

ALEXANDRIA
REAL ESTATE EQUITIES, INC.
2019 ANNUAL REPORT



ALEXANDRIA®
Building the Future of Life-Changing Innovation™



THE BUILDING BLOCKS OF OUR DNA*

- A** Advancing Human Health and Nutrition
- C** Creating Collaborative Campuses and Vibrant Clusters
- G** Giving Back to Our Communities
- T** Team-Oriented, Mission-Driven Culture

*The chemical bases adenine (A), cytosine (C), guanine (G), and thymine (T) are the four main components that make up DNA.

ON THE COVER
 The Alexandria Center[®] for Life Science – New York City, the first and only commercial life science campus in New York City, currently comprises 727,674 RSF across its existing East and West Towers. The latest addition to the campus, the iconic North Tower, is an inspiring 550,000 RSF development project, which upon completion will expand the campus to nearly 1.3 million RSF of highly amenitized and uniquely designed space for innovative life science companies at all stages in their life cycle.

EXECUTIVE CHAIRMAN & FOUNDER

LETTER TO STAKEHOLDERS

As founder of Alexandria, I am humbled and proud to lead and work alongside our Alexandria family to realize our critical mission to advance human health and nutrition. During this unprecedented time, which could prove to be a fundamentally new reality, we stand together as a family and wish each of you safety and good health as we navigate the coronavirus pandemic and maintain our focus to persevere and do our part in the face of this global crisis. Through our unique leadership position and longstanding pioneering relationships in the life science industry, we have a strong understanding of its far-reaching social, economic, and health impacts and feel an even greater responsibility to enable the life-changing innovations needed to conquer the virus and broadly advance human health.

We weathered the September 11, 2001 attacks on our homeland. We successfully endured the financial crisis of 2008–2009. Today, with a fortress balance sheet with significant liquidity, high-credit tenancy, long-term leases, and long-term, low-fixed-rate, investment-grade debt, we are well positioned during this time of global economic uncertainty and very well prepared to handle the black swan coronavirus. Many of our transformative tenants and investment companies are now swiftly working on developing diagnostic tests, treatments, and vaccines to combat and hopefully resolve this pandemic. We will continue to make highly disciplined and strategic decisions, and the health, safety, and well-being of our Alexandria family, our partners, our stakeholders, and our communities are our top priorities. *The significance of our mission has never been greater and our dedication never stronger.*

2019 was the 25th anniversary of our founding, and it was an exceptional year for Alexandria. We founded the company in 1994 with a bold and visionary business plan, and in doing so pioneered the life science real estate niche and formed the first-ever REIT uniquely focused on the critically important life science industry. Today, Alexandria is the foremost owner, operator, and developer of collaborative campuses for leading life science companies in the nation's top innovation clusters.

From our humble beginnings as a garage startup with \$19 million in Series A capital, followed by our disciplined growth over the last 25 years into a highly respected investment-grade rated S&P 500® REIT, we surpassed \$25 billion in total market capitalization at the end of 2019. We are profoundly grateful to every single member of our best-in-class team for their passion, dedication, and stellar operational excellence on the quest toward our important mission. Together, we have positioned Alexandria as the true innovator, influencer, and trusted partner within the life science industry.

Our solid 2019 operating and financial results highlight our continued growth in high-quality cash flows and our operational efficiency. Our industry-leading, high-quality tenant roster, with 50% of our annual rental revenue as of December 31, 2019 generated from investment-grade or publicly traded large cap tenants, drives high-quality and stable cash flows. Truly outstanding execution of our unique business strategy by our team resulted in a strong Adjusted EBITDA margin of 69% for 2019—a REIT industry-leading statistic.

The enduring strength of our balance sheet and significant liquidity of \$3.4 billion as of December 31, 2019, including the \$1 billion of forward equity sales agreements executed in January 2020, affords us flexibility to manage our strategic business initiatives. Our team also deserves recognition for the continual improvement in our credit profile, which ranks us in the top 10% among all publicly traded REITs (excluding mortgage REITs) as of December 31, 2019. Additionally, over the past five years ended December 31, 2019, we have continued to drive strong per-share growth in net asset value of 75%; funds from operations – diluted, as adjusted, of 45%; and common stock dividends of 39%.

Deepening our competitive advantage and distinguishing us from all other office REITs, our unique business model continues to contribute to the company's superior results and exceptional total shareholder return (TSR) of over 1,700% since the company's IPO in 1997 through December 31, 2019 (assuming reinvestment of dividends)—which outperforms various indices, including MSCI US REIT Index's 687% TSR and S&P 500's 482% TSR over the same period. We also received our fourth Nareit Gold Investor CARE Award in the Large Cap Equity REIT category for excellence in shareholder communications and reporting, highlighting Alexandria's operational transparency.

MISSION DRIVEN

At Alexandria, we live our mission—to create clusters that ignite and accelerate the world's leading innovators in their noble pursuit of advancing human health by curing disease and improving nutrition—each and every day. We differentiate ourselves with a deep-rooted passion for all that we do, a pioneering spirit to continually innovate, and a high degree of discipline that provides us with financial consistency and stability and enables us to adapt to market conditions. Our mission is woven into our DNA and underpins all aspects of our multifaceted business, which is built around four verticals: real estate, venture investments, thought leadership, and corporate responsibility.

REAL ESTATE: DRIVING GROWTH THROUGH OUR BOLD, VISIONARY STRATEGY

Our extraordinary growth was accelerated by our visionary cluster campus strategy, as informed by Harvard Business Professor Michael E. Porter's cluster theory. Utilizing this theory as the basis for our proven cluster model, for which we identified four critical components for innovative companies to thrive—location, innovation, talent, and capital—we successfully shifted our focus during 2004–2006 from single assets to high-potential urban innovation cluster campuses as the first mover in Mission Bay, Cambridge, and New York City.

Serving as an example of the next phase of our incredible execution of this visionary strategy is the future iconic North Tower at the Alexandria® Center for Life Science – New York City, featured on our cover this year. As Alexandria further advances the emerging life science cluster that we established in NYC, we continue to successfully operate the Alexandria Center, the city's first and only commercial life science campus. Today, our flagship campus is home to over 50 cutting-edge entities ranging from high-growth life science startups to multinational pharmaceutical companies. We are also proud to be NYC's leading provider of seed- and early-stage life science venture capital, as well as to have attracted serial life science entrepreneurs, who are vital to new company formation, and created and executed our Alexandria LaunchLabs® and Seed Capital platforms to foster the city's next generation of best-in-class biotechnology companies.

Alexandria has defined and dominated the creation and growth of vibrant life science clusters for 25 years. At our Investor Day on December 3, 2019, we publicly announced our mega campus strategy. Mega campuses consist of more than 1 million RSF and provide a superior set of amenities and services, which include transportation programs and sustainable commuting options. We anticipate that these compelling campuses will generate significant premiums relative to stand-alone assets and offer companies valuable strategic optionality. As part of this strategy, we will continue to execute on our overall growth strategy by focusing on delivering our highly visible value-creation pipeline and developing and enhancing value-added properties and campuses in the best locations to provide our tenants with amenity-rich environments that increase their ability to attract and retain top talent.

Located in the heart of the University Town Center submarket, Campus Pointe by Alexandria, our flagship San Diego campus, is a highly sustainable, 10-building campus at the forefront of workplace

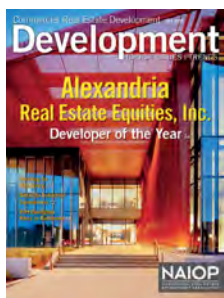


JOEL S. MARCUS
EXECUTIVE CHAIRMAN
& FOUNDER

ALEXANDRIA: NAIOP 2019 DEVELOPER OF THE YEAR

“The company has been strategic in its growth by locating in markets where the key building blocks for innovation thrive. ... Alexandria’s commitment to its employees and to the communities where it does business is evident.”

JEAN KANE
2019 CHAIR, NAIOP’S
DEVELOPER OF THE YEAR
SELECTION COMMITTEE



ALEXANDRIA VENTURE INVESTMENTS®

#1

MOST ACTIVE INVESTOR IN BIOPHARMA

SILICON VALLEY BANK
“2020 HEALTHCARE INVESTMENTS
AND EXITS REPORT,” BY NEW
DEAL VOLUME (U.S. AND
EUROPE, 2018-2019)

design. The exceptionally amenitized mega campus, anchored by Eli Lilly and Company, Bristol Myers Squibb, and UC San Diego, serves as a prime location for our newest proprietary product, Alexandria GradLabs™, which opened in 2019. A first of its kind, this post-seed-stage life science platform is providing promising companies with sought-after, highly flexible office/laboratory workspaces and an accelerated, scalable path for growth. In addition to state-of-the-art office/laboratory space, the contemporarily designed Alexandria GradLabs features on-site laboratory resources more commonly enjoyed by large biotechnology and pharmaceutical companies, creative collaborative spaces, and support services. The campus also has future value-creation development and redevelopment opportunities aggregating 982,000 RSF to create a 2.4 million RSF mega campus.

To provide much-needed infrastructure and capital to the rapidly growing agtech industry and address the challenge of advancing human health by improving nutrition, we opened the first phase of the Alexandria Center® for AgTech in Research Triangle, the most important, dense, and diverse agtech cluster in the United States. On this campus—the first and only integrated multi-tenant, amenity-rich agtech R&D and greenhouse campus in the country—we have created a thriving ecosystem ranging from global to emerging agtech companies such as UPL, Indigo Ag, and Boragen to facilitate the discovery and development of groundbreaking solutions to enhance the nutritional value of food and ensure a sustainable, cost-effective global food supply. We also extended the Alexandria LaunchLabs platform into the agtech sector to provide promising seed- and early-stage agtech companies with a dynamic and nurturing environment on this collaborative campus. Its second phase consists of a 160,000 RSF development project and includes additional greenhouse space.

STRATEGIC VENTURE INVESTMENTS: SUPPORTING THE CREATION OF TREATMENTS AND CURES

We founded Alexandria Venture Investments®, our strategic venture capital arm, in 1996 to strategically invest in promising seed-, early-, and growth-stage companies that will positively impact the lives of patients. Our venture activity provides us with deep insights emerging from the leading edge of science and technology, strengthens our relationships across the life science industry, and enables us to recruit and retain the highest-quality tenant base.

As a testament to our unparalleled network, Alexandria Venture Investments was recognized by Silicon Valley Bank as the #1 most active biopharma investor by new deal volume for the third consecutive year and was recently highlighted in *Barron's* as having been a key contributor to the life science “venture boom” in 2019.

The life-changing work that our investment companies are pursuing underscores the tremendous value of the life science industry. Moderna and Vir Biotechnology, two of our investments (and tenants), are among the transformational companies leading the charge in response to the coronavirus global pandemic with record speed. The novel innovation and remarkable talent behind each of these companies positions them to combat the most critical threats to human health and vitality.

IMPACTFUL THOUGHT LEADERSHIP: DRIVING INNOVATION TO ADVANCE HUMAN HEALTH

We founded the Alexandria Summit® in 2011 with the goal of building a highly collaborative, neutral platform that would convene our preeminent global life science and healthcare networks in a unique environment that catalyzes transformative discussions and stimulates new approaches to the most important issues facing human health. The impactful collaborations and policy work that have been cultivated by this platform over the last nine years have had a profound influence on the fields of oncology, neuroscience, infectious diseases, healthcare economics, agricultural innovation, medical research philanthropy, and digital health.

In 2019, we focused on two topics that are critical in our mission to advance human health—neuroscience and agricultural innovation. Diseases of the brain represent one of society’s

biggest unmet medical needs and are an enormous cost to society. At the Alexandria Summit – Neuroscience 2019, we examined the immense challenges and complexity of brain diseases and identified compelling opportunities and approaches for tackling neurodegeneration, mental health, and addiction. At the Alexandria Summit – Innovate Ag 2019, we worked to identify innovative solutions to support the evolution of the agricultural ecosystem so that we can collectively improve nutrition, increase access to healthy foods, and prepare to feed a rapidly growing world population.

Leveraging the Alexandria Summit’s powerful collective voice, we are catalyzing tangible solutions that will improve patient outcomes, drive the discovery and development of novel, cost-effective therapies, impact policy to advance innovation that saves lives and manages and cures disease, and address the urgent need to transform our healthcare system. The esteemed reputation of the Alexandria Summit demonstrates our distinct position as a trusted and collaborative partner to the life science industry.

PURPOSEFUL CORPORATE RESPONSIBILITY: PIONEERING A UNIQUELY COMPREHENSIVE CARE MODEL TO TACKLE OPIOID ADDICTION

Supported recovery is good philanthropy. Community revitalization is good business.

Since 2016, more Americans have died from drug overdoses each year than in battle during the Vietnam War. Roughly three-quarters of these deaths are attributed to opioids, with an average of 130 Americans dying per day. The U.S. opioid epidemic is one of the most important public health issues of our time, and to effectively solve it will require new therapies, new evidenced-based care models, and new attitudes and policies toward how we view and treat addiction.

We are passionate about partnering on endeavors that aim to better manage and cure disease, and we are tackling the opioid crisis head on. Alexandria partnered with Verily, an Alphabet company, on OneFifteen in Dayton, Ohio, to pioneer a comprehensive care model for the full and sustained recovery of people suffering from opioid addiction. We are leading the design and development of its state-of-the-art campus, which opened to patients in the fall of 2019. Our goal with OneFifteen is to help people recover from addiction, live healthier lives, and revitalize local communities, and we hope it serves as a model for the rest of the country.

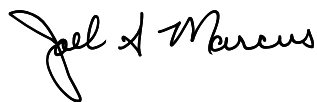
PREPARING FOR THE FUTURE

Coronavirus represents not only a threat to public health, but also to the world’s economic and international security. The United States must recognize the urgency around this effort by shaping policy to transform our already strained healthcare system and promoting faster and more effective translation of novel discoveries into medicines for patients. It is time that we move to the forefront of this global crisis.

In the 25 years since we first launched Alexandria, we have demonstrated stability and growth in the face of volatility. Guided by our culture of idea meritocracy, mutual respect, diversity, humility, transparency, and teamwork, we take great pride in the fact that the mission-critical work of our team and the industries we serve are part of the solution to our major healthcare challenges.

The world is changing rapidly, and it is a business imperative that we adapt and evolve in anticipation of those changes. As renowned author and business strategist Jim Collins put it, “To be built to last, you must be built to change.” This is how we think about what we do each and every day. It is how we will remain at the vanguard of the much-needed niche we created and how we will build the future of life-changing innovation for years to come.

With my deepest respect, gratitude, and appreciation,



JOEL S. MARCUS
EXECUTIVE CHAIRMAN & FOUNDER

THOUGHT LEADERSHIP

Alexandria convenes a diverse group of visionary stakeholders to address the most critical challenges in global healthcare and agriculture



ALEXANDRIA SUMMIT* – NEUROSCIENCE 2019

Opening Keynote (left to right): **Krishna Yeshwant, MD**, General Partner, GV; **Scott Gottlieb, MD**, Resident Fellow, American Enterprise Institute; Former Commissioner, U.S. Food and Drug Administration; and **Mark McClellan, MD, PhD**, Director, Duke-Margolis Center for Health Policy and Robert J. Margolis, MD, Professor of Business, Medicine, and Health Policy, Duke University; Former Administrator, Centers for Medicare & Medicaid Services; and Former Commissioner, U.S. Food and Drug Administration

CORPORATE RESPONSIBILITY

Alexandria partnered with Verily on OneFifteen to pioneer a comprehensive care model to support people suffering from opioid addiction



25 YEARS

Proud of the past.
 Focused on the present.
 Prepared for the future.

1994



Joel S. Marcus and Jerry M. Sudarsky found Alexandria

Alexandria acquires its first properties in Torrey Pines, San Diego

1995

Alexandria's senior management team completes over 30 one-on-one investor meetings

1996

Alexandria expands into the Seattle and Maryland clusters



Joel S. Marcus founds Alexandria Venture Investments, the company's strategic venture capital arm

1997



Alexandria executes IPO, trading on the NYSE under the ticker symbol ARE

Alexandria enters the Greater Boston, San Francisco, and Research Triangle clusters

1998



Alexandria commences the company's first two development projects in Torrey Pines, San Diego; and Gaithersburg, Maryland

Alexandria's portfolio more than triples in size since IPO, comprising 3.6 million RSF

1999



Alexandria's CEO Joel S. Marcus receives the EY Entrepreneur Of The Year Award (Los Angeles - Real Estate)

2000

Alexandria's total market capitalization surpasses \$1 billion

2001



Alexandria's portfolio exceeds 5 million RSF

2002

Alexandria launches its first proprietary product, the Science Hotel, in Cambridge to support the growth of leading early-stage life science companies

2003



Joel S. Marcus co-founds Accelerator Corporation (now Accelerator Life Science Partners) in Seattle

2004

Alexandria enters Mission Bay, San Francisco

2005



Alexandria is selected to develop New York City's first commercial life science campus

2006

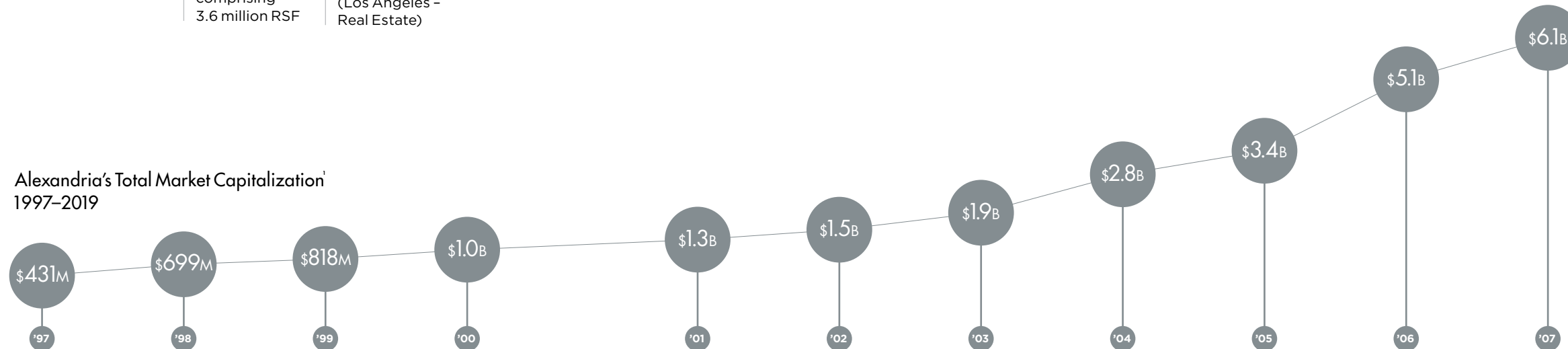
Alexandria acquires land supporting 2 million RSF in the Binney Street corridor and a 1.2 million RSF campus in Technology Square in Cambridge

2007

Alexandria breaks ground on the first phase of the Alexandria Center for Life Science - New York City

Alexandria delivers one of the world's first LEED certified office/laboratory projects

Alexandria's Total Market Capitalization¹ 1997-2019



1. Total market capitalization is equal to the sum of total equity capitalization and total debt as of December 31 of each year.

2008



Alexandria expands its sustainable building and operational practices, from central plant optimization projects to green housekeeping

2009

Alexandria signs Eli Lilly and Company as the anchor tenant at the Alexandria Center[®] for Life Science - New York City

2010



Alexandria opens the Alexandria Center[®] for Life Science - New York City in the heart of Manhattan's East Side Medical Corridor

Alexandria acquires Veralliance Properties, Inc. and its strategic facilities and key personnel in San Diego

2011

Alexandria receives investment-grade ratings from Moody's and Standard & Poor's (now S&P Global)

Alexandria establishes the Alexandria Summit, convening senior life science industry leaders to address the most critical challenges in global healthcare and agriculture

2012

Alexandria rings the closing bell at the NYSE to celebrate 15 years as a publicly traded company

Alexandria breaks ground on the second phase of the Alexandria Center[®] for Life Science - New York City

2013



Alexandria opens the Alexandria Center[®] at Kendall Square with the delivery of 225 Binney Street to Biogen Inc.

2014

Alexandria celebrates its 20th anniversary

Alexandria opens the West Tower at the Alexandria Center[®] for Life Science - New York City

Alexandria acquires the 510 Townsend Street site in San Francisco, expanding its Mission Bay life science and technology campus into the SoMa submarket

2015



Alexandria receives its first Nareit Investor CARE Gold Award in the Large Cap Equity REIT category

Alexandria breaks ground on the new headquarters and R&D center at 400 Dexter Avenue North for Juno Therapeutics, Inc. in Lake Union, Seattle

2016

Alexandria unveils plans for Alexandria LaunchLabs[®] and the Alexandria Seed Capital platform in New York City

Alexandria acquires One Kendall Square, an iconic 644,771 RSF, nine-building life science and technology campus in Cambridge

2017

Alexandria acquires land at 88 Bluxome Street in Mission Bay/SoMa to develop a 1.1 million RSF campus

Alexandria celebrates its 20th anniversary as an NYSE listed REIT

Alexandria joins the S&P 500 index

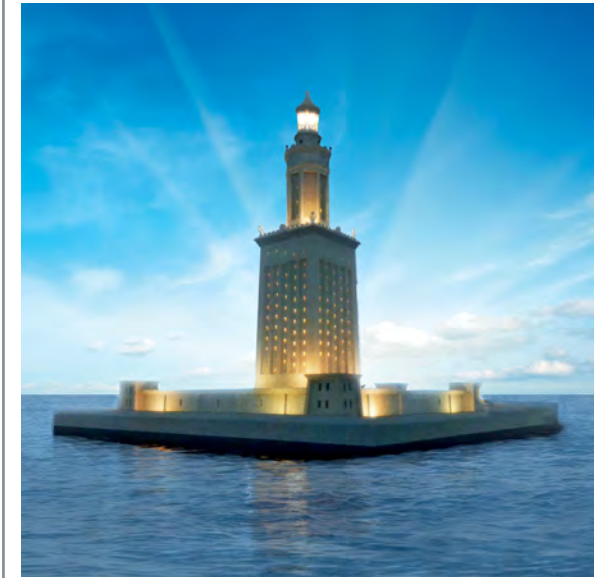
2018



Alexandria opens Alexandria LaunchLabs[®] - Cambridge, located at the Alexandria Center[®] at One Kendall Square

Alexandria issues its first green bond

2019

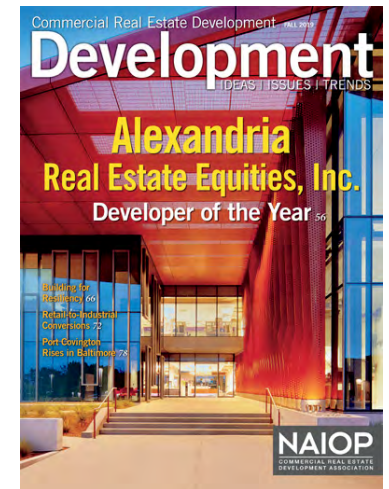


Alexandria celebrates its 25th anniversary

Alexandria is named NAIOP 2019 Developer of the Year



Alexandria achieves a GRESB 5 Star rating



\$5.1B

\$5.9B

\$7.0B

\$7.4B

\$8.0B

\$7.9B

\$10.4B

\$10.9B

\$14.2B

\$17.9B

\$18.4B

\$26.3B

'08

'09

'10

'11

'12

'13

'14

'15

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'17

'18

'19

2019 PERFORMANCE

Alexandria's well-earned reputation as a trusted partner to innovative entities and institutions in the real estate, life science, technology, and agtech industries drives our exceptional performance.

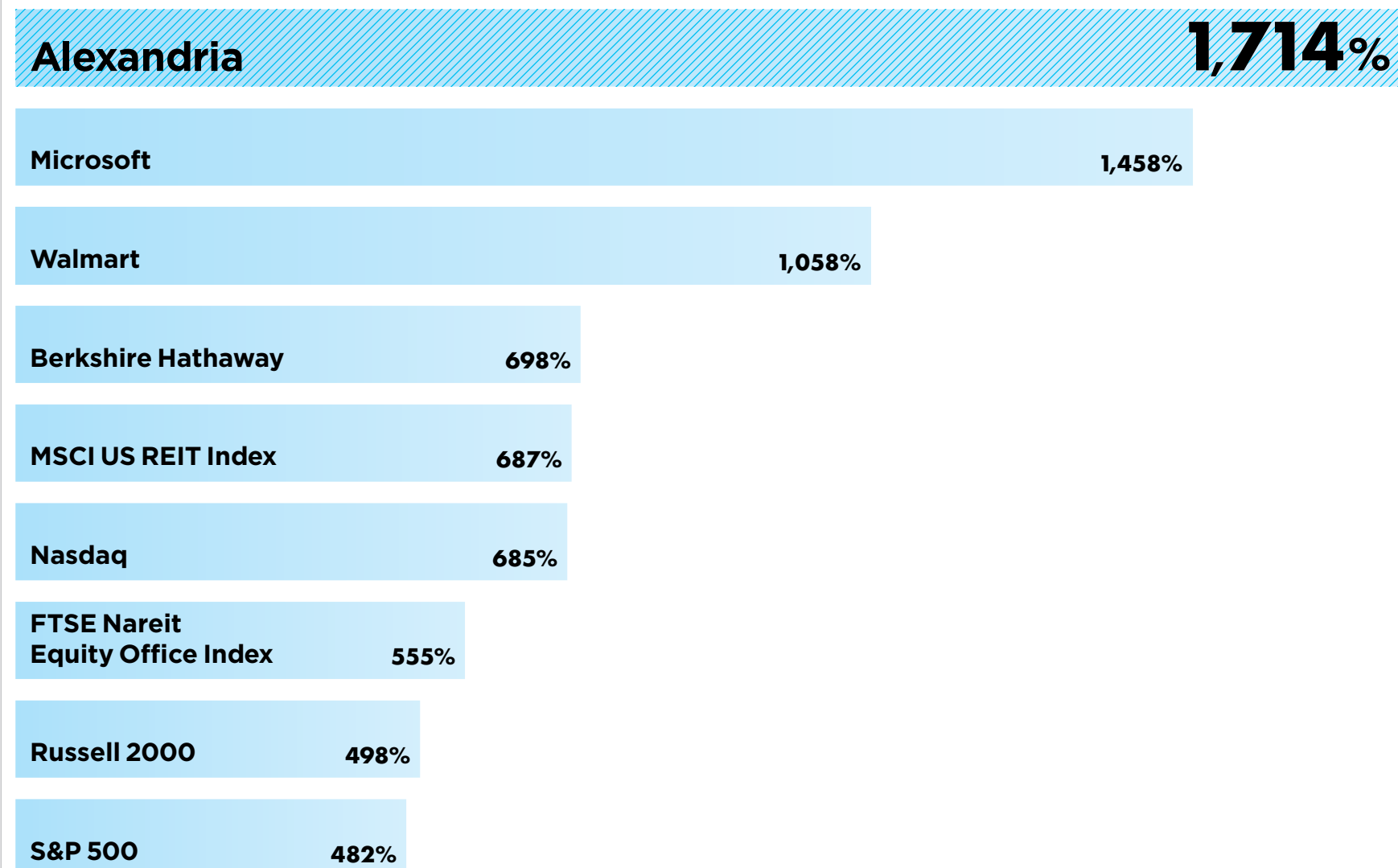


DEAN A. SHIGENAGA
CO-PRESIDENT & CHIEF FINANCIAL OFFICER

ALEXANDRIA'S OUTSTANDING PERFORMANCE

May 27, 1997¹ – December 31, 2019

TOTAL SHAREHOLDER RETURN COMPARISON



Source: Bloomberg and S&P Global Market Intelligence. Assumes reinvestment of dividends.

1. Alexandria's IPO priced at \$20.00 per share on May 27, 1997.

COMMUNICATIONS AND REPORTING EXCELLENCE

Best-in-class transparency, quality, and efficiency of disclosures and reporting



STRONG REAL ESTATE PERFORMANCE

5-Year Growth

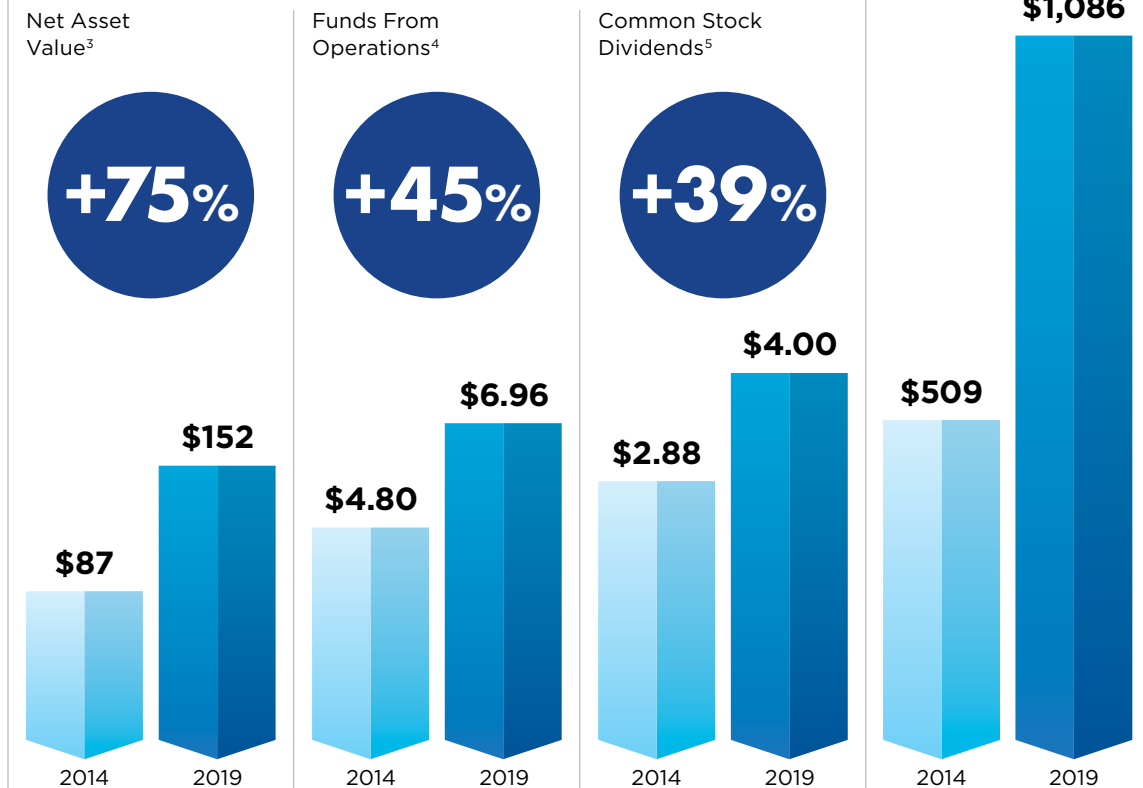
TOTAL SHAREHOLDER RETURN²

112%

NET OPERATING INCOME⁶ GROWTH (\$ in Millions)

+113%

PER-SHARE GROWTH



2. Represents a five-year total shareholder return as of December 31, 2019, and assumes reinvestment of dividends.

3. Based on average net asset value estimates at the end of each year provided by Bank of America Merrill Lynch, Barclays Capital Inc., Citigroup Global Markets Inc., Evercore ISI, Green Street Advisors, Inc., and J.P. Morgan Securities LLC.

4. Represents funds from operations - diluted, as adjusted. For information on Alexandria's funds from operations, including definitions and a reconciliation to the most directly comparable GAAP measure, see "Non-GAAP Measures and Definitions" under Item 7 of Alexandria's Annual Report on Form 10-K for the fiscal years ended December 31, 2014 and 2019.

5. Represents common stock dividends declared.
6. For information on Alexandria's net operating income, including definitions and a reconciliation to the most directly comparable GAAP measure, see "Non-GAAP Measures and Definitions" under Item 7 of Alexandria's Annual Report on Form 10-K for the fiscal years ended December 31, 2014 and 2019.

2019 PERFORMANCE

HIGH-QUALITY CASH FLOWS AND STRONG DEMAND

CASH FLOWS FROM HIGH-QUALITY TENANTS

Annual Rental Revenue (ARR) From Investment-Grade or Publicly Traded Large Cap Tenants¹

50%

ADJUSTED EBITDA MARGIN²

Outperformance vs. Other Office REITs³

68%

CASH FLOWS FROM CLASS A PROPERTIES IN AAA LOCATIONS

ARR From Class A Properties in AAA Locations¹

76%

STRONG DEMAND DRIVES SOLID OCCUPANCY

Occupancy Over 10 Years⁴

96%

HIGH-QUALITY TENANT ROSTER

TRUSTED PARTNER TO INNOVATIVE COMPANIES

Alexandria's Top 20 Tenants' ARR From Investment-Grade or Publicly Traded Large Cap Tenants¹

80%

ALEXANDRIA'S TENANTS COMMIT SUBSTANTIAL CAPITAL TO R&D

17 of the Top 20 Biopharma R&D Spenders Are Alexandria Tenants⁵

17/20

STRONG AND FLEXIBLE BALANCE SHEET

CREDIT RATING IMPROVEMENT⁶

Moody's INVESTORS SERVICE
Baa1
Stable

S&P Global
Ratings
BBB+
Stable

ALEXANDRIA'S CREDIT RATINGS⁷

TOP 10%
Alexandria Is in the Top 10% Among All Publicly Traded REITs

VENTURE INVESTMENTS

STRATEGIC VENTURE CAPITAL

#1

MOST ACTIVE INVESTOR IN BIOPHARMA BY NEW DEALS
Ranked by Silicon Valley Bank⁸

VALUE CREATION THROUGH ALEXANDRIA VENTURE INVESTMENTS ACTIVITY

\$400M

On-Balance Sheet Unrealized Gains⁹

\$70M

Realized Gains Over the Past Two Years¹⁰

MAKING A POSITIVE IMPACT ON OUR COMMUNITIES

2025 ENVIRONMENTAL IMPACT REDUCTION GOALS

CARBON POLLUTION (MTCO₂e)

2015-2019 Progress¹¹
17.9% REDUCTION

2025 Goal¹²
30% REDUCTION

ENERGY CONSUMPTION (kWh)

2015-2019 Progress¹¹
18.8% REDUCTION

2025 Goal¹²
25% REDUCTION

WASTE DIVERSION (Ton)

2019 Progress¹³
44.7% DIVERSION

2025 Goal¹⁴
45% DIVERSION

POTABLE WATER CONSUMPTION (Gal)

2015-2019 Progress¹¹
6.0% REDUCTION

2025 Goal¹²
10% REDUCTION

AWARDS AND RECOGNITION

GRESB
★ ★ ★ ★ ★
GRESB 5 STAR RATING 2019

A

GRESB DISCLOSURE SCORE 2018 | 2019

fitwel
FITWEL IMPACT AWARD
Highest-Scoring Project of All Time

PHILANTHROPY AND VOLUNTEERISM

4,500+
Hours Volunteered by Alexandria Team Members in 2019

250+

Non-Profit Organizations Alexandria Supported in 2019

59

Alexandria Team Members Completed the 2019 New York City Marathon to Support Critical Oncology Research at Memorial Sloan Kettering Cancer Center, Raising Over \$373,000

1. Represents annual rental revenue in effect as of December 31, 2019. For definitions, see "Non-GAAP Measures and Definitions" under Item 7 of Alexandria's Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

2. For information on Alexandria's Adjusted EBITDA and Adjusted EBITDA margin, including definitions and a reconciliation to the most directly comparable GAAP measure, see "Non-GAAP Measures and Definitions" under Item 7 of Alexandria's Annual Report on Form 10-K for the fiscal year ended December 31, 2019.

3. Based on data from S&P Global Market Intelligence and SEC filings for 2019.

4. Represents average occupancy of operating properties in North America as of each December 31 for the last 10 years.

5. Source: EvaluatePharma, February 2020. Top 20 biopharmaceutical companies ranked by pharma R&D spend in 2018.

6. As of December 31, 2019.

7. Represents credit rating levels from Moody's Investors Service and S&P Global Ratings in comparison to those of all publicly traded REITs (excluding mortgage REITs) as of December 31, 2019.

8. Source: Silicon Valley Bank, "2020 Healthcare Investments and Exits Report." Most Active New Investors calculated as new (first-time) investments into U.S. and Europe companies from 2018 to 2019.

9. Represents cumulative adjustments in value of Alexandria's non-real estate investments as of December 31, 2019.

10. Represents realized gains from non-real estate investments for the two-year period ended December 31, 2019.

11. Reflects sum of annual like-for-like progress from 2015 to 2019.

12. Relative to a 2015 baseline for buildings in operation that Alexandria directly manages.

13. Reflects progress for all buildings in operation in 2019 that Alexandria indirectly and directly manages.

14. Relative to a 2015 baseline for buildings in operation that Alexandria indirectly and directly manages.

2019 BIG WINS THROUGH THE LENS OF ALEXANDRIA'S CO-CHIEF EXECUTIVE OFFICERS

SOMA, SAN FRANCISCO

PIONEERING A NEW MODEL FOR URBAN DEVELOPMENT

In one of our biggest wins this past year, our cutting-edge development project at 88 Bluxome Street in San Francisco was the first under the Central SoMa Plan to obtain its full Prop M allocation at once, whereas others had managed only phased approvals. This unprecedented green-lighting from the San Francisco Planning Commission was particularly gratifying because it was born of the trusted relationships our team had developed with the City of San Francisco and key community partners during a multiyear approval process.

As a result of this highly collaborative model of urban development, 88 Bluxome will be an iconic, fully integrated, sustainable campus that addresses the multiple priorities of the community as it supports the vital work of the world's leading innovators. In short, it will be a model of how doing what's right for a neighborhood can lead to building design and amenities our innovative tenants look for and that also generate long-term value for our stockholders.

The 88 Bluxome mega campus is already nearly 60% pre-leased and continues to see strong demand. The fully entitled project will enable our tenants to advance their mission-critical work to improve lives, both for those in their immediate community and beyond.

In all of our cluster locations, the Alexandria team has identified and taken advantage of high-quality opportunities



that position us for robust future growth through our mega campus strategy. We also continue to bring to bear our strong brand and multifaceted resources in partnership with generational institutions like Stanford University and Columbia University, city governments like San Francisco and Seattle, and community groups like the ones we engaged for 88 Bluxome to advance economic and societal goals that are mutually desirable and meaningful.

We will continue to look for ways where we can be supportive, constructive, and proactive in the communities where we develop and operate. We are proud to

partner with our tenants in their ongoing efforts to advance human health, grateful to our colleagues for their work ethic and passion, and indebted to our stockholders for their continued interest and support.

Sincerely,

STEPHEN A. RICHARDSON
CO-CHIEF EXECUTIVE OFFICER

The transformative mixed-use campus will consist of two iconic, cutting-edge life science and technology buildings totaling 1.1 million RSF that will feature ample outdoor deck spaces and be activated by ground-floor retail amenities.



LAKE UNION, SEATTLE

CREATING AN ICONIC DESTINATION TO ENABLE INNOVATION

In 2019, we were honored to be selected by the City of Seattle to transform the last of its large, undeveloped parcels of land into a community-oriented, amenity-driven campus that will attract the most advanced life science and technology entities and enable innovation for the benefit of humankind. Our compelling vision for the Mercer Mega Block entails a premier campus that will serve as the center of gravity for Seattle's life science ecosystem while it also critically addresses some of the most pressing challenges the City faces.

Engagement and integration with the community were always central to our vision for this multi-use campus. From the streetscape and activated retail spaces to more affordable housing options and a community recreation center, our plans focus on elevating the Lake Union neighborhood, promoting economic and residential diversity, and enabling the world's most innovative organizations working to better our lives.

When I became Regional Market Director of our Seattle cluster in 2003, the life science sector was in its nascency and our asset base in the region totaled 750,000 RSF. In recent years, the region has emerged as a leader in immunology, cell therapy, and the intersection of science and technology—areas that are generating some of today's most transformative medical innovations. This expertise has led to the significant growth in our Seattle asset base, which now exceeds 1.5 million RSF with a solid development pipeline



to foster the technological advancements of the future. The Mercer mega campus is the crown jewel of that pipeline. It is literally located at the intersection of science and technology, only a few blocks away from the UW School of Medicine and the Allen Institute for Brain Science and Amazon's and Google's campuses.

Our team fully grasps the importance of the Mercer Mega Block development in its role to engage the existing neighborhood and build a connected ecosystem where these critical industries can cross-pollinate. With more than 20 years of on-the-ground experience and expertise in Seattle and an unparalleled track record of creating urban

innovation campuses in the nation's top life science and technology clusters, we are committed to collaborating with the City of Seattle to build upon its leadership in those disciplines.

We celebrate this important and strategic award with an eye toward the future, always driven by the promise of life-changing technologies that will emerge from our world-class buildings, campuses, and clusters.

Many thanks,

A handwritten signature in black ink, reading "Peter M. Moglia".

PETER M. MOGLIA
CO-CHIEF EXECUTIVE OFFICER &
CO-CHIEF INVESTMENT OFFICER

The 800,000 RSF Mercer Mega Block campus will build upon Seattle's legacy of scientific innovation by providing the neighborhood with engaging amenities for our tenants and the community and iconic buildings to showcase South Lake Union.



REAL ESTATE

GREATER BOSTON
MARYLAND
NEW YORK CITY
RESEARCH TRIANGLE
SAN DIEGO
SAN FRANCISCO
SEATTLE



GREATER BOSTON



399 BINNEY STREET is a 164,000 RSF development project that was completed in 2019 at the Alexandria Center® at One Kendall Square, a 10-building campus in Cambridge. Located in the most sought-after area of East Cambridge known as the world's most innovative square mile, the building is home to a carefully curated mix of therapeutics companies.

The Alexandria Center® at One Kendall Square, which includes an intermediate-term development opportunity for 402,000 square feet at 325 Binney Street, features ample outdoor space and engaging campus amenities to enhance our innovative tenants' ability to attract and retain top talent.



The LEED® Gold certified building incorporates a number of sustainable design features such as a green roof that serves many functions. They include retaining rainwater, improving site biodiversity, and reducing the heat island effect, which lowers the building's HVAC energy consumption and also has a positive impact on lowering the overall temperature of the city.

9950 Medical Center Drive is an 84,264 RSF development project that Alexandria fully leased to London-based biopharmaceutical company Autolus Therapeutics plc in early 2019. The facility will contain Autolus's U.S.-based R&D, commercial, and corporate functions and serve as its first full commercial-scale manufacturing center.

The sustainable office/laboratory development project aggregating 176,832 RSF at 9800 Medical Center Drive is anchored by a leading clinical-stage biotechnology company seeking to improve lives through the curative potential of gene therapy.

MARYLAND



9800 AND 9950 MEDICAL CENTER DRIVE, on our flagship Maryland campus in the highly desirable Rockville submarket, represent the first ground-up development projects in Maryland in a decade. Upon completion of these two buildings, Alexandria's footprint along Medical Center Drive will aggregate 859,777 RSF across 12 mission-critical facilities. Alexandria also has additional future development opportunities aggregating 499,000 RSF in Rockville.



NEW YORK CITY



The Alexandria Center® - Long Island City campus includes two redevelopment projects—30-02 48th Avenue and 47-50 30th Street—to provide the city’s early-stage life science companies with highly flexible step-up space. Upon completion of these two projects, the innovatively designed and amenity-rich campus will aggregate 312,697 RSF.



As the Alexandria Center® for Life Science - NYC grows, Alexandria envisions new campus amenities, including a lively food hall, a flexible forum for tenant programming, and reimagined outdoor spaces to complement the campus’s expansive river views.



ALEXANDRIA HAS A STRATEGIC GROWTH PIPELINE of approximately 1.4 million RSF in New York City, which includes the development of the North Tower at the Alexandria Center® for Life Science - NYC, the redevelopment of our Long Island City acquisitions, and a future redevelopment or development opportunity at 219 East 42nd Street. Combining this pipeline with our 1.1 million RSF of operating properties, our New York City asset base is uniquely positioned to meet the future needs of the city’s emerging life science cluster.

The North Tower at the Alexandria Center® for Life Science - NYC is a 550,000 RSF development project that will expand on the success of New York City’s first and only commercial life science campus. Situated in Manhattan’s East Side Medical Corridor, the iconic North Tower will feature inspiring design, significant office/laboratory step-up space, and sophisticated new amenities on a highly curated and sustainable campus.

RESEARCH TRIANGLE

The campus provides leading and emerging agtech companies with an inspiring environment to facilitate the discovery and development of breakthrough innovations that are vital to enhancing the nutritional value of food and ensuring a sustainable, accessible, cost-effective global food supply.

5 Laboratory Drive is home to Alexandria LaunchLabs[®] - AgTech, the premier platform accelerating early-stage agtech company growth. Alexandria LaunchLabs - AgTech supports promising seed- and early-stage agtech companies across plant science, animal health, food tech, and other sector areas.



THE ALEXANDRIA CENTER[®] FOR AGTECH - RESEARCH TRIANGLE, the first fully integrated, amenity-rich multi-tenant agtech R&D and greenhouse campus in the United States, opened in 2019. The campus's first phase is a 180,400 RSF redevelopment project at 5 Laboratory Drive in the heart of Research Triangle, the country's most important agtech cluster. The collaborative campus, which fills a critical need for high-tech greenhouse space, highlights Alexandria's significant focus on addressing the challenge of advancing human health by improving nutrition.



SAN DIEGO



CAMPUS POINTE BY ALEXANDRIA, the company's flagship San Diego campus, is a highly sustainable, amenity-rich campus in the heart of our University Town Center submarket, one of the region's leading life science and technology clusters. Anchored by Eli Lilly and Company, Bristol Myers Squibb, and UC San Diego, the campus holds development and redevelopment opportunities aggregating 982,263 RSF to create a 2.4 million RSF mega campus.

The 10-building campus features exceptional amenities, including a farm-to-table eatery, a sophisticated conference center, a fully equipped fitness center, a regulation-size soccer field, outdoor walking trails, and an organic farm.



Alexandria GradLabs™ provides its tenants with a communal gathering and event space, on-site shared laboratory equipment, and support services.

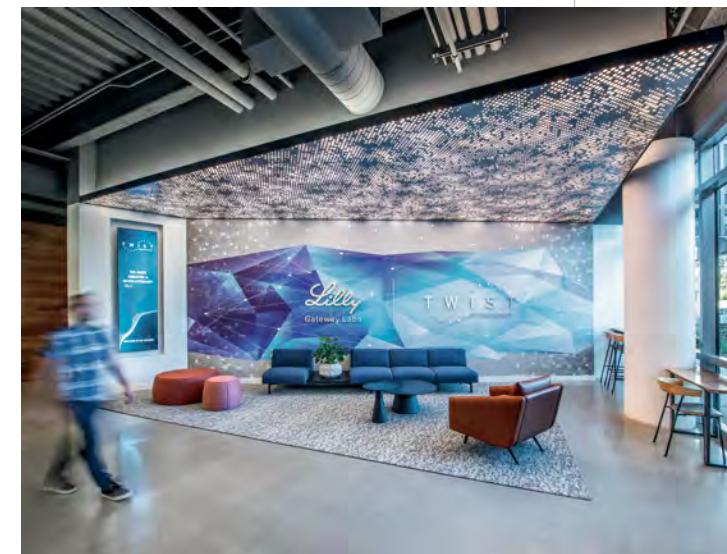
9880 CAMPUS POINT DRIVE, a 98,000 RSF development project that was delivered in 2019, is home to Alexandria's latest strategic proprietary offering, Alexandria GradLabs™. Located at Campus Pointe by Alexandria, Alexandria GradLabs is a highly flexible, first-of-its-kind life science platform that provides post-seed-stage life science companies with turnkey, fully furnished office/laboratory suites and an accelerated, scalable path for growth.

SAN FRANCISCO



ALEXANDRIA'S GATEWAY CAMPUS in our South San Francisco submarket will aggregate approximately 1.7 million RSF upon completion of the campus's value-creation opportunities over time. In 2019, Alexandria completed the redevelopment of a high-quality office/laboratory facility at 681 Gateway Boulevard and broke ground on a highly curated amenities building at 685 Gateway Boulevard. 685 Gateway is on track to be the first Zero Energy Certification building in Alexandria's asset base.

685 Gateway Boulevard, an amenities building, is a showcase for cutting-edge, high-performance sustainable development. The building will feature a sophisticated conference center, a healthy eatery, and a modern fitness center to enhance the campus experience.



681 Gateway Boulevard, a 126,963 RSF redevelopment office/laboratory project, was delivered to two leading life science companies, Eli Lilly and Company and Twist Bioscience Corporation, in 2019.





188 EAST BLAINE STREET is a 201,805 RSF development project on the north campus of Eastlake by Alexandria in our Lake Union submarket, which was delivered in 2019 to a range of innovative entities. At 188 East Blaine Street, Alexandria has curated a fully integrated life science ecosystem where public biotechnology companies and world-class research institutions are co-located.

The smartly amenitized building features a modern conference center, a fully equipped fitness center, and a communal lobby atrium that offers collaborative touchdown space and a healthy eatery.

The building includes modern amenities to enable our innovative tenants to attract and recruit top talent, including a rooftop deck with sweeping views of Lake Union and Seattle.

SEATTLE



Researchers investigate early-stage cancer treatments from a cutting-edge cancer R&D facility at 188 East Blaine Street, expanding on existing research collaborations with Seattle Children's Research Institute and Fred Hutchinson Cancer Research Center.



The iconic facility is LEED® Gold certified and offers highly adaptable state-of-the-art office/laboratory space in the heart of Lake Union.

ENVIRONMENTAL, SOCIAL, AND GOVERNANCE

CORPORATE RESPONSIBILITY

TO THRIVE IN A RAPIDLY CHANGING WORLD, our sustainability mission is to make a positive impact on society by developing and operating efficient buildings, reducing carbon pollution, managing climate risk, and advancing human health and nutrition.

ENVIRONMENTAL

Developing and operating efficient buildings, reducing carbon pollution, and managing climate risk

SOCIAL

Advancing human health and well-being on our campuses, for our employees, in our communities, and for the world at large

GOVERNANCE

Abiding by sound corporate governance principles



ENVIRONMENTAL IMPACT

685 Gateway Boulevard, an amenities building, is a showcase for cutting-edge, high-performance sustainability. The project, which is tracking and targeting reductions in embodied carbon, is on pace to achieve Zero Energy Certification from the International Living Future Institute.

ALEXANDRIA IS FOCUSED ON developing and operating efficient buildings, reducing carbon pollution, and managing climate risk in the creation of sustainable and vibrant ecosystems that support life-changing innovation to benefit humankind.

2025 REDUCTION GOALS FOR BUILDINGS IN OPERATION

CARBON POLLUTION (MTCO_{2e})

2025 Goal¹ | 30% Reduction

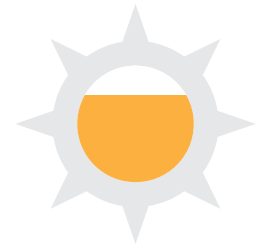


17.9%
REDUCTION

2015-2019 PROGRESS³

ENERGY CONSUMPTION (kWh)

2025 Goal¹ | 25% Reduction



18.8%
REDUCTION

2015-2019 PROGRESS³

WASTE DIVERSION (Ton)

2025 Goal² | 45% Diversion



44.7%
DIVERSION

2019 PROGRESS⁴

POTABLE WATER CONSUMPTION (Gal)

2025 Goal¹ | 10% Reduction



6.0%
REDUCTION

2015-2019 PROGRESS³

CLIMATE CHANGE FRAMEWORK



Alexandria supports and aligns our sustainability reporting with the recommendations of the Taskforce on Climate-related Financial Disclosures (TCFD).



Alexandria was the first REIT to use the Embodied Carbon Construction Calculator (EC3) tool, an open-source tool to compare and reduce embodied carbon emissions from construction materials.



NEW CONSTRUCTION GOAL



ACHIEVE LEED[®] GOLD OR PLATINUM CERTIFICATION FOR NEW GROUND-UP DEVELOPMENT PROJECTS

1. Relative to a 2015 baseline for buildings in operation that Alexandria directly manages.
2. Relative to a 2015 baseline for buildings in operation that Alexandria indirectly and directly manages.

3. Reflects sum of annual like-for-like progress from 2015 to 2019.

HEALTHY BUILDING GOAL

50

CERTIFICATIONS BY 2025

4. Reflects progress for all buildings in operation in 2019 that Alexandria indirectly and directly manages.

SUSTAINABILITY AWARDS AND RECOGNITION



GRESB 5 STAR RATING 2019



GRESB DISCLOSURE SCORE 2018 | 2019



MSCI ESG RATING 2019



FITWEL IMPACT AWARD Highest-Scoring Project of All Time

PHILANTHROPY & VOLUNTEERISM



OUR PHILANTHROPY AND VOLUNTEERISM EFFORTS are fundamental to the fulfillment of our commitment to building the future of life-changing innovation. Through our strategic corporate philanthropy, tireless fundraising, and robust volunteerism, Alexandria develops multifaceted partnerships with leading-edge non-profit organizations doing groundbreaking work in medical research, STEM education, military support services, and local communities.

In 2019, we launched Alexandria Scholars, a scholarship program that grants students in select locations \$5,000 annually to attend either a two- or four-year program at a college/university of their choice to study one of the STEM (science, technology, engineering, and mathematics) fields.



Family, friends, and fellow team members gather outside of Memorial Sloan Kettering Cancer Center, which is located along the New York City Marathon route at mile 17, to cheer on Alexandria Team runners.



Alexandria Team runners celebrate at the finish line after completing 26.2 miles in the 2019 New York City Marathon.

OUR IMPACT

4,500+
Hours Volunteered by Alexandria Team Members in 2019

250+
Non-Profit Organizations Alexandria Supported in 2019

59
Alexandria Team Members Completed the 2019 New York City Marathon to Support Critical Oncology Research at Memorial Sloan Kettering Cancer Center, Raising Over

\$373,000

ONEFIFTEEN

Reflecting the nonlinear path and continual process of recovery, the campus is anchored around a curved pathway that connects all of the experiences and elements of the OneFifteen ecosystem.

A city once known for its rich history of innovation, Dayton in the past several years has experienced a significant burden around opioid addiction and overdose, with the highest death rate per capita in any U.S. city in 2017. With strong institutions and civic leadership, the community is a natural partner for this unique and integrated approach to treatment.

“Supported recovery is good philanthropy. Community revitalization is good business.”

JOEL S. MARCUS
EXECUTIVE CHAIRMAN & FOUNDER

As a key component of our mission to advance human health by creating clusters and campuses that enable innovators to cure disease, improve nutrition, and enhance the quality of people’s lives, Alexandria partnered with Verily to support OneFifteen, a new non-profit healthcare system dedicated to the full and sustained recovery of people suffering from opioid addiction.

Together with Verily, we are building a state-of-the-art campus in Dayton, Ohio, to provide a comprehensive model of care that will encompass treatment, residential housing, family reunification, and community transition. The OneFifteen campus, designed and developed by Alexandria, opened to patients in the fall of 2019. OneFifteen is establishing a sustainable program with potential to act as a model throughout the country while revitalizing the local community it serves.

Central to our mission, we are committed to partnering on endeavors that aim to better manage and cure disease, as well as reduce the economic burden of disease on society, including addressing critical public health issues like the opioid epidemic.

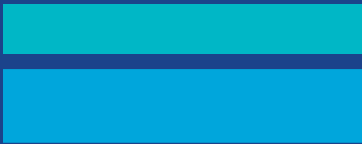


Grand Opening (foreground left to right): **Julia McNeal**, Vice President, Carillon Civic Council; **Senator Rob Portman**, U.S. Senator (R-OH); **Nan Whaley**, Mayor of Dayton, Ohio; **Joel S. Marcus**, Executive Chairman & Founder, Alexandria Real Estate Equities, Inc./Alexandria Venture Investments; **Marti Taylor**, President & Chief Executive Officer, OneFifteen; **Fred Manchur**, Chief Executive Officer, Kettering Health Network; and **Mary Boosalis**, President & Chief Executive Officer, Premier Health

ALEXANDRIA REAL ESTATE EQUITIES, INC. (NYSE:ARE), an S&P 500[®] urban office REIT, is the first, longest-tenured, and pioneering owner, operator, and developer uniquely focused on collaborative life science, technology, and agtech campuses in AAA innovation cluster locations, with a total market capitalization of \$26.3 billion as of December 31, 2019, and an asset base in North America of 39.2 million square feet. The asset base in North America includes 27.0 million RSF of operating properties and 2.1 million RSF of Class A properties undergoing construction, 6.3 million RSF of near-term and intermediate-term development and redevelopment projects, and 3.8 million square feet of future development projects. Founded in 1994, Alexandria pioneered this niche and has since established a significant market presence in key locations, including Greater Boston, San Francisco, New York City, San Diego, Seattle, Maryland, and Research Triangle. Alexandria has a longstanding and proven track record of developing Class A properties clustered in urban life science, technology, and agtech campuses that provide our innovative tenants with highly dynamic and collaborative environments that enhance their ability to successfully recruit and retain world-class talent and inspire productivity, efficiency, creativity, and success. Alexandria also provides strategic capital to transformative life science, technology, and agtech companies through our venture capital arm. We believe our unique business model and diligent underwriting ensure a high-quality and diverse tenant base that results in higher occupancy levels, longer lease terms, higher rental income, higher returns, and greater long-term asset value. For additional information on Alexandria, please visit www.are.com.

FORWARD-LOOKING STATEMENTS: This document includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such forward-looking statements include, without limitation, statements regarding our 2020 earnings per share attributable to Alexandria’s common stockholders – diluted, 2020 funds from operations per share attributable to Alexandria’s common stockholders – diluted, net operating income, our projected sources and uses of capital, and 2025 sustainability goals. You can identify the forward-looking statements by their use of forward-looking words, such as “forecast,” “guidance,” “goals,” “projects,” “estimates,” “anticipates,” “believes,” “expects,” “intends,” “may,” “plans,” “seeks,” “should,” or “will,” or the negative of those words or similar words. These forward-looking statements are based on our current expectations, beliefs, projections, future plans and strategies, anticipated events or trends, and similar expressions concerning matters that are not historical facts, as well as a number of assumptions concerning future events. There can be no assurance that actual results will not be materially higher or lower than these expectations. These statements are subject to risks, uncertainties, assumptions, and other important factors that could cause actual results to differ materially from the results discussed in the forward-looking statements. Factors that might cause such a difference include, without limitation, our failure to obtain capital (debt, construction financing, and/or equity) or refinance debt maturities, increased interest rates and operating costs, adverse economic or real estate developments in our markets, our failure to successfully place into service and lease any properties undergoing development or redevelopment and our existing space held for future development or redevelopment (including new properties acquired for that purpose), our failure to successfully operate or lease acquired properties, decreased rental rates, increased vacancy rates or failure to renew or replace expiring leases, defaults on or non-renewal of leases by tenants, adverse general and local economic conditions, an unfavorable capital market environment, decreased leasing activity or lease renewals, and other risks and uncertainties detailed in our filings with the Securities and Exchange Commission (SEC). Accordingly, you are cautioned not to place undue reliance on such forward-looking statements. All forward-looking statements are made as of the date of this document, and unless otherwise stated, we assume no obligation to update this information and expressly disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise. For more discussion relating to risks and uncertainties that could cause actual results to differ materially from those anticipated in our forward-looking statements, and risks to our business in general, please refer to our SEC filings, including our most recent annual report on Form 10-K and any subsequent quarterly reports on Form 10-Q.

Alexandria, Lighthouse Design[®] logo, Building the Future of Life-Changing Innovation[™], That’s What’s in Our DNA[™], Alexandria Center[®], Alexandria Venture Investments[®], Alexandria Summit[®], Science Hotel[®], LaunchLabs[®], and GradLabs[™] are trademarks of Alexandria Real Estate Equities, Inc. All other company names, trademarks, and logos referenced herein are the property of their respective owners.



ALEXANDRIA
REAL ESTATE EQUITIES, INC.
2019 ANNUAL REPORT
ON FORM 10-K



ALEXANDRIA®
Building the Future of Life-Changing Innovation™

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2019

Commission file number 1-12993



ALEXANDRIA®

ALEXANDRIA REAL ESTATE EQUITIES, INC.

(Exact name of registrant as specified in its charter)

Maryland

(State or other jurisdiction of incorporation or organization)

95-4502084

(I.R.S. Employer Identification Number)

26 North Euclid Avenue, Pasadena, California 91101

(Address of principal executive offices) (Zip code)

(626) 578-0777

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$0.01 par value per share	ARE	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: **None**

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the shares of Common Stock held by non-affiliates of registrant was approximately \$15.8 billion based on the closing price for such shares on the New York Stock Exchange on June 28, 2019.

As of January 15, 2020, 122,699,875 shares of common stock were outstanding.

Documents Incorporated by Reference

Part III of this annual report on Form 10-K incorporates certain information by reference from the registrant's definitive proxy statement to be filed within 120 days of the end of the fiscal year covered by this annual report on Form 10-K in connection with the registrant's annual meeting of stockholders to be held on or about May 5, 2020.

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GLOSSARY

The following abbreviations or acronyms that may be used in this document shall have the adjacent meanings set forth below:

ASU	Accounting Standards Update
ATM	At the Market
BBA	British Bankers' Association
BPS	Basis Points
CIP	Construction in Progress
EPS	Earnings per Share
FASB	Financial Accounting Standards Board
FDIC	Federal Deposit Insurance Corporation
FFO	Funds From Operations
GAAP	U.S. Generally Accepted Accounting Principles
GRESB	Global Real Estate Sustainability Benchmark
HVAC	Heating, Ventilation, and Air Conditioning
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standards
IRS	Internal Revenue Service
JV	Joint Venture
LEED®	Leadership in Energy and Environmental Design
LIBOR	London Interbank Offered Rate
Nareit	National Association of Real Estate Investment Trusts
NAV	Net Asset Value
NYSE	New York Stock Exchange
REIT	Real Estate Investment Trust
RSF	Rentable Square Feet/Foot
SEC	Securities and Exchange Commission
SF	Square Feet/Foot
SoMa	South of Market submarket of San Francisco
U.S.	United States
VIE	Variable Interest Entity

PART I

Forward-looking statements

Certain information and statements included in this annual report on Form 10-K, including, without limitation, statements containing the words “forecast,” “guidance,” “goals,” “projects,” “estimates,” “anticipates,” “believes,” “expects,” “intends,” “may,” “plans,” “seeks,” “should,” or “will,” or the negative of these words or similar words, constitute “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements involve inherent risks and uncertainties regarding events, conditions, and financial trends that may affect our future plans of operations, business strategy, results of operations, and financial position. A number of important factors could cause actual results to differ materially from those included within or contemplated by the forward-looking statements, including, but not limited to, the description of risks and uncertainties in “Item 1A. Risk Factors” in this annual report on Form 10-K. Additional information regarding risk factors that may affect us is included in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this annual report on Form 10-K. Readers of our annual report on Form 10-K should also read our SEC and other publicly filed documents for further discussion regarding such factors.

As used in this annual report on Form 10-K, references to the “Company,” “Alexandria,” “we,” “us,” and “our” refer to Alexandria Real Estate Equities, Inc. and its consolidated subsidiaries. The following discussion should be read in conjunction with the consolidated financial statements and the accompanying notes under “Item 15. Exhibits and Financial Statement Schedules” in this annual report on Form 10-K.

ITEM 1. BUSINESS

Overview

We are a Maryland corporation, formed in October 1994, that has elected to be taxed as a REIT for federal income tax purposes. We are an S&P 500[®] urban office REIT and the first and longest-tenured owner, operator, and developer uniquely focused on collaborative life science, technology, and agtech campuses in AAA innovation cluster locations. We consider AAA locations to be highly desirable for tenancy by life science, technology, and agtech entities because of their close proximity to concentrations of specialized skills, knowledge, institutions, and related businesses. Such locations are generally characterized by high barriers to entry for new landlords, high barriers to exit for tenants, and a limited supply of available space. Founded in 1994, Alexandria pioneered this niche and has since established a significant market presence in key locations, including Greater Boston, San Francisco, New York City, San Diego, Seattle, Maryland, and Research Triangle.

Alexandria develops dynamic urban cluster campuses and vibrant ecosystems that enable and inspire the world’s most brilliant minds and innovative companies to create life-changing scientific and technological breakthroughs. We believe in the utmost professionalism, humility, and teamwork. Alexandria manages its properties through fully integrated regional teams with real estate, life science, technology, and agtech expertise. Our tenants include multinational pharmaceutical companies; public and private biotechnology companies; life science product, service, and medical device companies; digital health, technology companies, and agtech companies; academic and medical research institutions; U.S. government research agencies; non-profit companies; and venture capital firms. Alexandria has a longstanding and proven track record of developing Class A properties clustered in urban life science, technology, and agtech campuses that provide its innovative tenants with highly dynamic and collaborative environments that enhance their ability to successfully recruit and retain world-class talent and inspire productivity, efficiency, creativity, and success. Alexandria also provides strategic risk capital to transformative life science, technology, and agtech companies through its venture capital arm. We believe our unique business model and diligent underwriting ensure a high-quality and diverse tenant base that should result in higher occupancy levels, longer lease terms, higher rental income, higher returns, and greater long-term asset value.

As of December 31, 2019, Alexandria’s total market capitalization was \$26.3 billion and our asset base in North America consisted of 39.2 million SF. The asset base in North America includes 27.0 million RSF of operating properties and 2.1 million RSF of Class A properties undergoing construction, 6.3 million RSF of near-term and intermediate-term development and redevelopment projects, and 3.8 million SF of future development projects. These operating properties and development projects include 36 properties that are held by consolidated real estate joint ventures and six properties that are held by unconsolidated real estate joint ventures. The occupancy percentage of our operating properties in North America was 96.8% as of December 31, 2019. Our 10-year average occupancy rate of operating properties as of December 31, 2019, was 96%. Investment-grade or publicly traded large cap tenants represented 50% of our annual rental revenue in effect as of December 31, 2019. Additional information regarding our consolidated and unconsolidated real estate joint ventures is included in “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this annual report on Form 10-K. Additional information regarding risk factors that may affect us is included in “Item 1A. Risk Factors” and “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this annual report on Form 10-K.

Business objective and strategies

Our primary business objective is to maximize long-term asset value and shareholder returns based on a multifaceted platform of internal and external growth. A key element of our strategy is our unique focus on Class A properties clustered in urban campuses located in AAA innovation cluster locations. These key urban campus locations are characterized by high barriers to entry for new landlords, high barriers to exit for tenants, and a limited supply of available space. They represent highly desirable locations for tenancy by life science, technology, and agtech entities because of their close proximity to concentrations of specialized skills, knowledge, institutions, and related businesses. Our strategy also includes drawing upon our deep and broad real estate, life science, technology, and agtech relationships in order to identify and attract new and leading tenants and to source additional value-creation real estate.

Our tenant base is broad and diverse within the life science, technology, and agtech industries and reflects our focus on regional, national, and international tenants with substantial financial and operational resources. For a more detailed description of our properties and tenants, refer to "Item 2. Properties" in this annual report on Form 10-K. We have an experienced Board of Directors and are led by an executive and senior management team with extensive experience in the real estate, life science, technology, and agtech industries.

Acquisitions

We seek to identify and acquire high-quality properties in our target cluster markets. Critical evaluation of prospective property acquisitions is an essential component of our acquisition strategy. When evaluating acquisition opportunities, we assess a full range of matters relating to the prospective property or properties, including:

- Proximity to centers of innovation and technological advances;
- Location of the property and our strategy in the relevant market;
- Quality of existing and prospective tenants;
- Condition and capacity of the building infrastructure;
- Physical condition of the structure and common area improvements;
- Quality and generic characteristics of the improvements;
- Opportunities available for leasing vacant space and for re-tenanting or renewing occupied space;
- Availability of and/or ability to add appropriate tenant amenities;
- Availability of land for future ground-up development of new space;
- Opportunities to generate higher rent through redevelopment of existing space;
- The property's unlevered yields; and
- Our ability to increase the property's long-term financial returns.

Development, pre-construction, and redevelopment

A key component of our business model is our value-creation development projects. Our development strategy is primarily to pursue selective projects with significant pre-leasing for which we expect to achieve appropriate investment returns and generally match a source of funds for this use. Our value-creation development projects focus on high-quality, generic, and reusable office/laboratory or tech office space to meet the real estate requirements of our diverse group of tenants.

We seek to meet growing demand from our stakeholders and continuously improve the efficiency of our buildings. We have committed to significant building goals to promote wellness and productivity for our buildings' occupants, including targeting a minimum of LEED® Gold certification on all new ground-up construction projects.

Pre-construction activities include entitlements, permitting, design, site work, and other activities preceding commencement of construction of aboveground building improvements, which are focused on reducing the time required to deliver projects to prospective tenants. These critical activities add significant value to our future ground-up development and are required for the vertical construction of buildings. We normally do not commence vertical construction of new projects prior to achieving significant pre-leasing.

Another key component of our business model is our value-creation redevelopment of existing office, warehouse, or shell space, or newly acquired properties, into high-quality, generic, and reusable office/laboratory space that can be leased at higher rental rates. Our redevelopment strategy generally includes significant pre-leasing of projects prior to the commencement of redevelopment.

Non-real estate investments

We also hold equity investments in publicly traded companies, limited partnerships, and privately held entities primarily involved in the life science, technology, and agtech industries. We invest primarily in highly innovative entities whose focus on the development of therapeutic products that advance health and transform patients' lives is aligned with Alexandria's purpose of making a positive and meaningful impact on the health, safety, and well-being of the global community. Our status as a REIT limits our ability to make such non-real estate investments. Therefore, we conduct, and will continue to conduct, our non-real estate investment activities in a manner that complies with REIT requirements.

Balance sheet and financial strategy

We seek to maximize balance sheet liquidity and flexibility, cash flows, and cash available for distribution to our stockholders through the ownership, operation, management, and selective acquisition, development, and redevelopment of office/laboratory and tech office space, as well as the management of our balance sheet. In particular, we seek to maximize balance sheet liquidity and flexibility, cash flows, and cash available for distribution to our stockholders by:

- Maintaining access to diverse sources of capital, including operating cash flows after dividends, incremental debt, asset sales, and other capital such as the sale of equity or joint venture capital;
- Maintaining significant liquidity through borrowing capacity under our unsecured senior line of credit, available commitments under secured construction loans, marketable securities, and cash and cash equivalents;
- Continuing to improve our credit profile;
- Minimizing the amount of near-term debt maturities in a single year;
- Maintaining commitment to long-term capital to fund growth;
- Maintaining low to modest leverage;
- Minimizing variable interest rate risk;
- Generating high-quality, strong, and increasing operating cash flows;
- Selectively selling real estate assets, including land parcels and non-core/"core-like" operating assets, and reinvesting the proceeds into our highly leased value-creation development projects;
- Allocating capital to Class A properties located in collaborative life science, technology, and agtech campuses in AAA urban innovation clusters;
- Maintaining geographic diversity in urban intellectual centers of innovation;
- Selectively acquiring high-quality office/laboratory and tech office space in our target urban innovation cluster submarkets at prices that enable us to realize attractive returns;
- Selectively developing properties in our target urban innovation cluster submarkets;
- Selectively redeveloping existing office, warehouse, or shell space, or newly acquired properties, into high-quality, generic, and reusable office/laboratory space that can be leased at higher rental rates in our target urban innovation cluster submarkets;
- Renewing existing tenant space at higher rental rates to the extent possible;
- Minimizing tenant improvement costs;
- Improving investment returns through the leasing of vacant space and the replacing of existing tenants with new tenants at higher rental rates;
- Executing leases with high-quality tenants and proactively monitoring tenant health;
- Maintaining solid occupancy while attaining high rental rates;
- Realizing contractual rental rate escalations; and
- Implementing effective cost control measures, including negotiating pass-through provisions in tenant leases for operating expenses and certain capital expenditures.

Competition

In general, other office/laboratory and tech office properties are located in close proximity to our properties. The amount of rentable space available in any market could have a material effect on our ability to rent space and on the rental rates we can attain for our properties. In addition, we compete for investment opportunities with other REITs, insurance companies, pension and investment funds, private equity entities, partnerships, developers, investment companies, owners/occupants, and foreign investors. Many of these entities have substantially greater financial resources than we do and may be able to invest more than we can or accept more risk than we are willing to accept. These entities may be less sensitive to risks with respect to the creditworthiness of a tenant or the overall expected returns from real estate investments. In addition, as a result of their financial resources, our competitors may offer more free rent concessions, lower rental rates, or higher tenant improvement allowances in order to attract tenants. These leasing incentives could hinder our ability to maintain or raise rents and attract or retain tenants. Competition may also reduce the number of suitable investment opportunities available to us or may increase the bargaining power of property owners seeking to sell. Competition in acquiring existing properties and land, both from institutional capital sources and from other REITs, has been very strong over the past several years; however, we believe we have differentiated ourselves from our competitors. As the first and only publicly traded urban office REIT to focus primarily on the office/laboratory real estate niche, we provide world-class collaborative life science, technology, and agtech campuses in AAA innovation cluster locations and maintain and cultivate many of the most important and strategic relationships in the life science, technology, and agtech industries.

Financial information about our reportable segment

Refer to Note 2 – “Summary of Significant Accounting Policies” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for information about our one reportable segment.

Regulation

General

Properties in our markets are subject to various laws, ordinances, and regulations, including regulations relating to common areas. We believe we have the necessary permits and approvals to operate each of our properties.

Americans with Disabilities Act

Our properties must comply with Title III of the Americans with Disabilities Act of 1990 (“ADA”) to the extent that such properties are “public accommodations” as defined by the ADA. The ADA may require removal of structural barriers to permit access by persons with disabilities in certain public areas of our properties where such removal is readily achievable. We believe that our properties are in substantial compliance with the ADA and that we will not be required to incur substantial capital expenditures to address the requirements of the ADA. However, noncompliance with the ADA could result in the imposition of fines or an award of damages to private litigants. The obligation to make readily achievable accommodations is an ongoing one, and we will continue to assess our properties and make alterations as appropriate in this respect.

Environmental matters

Under various environmental protection laws, a current or previous owner or operator of real estate may be liable for contamination resulting from the presence or discharge of hazardous or toxic substances at that property and may be required to investigate and clean up contamination located on or emanating from that property. Such laws often impose liability without regard to whether the owner or operator knew of, or was responsible for, the presence of the contaminants, and the liability may be joint and several. Previous owners may have used some of our properties for industrial and other purposes, so those properties may contain some level of environmental contamination. The presence of contamination or the failure to remediate contamination at our properties may expose us to third-party liability or may materially adversely affect our ability to sell, lease, or develop the real estate or to borrow using the real estate as collateral.

Some of our properties may have asbestos-containing building materials. Environmental laws require that asbestos-containing building materials be properly managed and maintained and may impose fines and penalties on building owners or operators for failure to comply with these requirements. These laws may also allow third parties to seek recovery from owners or operators for personal injury associated with exposure to asbestos-containing building materials.

In addition, some of our tenants handle hazardous substances and wastes as part of their routine operations at our properties. Environmental laws and regulations subject our tenants, and potentially us, to liability resulting from such activities. Environmental liabilities could also affect a tenant’s ability to make rental payments to us. We require our tenants to comply with these environmental laws and regulations and to indemnify us against any related liabilities.

Independent environmental consultants have conducted Phase I or similar environmental site assessments on the properties in our portfolio. Site assessments are intended to discover and evaluate information regarding the environmental condition of the surveyed property and surrounding properties and do not generally include soil samplings, subsurface investigations, or an asbestos survey. To date, these assessments have not revealed any material environmental liability that we believe would have a material adverse effect on our business, assets, or results of operations. Nevertheless, it is possible that the assessments on our properties have not revealed all environmental conditions, liabilities, or compliance concerns that may have arisen after the review was completed or may arise in the future; and future laws, ordinances, or regulations may also impose additional material environmental liabilities.

Insurance

With respect to our properties, we carry commercial general liability, all-risk property, and business interruption insurance, including loss of rental income coverage. We select policy specifications and insured limits that we believe to be appropriate given the relative risk of loss, the cost of the coverage, and industry practice. In our opinion, the properties in our portfolio are currently adequately insured. In addition, we have obtained earthquake insurance for certain properties located in the vicinity of known active earthquake zones in an amount and with deductibles we believe are commercially reasonable. We also carry environmental insurance and title insurance policies on our properties. We generally obtain our title insurance policies when we acquire the property, with each policy covering an amount equal to the initial purchase price of each property. Accordingly, any of our title insurance policies may be in an amount less than the current value of the related property. Additional information regarding risk factors that may affect us is included in “Item 1A. Risk Factors” in this annual report on Form 10-K.

Available information

Copies of our annual reports on Form 10-K, quarterly reports on Form 10-Q, and current reports on Form 8-K, including any amendments to the foregoing reports, are available, free of charge, through our corporate website at www.are.com as soon as is reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The current charters of our Board of Directors' Audit, Compensation, and Nominating & Governance Committees, along with our corporate governance guidelines and Business Integrity Policy and Procedures for Reporting Non-Compliance (the "Business Integrity Policy"), are also available on our corporate website. Additionally, any amendments to, and waivers of, our Business Integrity Policy that apply to our Co-Chief Executive Officers or our Chief Financial Officer will be available free of charge on our corporate website in accordance with applicable SEC and NYSE requirements. Written requests should be sent to Alexandria Real Estate Equities, Inc., 26 North Euclid Avenue, Pasadena, California 91101, Attention: Investor Relations. The public may also download these materials from the SEC's website at www.sec.gov.

Employees

As of December 31, 2019, we had 439 employees. We believe that we have good relations with our employees. We have adopted a Business Integrity Policy that applies to all of our employees. Its receipt and review by each employee is documented and verified annually.

ITEM 1A. RISK FACTORS

Overview

The following risk factors may adversely affect our overall business, financial condition, results of operations, and cash flows; our ability to make distributions to our stockholders; our access to capital; or the market price of our common stock, as further described in each risk factor below. In addition to the information set forth in this annual report on Form 10-K, one should carefully review and consider the information contained in our other reports and periodic filings that we make with the SEC. Those risk factors could materially affect our overall business, financial condition, results of operations, and cash flows; our ability to make distributions to our stockholders; our access to capital; or the market price of our common stock. The risks that we describe in our public filings are not the only risks that we face. Additional risks and uncertainties not presently known to us, or that we currently consider immaterial, also may materially adversely affect our business, financial condition, and results of operations. Additional information regarding forward-looking statements is included in the beginning of "Part I" in this annual report on Form 10-K.

Operating factors

We may be unable to identify and complete acquisitions and successfully operate acquired properties.

We continually evaluate the market of available properties and may acquire properties when opportunities exist. Our ability to acquire properties on favorable terms and successfully operate them may be exposed to the following significant risks:

- We may be unable to acquire a desired property because of competition from other real estate investors with significant capital, including both publicly traded REITs and institutional funds.
- Even if we are able to acquire a desired property, competition from other potential acquirers may significantly increase the purchase price or result in other less favorable terms.
- Even if we enter into agreements for the acquisition of properties, these agreements are subject to customary conditions to closing, including completion of due diligence investigations to our satisfaction.
- We may be unable to complete an acquisition because we cannot obtain debt and/or equity financing on favorable terms or at all.
- We may spend more than budgeted amounts to make necessary improvements or renovations to acquired properties;
- We may be unable to quickly and efficiently integrate new acquisitions, particularly acquisitions of operating properties or portfolios of properties, into our existing operations.
- Acquired properties may be subject to reassessment, which may result in higher-than-expected property tax payments;
- Market conditions may result in higher-than-expected vacancy rates and lower-than-expected rental rates.
- We may acquire properties subject to liabilities and without any recourse, or with only limited recourse, with respect to unknown liabilities, such as liabilities for the cleanup of undisclosed environmental contamination; claims by tenants, vendors, or other persons dealing with the former owners of the properties; and claims for indemnification by general partners, directors, officers, and others indemnified by the former owners of the properties.

The realization of any of the above risks could significantly and adversely affect our ability to meet our financial expectations, our financial condition, results of operations, and cash flows, our ability to make distributions to our stockholders, the market price of our common stock, and our ability to satisfy our debt service obligations.

We may suffer economic harm as a result of making unsuccessful acquisitions in new markets.

We may pursue selective acquisitions of properties in markets where we have not previously owned properties. These acquisitions may entail risks in addition to those we face in other acquisitions where we are familiar with the markets, such as the risk of not correctly anticipating conditions or trends in a new market and therefore not being able to generate profit from the acquired property. If this occurs, it could adversely affect our financial condition, results of operations, cash flows, ability to make distributions to our stockholders, ability to satisfy our debt service obligations, and the market price of our common stock.

The acquisition of new properties or the development of new properties may give rise to difficulties in predicting revenue potential.

We may continue to acquire additional properties and/or land and may seek to develop our existing land holdings strategically as warranted by market conditions. These acquisitions and developments could fail to perform in accordance with expectations. If we fail to accurately estimate occupancy levels, rental rates, lease commencement dates, operating costs, or costs of improvements to bring an acquired property or a development property up to the standards established for our intended market position, the performance of the property may be below expectations. Acquired properties may have characteristics or deficiencies affecting their valuation or revenue potential that we have not yet discovered. We cannot assure our stockholders that the performance of properties acquired or developed by us will increase or be maintained under our management.

We may fail to obtain the financial results expected from development or redevelopment projects.

There are significant risks associated with development and redevelopment projects, including the possibility that:

- We may not complete development or redevelopment projects on schedule or within budgeted amounts;
- We may be unable to lease development or redevelopment projects on schedule or within budgeted amounts;
- We may encounter project delays or cancellations due to unavailability of necessary labor and construction materials;
- We may expend funds on, and devote management's time to, development and redevelopment projects that we may not complete;
- We may abandon development or redevelopment projects after we begin to explore them, and as a result, we may lose deposits or fail to recover costs already incurred;
- Market and economic conditions may deteriorate, which can result in lower-than-expected rental rates;
- We may face higher operating costs than we anticipated for development or redevelopment projects, including insurance premiums, utilities, real estate taxes, and costs of complying with changes in government regulations or increases in tariffs;
- We may face higher requirements for capital improvements than we anticipated for development or redevelopment projects, particularly in older structures;
- We may be unable to proceed with development or redevelopment projects because we cannot obtain debt and/or equity financing on favorable terms or at all;
- We may fail to retain tenants that have pre-leased our development or redevelopment projects if we do not complete the construction of these properties in a timely manner or to the tenants' specifications;
- Tenants that have pre-leased our development or redevelopment projects may file for bankruptcy or become insolvent, which may adversely affect the income produced by, and the value of, our properties or require us to change the scope of the project, which may potentially result in higher construction costs and lower financial returns;
- We may encounter delays, refusals, unforeseen cost increases, and other impairments resulting from third-party litigation, natural disasters, or severe weather conditions;
- We may encounter delays or refusals in obtaining all necessary zoning, land use, building, occupancy, and other required government permits and authorizations; and
- Development or redevelopment projects may have defects we do not discover through our inspection processes, including latent defects that may not reveal themselves until many years after we put a property in service.

The realization of any of the above risks could significantly and adversely affect our ability to meet our financial expectations, our financial condition, results of operations, and cash flows, our ability to make distributions to our stockholders, the market price of our common stock, and our ability to satisfy our debt service obligations.

We could default on leases for land on which some of our properties are located or held for future development.

If we default under the terms of a ground lease obligation, we may lose the ownership rights to the property subject to the lease. Upon expiration of a ground lease and all of its options, we may not be able to renegotiate a new lease on favorable terms, if at all. The loss of the ownership rights to these properties or an increase in rental expense could have a material adverse effect on our financial condition, results of operations, and cash flows, and our ability to satisfy our debt service obligations and make distributions to our stockholders, as well as the market price of our common stock. Refer to "Ground Lease Obligations" in the "Sources and Uses of Capital" section under "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" in this annual report on Form 10-K for additional information on our ground lease obligations.

We may not be able to operate properties successfully and profitably.

Our success depends in large part upon our ability to operate our properties successfully. If we are unable to do so, our business could be adversely affected. The ownership and operation of real estate is subject to many risks that may adversely affect our business and our ability to make payments to our stockholders, including the risks that:

- Our properties may not perform as we expect;
- We may have to lease space at rates below our expectations;
- We may not be able to obtain financing on acceptable terms; and
- We may underestimate the cost of improvements required to maintain or improve space to meet standards established for the market position intended for that property.

The realization of any of the above risks could significantly and adversely affect our ability to meet our financial expectations, our financial condition, results of operations, and cash flows, our ability to make distributions to our stockholders, the market price of our common stock, and our ability to satisfy our debt service obligations.

We may not be able to attain the expected return on our investments in real estate joint ventures.

As of December 31, 2019, we had several consolidated and unconsolidated real estate joint ventures in which we shared ownership and decision-making power with one or more parties. Our joint venture partners must agree in order for the applicable joint venture to take specific major actions, including budget approvals, acquisitions, sales of assets, debt financing, execution of lease agreements, and vendor approvals. Under these joint venture arrangements, any disagreements between us and our partners may result in delayed decisions. Our inability to take unilateral actions that we believe are in our best interests may result in missed opportunities and an ineffective allocation of resources and could have an adverse effect on the financial performance of the joint venture and our operating results.

We may experience increased operating costs, which may reduce profitability to the extent that we are unable to pass those costs through to our tenants.

Our properties are subject to increases in operating expenses, including insurance, property taxes, utilities, administrative costs, and other costs associated with security, landscaping, and repairs and maintenance of our properties. As of December 31, 2019, approximately 97% of our leases (on an RSF basis) were triple net leases, which require tenants to pay substantially all real estate and other rent-related taxes, insurance, utilities, common area expenses, and other operating expenses (including increases thereto) in addition to base rent.

In addition, in June 2018, San Francisco voters approved a commercial rent tax measure establishing a new 3.5% gross receipts tax rate on rental revenues received by landlords of commercial properties within the city of San Francisco. The new 3.5% gross receipts tax, and the measure went into effect on January 1, 2019. The new gross receipts tax resulted in an incremental tax liability imposed on our commercial properties in the city of San Francisco, specifically in our Mission Bay/SoMa submarket of San Francisco.

Our triple net leases allow us to pass through, among other costs, substantially all real estate and rent-related taxes to our tenants in the form of additional rent. We cannot be certain that we will be able to continue to negotiate pass-through provisions related to taxes in tenant leases in the future, which could lead to a decrease in our income from rentals. If our operating expenses increase without a corresponding increase in revenues, our profitability could diminish. In addition, we cannot be certain that increased costs will not lead our current or prospective tenants to seek space outside of the city of San Francisco and the state of California, which could significantly hinder our ability to increase our rents or to maintain existing occupancy levels. A repeal of Proposition 13 in California and the 3.5% gross receipts tax rate in the city of San Francisco may significantly increase occupancy costs for some of our tenants and may adversely impact their financial condition, ability to make rental payments, and ability to renew lease agreements, which in turn could adversely affect our financial condition, results of operations, cash flows, and our ability to make distributions to our stockholders.

The cost of maintaining the quality of our properties may be higher than anticipated, which can result in reduced cash flows and profitability.

If our properties are not as attractive to current and prospective tenants in terms of rent, services, condition, or location as properties owned by our competitors, we could lose tenants or suffer lower rental rates. As a result, we may, from time to time, be required to make significant capital expenditures to maintain the competitiveness of our properties. However, there can be no assurances that any such expenditures would result in higher occupancy or higher rental rates or deter existing tenants from relocating to properties owned by our competitors.

Our inability to renew leases or re-lease space on favorable terms as leases expire may significantly affect our business.

Our revenues are derived primarily from rental payments and reimbursement of operating expenses under our leases. If our tenants experience a downturn in their business or other types of financial distress, they may be unable to make timely payments under their leases. Also, if our tenants terminate early or decide not to renew their leases, we may not be able to re-lease the space. Even if tenants decide to renew or lease space, the terms of renewals or new leases, including the cost of any tenant improvements, concessions, and lease commissions, may be less favorable to us than current lease terms. Consequently, we could generate less cash flows from the affected properties than expected, which could negatively impact our business. We may have to divert cash flows generated by other properties to meet our debt service payments, if any, or to pay other expenses related to owning the affected properties.

The inability of a tenant to pay us rent could adversely affect our business.

Our revenues are derived primarily from rental payments and reimbursement of operating expenses under our leases. If our tenants, especially significant tenants, fail to make rental payments under their leases, our financial condition, cash flows, and ability to make distributions to our stockholders could be adversely affected. Additionally, the inability of the U.S. Congress to enact a budget for a fiscal year or the occurrence of partial or complete U.S. government shutdowns may result in financial difficulties for tenants that are dependent on federal funding, which could adversely affect the ability of those tenants to pay us rent.

The bankruptcy or insolvency of a major tenant may also adversely affect the income produced by a property. If any of our tenants becomes a debtor in a case under the U.S. Bankruptcy Code, as amended, we cannot evict that tenant solely because of its bankruptcy. The bankruptcy court may authorize the tenant to reject and terminate its lease with us. Our claim against such a tenant for uncollectible future rent would be subject to a statutory limitation that might be substantially less than the remaining rent actually owed to us under the tenant's lease. Any shortfall in rent payments could adversely affect our cash flows and our ability to make distributions to our stockholders.

We could be held liable for damages resulting from our tenants' use of hazardous materials.

Many of our tenants engage in research and development activities that involve controlled use of hazardous materials, chemicals, and biological and radioactive compounds. In the event of contamination or injury from the use of these hazardous materials, we could be held liable for damages that result. This liability could exceed our resources and any recovery available through any applicable insurance coverage, which could adversely affect our ability to make distributions to our stockholders.

Together with our tenants, we must comply with federal, state, and local laws and regulations governing the use, manufacture, storage, handling, and disposal of hazardous materials and waste products. Failure to comply with these laws and regulations, or changes thereto, could adversely affect our business or our tenants' businesses and their ability to make rental payments to us.

Our properties may have defects that are unknown to us.

Although we thoroughly review the physical condition of our properties before they are acquired, and as they are developed and redeveloped, any of our properties may have characteristics or deficiencies unknown to us that could adversely affect the property's value or revenue potential.

Our properties may contain or develop harmful mold or suffer from other air quality issues, which could lead to liability for adverse health effects and costs to remedy the problem.

When excessive moisture accumulates in buildings or on building materials, mold may grow, particularly if the moisture problem remains undiscovered or is not addressed over a period of time. Some molds may produce airborne toxins or irritants. Indoor air quality issues can also stem from inadequate ventilation, chemical contamination from indoor or outdoor sources, and other biological contaminants such as pollen, viruses, and bacteria. Indoor exposure to airborne toxins or irritants above certain levels may cause a variety of adverse health effects and symptoms, including allergic or other reactions. As a result, the presence of significant mold or other airborne contaminants at any of our properties could require us to undertake a costly remediation program to contain or remove the mold or other airborne contaminants from the affected property or increase indoor ventilation. In addition, the presence of significant mold or other airborne contaminants could expose us to liability from our tenants, employees of our tenants, and others if property damage or health concerns arise.

We may not be able to obtain additional capital to further our business objectives.

Our ability to acquire, develop, or redevelop properties depends upon our ability to obtain capital. The real estate industry has historically experienced periods of volatile debt and equity capital markets and/or periods of extreme illiquidity. A prolonged period in which we cannot effectively access the public debt or equity markets may result in heavier reliance on alternative financing sources to undertake new investments. An inability to obtain debt or equity capital on acceptable terms could delay or prevent us from acquiring, financing, and completing desirable investments and could otherwise adversely affect our business. Also, the issuance of additional shares of capital stock or interests in subsidiaries to fund future operations could dilute the ownership of our then-existing stockholders. Even as liquidity returns to the market, debt and equity capital may be more expensive than in prior years.

We may not be able to sell our properties quickly to raise money.

Investments in real estate are relatively illiquid compared to other investments. Accordingly, we may not be able to sell our properties when we desire or at prices acceptable to us in response to changes in economic or other conditions. In addition, the Internal Revenue Code of 1986, as amended (the "Internal Revenue Code"), limits our ability to sell properties held for less than two years. These limitations on our ability to sell our properties may adversely affect our cash flows, our ability to repay debt, and our ability to make distributions to our stockholders.

Adverse changes in our credit ratings could negatively affect our financing ability.

Our credit ratings may affect the amount of capital we can access, as well as the terms and pricing of any debt we may incur. There can be no assurance that we will be able to maintain our current credit ratings. In the event that our current credit ratings are downgraded or removed, we would most likely incur higher borrowing costs and experience greater difficulty in obtaining additional financing, which in turn would have a material adverse impact on our financial condition, results of operations, cash flows, and liquidity.

We may not be able to refinance our debt, and/or our debt may not be assumable.

Due to the high volume of real estate debt financing in recent years, the real estate industry may require more funds to refinance debt maturities than are available from lenders. This potential shortage of available funds from lenders and stricter credit underwriting guidelines may limit our ability to refinance our debt as it matures or may adversely affect our financial condition, results of operations, cash flows, our ability to make distributions to our stockholders, and the market price of our common stock.

We may not be able to borrow additional amounts through the issuance of unsecured bonds or under our unsecured senior line of credit or commercial paper program.

There is no assurance that we will be able to continue to access the unsecured bond market on favorable terms. Our ability to borrow additional amounts through the issuance of unsecured bonds may be negatively impacted by periods of illiquidity in the bond market.

Aggregate borrowings under our unsecured senior line of credit require compliance with certain financial and non-financial covenants. Borrowings under our unsecured senior line of credit are funded by a group of banks. Our ability to borrow additional amounts under our unsecured senior line of credit and commercial paper program may be negatively impacted by a decrease in cash flows from our properties, a default or cross-default under our unsecured senior line of credit and commercial paper program, non-compliance with one or more loan covenants associated with our unsecured senior line of credit, and non-performance or failure of one or more lenders under our unsecured senior line of credit. In addition, we may not be able to refinance or repay outstanding borrowings on our unsecured senior line of credit or commercial paper program.

Our inability to borrow additional amounts on an unsecured basis could delay us in or prevent us from acquiring, financing, and completing desirable investments, which could adversely affect our business; and our inability to refinance or repay amounts under our unsecured senior line of credit or commercial paper program may adversely affect our cash flows, ability to make distributions to our stockholders, financial condition, and results of operations.

If interest rates rise, our debt service costs will increase and the value of our properties may decrease.

Our unsecured senior line of credit bears interest at variable rates, and we may incur additional variable-rate debt in the future. Additionally, amounts issued under our commercial paper program typically mature in less than 30 days and no later than 397 days from the date of issuance, and would require repayment or refinancing upon maturity. Increases in market interest rates would increase our interest expense under these debt instruments and would increase the costs of refinancing existing indebtedness or obtaining new debt. Additionally, increases in market interest rates may result in a decrease in the value of our real estate and a decrease in the market price of our common stock. Accordingly, these increases could adversely affect our financial condition and our ability to make distributions to our stockholders.

Failure to hedge effectively against interest rate changes may adversely affect our results of operations.

From time to time, we may enter into interest rate hedge agreements to manage some of our exposure to interest rate volatility. Interest rate hedge agreements involve risks, such as the risk that counterparties may fail to honor their obligations under these arrangements. In addition, these arrangements may not be effective in reducing our exposure to changes in interest rates. These risk factors may lead to failure to hedge effectively against changes in interest rates and therefore could adversely affect our results of operations. As of December 31, 2019, we had no interest rate hedge agreements outstanding.

Our unsecured senior line of credit restricts our ability to engage in some business activities.

Our unsecured senior line of credit contains customary negative covenants and other financial and operating covenants that, among other things:

- Restrict our ability to incur additional indebtedness;
- Restrict our ability to make certain investments;
- Restrict our ability to merge with another company;
- Restrict our ability to make distributions to our stockholders;
- Require us to maintain financial coverage ratios; and
- Require us to maintain a pool of qualified unencumbered assets.

Complying with these restrictions may prevent us from engaging in certain profitable activities and constrain our ability to effectively allocate capital. Failure to comply with these restrictions may result in our defaulting on these and other loans, which would likely have a negative impact on our operations, financial condition, and ability to make distributions to our stockholders.

Our debt service obligations may have adverse consequences on our business operations.

We use debt to finance our operations, including the acquisition, development, and redevelopment of properties. Our use of debt may have adverse consequences, including the following:

- Our cash flows from operations may not be sufficient to meet required payments of principal and interest;
- We may be forced to dispose of one or more of our properties, possibly on disadvantageous terms, to make payments on our debt;
- If we default on our debt obligations, the lenders or mortgagees may foreclose on our properties that secure those loans;
- A foreclosure on one of our properties could create taxable income without any accompanying cash proceeds to pay the tax;
- A default under a loan that has cross-default provisions may cause us to automatically default on another loan;
- We may not be able to refinance or extend our existing debt;
- The terms of any refinancing or extension may not be as favorable as the terms of our existing debt;
- We may be subject to a significant increase in the variable interest rates on our unsecured senior line of credit, which could adversely impact our cash flows and operations; and
- The terms of our debt obligations may require a reduction in our distributions to stockholders.

If our revenues are less than our expenses, we may have to borrow additional funds, and we may not be able to make distributions to our stockholders.

If our properties do not generate revenues sufficient to cover our operating expenses, including our debt service obligations and capital expenditures, we may have to borrow additional amounts to cover fixed costs and cash flow needs. This could adversely affect our ability to make distributions to our stockholders. Factors that could adversely affect the revenues we generate from, and the values of, our properties include:

- National, local, and worldwide economic and political conditions;
- Competition from other properties;
- Changes in the life science, technology, and agtech industries;
- Real estate conditions in our target markets;
- Our ability to collect rent payments;
- The availability of financing;
- Changes to the financial and banking industries;
- Changes in interest rate levels;
- Vacancies at our properties and our ability to re-lease space;
- Changes in tax or other regulatory laws;
- The costs of compliance with government regulation;
- The lack of liquidity of real estate investments; and
- Increases in operating costs.

In addition, if a lease at a property is not a triple net lease, we will have greater exposure to increases in expenses associated with operating that property. Certain significant expenditures, such as mortgage payments, real estate taxes, insurance, and maintenance costs, are generally fixed and do not decrease when revenues at the related property decrease.

If we fail to effectively manage our debt obligations, we could become highly leveraged, and our debt service obligations could increase to unsustainable levels.

Our organizational documents do not limit the amount of debt that we may incur. Therefore, if we fail to prudently manage our capital structure, we could become highly leveraged. This would result in an increase in our debt service obligations that could adversely affect our cash flows and our ability to make distributions to our stockholders. Higher leverage could also increase the risk of default on our debt obligations or may result in downgrades to our credit ratings.

Market volatility may negatively affect our business.

From time to time, the capital and credit markets experience volatility. In some cases, the markets have produced downward pressure on stock prices and credit capacity for certain issuers without regard to those issuers' underlying financial and/or operating strength. If market disruption and volatility occur, there can be no assurance that we will not experience an adverse effect, which may be material, on our business, financial condition, and results of operations. Market disruption and volatility may adversely affect the value of the companies in which we hold equity investments, and we may be required to recognize losses in our earnings. Disruptions, uncertainty, or volatility in the capital markets may also limit our access to capital from financial institutions on favorable terms, or altogether, and our ability to raise capital through the issuance of equity securities could be adversely affected by causes beyond our control through extraordinary disruptions in the global economy and financial systems or through other events.

Failure to meet market expectations for our financial performance would likely adversely affect the market price and volatility of our stock.

Our expected financial results may not be achieved, and actual results may differ materially from our expectations. This may be a result of various factors, including, but not limited to:

- The status of the economy;
- The status of capital markets, including availability and cost of capital;
- Changes in financing terms available to us;
- Negative developments in the operating results or financial condition of tenants, including, but not limited to, their ability to pay rent;
- Our ability to re-lease space at similar rates as vacancies occur;
- Our ability to reinvest sale proceeds in a timely manner at rates similar to the rate at which assets are sold;
- Regulatory approval and market acceptance of the products and technologies of tenants;
- Liability or contract claims by or against tenants;
- Unanticipated difficulties and/or expenditures relating to future acquisitions;
- Environmental laws affecting our properties;
- Changes in rules or practices governing our financial reporting; and
- Other legal and operational matters, including REIT qualification and key management personnel recruitment and retention.

Failure to meet market expectations, particularly with respect to earnings estimates, funds from operations per share, operating cash flows, and revenues, would likely result in a decline and/or increased volatility in the market price of our common stock or other outstanding securities.

The price per share of our stock may fluctuate significantly.

The market price per share of our common stock may fluctuate significantly in response to many factors, including, but not limited to:

- The availability and cost of debt and/or equity capital;
- The condition of our balance sheet;
- Actual or anticipated capital requirements;
- The condition of the financial and banking industries;
- Actual or anticipated variations in our quarterly operating results or dividends;
- The amount and timing of debt maturities and other contractual obligations;
- Changes in our net income, funds from operations, or guidance;
- The publication of research reports and articles about us, our tenants, the real estate industry, or the life science, technology, and agtech industries;
- The general reputation of REITs and the attractiveness of their equity securities in comparison to other debt or equity securities (including securities issued by other real estate-based companies);
- General stock and bond market conditions, including changes in interest rates on fixed-income securities, that may lead prospective stockholders to demand a higher annual yield from future dividends;
- Fluctuations from general market volatility;

- Changes in our analyst ratings;
- Changes in our corporate credit rating or credit ratings of our debt or other securities;
- Changes in market valuations of similar companies;
- Adverse market reaction to any additional debt we incur in the future;
- Additions, departures, or other announcements regarding our key management personnel;
- Actions by institutional stockholders;
- Speculation in the press or investment community;
- Terrorist activity adversely affecting the markets in which our securities trade, possibly increasing market volatility and causing the further erosion of business and consumer confidence and spending;
- Government regulatory action and changes in tax laws;
- Fiscal policies or inaction at the U.S. federal government level that may lead to federal government shutdowns or negative impacts on the U.S. economy;
- Global market factors adversely affecting the U.S. economic and political environment;
- The realization of any of the other risk factors included in this annual report on Form 10-K; and
- General market and economic conditions.

Many of the factors listed above are beyond our control. These factors may cause the market price of shares of our common stock to decline, regardless of our financial condition, results of operations, business, or prospects.

Possible future sales of shares of our common stock could adversely affect its market price.

We cannot predict the effect, if any, of future sales of shares of our common stock or the market price of our common stock. Sales of substantial amounts of capital stock (including the conversion or redemption of preferred stock), or the perception that such sales may occur, could adversely affect prevailing market prices for our common stock. Refer to “Other Sources” in the “Sources and Uses of Capital” subsection of the “Capital Resources” section under “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this annual report on Form 10-K.

We have reserved a number of shares of common stock for issuance to our directors, officers, and employees pursuant to our Amended and Restated 1997 Stock Award and Incentive Plan (sometimes referred to herein as our “equity incentive plan”). We have filed a registration statement with respect to the issuance of shares of our common stock pursuant to grants under our equity incentive plan. In addition, any shares issued under our equity incentive plan will be available for sale in the public market from time to time without restriction by persons who are not our “affiliates” (as defined in Rule 144 adopted under the Securities Act of 1933, as amended). Affiliates will be able to sell shares of our common stock subject to restrictions under Rule 144.

Our distributions to stockholders may decline at any time.

We may not continue our current level of distributions to our stockholders. Our Board of Directors will determine future distributions based on a number of factors, including:

- The amount of net cash provided by operating activities available for distribution;
- Our financial condition and capital requirements;
- Any decision to reinvest funds rather than to distribute such funds;
- Our capital expenditures;
- The annual distribution requirements under the REIT provisions of the Internal Revenue Code;
- Restrictions under Maryland law; and
- Other factors our Board of Directors deems relevant.

A reduction in distributions to stockholders may negatively impact our stock price.

Distributions on our common stock may be made in the form of cash, stock, or a combination of both.

As a REIT, we are required to distribute at least 90% of our taxable income to our stockholders. Typically, we generate cash for distributions through our operations, the disposition of assets, including partial interest sales, or the incurrence of additional debt. Our Board of Directors may determine in the future to pay dividends on our common stock in cash, in shares of our common stock, or in a combination of cash and shares of our common stock. For example, we may declare dividends payable in cash or stock at the election of each stockholder, subject to a limit on the aggregate cash that could be paid. Any such dividends would be distributed in a manner intended to count in full toward the satisfaction of our annual distribution requirements and to qualify for the dividends paid deduction. While the IRS privately has ruled that such a dividend would so qualify if certain requirements are met, no assurances can be provided that the IRS would not assert a contrary position in the future. Moreover, a reduction in the cash yield on our common stock may negatively impact our stock price.

We have certain ownership interests outside the U.S. that may subject us to risks different from or greater than those associated with our domestic operations.

We have three operating properties in Canada and one operating property in China. Acquisition, development, redevelopment, ownership, and operating activities outside the U.S. involve risks that are different from those we face with respect to our domestic properties and operations. These risks include, but are not limited to:

- Adverse effects of changes in exchange rates for foreign currencies;
- Challenges and/or taxation with respect to the repatriation of foreign earnings or repatriation of proceeds from the sale of one or more of our foreign investments;
- Changes in foreign political, regulatory, and economic conditions, including nationally, regionally, and locally;
- Challenges in managing international operations;
- Challenges in hiring or retaining key management personnel;
- Challenges of complying with a wide variety of foreign laws and regulations, including those relating to real estate, corporate governance, operations, taxes, employment, and legal proceedings;
- Differences in lending practices;
- Differences in languages, cultures, and time zones;
- Changes in applicable laws and regulations in the U.S. that affect foreign operations;
- Challenges in managing foreign relations and trade disputes that adversely affect U.S. and foreign operations;
- Future partial or complete U.S. federal government shutdowns, trade disagreements with other countries, or uncertainties that could affect business transactions within the U.S. and with foreign entities;
- Changes in tax and local regulations with potentially adverse tax consequences and penalties; and
- Foreign ownership and transfer restrictions.

In addition, our foreign investments are subject to taxation in foreign jurisdictions based on local tax laws and regulations and on existing international tax treaties. We have invested in foreign markets under the assumption that our future earnings in each of those countries will be taxed at the current prevailing income tax rates. There are no guarantees that foreign governments will continue to honor existing tax treaties we have relied upon for our foreign investments or that the current income tax rates in those countries will not increase significantly, thus impacting our ability to repatriate our foreign investments and related earnings.

Investments in international markets may also subject us to risks associated with establishing effective controls and procedures to regulate the operations of new offices and to monitor compliance with U.S. laws and regulations, including the Foreign Corrupt Practices Act and similar foreign laws and regulations. The Foreign Corrupt Practices Act and similar applicable anti-corruption laws prohibit individuals and entities from offering, promising, authorizing, or providing payments or anything of value, directly or indirectly, to government officials in order to obtain, retain, or direct business. Failure to comply with these laws could subject us to civil and criminal penalties that could materially adversely affect our results of operations or the value of our international investments. In addition, if we fail to effectively manage our international operations, our overall financial condition, results of operations, cash flows, and the market price of our common stock could be adversely affected.

Furthermore, we may in the future enter into agreements with non-U.S. entities that are governed by the laws of, and are subject to dispute resolution rules of, another country or region. In some cases, such a country or region might not have a forum that provides us an effective or efficient means for resolving disputes that may arise under these agreements.

We are subject to risks and liabilities in connection with properties owned through partnerships, limited liability companies, and joint ventures.

Our organizational documents do not limit the amount of funds that we may invest in non-wholly owned partnerships, limited liability companies, or joint ventures. Partnership, limited liability company, or joint venture investments involve certain risks, including, but not limited to, the following:

- Upon bankruptcy of non-wholly owned partnerships, limited liability companies, or joint venture entities, we may become liable for the liabilities of the partnership, limited liability company, or joint venture;
- We may share certain approval rights over major decisions with third parties;
- We may be required to contribute additional capital if our partners fail to fund their share of any required capital contributions;
- Our partners, co-members, or joint venture partners might have economic or other business interests or goals that are inconsistent with our business interests or goals and that could affect our ability to lease or re-lease the property, operate the property, or maintain our qualification as a REIT;
- Our ability to sell the interest on advantageous terms when we so desire may be limited or restricted under the terms of our agreements with our partners; and
- We may not continue to own or operate the interests or assets underlying such relationships or may need to purchase such interests or assets at an above-market price to continue ownership.

We generally seek to maintain control of our partnerships, limited liability companies, and joint venture investments in a manner sufficient to permit us to achieve our business objectives. However, we may not be able to do so, and the occurrence of one or more of the events described above could adversely affect our financial condition, results of operations, cash flows, our ability to make distributions to our stockholders, or the market price of our common stock.

Market and other external factors may adversely impact the valuation of our equity investments.

We hold equity investments in certain publicly traded companies, limited partnerships, and privately held entities primarily involved in the life science, technology, and agtech industries. The valuation of these investments is affected by many external factors beyond our control, including, but not limited to, market prices, market conditions, the effect of healthcare reform legislation, prospects for favorable or unfavorable clinical trial results, new product initiatives, the manufacturing and distribution of new products, product safety and efficacy issues, and new collaborative agreements. In addition, partial or complete future government shutdowns that may result in temporary closures of agencies such as the Food and Drug Administration (“FDA”) and SEC may adversely affect the processing of initial public offerings, business operations, financial results, and funding for projects of the companies in which we hold equity investments. Unfavorable developments with respect to any of these factors may have an adverse impact on the valuation of our equity investments.

Market and other external factors may negatively impact the liquidity of our equity investments.

We make and hold investments in privately held life science, technology, and agtech companies. These investments may be illiquid, which could impede our ability to realize the value at which these investments are carried if we are required to dispose of them. The lack of liquidity of these investments may make it difficult for us to sell these investments on a timely basis and may impair the value of these investments. If we are required to liquidate all or a portion of these investments quickly, we may realize significantly less than the amounts at which we had previously valued these investments.

We face risks associated with short-term liquid investments.

From time to time, we may have significant cash balances that we invested in a variety of short-term investments that are intended to preserve principal value and maintain a high degree of liquidity while providing current income. These investments may include (either directly or indirectly) obligations (including certificates of deposit) of banks, money market funds, treasury bank securities, and other short-term securities. Investments in these securities and funds are not insured against loss of principal. Under certain circumstances, we may be required to redeem all or part of these securities or funds at less than par value. A decline in the value of our investments, or a delay or suspension of our right to redeem them, may have a material adverse effect on our results of operations or financial condition and our ability to pay our obligations as they become due.

We could incur significant costs due to the financial condition of our insurance carriers.

We insure our properties with insurance companies we believe have good ratings at the time our policies are put into effect. The financial condition of one or more of the insurance companies we hold policies with may be negatively impacted, which can result in their inability to pay on future insurance claims. Their inability to pay future claims may have a negative impact on our financial results. In addition, the failure of one or more insurance companies may increase the cost of renewing our insurance policies or increase the cost of insuring additional properties and recently developed or redeveloped properties.

Our insurance may not adequately cover all potential losses.

If we experience a loss at any of our properties that is not covered by insurance, that exceeds our insurance policy limits, or that is subject to a policy deductible, we could lose the capital invested in the affected property and, possibly, future revenues from that property. In addition, we could continue to be obligated on any mortgage indebtedness or other obligations related to the affected properties. All properties carry comprehensive liability, fire, extended coverage, and rental loss insurance with respect to our properties, including properties partially owned through joint ventures that are managed by our joint venture partners.

We have obtained earthquake insurance for our properties that are located in the vicinity of active earthquake zones in an amount and with deductibles we believe are commercially reasonable. However, a significant portion of our real estate portfolio is located in seismically active regions, including San Francisco, San Diego, and Seattle, and a damaging earthquake in any of these regions could significantly impact multiple properties. As a result, the amount of our earthquake insurance coverage may be insufficient to cover our losses, and aggregate deductible amounts may be material, which could adversely affect our business, financial condition, results of operations, and cash flows. We also carry environmental insurance and title insurance policies for our properties. We generally obtain title insurance policies when we acquire a property, with each policy covering an amount equal to the initial purchase price of each property. Accordingly, any of our title insurance policies may be in an amount less than the current value of the related property.

Our tenants are also required to maintain comprehensive insurance, including liability and casualty insurance that is customarily obtained for similar properties. There are, however, certain types of losses that we and our tenants do not generally insure

against because they are uninsurable or because it is not economical to insure against them. The availability of coverage against certain types of losses, such as from terrorism or toxic mold, has become more limited and, when available, carries a significantly higher cost. We cannot predict whether insurance coverage against terrorism or toxic mold will remain available for our properties because insurance companies may no longer offer coverage against such losses, or such coverage, if offered, may become prohibitively expensive. We have not had material losses from terrorism or toxic mold at any of our properties.

The loss of services of any of our senior officers could adversely affect us.

We depend upon the services and contributions of relatively few senior officers. The loss of services or contributions of any one of them may adversely affect our business, financial condition, and prospects. We use the extensive personal and business relationships that members of our management have developed over time with owners of office/laboratory and tech office properties and with major tenants in the life science, technology, and agtech industries. We cannot assure our stockholders that our senior officers will remain employed with us.

Competition for skilled personnel could increase labor costs.

We compete with various other companies in attracting and retaining qualified and skilled personnel. We depend on our ability to attract and retain skilled management personnel who are responsible for the day-to-day operations of our company. Competitive pressures may require that we enhance our pay and benefits package to compete effectively for such personnel. We may not be able to offset such additional costs by increasing the rates we charge tenants. If there is an increase in these costs or if we fail to attract and retain qualified and skilled personnel, our business and operating results could be adversely affected.

Failure to maintain effective internal control over financial reporting could have a material adverse effect on our business, results of operations, financial condition, and stock price.

Pursuant to the Sarbanes-Oxley Act of 2002, we are required to provide a report by management on internal control over financial reporting, including management's assessment of the effectiveness of internal control. Changes to our business will necessitate ongoing changes to our internal control systems and processes. Internal control over financial reporting may not prevent or detect misstatement because of its inherent limitations, including the possibility of human error, the circumvention or overriding of controls, or fraud. Therefore, even effective internal controls can provide only reasonable assurance with respect to the preparation and fair presentation of financial statements. If we fail to maintain the adequacy of our internal controls, including any failure to implement required new or improved controls, or if we experience difficulties in their implementation, our business, results of operations, and financial condition could be materially harmed, we could fail to meet our reporting obligations, and there could be a material adverse effect on the market price of our common stock.

If we failed to qualify as a REIT, we would be taxed at corporate rates and would not be able to take certain deductions when computing our taxable income.

If, in any taxable year, we failed to qualify as a REIT:

- We would be subject to federal and state income taxes on our taxable income at regular corporate rates;
- We would not be allowed a deduction for distributions to our stockholders in computing taxable income;
- We would be disqualified from treatment as a REIT for the four taxable years following the year during which we lost qualification, unless we were entitled to relief under the Internal Revenue Code; and
- We would no longer be required by the Internal Revenue Code to make distributions to our stockholders.

As a result of any additional tax liability, we might need to borrow funds or liquidate certain investments in order to pay the applicable tax. Accordingly, funds available for investment or distribution to our stockholders would be reduced for each of the years involved.

Qualification as a REIT involves the application of highly technical and complex provisions of the Internal Revenue Code to our operations and financial results, and the determination of various factual matters and circumstances not entirely within our control. There are only limited judicial or administrative interpretations of these provisions. Although we believe that we have operated in a manner so as to qualify as a REIT, we cannot assure our stockholders that we are or will remain so qualified.

From time to time, we dispose of properties in transactions qualified as Section 1031 Exchanges. If a transaction intended to qualify as a Section 1031 Exchange is later determined by the IRS to be taxable or if we are unable to identify and complete the acquisition of a suitable replacement property to effect a Section 1031 Exchange or if the laws surrounding Section 1031 Exchanges are amended or repealed, we may not be able to dispose of properties on a tax-deferred basis. In such a case, our earnings and profits and our taxable income would increase, which could increase the dividend income and reduce the return of capital to our stockholders. As a result, we may be required to pay additional dividends to stockholders, or if we do not pay additional dividends, our corporate income tax liability could increase and we may be subject to interest and penalties.

We may not be able to participate in certain sales that the IRS characterizes as “prohibited transactions.” The tax imposed on REITs engaging in prohibited transactions is a 100% tax on net income from the transaction. Whether or not the transaction is characterized as a prohibited transaction is a factual matter. Generally, prohibited transactions are sales or other dispositions of property, other than foreclosures, characterized as held primarily for sale to customers in the ordinary course of business. However, a sale will not be considered a prohibited transaction if it meets certain safe harbor requirements. Although we do not intend to participate in prohibited transactions, there is no guarantee that the IRS would agree with our characterization of our properties or that we will meet the safe harbor requirements.

Federal income tax rules are constantly under review by Congress and the IRS. Changes to tax laws could adversely affect our investors or our tenants, and we cannot predict how those changes may affect us in the future. New legislation, U.S. Treasury Department regulations, administrative interpretations, or court decisions could significantly and negatively affect our ability to qualify as a REIT, the federal income tax consequences of such qualification, or an investment in our stock. Also, laws relating to the tax treatment of investment in other types of business entities could change, making an investment in such other entities more attractive relative to an investment in a REIT.

We are dependent on third parties to manage the amenities at our properties.

We retain third-party managers to manage certain amenities at our properties, such as restaurants, conference centers, exercise facilities, and parking garages. Our income from our properties may be adversely affected if these parties fail to provide quality services and amenities with respect to our properties. While we monitor the performance of these third parties, we may have limited recourse if we believe they are not performing adequately. In addition, these third-party managers may operate, and in some cases may own or invest in, properties that compete with our properties, which may result in conflicts of interest. As a result, these third-party managers may have made, and may in the future make, decisions that are not in our best interests.

We rely on a limited number of vendors to provide utilities and certain other services at our properties, and disruption in these services may have a significant adverse effect on our business operations, financial condition, and cash flows.

We rely on a limited number of vendors to provide key services, including, but not limited to, utilities and construction services, at certain of our properties. Our business and property operations may be adversely affected if key vendors fail to adequately provide key services at our properties as a result of natural disasters (such as fires, floods, earthquakes, etc.), power interruptions, bankruptcies, war, acts of terrorism, public health emergencies, cyber attacks, or other unanticipated catastrophic events. If a vendor encounters financial difficulty such as bankruptcy or other events beyond our control that cause it to fail to adequately provide utilities, construction, or other important services, we may experience significant interruptions in service and disruptions to business operations at our properties, incur remediation costs, and become subject to claims and damages to our reputation.

In addition, difficulties encountered by key vendors in providing necessary services at our properties could result in a significant market rate increases for such services. Our triple net leases allow us to pass through substantially all operating expenses and certain capital expenditures to our tenants in the form of additional rent. However, we cannot be certain that we will be able to continue to negotiate pass-through provisions in tenant leases in the future, which could lead to a decrease in our recovery of operating expenses. If our operating expenses increase without a corresponding increase in revenues, our profitability could diminish. In addition, we cannot be certain that increased costs will not lead our current or prospective tenants to seek space elsewhere, which could significantly hinder our ability to increase our rents or to maintain existing occupancy levels. Additionally, this may significantly increase occupancy costs for some of our tenants and may adversely impact their financial condition, ability to make rental payments, and ability to renew their lease agreements.

On January 29, 2019, in response to potential liabilities arising from a series of catastrophic wildfires that occurred in Northern California in 2017 and 2018, PG&E Corporation and its regulated utility subsidiary, Pacific Gas and Electric Company (together, “PG&E”), initiated voluntary reorganization proceedings under Chapter 11 of the U.S. Bankruptcy Code. An examination conducted by the California state fire investigators identified numerous violations by PG&E of state rules for maintaining electric lines and specific problems with upkeep of the transmission line that started the 2018 Camp Fire, the deadliest in California history. On December 17, 2019, the court approved PG&E’s \$13.5 billion settlement with victims of fires linked to its equipment and \$11 billion settlement with insurance creditors, among other settlements. In addition, in December 2019, PG&E and the California Public Utilities Commission, PG&E’s regulator, reached a settlement, under the terms of which PG&E must improve the safety of its electric system by investing in safety upgrades, expanding oversight of its tree-trimming efforts, employing a wildfire safety auditor, evaluating the causes of the fires, and resolving PG&E’s other outstanding issues with the California Public Utilities Commission.

However, PG&E’s bankruptcy plan still faces opposition from California’s Governor, who wants to see a restructured company with a new board of directors that would prioritize safety. PG&E needs the governor’s approval to participate in the California wildfire fund designed to help the state’s utilities that operate safely against rising wildfire risks to cover their liabilities in the event of future fires.

PG&E is the primary public utility company providing electrical and gas service to residential and commercial customers in northern California, including the San Francisco Bay Area. Most of our properties located in our San Francisco market depend on

PG&E for the delivery of these essential services. PG&E has stated that it does not expect any impact to electric or natural gas service for its customers as a result of the Chapter 11 proceedings. While PG&E expects to continue to provide electric and natural gas utilities services during the Chapter 11 process, there is no guarantee that PG&E will be able to sustain safe operations and continue to provide consistent utilities services. During periods of high winds and high fire danger, PG&E has preemptively shut off power to areas of Central and Northern California. The shut-offs were designed to help guard against fires ignited in areas with high winds and dry conditions. PG&E has warned that it may have to employ shut-offs while the utility company addresses maintenance issues. Future shut-offs of power may impact the reliability of access to a stable power supply at our properties and, in turn, adversely impact our tenants' businesses. In addition, there is no guarantee that PG&E's safety measures mandated by regulators will be timely and sufficient to prevent future catastrophic wildfires. While bankruptcies of utilities as large and complex as PG&E are relatively infrequent, based on the experience in other large utility bankruptcy proceedings (including PG&E's own previous Chapter 11 proceedings in 2001-2004) and the course of Chapter 11 practice generally, we currently consider it unlikely that utility service disruptions will occur as a result of the PG&E bankruptcy proceedings. However, in the unexpected event that such service disruptions were to occur at our properties in connection with the bankruptcy proceedings and continue for an extended period, they could result in adverse consequences to us similar to those described earlier in this risk factor.

The realization of any of the above risks could significantly and adversely affect our ability to meet our financial expectations, our financial condition, results of operations, and cash flows, our ability to make distributions to our stockholders, the market price of our common stock, and our ability to satisfy our debt service obligations.

We may change our business policies without stockholder approval.

Our Board of Directors determines all of our material business policies, with management's input, including those related to our:

- Status as a REIT;
- Incurrence of debt and debt management activities;
- Selective acquisition, disposition, development, and redevelopment activities;
- Stockholder distributions; and
- Other policies, as appropriate.

Our Board of Directors may amend or revise these policies at any time without a vote of our stockholders. A change in these policies could adversely affect our business and our ability to make distributions to our stockholders.

There are limits on the ownership of our capital stock under which a stockholder may lose beneficial ownership of its shares and that may delay or prevent transactions that might otherwise be desired by our stockholders.

In order for a company to qualify as a REIT under the Internal Revenue Code, not more than 50% of the value of its outstanding stock may be owned, directly or constructively, by five or fewer individuals or entities (as set forth in the Internal Revenue Code) during the last half of a taxable year. Furthermore, shares of our company's outstanding stock must be beneficially owned by 100 or more persons during at least 335 days of a taxable year of 12 months or during a proportionate part of a shorter taxable year.

In order for us to maintain our qualification as a REIT, among other things, our charter provides for an ownership limit, which prohibits, with certain exceptions, direct or constructive ownership of shares of stock representing more than 9.8% of the combined total value of our outstanding shares of stock by any person, as defined in our charter. Our Board of Directors, in its sole discretion, may waive the ownership limit for any person. However, our Board of Directors may not grant such waiver if, after giving effect to such waiver, we would be "closely held" under Section 856(h) of the Internal Revenue Code. As a condition to waiving the ownership limit, our Board of Directors may require a ruling from the IRS or an opinion of counsel in order to determine our status as a REIT. Notwithstanding the receipt of any such ruling or opinion, our Board of Directors may impose such conditions or restrictions as it deems appropriate in connection with granting a waiver.

Our charter further prohibits transferring shares of our stock if such transfer would result in our being "closely held" under Section 856(h) of the Internal Revenue Code or would result in shares of our stock being owned by fewer than 100 persons.

The constructive ownership rules are complex and may cause shares of our common stock owned directly or constructively by a group of related individuals or entities to be constructively owned by one individual or entity. A transfer of shares to a person who, as a result of the transfer, violates these limits shall be void or these shares shall be exchanged for shares of excess stock and transferred to a trust for the benefit of one or more qualified charitable organizations designated by us. In that case, the intended transferee will have only a right to share, to the extent of the transferee's original purchase price for such shares, in proceeds from the trust's sale of those shares and will effectively forfeit its beneficial ownership of the shares. These ownership limits could delay, defer, or prevent a transaction or a change in control that might involve a premium price for the holders of our common stock or that might otherwise be desired by such holders.

In addition to the ownership limit, certain provisions of our charter and bylaws may delay or prevent transactions that may be deemed to be desirable to our stockholders.

As authorized by Maryland law, our charter allows our Board of Directors to cause us to issue additional authorized but unissued shares of our common stock or preferred stock and to classify or reclassify unissued shares of common or preferred stock without any stockholder approval. Our Board of Directors could establish a series of preferred stock that could delay, defer, or prevent a transaction that might involve a premium price for our common stock or that might, for other reasons, be desired by our common stockholders, or a series of preferred stock that has a dividend preference that may adversely affect our ability to pay dividends on our common stock.

Our charter permits the removal of a director only upon a two-thirds majority of the votes entitled to be cast generally in the election of directors, and our bylaws require advance notice of a stockholder's intention to nominate directors or to present business for consideration by stockholders at an annual meeting of our stockholders. Our charter and bylaws also contain other provisions that may delay, defer, or prevent a transaction or change in control that involves a premium price for our common stock or that, for other reasons, may be desired by our stockholders.

Market and industry factors

We face substantial competition in our target markets.

The significant competition for business in our target markets could have an adverse effect on our operations. We compete for investment opportunities with:

- Other REITs;
- Insurance companies;
- Pension and investment funds;
- Private equity entities;
- Partnerships;
- Developers;
- Investment companies;
- Owners/occupants; and
- Foreign investors, including sovereign wealth funds.

Many of these entities have substantially greater financial resources than we do and may be able to pay more than we can or accept more risk than we are willing to accept. These entities may be less sensitive to risks with respect to the creditworthiness of a tenant or the geographic concentration of their investments. Competition may also reduce the number of suitable investment opportunities available to us or may increase the bargaining power of property owners seeking to sell.

Poor economic conditions in our markets could adversely affect our business.

Our properties are primarily located in the following markets:

- Greater Boston;
- San Francisco;
- New York City;
- San Diego;
- Seattle;
- Maryland; and
- Research Triangle.

As a result of our geographic concentration, we depend upon the local economic and real estate conditions in these markets. We are therefore subject to increased exposure (positive or negative) to economic, tax, and other competitive factors specific to markets in confined geographic areas. Our operations may also be affected if too many competing properties are built in any of these markets. An economic downturn in any of these markets could adversely affect our operations and our ability to make distributions to our stockholders. We cannot assure our stockholders that these markets will continue to grow or remain favorable to the life science, technology, and agtech industries.

Improvements to our properties are significantly more costly than improvements to traditional office space.

Many of our properties generally contain infrastructure improvements that are significantly more costly than improvements to other property types. Although we have historically been able to recover the additional investment in infrastructure improvements through higher rental rates, there is the risk that we will not be able to continue to do so in the future. Typical improvements include:

- Reinforced concrete floors;
- Upgraded roof loading capacity;
- Increased floor-to-ceiling heights;
- Heavy-duty HVAC systems;
- Enhanced environmental control technology;
- Significantly upgraded electrical, gas, and plumbing infrastructure; and
- Laboratory benches.

We are dependent on the life science, technology, and agtech industries, and changes within these industries may adversely impact our revenues from lease payments and our results of operations.

In general, our business strategy is to invest primarily in properties used by tenants in the life science, technology, and agtech industries. Our business could be adversely affected if the life science, technology, and agtech industries are impacted by an economic, financial, or banking crisis, or if the life science, technology, and agtech industries migrate from the U.S. to other countries. Because of our industry focus, events within these industries may have a more pronounced effect on our results of operations and ability to make distributions to our stockholders than if we had more diversified investments. Also, some of our properties may be better suited for a particular life science, technology, or agtech tenant and could require significant modification before we are able to re-lease space to another tenant. Generally, our properties may not be suitable for lease to traditional office tenants without significant expenditures on renovations.

Our ability to negotiate contractual rent escalations on future leases and to achieve increases in rental rates will depend upon market conditions and the demand for office/laboratory and tech office space at the time the leases are negotiated and the increases are proposed.

It is common for businesses in the life science, technology, and agtech industries to undergo mergers or consolidations. Mergers or consolidations of life science, technology, and agtech entities in the future could reduce the RSF requirements of our tenants and prospective tenants, which may adversely impact the demand for office/laboratory and tech office space and our future revenue from lease payments and our results of operations.

Some of our current or future tenants may include high-tech companies in their startup or growth phases of their life cycle. Fluctuations in market confidence vested in these companies or adverse changes in economic conditions may have a disproportionate effect on operations of such companies. Deteriorations in the financial conditions of our tenants may result in our inability to collect rental payments from them and therefore may negatively impact our results of operations.

Our results of operations depend on our tenants' research and development efforts and their ability to obtain funding for these efforts.

Our tenant base includes entities in the pharmaceutical, biotechnology, medical device, life science, technology, agtech, and related industries; academic institutions; government institutions; and private foundations. Our tenants base their research and development budgets on several factors, including the need to develop new products, the availability of government and other funding, competition, and the general availability of resources.

Research and development budgets fluctuate due to changes in available resources, research priorities, general economic conditions, institutional and government budgetary limitations, and mergers and consolidations of entities. Our business could be adversely impacted by a significant decrease in research and development expenditures by either our tenants or the life science, technology, and agtech industries.

Our tenants also include research institutions whose funding is largely dependent on grants from government agencies, such as the National Institutes of Health (the "NIH"), the National Science Foundation, and similar agencies or organizations. U.S. government funding of research and development is subject to the political process, which is often unpredictable. Other programs, such as Homeland Security or defense, could be viewed by the government as higher priorities. Additionally, proposals to reduce or eliminate budgetary deficits have sometimes included reduced allocations to the NIH and other U.S. government agencies that fund research and development activities. Additionally, the inability of the U.S. Congress to enact a budget for a fiscal year or the occurrence of partial or complete U.S. federal government shutdowns may result in temporary closures of agencies such as the Food and Drug Administration (the "FDA") or NIH, which could adversely affect business operations of our tenants who are dependent on government approvals and appropriations. Any shift away from funding of research and development or delays surrounding the approval of government budget

proposals may adversely impact our tenants' operations, which in turn may impact their demand for office/laboratory and tech office space and their ability to make lease payments to us and thus adversely impact our results of operations.

Our life science tenants are subject to a number of risks unique to their industry, including (i) high levels of regulation, (ii) failures in the safety and efficacy of their products, (iii) significant funding requirements for product research and development, and (iv) changes in technology, patent expiration, and intellectual property protection. These risks may adversely affect their ability to make rental payments to us or satisfy their other lease obligations and consequently may materially adversely affect our business, results of operations, financial condition, and stock price.

High levels of regulation

- Some of our tenants develop and manufacture drugs that require regulatory approval, including approval from the FDA, prior to being made, marketed, sold, and used. The regulatory approval process to manufacture and market drugs is costly, typically takes several years, requires validation through clinical trials and the use of substantial resources, and is often unpredictable. A tenant may fail to obtain or may experience significant delays in obtaining these approvals. Even if the tenant obtains regulatory approvals, marketed products will be subject to ongoing regulatory review and potential loss of approvals.
- The ability of some of our tenants to commercialize any future products successfully will depend in part on the coverage and reimbursement levels set by government authorities, private health insurers, and other third-party payers. Additionally, reimbursements may decrease in the future.

Failures in the safety and efficacy of their products

- Some of our tenants developing potential products may find that their products are not effective, or even are harmful, when tested in humans.
- Some of our tenants depend upon the commercial success of certain products. Even if a product made by a tenant is successfully developed and proven safe and effective in human clinical trials, and the requisite regulatory approvals are obtained, subsequent discovery of safety issues with these products could cause product liability events, additional regulatory scrutiny and requirements for additional labeling, loss of approval, withdrawal of products from the market, and the imposition of fines or criminal penalties.
- A drug made by a tenant may not be well accepted by doctors and patients, or may be less effective or accepted than a competitor's drug, even if it is successfully developed.
- The negative results of safety signals arising from the clinical trials of the competitors of our tenants may prompt regulatory agencies to take actions that may adversely affect the clinical trials or products of our tenants.

Significant funding requirements for product research and development

- Some of our tenants require significant funding to develop and commercialize their products and technologies, which funding must be obtained from venture capital firms; private investors; the public markets; companies in the life science industry; or federal, state, and local governments. Such funding may become unavailable or difficult to obtain. The ability of each tenant to raise capital will depend on its financial and operating condition, viability of their products, and the overall condition of the financial, banking, and economic environment, as well as government budget policies.
- Even with sufficient funding, some of our tenants may not be able to discover or identify potential drug targets in humans, or potential drugs for use in humans, or to create tools or technologies that are commercially useful in the discovery or identification of potential drug targets or drugs.
- Some of our tenants may not be able to successfully manufacture their drugs economically, even if such drugs are proven through human clinical trials to be safe and effective in humans.
- Marketed products also face commercialization risk, and tenants may never realize projected levels of product utilization or revenues.
- Negative news regarding the products, the clinical trials, or other business developments of our tenants may cause their stock price or credit profile to deteriorate.

Changes in technology, patent expiration, and intellectual property protection

- Our tenants sell products and services in an industry that is characterized by rapid and significant technological changes, frequent new product and service introductions and enhancements, evolving industry standards, and uncertainty over the implementation of new healthcare reform legislation, which may cause them to lose competitive positions and adversely affect their operations.
- Some of our tenants and their licensors require patent, copyright, or trade secret protection to develop, make, market, and sell their products and technologies. A tenant may be unable to commercialize its products or technologies if patents covering such products or technologies are not issued or are successfully challenged, narrowed, invalidated, or circumvented by third parties, or if the tenant fails to obtain licenses to the discoveries of third parties necessary to commercialize its products or technologies.
- Many of our tenants depend upon patents to provide exclusive marketing rights for their products. As their product patents expire, competitors of these tenants may be able to legally produce and market products similar to those products of our tenants, which could have a material adverse effect on their sales and results of operations.

We cannot assure our stockholders that our life science industry tenants will be able to develop, make, market, or sell their products and technologies due to the risks inherent in the life science industry. Any life science industry tenant that is unable to avoid, or sufficiently mitigate, the risks described above may have difficulty making rental payments to us or satisfying their other lease obligations to us. Such risks may also decrease the credit quality of our life science industry tenants or cause us to expend more funds and resources on the space leased by these tenants than we originally anticipated. The increased burden on our resources due to adverse developments relating to our life science industry tenants may cause us to achieve lower-than-expected yields on the space leased by these tenants. Negative news relating to our more significant life science industry tenants may also adversely impact our stock price.

Our technology industry tenants are subject to a number of risks unique to their industry, including (i) an uncertain regulatory environment, (ii) rapid technological changes, (iii) a dependency on the maintenance and security of the Internet infrastructure, (iv) significant funding requirements for product research and development, and (v) inadequate intellectual property protections. These risks may adversely affect their ability to make rental payments to us or satisfy their other lease obligations, which in turn may materially adversely affect our business, results of operations, financial condition, and stock price.

Uncertain regulatory environment

- Laws and regulations governing the Internet, e-commerce, electronic devices, and other services are evolving. Existing and future laws and regulations and the halting of operations at certain agencies resulting from partial or complete U.S. federal government shutdowns may impede the growth of our technology industry tenants. These laws and regulations may cover, among other areas, taxation, privacy, data protection, pricing, content, copyrights, distribution, mobile communications, business licensing, and consumer protection.

Rapid technological changes

- The technology industry is characterized by rapid changes in customer requirements and preferences, frequent new product and service introductions, and the emergence of new industry standards and practices. A failure to respond in a timely manner to these market conditions could materially impair the operations of our technology industry tenants.

Dependency on the maintenance and security of the Internet infrastructure

- Some of our tenants depend on continued and unimpeded access to the Internet by users of their products and services, as well as access to mobile networks. Internet service providers and mobile network operators may be able to block, degrade, or charge additional fees to these tenants or users.
- The Internet has experienced, and is likely to continue to experience, outages and other delays. These outages and delays, as well as problems caused by cyber attacks and computer malware, viruses, worms, and similar programs, may materially affect the ability of our technology industry tenants to conduct business.
- Security breaches or network attacks may delay or interrupt the services provided by our tenants and could harm their reputations or subject them to significant liability.

Significant funding requirements for product research and development

- Some of our tenants require significant funding to develop and commercialize their products and technologies, which funding must be obtained from venture capital firms; private investors; the public markets; companies in the technology industry; or federal, state, and local governments. Such funding may become unavailable or difficult to obtain. The ability of each tenant to raise capital will depend on its financial and operating condition, viability of their products, and the overall condition of the financial, banking, governmental budget policies, and economic environment.
- Even with sufficient funding, some of our tenants may not be able to discover or identify potential customers or may not be able to create tools or technologies that are commercially useful.
- Some of our tenants may not be able to successfully manufacture their products economically.
- Marketed products also face commercialization risk, and some of our tenants may never realize projected levels of product utilization or revenues.
- Unfavorable news regarding the products or other business developments of our tenants may cause their stock price or credit profile to deteriorate.

Inadequate intellectual property protections

- The products and services provided by some of our tenants are subject to the threat of piracy and unauthorized copying, and inadequate intellectual property laws and other inadequate protections could prevent them from enforcing or defending their proprietary technologies. These tenants may also face legal risks arising out of user-generated content.
- Trademark, copyright, patent, domain name, trade dress, and trade secret protection is very expensive to maintain and may require our technology industry tenants to incur significant costs to protect their intellectual property rights.

We cannot assure our stockholders that our technology industry tenants will be able to develop, make, market, or sell their products and services due to the risks inherent in the technology industry. Any technology industry tenant that is unable to avoid, or sufficiently mitigate, the risks described above may have difficulty making rental payments to us or satisfying their other lease obligations to us. Such risks may also decrease the credit quality of our technology industry tenants or cause us to expend more funds and resources on the space leased by these tenants than we originally anticipated. The increased burden on our resources due to adverse developments relating to our technology industry tenants may cause us to achieve lower-than-expected yields on the space leased by these tenants. Unfavorable news relating to our more significant technology industry tenants may also adversely impact our stock price.

Our agtech industry tenants are subject to a number of risks unique to their industry, including (i) governmental policies affecting the agricultural industry, (ii) seasonality in business, (iii) unavailability of transportation mechanisms for carrying products and raw materials, (iv) changes in costs or constraints on supplies or energy used in operations, (v) strikes or labor slowdowns or labor contract negotiations, and (vi) rapid technological changes in agriculture. These risks may adversely affect their ability to make rental payments to us or satisfy their other lease obligations, which in turn may materially adversely affect our business, results of operations, financial condition, and stock price.

Uncertain regulatory environment

- Laws and regulations governing the Internet, e-commerce, electronic devices, and other services and products developed by the agtech industry are evolving. Existing and future laws and regulations and the halting of operations at certain agencies resulting from partial or complete U.S. federal government shutdowns may impede the growth of our agtech industry tenants. These laws and regulations may cover, among other areas, taxation, privacy, data protection, pricing, content, copyrights, distribution, mobile communications, business licensing, and consumer protection.

Seasonality in business

- Our agtech tenants businesses may fluctuate from time to time due to seasonal weather conditions and other factors out of their control, affecting products and services our agtech tenants' offer.

Unavailability of transportation mechanisms for carrying products and raw materials

- Some of our agtech tenants' businesses depend on transportation services to deliver their products or to deliver raw materials to their clients. If transportation providers are unavailable or fail to deliver our agtech tenant's products in a timely manner, they may be able to manufacture and deliver their services and products on a timely basis.

Changes in costs or constraints on supplies or energy used in operations

- Similarly, if fuel or other energy prices increase, it may increase transportation costs, which could affect our agtech tenants' businesses.

Strikes or labor slowdowns or labor contract negotiations

- Our agtech tenants may face labor strikes, work slowdowns, labor contract negotiations or other job actions from their employees or third party contractors. In the event of a strike, work slowdown or other similar labor unrest, our tenants may not have the ability to adequately staff their businesses, which could have an adverse effect on their operations and revenue.

Rapid technological changes

- The agtech industry is characterized by frequent new product and service introductions, and the emergence of new industry standards and practices. A failure to respond in a timely manner to these market conditions could materially impair the operations of our agtech industry tenants.
- Technological advances in agriculture could decrease the demand for crop nutrients, energy and other crop input products and services our tenants provide. Genetically engineered crops that resist disease and insects could affect the demand for certain of our tenant's products. Demand for fuel could decline as technology allows for more efficient usage of equipment.

We cannot assure our stockholders that our agtech industry tenants will be able to develop, make, market, or sell their products and services due to the risks inherent in the agtech industry. Any agtech industry tenant that is unable to avoid, or sufficiently mitigate, the risks described above may have difficulty making rental payments to us or satisfying their other lease obligations to us. Such risks may also decrease the credit quality of our agtech industry tenants or cause us to expend more funds and resources on the space leased by these tenants than we originally anticipated. The increased burden on our resources due to adverse developments

relating to our agtech industry tenants may cause us to achieve lower-than-expected yields on the space leased by these tenants. Unfavorable news relating to our more significant agtech industry tenants may also adversely impact our stock price.

Government factors

Negative impact on economic growth resulting from the combination of federal income tax policy, debt policy, and government spending may adversely affect our results of operations.

Global macroeconomic conditions affect our tenants' businesses. Instability in the banking and government sectors of the U.S. and/or the negative impact on economic growth resulting from the combination of government tax policy, debt policy, and government spending, may have an adverse effect on the overall economic growth and our future revenue growth and profitability. Volatile, negative, or uncertain economic conditions could undermine business confidence in our significant markets or in other markets and cause our tenants to reduce or defer their spending, which would negatively affect our business. Growth in the markets we serve could be at a slow rate or could stagnate or contract in each case for an extended period of time. Differing economic conditions and patterns of economic growth and contraction in the geographic regions in which we operate and the industries we serve may in the future affect demand for our services. Our revenues and profitability are derived from our tenants in North America, some of which derive significant revenues from their international operations. Ongoing economic volatility and uncertainty affects our business in a number of other ways, including making it more difficult to accurately forecast client demand beyond the short term and to effectively build our revenue and spending plans. Economic volatility and uncertainty are particularly challenging because it may take some time for the effects and resulting changes in demand patterns to manifest themselves in our business and results of operations. Changing demand patterns from economic volatility and uncertainty could have a significant negative impact on our results of operations. These risks may impact our overall liquidity, our borrowing costs, or the market price of our common stock.

Failure of the U.S. federal government to manage its fiscal matters or to raise or further suspend the debt ceiling, and changes in the amount of federal debt, may negatively impact the economic environment and adversely impact our results of operations.

The Budget Control Act of 2011 provided for a reduction of \$1.1 trillion of U.S. federal government discretionary spending over the succeeding decade (later extended through 2023) through a series of automatic, across-the-board spending cuts known as sequestration. Sequestration went into effect on March 1, 2013, and will remain in effect in the absence of further legislative action.

The U.S. federal government has established a limit on the level of federal debt that the U.S. federal government can have outstanding, often referred to as the debt ceiling. The U.S. Congress has authority to raise or suspend the debt ceiling and to approve the funding of U.S. federal government operations within the debt ceiling, and has done both frequently in the past, often on a relatively short-term basis. Following a three-day partial shutdown of the U.S. federal government in January 2018, the U.S. Congress extended the government funding deadline to February 8, 2018. On February 9, 2018, the U.S. President signed the Bipartisan Budget Act of 2018, which temporarily suspended the statutory debt limit through March 1, 2019. A debt limit was reimposed on March 2, 2019, and on July 22, 2019, congressional leaders passed a two-year deal to raise the U.S. borrowing limit, which reduced the threat of default and significantly raised federal spending limits. Absent appropriate action to mitigate increasing government spending and provide fiscal discipline, the U.S. federal government may encounter similar issues that result in a partial or complete shut down and/or default of its existing loans as a result of reaching the debt ceiling. If effective legislation to manage the debt ceiling is not enacted and the debt ceiling is reached, the federal government may stop or delay making payments on its obligations. A failure by the U.S. Congress to raise the debt limit to the extent necessary in future fiscal years would increase the risk of default by the U.S. on its obligations, the risk of a lowering of the credit rating of the U.S. federal government, and the risk of other economic dislocations. If the U.S. government fails to complete its budget process, another federal government shutdown may result. Such a failure, or the perceived risk of such a failure could consequently have a material adverse effect on the financial markets and economic conditions in the U.S. and throughout the world.

An inability of the U.S. federal government to manage its fiscal matters, reduce the duration and scope of sequestration, or manage its debt may result in the loss of economic confidence domestically and globally, reduce investment spending, increase borrowing costs, impact availability and cost of capital, and significantly hinder or reduce economic activity. Furthermore, a failure by the U.S. federal government to enact appropriate fiscal legislation may significantly impact the national and global economic and financial environment and affect our business and the businesses of our tenants. In December 2018, the U.S. Congress failed to enact a budget for the upcoming fiscal year's government operations and the U.S. President rejected a stopgap funding bill to fund the government into early 2019, which resulted in a partial government shutdown that began on December 22, 2018 through January 25, 2019. The shutdown affected certain key agencies at the federal government level, including the FDA and the SEC, resulting in partial closures of operations. The shutdown ended on January 25, 2019, when the U.S. President signed a bill to temporarily reopen the government through February 15, 2019, after which Congress passed an appropriations bill to fund the government through September 30, 2019. In September, 2019, the Senate passed a temporary government-wide bill to provide funding through November 21, 2019. Subsequently, further temporary funding was extended through December 20, 2019, and in December 2019, the Senate passed two appropriations measures to provide funding for the 2020 fiscal year. It is unclear whether

the U.S. federal government will fail to enact a budget in future fiscal years, and if so, it is possible another partial government shutdown may occur.

The shutdown in early 2019 had affected certain key agencies at the federal government level, including the SEC, which closed partial non-essential operations. The SEC operated limited functions to address emergency situations involving market integrity and investor protection. However, the SEC suspended key functions, such as those related to enforcement actions and review of applications for initial public offerings. Future closures of the SEC could result in uncertainty regarding regulatory actions, issuance of new or clarifications of existing rules and regulations, disruptions in the initial public offerings of companies, including those of our tenants and companies in which we hold equity investments, and investigations and enforcement actions by the SEC. During this period, the FDA and certain other science agencies temporarily shut down select non-essential operations. Also during this period, the FDA maintained only operations deemed to be essential public health-related functions and halted the acceptance of new medical product applications and routine regulatory and compliance work for medical products and certain drugs and foods during the shutdown. The long-term impacts resulting from a prolonged closure of the SEC, FDA, and other similar agencies are uncertain and may adversely affect our business operations or our tenants and companies in which we hold equity investments. If economic conditions severely deteriorate as a result of government fiscal gridlock, our operations, or those of our tenants, could be affected, which may adversely impact our financial condition and results of operations. These risks may also impact our overall liquidity, our borrowing costs, or the market price of our common stock.

Monetary policy actions by the U.S. Federal Reserve could adversely impact our financial condition and our ability to make distributions to our stockholders.

During 2017-2018, the U.S. Federal Reserve gradually increased the target range for the federal funds rate. In December 2017, the U.S. Federal Reserve increased the federal funds rate to a range from 1.25% to 1.50%. During each quarter of 2018, the rate was increased by 25 bps per quarter. As of December 31, 2018, the federal funds rate was set at a range from 2.25% to 2.50%. As of December 31, 2019, after a series of rate cuts during 2019, the federal funds rate was set at a range from 1.50% to 1.75%. The U.S. Federal Reserve has not indicated any intention to continue to cut the federal funds rate. Should the U.S. Federal Reserve raise the rate in the future, this will likely result in an increase in market interest rates, which may increase our interest expense under our variable-rate borrowings and the costs of refinancing existing indebtedness or obtaining new debt. In addition, increases in market interest rates may result in a decrease in the value of our real estate and a decrease in the market price of our common stock. Increases in market interest rates may also adversely affect the securities markets generally, which could reduce the market price of our common stock without regard to our operating performance. Any such unfavorable changes to our borrowing costs and stock price could significantly impact our ability to raise new debt and equity capital going forward.

Changes to the U.S. tax laws could have a significant negative impact on the overall economy, our tenants, and our business.

On December 20, 2017, the House of Representatives and the Senate passed a tax reform bill, which the U.S. President signed into law on December 22, 2017 (the "Tax Reform Legislation"). Among other things, the Tax Reform Legislation:

- Restricted the deductibility of interest expense by businesses (generally, to 30% of the business' adjusted taxable income) except, among others, real property businesses electing out of such restriction; generally, we expect our business to qualify as a real property business, but businesses conducted by our taxable REIT subsidiaries may not qualify;
- Required real property businesses to use the less favorable alternative depreciation system to depreciate real property in the event businesses elect to avoid the interest deduction restriction above;
- Restricted the benefits of like-kind exchanges that defer capital gains for tax purposes to exchanges of real property;
- Required accrual method taxpayers to take certain amounts in income no later than the taxable year in which such income is taken into account as revenue in an applicable financial statement prepared under GAAP, which, with respect to certain leases, could accelerate the inclusion of rental income; and
- Generally allowed a deduction for individuals equal to 20% of certain income from pass-through entities, including ordinary dividends distributed by a REIT (excluding capital gain dividends and qualified dividend income).

Many of the provisions in the Tax Reform Legislation expire at the end of 2025.

The Tax Reform Legislation was a far-reaching and complex revision to the existing U.S. federal income tax laws with disparate and, in some cases, countervailing impacts on different categories of taxpayers and industries and will continue to require rulemaking and interpretation in a number of areas. As a result, the long-term impact of the Tax Reform Legislation on the overall economy, government revenues, our tenants, us, and the real estate industry cannot be reliably predicted. Furthermore, the Tax Reform Legislation may negatively impact certain of our tenants' operating results, financial condition, and future business plans. The Tax Reform Legislation may also result in reduced government revenues, and therefore reduced government spending, which may negatively impact some of our tenants that rely on government funding. There can be no assurance that the Tax Reform Legislation will not negatively impact our operating results, financial condition, and future business operations.

Actual and anticipated changes to the regulations of the healthcare system may have a negative impact on the pricing of drugs, the cost of healthcare coverage, and the reimbursement of healthcare services and products.

The FDA and comparable agencies in other jurisdictions directly regulate many critical activities of life science, technology, and healthcare industries, including the conduct of preclinical and clinical studies, product manufacturing, advertising and promotion, product distribution, adverse event reporting, and product risk management. In both domestic and foreign markets, sales of products depend in part on the availability and amount of reimbursement by third-party payers, including governments and private health plans. Governments may regulate coverage, reimbursement, and pricing of products to control cost or affect utilization of products. Private health plans may also seek to manage cost and utilization by implementing coverage and reimbursement limitations. Substantial uncertainty exists regarding the reimbursement by third-party payers of newly approved healthcare products. The U.S. and foreign governments regularly consider reform measures that affect healthcare coverage and costs. Such reforms may include changes to the coverage and reimbursement of healthcare services and products. In particular, there have been recent judicial and Congressional challenges to the Patient Protection and Affordable Care Act of 2010, as amended by the Health Care and Education Reconciliation Act (collectively, the “ACA”), which could have an impact on coverage and reimbursement for healthcare terms and services covered by plans authorized by the ACA. During 2017 several attempts were made to amend the ACA; however, no amendment proposal gained the 50-vote support from the U.S. Senate needed to pass a repeal bill. As a result, in October 2017, The U.S. President issued an Executive Order “Promoting Healthcare Choice and Competition Across the United States.” We do not know how our tenants will be affected (if at all) by this new executive order. Government and other regulatory oversight and future regulatory and government interference with the healthcare systems may adversely impact our tenants’ businesses and our business.

U.S. government tenants may not receive anticipated appropriations, which could hinder their ability to pay us.

U.S. government tenants are subject to government funding. If one or more of our U.S. government tenants fail to receive anticipated appropriations, we may not be able to collect rental amounts due to us. A significant reduction in federal government spending, particularly a sudden decrease due to the recent tax reform or to a sequestration process, which has occurred in recent years, could also adversely affect the ability of these tenants to fulfill lease obligations or decrease the likelihood that they will renew their leases with us. In addition, recent budgetary pressures have resulted in, and may continue to result in, reduced allocations to government agencies that fund research and development activities, such as the NIH. For example, the NIH budget has been, and may continue to be, significantly impacted by the sequestration provisions of the Budget Control Act of 2011, which became effective on March 1, 2013. Past proposals to reduce budget deficits have included reduced NIH and other research and development budgets. Any shift away from the funding of research and development or delays surrounding the approval of government budget proposals may cause our tenants to default on rental payments or delay or forgo leasing our rental space, which could adversely affect our business, financial condition, or results of operations. Additionally, the inability of the U.S. Congress to enact a budget for a fiscal year or the occurrence of partial or complete U.S. federal government shutdowns could adversely impact demand for our services by limiting federal funding available to our tenants and their customers. In addition, defaults under leases with U.S. government tenants are governed by federal statute and not by state eviction or rent deficiency laws. As of December 31, 2019, leases with U.S. government tenants at our properties accounted for approximately 1.3% of our aggregate annual rental revenue in effect as of December 31, 2019.

Some of our tenants may be subject to increasing government price controls and other healthcare cost-containment measures.

Government healthcare cost-containment measures can significantly affect our tenants’ revenue and profitability. In many countries outside the U.S., government agencies strictly control, directly or indirectly, the prices at which our pharmaceutical industry tenants’ products are sold. In a number of European Union (“EU”) Member States, the pricing and/or reimbursement of prescription pharmaceuticals are subject to governmental control, and legislators, policymakers, and healthcare insurance funds continue to propose and implement cost-containing measures to keep healthcare costs down, due in part to the attention being paid to healthcare cost containment and other austerity measures in the EU. In the U.S., our pharmaceutical industry tenants are subject to substantial pricing pressures from state Medicaid programs, private insurance programs, and pharmacy benefit managers. In addition, many state legislative proposals could further negatively affect pricing and/or reimbursement for our pharmaceutical industry tenants’ products. Also, the pricing environment for pharmaceuticals continues to be in the political spotlight in the U.S. Pharmaceutical and medical device product pricing is subject to enhanced government and public scrutiny and calls for reform. Some states have implemented, and other states are considering, pharmaceutical price controls or patient access constraints under the Medicaid program, and some states are considering price-control regimes that would apply to broader segments of their populations who are not Medicaid eligible. We anticipate that pricing pressures from both governments and private payers inside and outside the U.S. will become more severe over time.

Changes in U.S. federal government funding for the FDA, NIH, and other government agencies could hinder their ability to hire and retain key leadership and other personnel, properly administer drug innovation, or prevent new products and services from being developed or commercialized by our life science tenants, which could negatively impact our business.

The ability of the FDA to review and approve new products can be affected by a variety of factors, including budget and funding levels, the ability to hire and retain key personnel, and statutory, regulatory, and policy changes. Average review times at the agency have fluctuated in recent years as a result. In addition, government funding of the NIH and other government agencies that fund research and development activities is subject to the political process, which is inherently fluid and unpredictable.

The ability of the FDA, the NIH, and other government agencies to properly administer their functions is highly dependent on the levels of government funding and the ability to fill key leadership appointments, among various factors. Delays in filling or replacing key positions could significantly impact the ability of the FDA, the NIH, and other agencies to fulfill their functions and could greatly impact healthcare and the drug industry.

In December 2016, the 21st Century Cures Act was signed into law. This legislation is designed to advance medical innovation and empower the FDA with the authority to directly hire positions related to drug and device development and review. In the past, the FDA was often unable to offer key leadership candidates (including scientists) competitive compensation packages as compared to those offered by private industry. The 21st Century Cures Act is designed to streamline the agency's hiring process and enable the FDA to compete for leadership talent by expanding the narrow ranges that are provided in prior compensation structures.

However, any future government proposals to reduce or eliminate budgetary deficits may include reduced allocations to the FDA, the NIH, and other related government agencies. These budgetary pressures may result in a reduced ability by the FDA and the NIH to perform their respective roles and may have a related impact on academic institutions and research laboratories whose funding is fully or partially dependent on both the level and the timing of funding from government sources.

In December 2018, the U.S. Congress failed to enact a budget for the upcoming fiscal year's government operations and the U.S. President rejected a stopgap funding bill to fund the government into early 2019, which resulted in a partial government shutdown that took place from December 22, 2018 through January 25, 2019. During this period, the FDA and certain other science agencies temporarily shut down select non-essential operations. The FDA maintained only operations deemed to be essential public health-related functions and halted the acceptance of new medical product applications and routine regulatory and compliance work for medical products and certain drugs and foods during the shutdown. The shutdown ended on January 25, 2019, when the President signed a bill to temporarily reopen the government through February 15, 2019. After a series of stopgap bills passed to temporarily fund the government, Congress passed appropriations bills to provide funding for the 2020 fiscal year.

Disruptions at the FDA and other agencies, including those caused by the government shutdown, may slow the time necessary for new drugs and devices to be reviewed and/or approved by necessary government agencies and the healthcare and drug industries' ability to deliver new products to the market in a timely manner, which would adversely affect our tenants' operating results and business. Interruptions to the function of the FDA and other government agencies could adversely affect the demand for office/laboratory space and significantly impact our operating results and our business.

Changes in laws and regulations that control drug pricing for government programs may adversely impact our operating results and our business.

The Centers for Medicare & Medicaid Services ("CMS") is the federal agency within the U.S. Department of Health and Human Services that administers the Medicare program and works in partnership with state governments to administer Medicaid. The Medicare Modernization Act of 2003 that went into effect on January 1, 2006 (which also made changes to the public Part C Medicare health plan program), explicitly prohibits government entities from directly negotiating drug prices with manufacturers. Recently, there has been significant public outcry against price increases viewed to be unfair and unwarranted. The U.S. President has endorsed having government programs such as Medicare bid and negotiate the price of drugs directly with drug companies.

Currently, the outcome of potential reforms and changes to government negotiation/regulation to drug pricing is unknown. Changes in policy that limit prices may reduce the financial incentives for the research and development efforts that lead to discovery and production of new therapies and solutions to life-threatening conditions. Negative impacts of new policies could adversely affect our tenants' businesses, including life science and technology companies, which may reduce the demand for office/laboratory space and negatively impact our operating results and our business.

The provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”) may subject us to substantial additional federal regulation and may adversely affect our business, results of operations, cash flows, or financial condition.

There are significant corporate governance- and executive compensation-related provisions in the Dodd-Frank Act that required the SEC to adopt additional rules and regulations in these areas. For example, the Dodd-Frank Act requires publicly traded companies to give stockholders a non-binding vote on executive compensation and so-called “golden parachute” payments. Our efforts to comply with these requirements have resulted in, and are likely to continue to result in, an increase in expenses and a diversion of management’s time from other business activities. In addition, provisions of the Dodd-Frank Act that directly affect other participants in the real estate and capital markets, such as banks, investment funds, and interest rate hedge providers, could have indirect, but material, impacts on our business. The U.S. President has also proposed to repeal certain provisions of the Dodd-Frank Act. Given the uncertainty associated with the Dodd-Frank Act itself and the manner in which its provisions are implemented by various regulatory agencies and through regulations, the full extent of the impact such requirements will have on our future operations is unclear. The provisions of the Dodd-Frank Act may impact the profitability of business activities, require changes to certain business practices, or otherwise adversely affect our business in general.

The ongoing implementation of derivatives regulations could have an adverse impact on our ability to hedge risks associated with our business.

Title VII of the Dodd-Frank Act regulates derivatives transactions, which include certain instruments that we use in our risk management activities. It remains impossible at this time to predict the full effects on our hedging activities of the derivatives-related provisions of the Dodd-Frank Act and rules of the Commodity Futures Trading Commission (“CFTC”) and SEC thereunder, or the timing of such effects. While the CFTC has implemented most of its derivatives-related regulations under the Dodd-Frank Act, it has not yet adopted all of those regulations, and it has proposed revisions to certain of its existing derivatives regulations. The impact of any future new or revised CFTC derivatives regulations, or new or revised CFTC interpretations of existing regulations, is unknown, but they could result in, among other things, increases in the costs to us of swaps and other derivatives contracts, and decreases in the number and/or creditworthiness of available hedge counterparties. Furthermore, at this time the SEC’s regulations for security-based swaps have generally not yet been implemented and their potential impact on our ability to hedge risks cannot yet be known.

In addition, we may enter into hedging transactions with counterparties based in the EU, Canada, or other jurisdictions which, like the U.S., are in the process of implementing regulations for derivatives. Non-U.S. regulations may apply to such derivatives transactions. The potential impact of such non-U.S. regulations is not fully known and may include, among other things, increased costs for our hedging transactions.

Global factors

A global financial crisis, high structural unemployment levels, and other events or circumstances beyond our control may adversely affect our industry, business, results of operations, contractual commitments, and access to capital.

What began initially in 2007 and 2008 as a “subprime” mortgage crisis turned into an extraordinary U.S. and worldwide structural economic and financial crisis, coupled with the rapid decline of the consumer economy. From 2008 through 2010, significant concerns over energy costs, geopolitical issues, the availability and cost of credit, the U.S. mortgage market, and a declining real estate market in the U.S. contributed to increased volatility, diminished expectations for the economy and the markets, and high levels of structural unemployment by historical standards. These factors, combined with volatile oil prices and fluctuating business and consumer confidence, precipitated a steep economic decline. Since 2011, the U.S. economy showed significant signs of improvement, but other economies around the world, including Latin America, continue to demonstrate sluggish, stagnant, or slowing growth. Further, severe financial and structural strains on the banking and financial systems have led to significant lack of trust and confidence in the global credit and financial system. Consumers and money managers have liquidated and may liquidate equity investments, and consumers and banks have held and may hold cash and other lower-risk investments, which has resulted in significant and, in some cases, catastrophic declines in the equity capitalization of companies and failures of financial institutions. Although U.S. bank earnings and liquidity are on the rebound, the potential of significant future bank credit losses creates uncertainty for the lending outlook.

Further downgrades of the U.S. government’s sovereign credit rating and an economic crisis in Europe could negatively impact our liquidity, financial condition, and earnings.

Previous U.S. debt ceiling and budget deficit concerns, together with sovereign debt conditions in Europe, have increased the possibility of additional downgrades of sovereign credit ratings and economic slowdowns. There is no guarantee that future debt ceiling or federal spending legislation will not fail.

Standard & Poor’s Ratings Services lowered its long-term sovereign credit rating on the U.S. from “AAA” to “AA+” in August 2011, which was affirmed in June 2018. Although Standard & Poor’s Ratings Services maintains a stable outlook on the U.S. credit rating, further fiscal impasses within the federal government may result in future downgrades. Further, Moody’s Investor Services, Inc. and Fitch Ratings Inc. each maintain a stable outlook on the U.S. credit rating but have warned that they may downgrade the federal government’s credit rating under certain circumstances. The impact of any further downgrades to the U.S. government’s

sovereign credit rating, or its perceived creditworthiness, is inherently unpredictable and could adversely affect the U.S. and global financial markets and economic conditions.

In addition, certain European nations experienced in the recent past varying degrees of financial stress, including Greece, Ireland, Italy, Portugal, and Spain. Although these economies are continuing to recover or have already gone through a gradual recovery, we do not know whether the economic growth will be slowed by the United Kingdom ("U.K.") leaving the EU or whether the prior sovereign financial difficulties within the EU governments will reemerge with a higher degree of negative impact to the financial markets. Market concerns over the direct and indirect exposure of European banks and insurers to these EU peripheral nations have resulted in a widening of credit spreads and increased costs of funding for some EU financial institutions. There can be no assurance that government or other measures to aid economic recovery will be effective.

These developments, and concerns over the U.S. government's fiscal policies in general, could cause interest rates and borrowing costs to rise, which may negatively impact our ability to access the debt markets on favorable terms. In addition, the lowered credit rating could create broader financial turmoil and uncertainty, which may exert downward pressure on the market price of our common stock. Continued adverse economic conditions could have a material adverse effect on our business, financial condition, and results of operations.

Financial volatility and geopolitical instability outside of the U.S. may adversely impact the U.S. and global economies.

During 2018-2019, global growth weakened, trade tensions heightened, and several developing economies, most notably Argentina and Turkey, experienced financial trouble, soaring inflation and interest rates, and a significant depreciation of local currencies. Economies of developing countries like Venezuela remain in a long-term crisis with current political turmoil exacerbating their economic problems and rendering a bleak near-term outlook. Policies of advanced economies have a profound effect on emerging markets and ramifications of any trade war involving an advanced economy, like that between the U.S. and China, could further contribute to the adverse economic and political conditions of emerging and other developed economies. In addition, there are ongoing security concerns about North Korea and Iran's nuclear weapons and ballistic missile capabilities, uncertainty regarding North Korea and Iran's actions, their relations with the U.S. and the international community in general, which have created a global security issue that may adversely affect international business and economic conditions.

During 2018-2019, disputes on trade policy between the U.S. and China resulted in increased tariffs and escalating tensions between the two countries. On January 15, 2020, the two parties signed a trade deal representing the first phase of trade negotiations between the two countries. The agreement reduces certain existing tariffs, obligates China to purchase additional products from the U.S. during the next two years, and provides for stronger protection of American intellectual property and trade secrets. It is unclear whether both parties will honor the stipulations of the agreement or if future disputes will occur. Future trade disputes may result in the imposition of further tariffs or other retaliatory actions that may affect us, the industry in which we operate, or that of our tenants and vendors.

Additionally, on January 3, 2020, the U.S. President authorized an airstrike against Iran to deter attacks against U.S. embassies, service members, or diplomats. The airstrike killed a top Iranian military general. In response, Iran's foreign minister declared the strike as an act of international terrorism. On January 8, 2020, Iran launched ballistic missiles targeting two U.S. air bases located in Iraq. Following the attacks, the U.S. imposed new sanctions on Iran, targeting the construction, mining, manufacturing, and textiles sectors, which are key sectors of Iran's economy, in an attempt to deny the Iranian government revenues derived from these activities. It is unclear how Iran will respond to the airstrike and resulting death of its military leader or to the newly imposed sanctions. If Iran carries out retaliatory actions against the U.S., the U.S. economy, safety, and lives of U.S. residents and businesses may be significantly impacted, resulting in financial volatility and social instability for those affected. This may include, but not be limited to, our company, tenants, employees, investors, and others located in affected communities in which we hold properties.

It is not possible to predict to what extent regional economic and political instability of emerging economies or trade conflicts may negatively impact other economies around the world, including the U.S. If these macroeconomic and political issues are not managed appropriately, they could lead to currency devaluation, sovereign debt increases, banking crises, and other financial and political turmoil and uncertainty. Continued adverse economic conditions could have a material adverse effect on our business, financial condition, and results of operations.

We are subject to risks from potential fluctuations in exchange rates between the U.S. dollar and foreign currencies.

We have properties and operations in countries where the U.S. dollar is not the local currency, and we thus are subject to international currency risk from the potential fluctuations in exchange rates between the U.S. dollar and the local currency. In particular, a significant decrease or volatility in the value of the Canadian dollar or other currencies in countries where we may have an investment could materially affect our results of operations. We may attempt to mitigate such effects by borrowing in the local foreign currency in which we invest. Any international currency gain recognized with respect to changes in exchange rates may not qualify under gross income tests that we must satisfy annually in order to qualify and maintain our status as a REIT.

Changes in the method of determining LIBOR, or the replacement of LIBOR with an alternative reference rate, may adversely affect interest expense related to outstanding debt.

From time to time, we utilize interest rate hedge agreements to manage a portion of our exposure to variable interest rates. Historically, our interest rate hedge agreements primarily related to our borrowings with variable interest rates based on LIBOR. Beginning in 2008, concerns were raised that some of the member banks surveyed by the BBA in connection with the calculation of daily LIBOR across a range of maturities and currencies may have underreported, overreported, or otherwise manipulated the interbank lending rate applicable to them in order to profit on their derivatives positions or to avoid an appearance of capital insufficiency or adverse reputational or other consequences that might have resulted from reporting interbank lending rates higher than those they actually submitted. A number of BBA member banks have entered into settlements with their regulators and law enforcement agencies with respect to alleged manipulation of LIBOR, and investigations have been instigated by regulators and government authorities in various jurisdictions. Other member banks may also enter into such settlements with, or have proceedings brought by, their regulators or law enforcement agencies in the future. If manipulation of LIBOR occurred, it may have resulted in LIBOR having been artificially lower (or higher) than it would otherwise have been. Any such manipulation could have occurred over a substantial period of time.

On September 28, 2012, British regulators published a report on the review of LIBOR. The report concluded that LIBOR should be retained as a benchmark but recommended a comprehensive reform of LIBOR, including replacing the BBA with a new independent administrator of LIBOR. Based on this report, final rules for the regulation and supervision of LIBOR by the Financial Conduct Authority (“FCA”) were published and came into effect on April 2, 2013 (the “FCA Rules”). In particular, the FCA Rules include requirements that (i) an independent LIBOR administrator monitor and survey LIBOR submissions to identify breaches of practice standards and/or potentially manipulative behavior and (ii) firms submitting data to LIBOR establish and maintain a clear conflict-of-interest policy and appropriate systems and controls. In response, ICE Benchmark Administration Limited (“IBA”) was appointed as the independent LIBOR administrator, effective in early 2014. On July 27, 2017, the FCA announced that it would phase out LIBOR as a benchmark by the end of 2021.

In addition, in November 2014, the U.S. Federal Reserve established a working group composed of large U.S. financial institutions, the Alternative Reference Rates Committee (“ARRC”), to identify a set of alternative interest reference rates to LIBOR. In a May 2016 interim report, the ARRC narrowed its choice to two LIBOR alternatives. The first choice was the Overnight Bank Funding Rate (“OBFR”), which consists of domestic and foreign unsecured borrowing in U.S. dollars. The U.S. Federal Reserve has been calculating and publishing the OBFR since March 2016. The second alternative rate to LIBOR was the Treasury General Collateral Rate, which is composed of repo transactions secured by treasuries or other assets accepted as collateral by the majority of intermediaries in the repo market.

In June 2017, the ARRC selected the Secured Overnight Financing Rate (“SOFR”), a new index calculated by reference to short-term repurchase agreements backed by Treasury securities, as its preferred replacement for U.S. dollar LIBOR. SOFR is observed and backward looking, which stands in contrast to LIBOR under the current methodology, which is an estimated forward-looking rate and relies, to some degree, on the expert judgment of submitting panel members. Given that SOFR is a secured rate backed by government securities, it does not take into account bank credit risk (as is the case with LIBOR). SOFR is therefore likely to be lower than LIBOR and is less likely to correlate with the funding costs of financial institutions. The first publication of SOFR was released by the Federal Reserve Bank of New York in April 2018.

In April 2019, the ARRC published its recommendations on fallback language for syndicated loans, which the ARRC encourages companies to use in new contracts that reference LIBOR in order to minimize market disruptions when LIBOR ceases to exist. The ARRC suggested two alternative fallback language approaches for syndicated loan contracts:

- “Hardwired Approach,” which clearly specifies the SOFR-based successor rate and spread adjustment to be used when LIBOR ceases to exist.
- “Amendment Approach,” which, unlike the Hardwired Approach, does not reference specific rates or spread adjustments but provides a streamlined amendment approach for negotiating a benchmark replacement and introduces clarity with respect to the fallback trigger events and an adjustment to be applied to the successor rate.

Since 2012, we have been closely monitoring developments related to the transition away from LIBOR and have implemented numerous proactive measures to minimize the potential impact of the transition to the Company, specifically:

- We have proactively reduced outstanding LIBOR-based borrowings under our unsecured senior bank term loans and secured construction loans through repayments. From January 2017 to December 2018, we retired approximately \$942.0 million of such debt.
- During the year ended December 31, 2019, we further reduced our exposure to LIBOR as follows:
 - Repaid the \$350.0 million balance and extinguished our unsecured senior bank term loan.
 - Terminated our LIBOR-based interest rate hedge agreements aggregating \$350.0 million in conjunction with the extinguishment of our unsecured senior bank term loan. As a result, we had no outstanding interest rate hedge agreements as of December 31, 2019.
 - Fully repaid outstanding balances aggregating \$193.1 million under our LIBOR-based construction loans.

- During the three months ended September 30, 2019, we established a commercial paper program, under which we have the ability to issue up to \$750.0 million of commercial notes, bearing interest at short term fixed rates, with a maximum maturity of 397 days from the date of issuance. Our commercial paper program is not subjected to LIBOR and will be used for funding short-term working capital needs. As of December 31, 2019, we had no borrowings outstanding under our commercial paper program.
- We continue to prudently manage outstanding borrowings under our unsecured senior line of credit, which represented less than 6% of our total debt balance outstanding as of December 31, 2019. Excluding LIBOR-based debt held by our unconsolidated joint ventures, borrowings under our unsecured senior line of credit represented our only LIBOR-based debt outstanding as of December 31, 2019.
- Our unsecured senior line of credit contains fallback language generally consistent with the ARRC's Amendment Approach, which provides a streamlined amendment approach for negotiating a benchmark replacement and introduces clarity with respect to the fallback trigger events and an adjustment to be applied to the successor rate.
- We continue to monitor developments by the ARRC and other governing bodies involved in LIBOR transition.

We continue to be proactive in managing the risk of disruption associated with the cessation of LIBOR; however, it is not possible to predict the effect of the FCA Rules, any changes in the methods pursuant to which LIBOR is determined, the administration of LIBOR by IBA, and any other reforms to LIBOR that will be enacted in the United Kingdom and elsewhere. In addition, any changes announced by the FCA, the BBA, IBA, the ARRC, or any other successor governance or oversight body, or future changes adopted by such body, in the method pursuant to which LIBOR is determined, as well as manipulative practices or the cessation thereof, may result in a sudden or prolonged increase or decrease in reported LIBOR, which could have an adverse impact on the level of the index. Fluctuation or discontinuation of LIBOR would affect our interest expense and earnings and the fair value of certain of our financial instruments. We also have certain joint ventures that may require variable-rate construction loans with interest based upon LIBOR plus a spread. From time to time, we utilize interest rate hedge agreements to mitigate our exposure to such interest rate risk on a portion of our debt obligations. However, there is no assurance these arrangements will be effective in reducing our exposure to changes in interest rates.

It is unclear whether new methods of calculating LIBOR will be established such that it continues to exist after 2021. When LIBOR ceases to exist, we may need to amend the credit and loan agreements with our lenders that utilize LIBOR as a factor in determining the interest rate based on a new standard that is established, if any. The transition to an alternative rate will require careful and deliberate consideration and implementation so as to not disrupt the stability of financial markets. There is no guarantee that a transition from LIBOR to an alternative will not result in financial market disruptions, significant increases in benchmark rates, or borrowing costs to borrowers, any of which could have an adverse effect on our business, results of operations, financial condition, and stock price.

The transition to SOFR may present challenges, including, but not limited to, the illiquidity of SOFR derivatives markets, which could make it difficult for financial institutions to offer SOFR-based debt products, the determination of the spread adjustment required to convert LIBOR to SOFR (and the related determination of a term structure with different maturities), and the greater volatility of SOFR compared to that of LIBOR. Although daily pricing resets for SOFR have been noted to be more volatile than that of LIBOR, especially at month end, there is no sufficient evidence to establish how SOFR volatility compares to that of LIBOR. Whether or not SOFR attains market acceptance as a LIBOR replacement tool remains in question. As such, the future of LIBOR and potential alternatives at this time remains uncertain.

Adoption of the Basel III standards and other regulatory standards affecting financial institutions may negatively impact our access to financing or affect the terms of our future financing arrangements.

In response to various financial crises and the volatility of financial markets, the Basel Committee on Banking Supervision (the "Basel Committee") adopted the Basel III regulatory capital framework ("Basel III" or the "Basel III Standards"). The final package of Basel III reforms was approved by the G20 leaders in November 2010. In January 2013, the Basel Committee agreed to delay implementation of the Basel III Standards and expanded the scope of assets permitted to be included in certain banks' liquidity measurements. U.S. banking regulators have elected to implement substantially all of the Basel III Standards, with implementation of Basel III commencing in 2014 and scheduled to be incrementally implemented through 2019.

Since approving the Basel III Standards, U.S. regulators also issued rules that impose upon the most systemically significant banking organizations in the U.S. supplementary leverage ratio standards (the "SLR Standards") more stringent than those of the Basel III Standards. In addition, the Federal Reserve Board has adopted a final rule that establishes a methodology to identify whether a U.S. bank holding company is a global systemically important banking organization ("GSIB"). Any firm identified as a GSIB would be subject to a risk-based capital surcharge that is calibrated based on its systemic risk profile. Under the final rule, the capital surcharge began phasing in on January 1, 2016, and became fully effective on January 1, 2019.

On September 3, 2014, U.S. banking regulators issued a final rule to implement the Basel Committee's liquidity coverage ratio (the "LCR") in the U.S. (the "LCR Final Rule"). The LCR is intended to promote the short-term resilience of internationally active banking organizations to improve the banking industry's ability to absorb shocks arising from idiosyncratic or market stress, and to improve the measurement and management of liquidity risk. The LCR Final Rule contains requirements that are in certain respects more stringent than the Basel Committee's LCR. The LCR measures an institution's high-quality liquid assets against its net cash outflows. Under the LCR Final Rule, the LCR transition period occurred from 2015 through 2017.

U.S. regulators have also issued and proposed rules that impose additional restrictions on the business activities of financial institutions, including their trading and investment activities. For example, with effect in April 2014, U.S. regulators adopted a final rule implementing a section of the Dodd-Frank Act that has become known as the "Volcker Rule." The Volcker Rule generally restricts certain U.S. and foreign financial institutions from engaging in proprietary trading and from investing in sponsoring or having certain relationships with "covered funds," which include private equity funds and hedge funds. Amendments effective in January 2020 have provided a certain level of regulatory relief, particularly pertaining to proprietary trading restrictions, by tailoring the Volcker Rule's application, simplifying certain standards and requirements, and reducing compliance burden. Additional amendments related to "covered funds" are expected. The effects of the Volcker Rule are uncertain, but it is in any event likely to curtail various banking activities, which in turn could result in uncertainties in the financial markets.

The implementation of the Basel III Standards, the SLR Standards, the GSIB capital surcharge, the LCR Final Rule, the Volcker Rule, and other similar rules and regulations could cause an increase in capital requirements for, and place other financial constraints on, both U.S. and foreign financial institutions from which we borrow, which may negatively impact our access to financing or affect the terms of our future financing arrangements.

Significant developments stemming from the recent U.S. presidential election, outcomes from impeachment procedures, or the U.K.'s referendum on membership in the EU could have a material adverse effect on us.

During his administration, President Trump has expressed apprehension toward existing trade agreements, such as the North American Free Trade Agreement ("NAFTA"), and has imposed significant increases on tariffs on goods imported into the U.S., particularly from China, Mexico, and Canada. The U.S., Mexico, and Canada negotiated and reached an agreement for a new United States-Mexico-Canada Agreement ("USMCA"), which replaces NAFTA and, as of the date of this report, is signed but not yet ratified. Mr. Trump has also spearheaded significant efforts to repeal and replace the Affordable Care Act, and government negotiation/regulation of drug prices paid by government programs.

On December 18, 2019, the U.S. House of Representatives voted on and passed two articles of impeachment against President Trump for abuse of power and obstruction of Congress relating to the President's effort to solicit Ukraine's interference in the 2020 election while withholding military aid. Senate impeachment proceedings are ongoing, during which the Senate will determine whether or not to convict President Trump and remove him from office. It is unclear what the length, outcome, and effects of the trial will be, or how the proceedings will impact the U.S. economy, political environment, and upcoming U.S. presidential election in 2020. Any changes in U.S. social, political, regulatory and economic conditions or laws and policies governing the health care system and drug prices, foreign trade, manufacturing, and development and investment in the territories and countries where we or our tenants operate could adversely affect our operating results and our business.

Additionally, on June 23, 2016, the U.K. held a referendum and voted in favor of leaving the EU (known as "Brexit"). The U.K. government initiated the official EU withdrawal process on March 29, 2017, and the exit from the EU was expected to occur by the end of March 2019. However, the withdrawal was extended several times due to deadlock in negotiations. On January 29, 2020, the U.K. Parliament approved a withdrawal agreement submitted on January 22, 2020, and the U.K. officially withdrew from the EU on January 31, 2020. There is a transition period through December 2020, with an option to extend an additional one to two years, to allow for businesses and individuals to adjust to its changes, during which all EU regulations will continue to apply to the U.K. Trade negotiations are expected to begin in early March 2020, but the nature of the economic relationship between the EU and U.K. remains uncertain, and there is no guarantee that both parties will be able to reach an agreement before the transition period expires. This Brexit decision has created political and economic uncertainty, particularly in the U.K. and the EU, and this uncertainty may last for years. Our business could be affected during this period of uncertainty, and perhaps longer, by the impact of the U.K. referendum. In addition, our business could be negatively affected by new trade agreements between the U.K. and other countries, including the U.S., and by the possible imposition of trade or other regulatory barriers in the U.K. These possible negative impacts, and others resulting from the U.K.'s withdrawal from the EU, may adversely affect our operating results and our tenants' businesses.

Other factors

Changes in laws, regulations, and financial accounting standards may adversely affect our reported results of operations.

As a response, in large part, to perceived abuses and deficiencies in current regulations believed to have caused or exacerbated the recent global financial crisis, legislative, regulatory, and accounting standard-setting bodies around the world are engaged in an intensive, wide-ranging examination and rewriting of the laws, regulations, and accounting standards that have constituted the basic playing field of global and domestic business for several decades. In many jurisdictions, including the U.S., the legislative and regulatory response has included the extensive reorganization of existing regulatory and rule-making agencies and organizations, and the establishment of new agencies with broad powers. This reorganization has disturbed longstanding regulatory and industry relationships and established procedures.

The rule-making and administrative efforts have focused principally on the areas perceived as having contributed to the financial crisis, including banking, investment banking, securities regulation, and real estate finance, with spillover impacts on many other areas. These initiatives have created a degree of uncertainty regarding the basic rules governing the real estate industry, and many other businesses, that is unprecedented in the U.S. at least since the wave of lawmaking, regulatory reform, and government reorganization that followed the Great Depression.

The global financial crisis and the aggressive reaction of the government and accounting profession thereto have occurred against a backdrop of increasing globalization and internationalization of financial and securities regulation that began prior to the recent financial crisis. As a result of this ongoing trend, financial and investment activities previously regulated almost exclusively at a local or national level are increasingly being regulated, or at least coordinated, on an international basis, with national rule-making and standard-setting groups relinquishing varying degrees of local and national control to achieve more uniform regulation and reduce the ability of market participants to engage in regulatory arbitrage between jurisdictions. This globalization trend has continued, arguably with an increased sense of urgency and importance, since the financial crisis.

This high degree of regulatory uncertainty, coupled with considerable additional uncertainty regarding the underlying condition and prospects of global, domestic, and local economies, has created a business environment that makes business planning and projections even more uncertain than is ordinarily the case for businesses in the financial and real estate sectors.

In the commercial real estate sector in which we operate, the uncertainties posed by various initiatives of accounting standard-setting authorities to fundamentally rewrite major bodies of accounting literature constitute a significant source of uncertainty as to the basic rules of business engagement. Changes in accounting standards and requirements, including the potential requirement that U.S. public companies prepare financial statements in accordance with international accounting standards and the adoption of accounting standards likely to require the increased use of "fair value" measures, may have a significant effect on our financial results and on the results of our tenants, which would in turn have a secondary impact on us. New accounting pronouncements and interpretations of existing pronouncements are likely to continue to occur at an accelerated pace as a result of recent Congressional and regulatory actions and continuing efforts by the accounting profession itself to reform and modernize its principles and procedures.

Although we have not been as directly affected by the wave of new legislation and regulation as banks and investment banks, we may also be adversely affected by new or amended laws or regulations; by changes in federal, state, or foreign tax laws and regulations; and by changes in the interpretation or enforcement of existing laws and regulations. In the U.S., the financial crisis and continuing economic slowdown prompted a variety of legislative, regulatory, and accounting profession responses.

The federal legislative response culminated in the enactment on July 21, 2010, of the Dodd-Frank Act. The Dodd-Frank Act contains far-reaching provisions that substantially revise, or provide for the revision of, longstanding, fundamental rules governing the banking and investment banking industries and provide for the broad restructuring of the regulatory authorities in these areas. The Dodd-Frank Act has resulted in, and is expected to continue to result in, profound changes in the ground rules for financial business activities in the U.S.

To a large degree, the impacts of the legislative, regulatory, and accounting reforms to date are still not clear. Many of the provisions of the Dodd-Frank Act have extended implementation periods and delayed effective dates and will require extensive rule making by regulatory authorities. While we do not currently expect the Dodd-Frank Act to have a significant impact on our business activities, the Dodd-Frank Act's impact on us may not be known for an extended period of time. The Dodd-Frank Act, including current and future rules implementing its provisions and the interpretation of those rules, along with other legislative and regulatory proposals directed at the financial or real estate industry or affecting taxation that are proposed or pending in the U.S. Congress, may limit our revenues, impose fees or taxes on us, and/or intensify the regulatory framework within which we operate in ways that are not currently identifiable. The Dodd-Frank Act also has resulted in, and is expected to continue to result in, substantial changes and dislocations in the banking industry and the financial services sector in ways that could have significant effects on, for example, the availability and pricing of unsecured credit, commercial mortgage credit, and derivatives, such as interest rate swaps, which are important aspects of our business. Accordingly, new laws, regulations, and accounting standards, as well as changes to, or new interpretations of, currently accepted accounting practices in the real estate industry, may adversely affect our results of operations.

We may incur significant costs if we fail to comply with laws or if laws change.

Our properties are subject to many federal, state, and local regulatory requirements and to state and local fire, life-safety, and other requirements. If we do not comply with all of these requirements, we may have to pay fines to government authorities or damage awards to private litigants. We do not know whether these requirements will change or whether new requirements will be imposed. Changes in these regulatory requirements could require us to make significant unanticipated expenditures. These expenditures could have an adverse effect on us and our ability to make distributions to our stockholders.

For example, the California Safe Drinking Water and Toxic Enforcement Act, also referred to as Proposition 65, requires “clear and reasonable” warnings be given to persons who are exposed to chemicals known to the State of California to cause cancer or reproductive toxicity. We believe that we comply with Proposition 65 requirements; however, there can be no assurance that we will not be adversely affected by litigation or regulatory enforcement relating to Proposition 65. In addition, there can be no assurance that the costs of compliance with new environmental laws and regulations will not be significant or will not adversely affect our ability to meet our financial expectations, our financial condition, results of operations, and cash flows.

We may incur significant costs in complying with the Americans with Disabilities Act and similar laws.

Under the ADA, places of public accommodation and/or commercial facilities must meet federal requirements related to access and use by disabled persons. We may be required to make substantial capital expenditures at our properties to comply with this law. In addition, non-compliance could result in the imposition of fines or an award of damages to private litigants.

A number of additional federal, state, and local laws and regulations exist regarding access by disabled persons. These regulations may require modifications to our properties or may affect future renovations. These expenditures may have an adverse impact on overall returns on our investments.

We face possible risks and costs associated with the effects of climate change and severe weather.

We cannot predict the rate at which climate change will progress. However, the physical effects of climate change could have a material adverse effect on our properties, operations, and business. For example, most of our properties are located along the east and west coasts of the U.S. To the extent that climate change impacts changes in weather patterns, our markets could experience severe weather, including hurricanes, severe winter storms, and coastal flooding due to increases in storm intensity and rising sea levels. Over time, these conditions could result in declining demand for space at our properties, delays in construction, resulting in increased construction costs, or in our inability to operate the buildings at all. Climate change and severe weather may also have indirect effects on our business by increasing the cost of, or decreasing the availability of, property insurance on terms we find acceptable, by increasing the cost of energy, maintenance, repair of water and/or wind damage, and snow removal at our properties.

Although Congress has not yet enacted comprehensive federal legislation to address climate change, numerous states and municipalities have adopted laws and policies on climate change and emission reduction targets. For example, in July 2019, the Climate Leadership and Community Protection Act was signed into law in New York, establishing a statewide framework to reduce net greenhouse gas emissions to zero by 2050. Also, in May 2019, New York City enacted the Climate Mobilization Act aimed at reducing greenhouse gas emissions and will apply to commercial and residential buildings. In September 2018, SB 100 was signed into law in California, accelerating the state’s renewable portfolio standard target dates, and setting a policy of meeting 100% of retail sales from eligible renewables and zero-carbon resources by December 31, 2045. Changes in federal, state and local legislation and regulation based on concerns about climate change could result in increased capital expenditures on our existing properties and our new development properties (for example, to improve their energy efficiency and/or resistance to severe weather) without a corresponding increase in revenue, resulting in adverse impacts to our net income.

There can be no assurance that climate change and severe weather will not have a material adverse effect on our properties, operations, or business.

We may incur significant costs in complying with environmental laws.

Federal, state, and local environmental laws and regulations may require us, as a current or prior owner or operator of real estate, to investigate and clean up hazardous or toxic substances or petroleum products released at or from any of our properties. The cost of investigating and cleaning up contamination could be substantial and could exceed the amount of any insurance coverage available to us. In addition, the presence of contamination, or the failure to properly clean it up, may adversely affect our ability to lease or sell an affected property, or to borrow funds using that property as collateral.

Under environmental laws and regulations, we may have to pay government entities or third parties for property damage and for investigation and cleanup costs incurred by those parties relating to contaminated properties regardless of whether we knew of or caused the contamination. Even if more than one party was responsible for the contamination, we may be held responsible for all of the

cleanup costs. In addition, third parties may sue us for damages and costs resulting from environmental contamination, or jointly responsible parties may contest their responsibility or be financially unable to pay their share of such costs.

Environmental laws also govern the presence, maintenance, and removal of asbestos-containing building materials. These laws may impose fines and penalties on us for the release of asbestos-containing building materials and may allow third parties to seek recovery from us for personal injury from exposure to asbestos fibers. We have detected asbestos-containing building materials at some of our properties, but we do not expect that they will result in material environmental costs or liabilities for us.

Environmental laws and regulations also require the removal or upgrading of certain underground storage tanks and regulate:

- The discharge of stormwater, wastewater, and any water pollutants;
- The emission of air pollutants;
- The generation, management, and disposal of hazardous or toxic chemicals, substances, or wastes; and
- Workplace health and safety.

Many of our tenants routinely handle hazardous substances and wastes as part of their operations at our properties. Environmental laws and regulations subject our tenants, and potentially us, to liability resulting from these activities. Environmental liabilities could also affect a tenant's ability to make rental payments to us. We require our tenants to comply with these environmental laws and regulations and to indemnify us against any related liabilities.

Independent environmental consultants have conducted Phase I or similar environmental assessments at our properties. We intend to use consultants to conduct similar environmental assessments on our future acquisitions. This type of assessment generally includes a site inspection, interviews, and a public records review, but no subsurface sampling. These assessments and certain additional investigations of our properties have not to date revealed any environmental liability that we believe would have a material adverse effect on our business, assets, or results of operations.

Additional investigations have included, as appropriate:

- Asbestos surveys;
- Radon surveys;
- Lead-based paint surveys;
- Mold surveys;
- Additional public records review;
- Subsurface sampling; and
- Other testing.

Nevertheless, it is possible that the assessments on our current properties have not revealed, and that assessments on future acquisitions will not reveal, all environmental liabilities. Consequently, there may be material environmental liabilities of which we are unaware that may result in substantial costs to us or our tenants and that could have a material adverse effect on our business.

Environmental, health, or safety matters are subject to evolving regulatory requirements. Costs and capital expenditures relating to the evolving requirements depend on the timing of the promulgation and enforcement of new standards. As discussed in the immediately preceding risk factor, due to concern over the risks of climate change, a more restrictive regulatory framework to reduce greenhouse gas pollution might be implemented, including the adoption of carbon taxes, restrictive permitting, and increased efficiency standards. These requirements could make our operations more expensive and lengthen our project times. The costs of complying with evolving regulatory requirements, including greenhouse gas regulations and policies, could negatively impact our financial results. Moreover, changes in environmental regulations could inhibit or interrupt our operations, or require modifications to our facilities. Accordingly, environmental, health, or safety regulatory matters could result in significant unanticipated costs or liabilities and could have a material adverse effect on our business, financial condition, results of operations, cash flows, and the market price of our common stock.

We may be unable to meet our sustainability goals.

We seek to make a positive and meaningful impact on the health, safety, and well-being of our tenants, stockholders, employees, and the communities in which we live and work. In support of these efforts, we set specific sustainability goals to reduce the environmental impact of buildings in operation and for new ground-up construction projects. There are significant risks that may prevent us from achieving these goals, including the possibility that:

- Change in market conditions may affect our ability to deploy capital for projects that reduce energy consumption, greenhouse gas pollution and potable water consumption, and provide waste savings.
- Our tenants might be unwilling or unable to accept potential incremental expenses associated with our sustainability programs, including expenses to comply with requirements stipulated under building certification standards such as LEED, WELL, and Fitwel.

The realization of any of the above risks could significantly impact our reputation, our ability to continue developing properties in markets where high levels of LEED certification contribute to our efforts to obtain building permits and entitlements, and our ability to attract tenants who include LEED certification among their priorities when selecting a location to lease.

We may invest or spend the net proceeds from the offering of our unsecured senior notes payable due in January 2024 and April 2026 in ways with which investors may not agree and in ways that may not earn a profit.

The net proceeds from the offering of our unsecured senior notes payable due in January 2024 and our unsecured senior notes payable due in April 2026 (collectively “the Green Bonds”) will be used to fund, in whole or in part, Eligible Green Projects (as defined below), including the development and redevelopment of such projects. The net proceeds from this offering were initially used to reduce the outstanding balance on our unsecured senior line of credit. We then allocated the funds to recently completed and future Eligible Green Projects.

There can be no assurance that the projects funded with the proceeds from the Green Bonds will meet investor criteria and expectations regarding environmental impact and sustainability performance. In particular, no assurance is given that the use of such proceeds for any Eligible Green Projects will satisfy, whether in whole or in part, any present or future investor expectations or requirements as regards to any investment criteria or guidelines with which such investor or its investments are required to comply, whether by any present or future applicable law or regulations or by its own bylaws or other governing rules or investment portfolio mandates (in particular with regard to any direct or indirect environmental, sustainability, or social impact of any projects or uses, the subject of or related to, the relevant Eligible Green Projects). Adverse environmental or social impacts may occur during the design, construction, and operation of the projects, or the projects may become controversial or criticized by activist groups or other stakeholders. In addition, although we will limit the use of proceeds from the Green Bonds to Eligible Green Projects, there can be no assurance that one or more development, redevelopment, and tenant improvement projects that we expect will receive a LEED certification will actually receive such certification.

“Eligible Green Projects” are defined as:

- New class A development properties that have received or are expected to receive Gold or Platinum LEED certification;
- Existing class A redevelopment properties that have received or are expected to receive Gold or Platinum LEED certification; and
- Tenant improvements that have received or are expected to receive Gold or Platinum LEED certification.

Eligible Green Projects include projects with disbursements made in the three years preceding the applicable issue date of the Green Bonds. We intend to spend the remaining net proceeds from the sale of the Green Bonds within two years following the applicable issue date of the Green Bonds. LEED is a voluntary, third party building certification process developed by the U.S. Green Building Council (“USGBC”), a non-profit organization. The USGBC developed the LEED certification process to (i) evaluate the environmental performance from a whole-building perspective over a building’s life cycle, (ii) provide a definitive standard for what constitutes a “green building,” (iii) enhance environmental awareness among architects and building contractors, and (iv) encourage the design and construction of energy-efficient, water-conserving buildings that use sustainable or green resources and materials.

Changes in U.S. accounting standards may adversely impact us.

The regulatory boards and government agencies that determine financial accounting standards and disclosures in the U.S., which include the FASB and the IASB (collectively, the “Boards”) and the SEC, continually change and update the financial accounting standards we must follow.

In February 2016, the Boards issued an ASU that changes certain aspects of accounting for leases for both lessees and lessors. Since then, several additional ASUs have been issued to clarify implementation issues, which became effective for us on January 1, 2019. These ASUs could have a material effect on our financial condition or results of operations, which in turn could also significantly impact the market price of our common stock. Such potential impacts include, without limitation:

- Significant changes to our balance sheet relating to the recognition of operating leases as assets or liabilities based on existing lease terms and whether we are the lessor or lessee;
- Significant changes in the timing of revenue recognition (related to lease arrangements in which we are the lessor) or expense recognition (related to the lease arrangements in which we are the lessee) stemming from the potential classification of financing or sales-type leases under the new ASU, for leases that are classified as operating leases under the current accounting standards;
- Significant fluctuations in our reported results of operations, including an increase in our expenses related to amortization of new lease-related assets and/or liabilities and assumed interest costs with leases;
- Significant fluctuations in our reported results of operations, including an increase in our general and administrative expenses related to payroll costs, legal costs, and other out-of-pocket costs incurred as part of the leasing process prior to the execution of a lease that no longer qualifies for capitalization as initial direct costs and instead are expensed as incurred; and

- Significant fluctuations in our reported results of operations that may result from the classification of future ground leases as finance leases rather than operating leases. Prior to January 1, 2019, the effective date of the new lease ASUs, all ground leases were accounted for as operating leases, with ground lease payments straight-lined over the term of the ground lease. Under the new lease accounting, ground leases can qualify for classification as finance leases, which are recognized in operating results using an effective interest method. The classification of ground leases as operating leases or finance leases may result in different timing of expense recognition over the term of the ground leases.

In addition, the new accounting updates could make leasing/re-leasing of our space less attractive to our potential and current tenants, which could reduce overall occupancy of our properties. Under the lease guidance effective prior to January 1, 2019, our tenants did not reflect operating leases with us as a liability on their balance sheets, but only provided a disclosure of future minimum payments associated with the operating lease in the footnotes to their financial statements. The new lease standard requires that lessees record on their balance sheets their rights and obligations pertaining to operating leases with a term of over 12 months. Changes in lease accounting standards could potentially impact the structure and terms of future leases since our tenants may seek to limit lease terms to avoid recognizing lease obligations in their financial statements. The new rules may also make lease renewal options less attractive because, under certain circumstances, the rules will require a tenant to assume that a renewal right will be exercised and accrue a liability relating to the longer lease term. Shorter lease terms and a reduction in RSF leased may lead to reduction in occupancy rates and decline in rental revenue, which would have an adverse effect on our results of operations.

Furthermore, in January 2016, the FASB issued an ASU that amended the accounting for certain equity investments. The update became effective for us on January 1, 2018. The core principle of the ASU involves the measurement of equity investments at fair value and the recognition of changes in fair value of those investments during each reporting period in net income. Since adoption, this ASU increased the volatility of our earnings, and is expected to continue introducing volatility to our results of operations, as a result of the guidance requiring us to immediately recognize in net income (i) unrealized gains and losses on our equity investments and (ii) impairments deemed not to be other than temporary under the previous guidance. The increased volatility of our earnings could adversely affect investors and analysts' ability to form reliable expectations of our future performance, which could negatively impact analysts' "buy," "sell," or "hold" recommendations for our common stock. Therefore, our share price could be negatively affected by causes beyond our control.

Any difficulties in the implementation of changes in accounting principles, particularly for the new leases ASUs, including the ability to modify our accounting systems and to update our policies, procedures, information systems, and internal controls over financial reporting, could result in materially inaccurate financial statements, which in turn could harm our operating results or cause us to fail to meet our reporting obligations. Significant changes in the new lease ASUs could cause fluctuations in revenue and expense recognition and materially affect our results of operations. We also anticipate an increase to our general and administrative expenses resulting from the expensing of initial direct costs that no longer qualify for capitalization. This could adversely affect our reported results of operations, profitability, and financial statements. Additionally, the adoption of new accounting standards could also affect the calculation of our debt covenants. It cannot be assured that we will be able to work with our lenders to successfully amend our debt covenants in response to changes in accounting standards.

Changes in the system for establishing U.S. accounting standards may result in adverse fluctuations in our reported asset and liability values and earnings and may materially and adversely affect our reported results of operations.

Accounting for public companies in the U.S. has historically been conducted in accordance with GAAP as established by the FASB, an independent body whose standards are recognized by the SEC as authoritative for U.S. publicly held companies. The IASB is a London-based independent board established in 2001 and charged with the development of IFRS. IFRS generally reflects accounting practices that prevail in Europe and in developed nations in other parts of the world.

IFRS differs in material respects from GAAP. Among other things, IFRS has historically relied more on "fair value" models of accounting for assets and liabilities than GAAP. "Fair value" models are based on periodic revaluation of assets and liabilities, often resulting in fluctuations in such values as compared to GAAP, which relies more frequently on historical cost as the basis for asset and liability valuation.

The SEC released a final report on its IFRS work plan, which indicates the SEC still needs to analyze and consider whether IFRS should be incorporated into the U.S. financial reporting system. It is unclear at this time how and when the SEC will propose that GAAP and IFRS be harmonized if the decision to incorporate is adopted. In addition, incorporating a new method of accounting and adopting IFRS will be a complex undertaking. We may need to develop new systems and controls based on the principles of IFRS. Since these are new endeavors, and the precise requirements of the pronouncements ultimately adopted are not now known, the magnitude of costs associated with this conversion is uncertain.

We are currently evaluating the impact of the adoption of IFRS on our financial condition and results of operations. Such evaluation cannot be completed, however, without more clarity regarding the specific proposed standards that will be adopted. Until there is more certainty with respect to the standards to be adopted, prospective investors should consider that our conversion to IFRS could have a material adverse impact on our reported results of operations.

Changes in financial accounting standards may adversely impact our compliance with financial debt covenants.

Our unsecured senior notes payable contain financial covenants that are calculated based on GAAP at the date the instruments were issued. However, certain debt agreements, including those related to our unsecured senior line of credit, contain financial covenants whose calculations are based on current GAAP, which is subject to future changes. Our unsecured senior line of credit agreement provides that our financial debt covenants be renegotiated in good faith to preserve the original intent of the existing financial covenant when such covenant is affected by an accounting standard change. For those debt agreements that require the renegotiation of financial covenants upon changes in accounting standards, there is no assurance that we will be successful in such negotiations or that the renegotiated covenants will not be more restrictive to us.

Extreme weather, natural or other unforeseen disasters may cause property damage or disrupt operations, which could harm our business and operating results.

We have properties located in areas that may be subject to extreme weather and natural or other disasters, including, but not limited to, earthquakes, winds, floods, hurricanes, fires, power shortages, telecommunication failures, medical epidemics, explosions, or other natural or manmade accidents or incidents. Our headquarters and certain properties are located in areas of California that have historically been subject to earthquakes and wildfires. Such conditions and disastrous events may damage our properties, disrupt our operations, or adversely impact our tenants' or third party vendors' operations. These events may affect our ability to operate our business and have significant negative consequences on our financial and operating results. Damage caused by these events may result in costly repairs for damaged properties or equipment, delays in the development or redevelopment of our construction projects, or interruption of our daily business operations, which may result in increased costs and decreased revenues.

We maintain insurance coverage at levels that we believe are appropriate for our business. However, we cannot be certain that the amount of coverage will be adequate to satisfy damages or losses incurred in the event of another wildfire or other natural or manmade disaster, which may lead to a material adverse effect on our properties, operations, and our business, or those of our tenants.

Terrorist attacks may have an adverse impact on our business and operating results and could decrease the value of our assets.

Terrorist attacks such as those that took place on September 11, 2001, could have a material adverse impact on our business, our operating results, and the market price of our common stock. Future terrorist attacks may result in declining economic activity, which could reduce the demand for, and the value of, our properties. To the extent that future terrorist attacks impact our tenants, their businesses similarly could be adversely affected, including their ability to continue to honor their lease obligations.

Our business and operations would suffer in the event of information technology system failures.

Despite system redundancy, the implementation of security measures, and the existence of a disaster recovery plan for our internal information technology systems, our systems are vulnerable to damages from any number of sources, including computer viruses, unauthorized access, energy blackouts, natural disasters, terrorism, war, and telecommunications failures. Any system failure or accident that causes interruptions in our operations could result in a material disruption to our business. We may also incur additional significant costs to remedy damages caused by such disruptions.

Security incidents through cyber attacks, cyber intrusions, or other methods could disrupt our information technology networks and related systems, cause a loss of assets or loss of data, give rise to remediation or other expenses, expose us to liability under federal and state laws, and subject us to litigation and investigations, which could result in substantial reputational damage and materially and adversely affect our business, financial condition, results of operations, cash flows, and the market price of our common stock.

Information technology, communication networks, and related systems are essential to the operation of our business. We use these systems to manage our tenant and vendor relationships, internal communications, accounting and record-keeping systems, and many other key aspects of our business. Our operations rely on the secure processing, storage, and transmission of confidential and other information in our computer systems and networks, which also depend on the strength of our procedures and the effectiveness of our internal controls.

A security incident may occur through physical break-ins, breaches of our secure network by an unauthorized party, software vulnerabilities, malware, computer viruses, attachments to emails, employee theft or misuse, social engineering, or inadequate use of security controls. Outside parties may attempt to fraudulently induce our employees to disclose sensitive information or transfer funds via illegal electronic spamming, phishing, spoofing, or other tactics. Additionally, cyber attackers can develop and deploy malware, credential theft or guessing tools, and other malicious software programs to gain access to sensitive data or fraudulently obtain assets we hold.

We have implemented security measures to safeguard our systems and data and to manage cyber security risk. We monitor and develop our information technology networks and infrastructure, and invest in the development and enhancement of our controls designed to prevent, detect, respond, and mitigate the risk of unauthorized access, misuse, computer viruses, and other events that could have a security impact. We conduct periodic security awareness trainings of our employees to educate them on how to identify and alert management to phishing emails, spoofed or manipulated electronic communications, and other critical security threats. We've implemented internal controls around our treasury function including enhanced payment authorization procedures, verification requirements for new vendor set-up and vendor information changes, and bolstered outgoing payment notification process and account reconciliation procedures.

While, to date, we are not aware of having experienced a significant security incident or cyber attack, there can be no assurance that our actions, security measures, and controls designed to prevent, detect, or respond to intrusion; to limit access to data; to prevent loss, destruction, alteration, or exfiltration of business information; or to limit the negative impact from such attacks can provide absolute security against a security incident. A significant security incident involving our information systems or those of our tenants, vendors, software creators, cloud providers, or other third parties with whom we do business could lead to:

- Theft of our cash, cash equivalents, or other liquid assets, including publicly traded securities;
- Interruption in the operation of our systems, which may result in operational inefficiencies and a loss of profits;
- Unauthorized access to, and destruction, loss, theft, misappropriation, or release of, proprietary, confidential, sensitive, or otherwise valuable information of ours or our tenants, and other business partners, which could be used to compete against us or for disruptive, destructive, or otherwise harmful purposes and outcomes;
- Inability to produce financial and operational data necessary to comply with rules and regulations from the SEC, the IRS, or other state and federal regulatory agencies;
- Our inability to properly monitor our compliance with the rules and regulations regarding our qualification as a REIT;
- Significant management attention and resources required to remedy any damages that result;
- Significant exposure to litigation and regulatory fines, penalties or other sanctions;
- Violation of our lease agreements or other agreements;
- Damage to our reputation among our tenants, business partners, and investors;
- Loss of business opportunities; and
- Difficulties in employee retention and recruitment.

A principal reason that we cannot provide absolute protection from security incidents is that it may not always be possible to anticipate, detect, or recognize threats to our systems, or to implement effective preventive measures against all security incidents due to, among other things, the frequent change in techniques used in cyber attacks, which may not be recognized until launched, and the wide variety of sources from which a cyber attack can originate. We may not be able to immediately address the consequences of a security incident due to a cyber attack. A successful breach of our computer systems, software, networks, or other technology assets due to a cyber attack could occur and persist for an extended period of time before being detected due to, among other things:

- The breadth of our operations and the high volume of transactions that our systems process;
- The large number of our business partners; and
- The proliferation and increasing sophistication of cyber attacks.

The extent of a particular cyber attack and the steps that we may need to take to investigate the attack may not be immediately clear. Therefore, in the event of an attack, it may take a significant amount of time before such an investigation can be completed. During an investigation, we may not necessarily know the extent of the damage incurred or how best to remediate it, and certain errors or actions could be repeated or compounded before they are discovered and remediated, which could further increase the costs and consequences of a cyber attack.

Even if we are not targeted directly, cyber attacks on the U.S. government, financial markets, financial institutions, or other businesses, including our tenants, vendors, software creators, cloud providers, and other third parties with whom we do business, could disrupt our normal business operations and networks.

We maintain insurance to protect ourselves against certain losses incurred in the event of a security incident or disruption of our information systems. However, we cannot be certain that the coverage is adequate to compensate for all damages that may arise. In addition, we cannot be certain that such insurance options will remain available to us in the future on commercially reasonable terms, or at all.

Any or all of the foregoing could have a material adverse effect on our financial condition, results of operations, cash flows, or the market price of our common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 2. PROPERTIES

General

As of December 31, 2019, we had 291 properties in North America containing approximately 29.1 million RSF of operating properties and development and redevelopment of new Class A properties (under construction), including 36 properties that are held by consolidated real estate joint ventures and six properties that are held by unconsolidated real estate joint ventures. Refer to the definitions of “Annual Rental Revenue” and “Operating Statistics” in the “Non-GAAP Measures and Definitions” section under “Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations” in this annual report on Form 10-K for a description of the basis used to compute the aforementioned measures. The occupancy percentage of our operating properties in North America was 96.8% as of December 31, 2019. The exteriors of our properties typically resemble traditional office properties, but the interior infrastructures are designed to accommodate the needs of life science, technology, and agtech tenants. These improvements typically are generic rather than specific to a particular tenant. As a result, we believe that the improvements have long-term value and utility and are usable by a wide range of tenants. Improvements to our properties typically include:

- Reinforced concrete floors;
- Upgraded roof loading capacity;
- Increased floor-to-ceiling heights;
- Heavy-duty HVAC systems;
- Enhanced environmental control technology;
- Significantly upgraded electrical, gas, and plumbing infrastructure; and
- Laboratory benches.

As of December 31, 2019, we held a fee simple interest in each of our properties, with the exception of 31 properties in North America that accounted for approximately 11% of our total number of properties. Of these 31 properties, we held 16 properties in the Greater Boston market, eight properties in the San Francisco market, two properties in the New York City market, two properties in the Seattle market, one property in the Maryland market, and two properties in the Research Triangle market pursuant to ground leasehold interests. During the year ended December 31, 2019, our ground lease rental expense aggregated 1.5% as a percentage of net operating income. Refer to further discussion in our consolidated financial statements and notes thereto in “Item 15. Exhibits and Financial Statement Schedules” in this annual report on Form 10-K.

As of December 31, 2019, we had 820 leases with a total of 622 tenants, and 135, or 46%, of our 291 properties were single-tenant properties. Leases in our multi-tenant buildings typically have initial terms of five to 11 years, while leases in our single-tenant buildings typically have initial terms of 10 to 19 years. As of December 31, 2019:

- Investment-grade or publicly traded large cap tenants represented 50% of our total annual rental revenue;
- Approximately 95% of our leases (on an RSF basis) contained effective annual rent escalations that were either fixed (generally ranging from approximately 3.0% to 3.5%) or indexed based on a consumer price index or other index;
- Approximately 97% of our leases (on an RSF basis) were triple net leases, which require tenants to pay substantially all real estate taxes, insurance, utilities, repairs and maintenance, common area expenses, and other operating expenses (including increases thereto) in addition to base rent; and
- Approximately 96% of our leases (on an RSF basis) provided for the recapture of capital expenditures (such as HVAC maintenance and/or replacement, roof replacement, and parking lot resurfacing) that we believe would typically be borne by the landlord in traditional office leases.

Our leases also typically give us the right to review and approve tenant alterations to the property. Generally, tenant-installed improvements to the properties are reusable generic improvements and remain our property after termination of the lease at our election. However, we are permitted under the terms of most of our leases to require that the tenant, at its expense, remove certain non-generic improvements and restore the premises to their original condition.

Locations of properties

The locations of our properties are diversified among a number of life science, technology, and agtech cluster markets. The following table sets forth the total RSF, number of properties, and annual rental revenue in effect as of December 31, 2019, in each of our markets in North America (dollars in thousands, except per RSF amounts):

Market	RSF					Number of Properties	Annual Rental Revenue		
	Operating	Development	Redevelopment	Total	% of Total		Total	% of Total	Per RSF
Greater Boston	7,195,439	—	153,157	7,348,596	25%	66	\$ 453,998	36%	\$ 63.65
San Francisco	6,829,211	841,178	347,912	8,018,301	28	55	337,801	26	58.37
New York City	1,127,580	—	140,098	1,267,678	4	5	80,119	6	72.49
San Diego	5,731,061	232,818	—	5,963,879	20	75	204,900	16	38.75
Seattle	1,458,305	100,086	—	1,558,391	6	15	75,770	6	52.65
Maryland	2,663,891	261,096	41,098	2,966,085	10	42	73,868	6	28.87
Research Triangle	1,224,904	—	—	1,224,904	4	16	32,337	3	27.36
Canada	188,967	—	—	188,967	1	2	4,793	—	27.07
Non-cluster markets	369,770	—	—	369,770	1	12	10,597	1	35.77
Properties held for sale	191,862	—	—	191,862	1	3	4,073	—	N/A
North America	26,980,990	1,435,178	682,265	29,098,433	100%	291	\$ 1,278,256	100%	\$ 51.04
			2,117,443						

Summary of occupancy percentages in North America

The following table sets forth the occupancy percentages for our operating properties and our operating and redevelopment properties in each of our North America markets, excluding properties held for sale, as of the following dates:

Market	Operating Properties			Operating and Redevelopment Properties		
	12/31/19	12/31/18	12/31/17	12/31/19	12/31/18	12/31/17
Greater Boston	99.1%	98.7%	96.6%	97.1%	98.2%	95.7%
San Francisco	98.3	100.0	99.6	93.6	96.2	99.6
New York City	99.2	98.3	99.8	88.1	87.3	99.8
San Diego	92.3 ⁽¹⁾	94.7	94.5	92.3	94.7	90.9
Seattle	98.7	97.7	97.7	98.7	97.7	97.7
Maryland	96.7	96.8	95.2	95.2	94.7	93.2
Research Triangle	96.5	95.4	98.1	96.5	85.9	84.0
Subtotal	97.0	97.6	97.0	94.6	95.3	94.9
Canada	93.7	95.2	99.6	93.7	95.2	99.6
Non-cluster markets	80.1	79.0	78.4	80.1	79.0	78.4
North America	96.8% ⁽²⁾	97.3%	96.8%	94.4%	95.1%	94.7%

- (1) Decline from December 31, 2018 primarily related to vacancy at the recently acquired SD Tech by Alexandria, partially offset by lease commencements at our Campus Pointe by Alexandria and University District campuses.
- (2) Includes 259,616 RSF, or 1.0%, of vacancy representing lease-up opportunities at properties recently acquired during the second half of 2019, primarily related to our SD Tech by Alexandria campus. Excluding these vacancies, occupancy of operating properties in North America would have been 97.8% as of December 31, 2019. Expected occupancy for the first quarter of 2020 includes 689,103 RSF, or 2.4%, of vacancy primarily from three buildings contributed by our partner in a recently formed consolidated real estate joint venture and our acquisition of SD Tech by Alexandria campus. Refer to the "Acquisitions" section under this Item 2 in this annual report on Form 10-K for additional information.

Property	Submarket/Market	As of December 31, 2019			As of March 31, 2020 (projected)		
		RSF	Occupancy Impact		RSF	Occupancy Impact	
			Region	Consolidated		Region	Consolidated
SD Tech by Alexandria	Sorrento Mesa/San Diego	182,056	3.2%	0.7%	225,865	3.8%	0.8%
601, 611, and 651 Gateway Boulevard	South San Francisco/San Francisco	N/A	N/A	N/A	211,454	2.7%	0.7%
Other acquisitions	Various	77,560	N/A	0.3	251,784	N/A	0.9%
		<u>259,616</u>		<u>1.0%</u>	<u>689,103</u>		<u>2.4%</u>

Refer to the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for additional information.

Top 20 tenants

80% of Top 20 Annual Rental Revenue From Investment-Grade or Publicly Traded Large Cap Tenants⁽¹⁾⁽²⁾

Our properties are leased to a high-quality and diverse group of tenants, with no individual tenant accounting for more than 4.1% of our annual rental revenue in effect as of December 31, 2019. The following table sets forth information regarding leases with our 20 largest tenants in North America based upon annual rental revenue in effect as of December 31, 2019 (dollars in thousands, except average market cap):

	Tenant	Remaining Lease Term ⁽¹⁾ (in Years)	Aggregate RSF	Annual Rental Revenue ⁽¹⁾	Percentage of Aggregate Annual Rental Revenue ⁽¹⁾	Investment-Grade Credit Ratings		Average Market Cap ⁽¹⁾ (in billions)
						Moody's	S&P	
1	Bristol-Myers Squibb Company	8.7	900,050	\$ 52,174	4.1%	A2	A+	\$ 86.9
2	Takeda Pharmaceutical Company Ltd.	9.6	606,249	39,251	3.1	Baa2	BBB+	\$ 57.9
3	Facebook, Inc.	12.0	903,786	38,873	3.0	—	—	\$ 518.1
4	illumina, Inc.	10.6	891,495	35,907	2.8	—	BBB	\$ 45.6
5	Eli Lilly and Company	9.4	554,089	34,096	2.7	A2	A+	\$ 115.9
6	Sanofi	8.5	494,693	33,845	2.6	A1	AA	\$ 109.7
7	Novartis AG	8.3	378,894	27,849	2.2	A1	AA-	\$ 224.8
8	Uber Technologies, Inc.	62.8 ⁽³⁾	1,016,745	27,445	2.1	—	—	\$ 60.3
9	Merck & Co., Inc.	11.4	421,623	24,290	1.9	A1	AA	\$ 211.4
10	bluebird bio, Inc.	7.4	312,805	23,076	1.8	—	—	\$ 6.5
11	Moderna, Inc.	9.9	382,388	22,665	1.8	—	—	\$ 6.0
12	Maxar Technologies ⁽²⁾	5.5	478,000	21,577	1.7	—	—	\$ 0.5
13	New York University	11.7	201,284	19,011	1.5	Aa2	AA-	\$ —
14	Roche	3.5	365,309	18,996	1.5	Aa3	AA	\$ 240.2
15	Pfizer Inc.	5.2	416,979	17,754	1.4	A1	AA-	\$ 223.3
16	Stripe, Inc.	7.8	295,333	17,736	1.4	—	—	\$ —
17	athenahealth, Inc. ⁽²⁾	12.5	409,710	17,632	1.4	—	—	\$ 5.6
18	Massachusetts Institute of Technology	5.7	257,626	17,306	1.4	Aaa	AAA	\$ —
19	Amgen Inc.	4.3	407,369	16,838	1.3	Baa1	A-	\$ 119.3
20	United States Government	8.0	284,998	16,384	1.3	Aaa	AA+	\$ —
	Total/weighted average	11.6 ⁽³⁾	9,979,425	\$ 522,705	41.0%			

Annual rental revenue and RSF include 100% of each property managed by us in North America.

- (1) Based on aggregate annual rental revenue in effect as of December 31, 2019. Refer to the definitions of "Annual Rental Revenue" and "Investment-Grade or Publicly Traded Large Cap Tenants" in the "Non-GAAP Measures and Definitions" section under Item 7 of this annual report on Form 10-K for additional information on our methodology on annual rental revenue from unconsolidated real estate joint ventures and average daily market capitalization.
- (2) Annual rental revenue from investment-grade or publicly traded large cap tenants includes two tenants, Maxar Technologies and athenahealth, Inc., located in properties acquired during the three months ended December 31, 2019. Excluding these two tenants, our annual rental revenue from investment-grade or publicly traded large cap tenants within our top 20 tenants was 87%.
- (3) Includes a ground lease for land at 1455 and 1515 Third Street (two buildings aggregating 422,980 RSF) and a lease at 1655 and 1725 Third Street (two buildings aggregating 593,765 RSF) owned by our unconsolidated joint venture in which we have an ownership interest of 10%. Annual rental revenue is presented using 100% of the annual rental revenue of our consolidated properties and our share of annual rental revenue of our unconsolidated real estate joint ventures. Refer to footnote 1 for additional information. Excluding the ground lease, the weighted-average remaining lease term for our top 20 tenants was 8.9 years as of December 31, 2019.

Long-Duration Cash Flows From High-Quality, Diverse, and Innovative Tenants

Investment-Grade or Publicly Traded Large Cap Tenants

50%

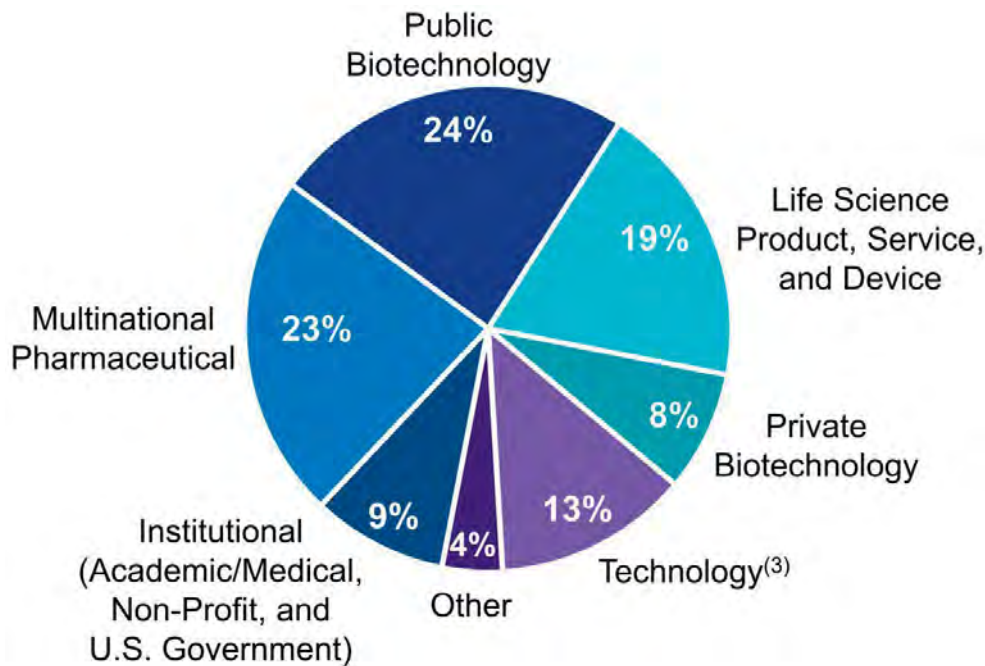
of ARE's Annual Rental Revenue⁽¹⁾

Long-Duration Lease Terms

8.1 Years

Weighted-Average Remaining Term⁽²⁾

Tenant Mix



Percentage of ARE's Annual Rental Revenue⁽¹⁾

(1) Represents annual rental revenue in effect as of December 31, 2019. Refer to the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for additional information.

(2) Based on aggregate annual rental revenue in effect as of December 31, 2019. Refer to definition of "Annual Rental Revenue" in the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for our methodology on annual rental revenue for unconsolidated real estate joint ventures.

(3) 67% of our annual rental revenue for technology tenants is from investment-grade or publicly traded large cap tenants.

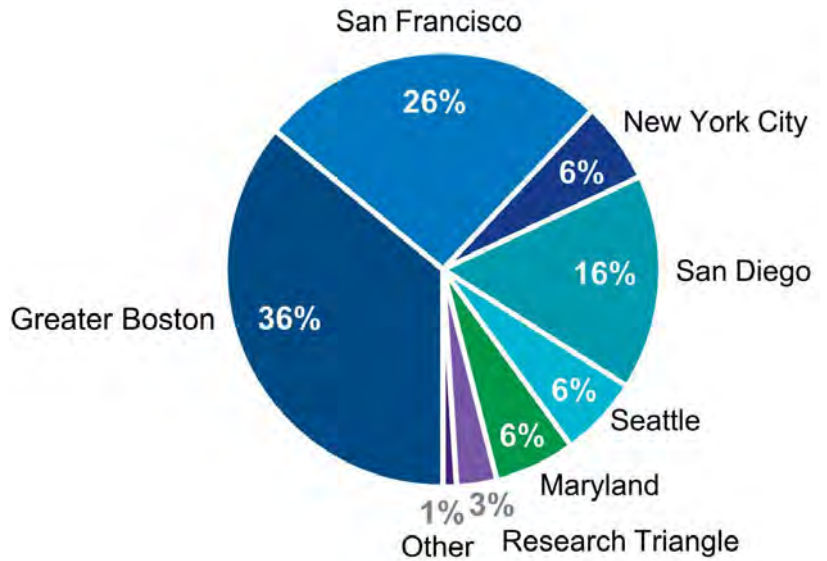
High-Quality Cash Flows From Class A Properties in AAA Locations

Class A Properties in AAA Locations

76%

of ARE's Annual Rental Revenue⁽¹⁾

AAA Locations



Percentage of ARE's Annual Rental Revenue⁽¹⁾

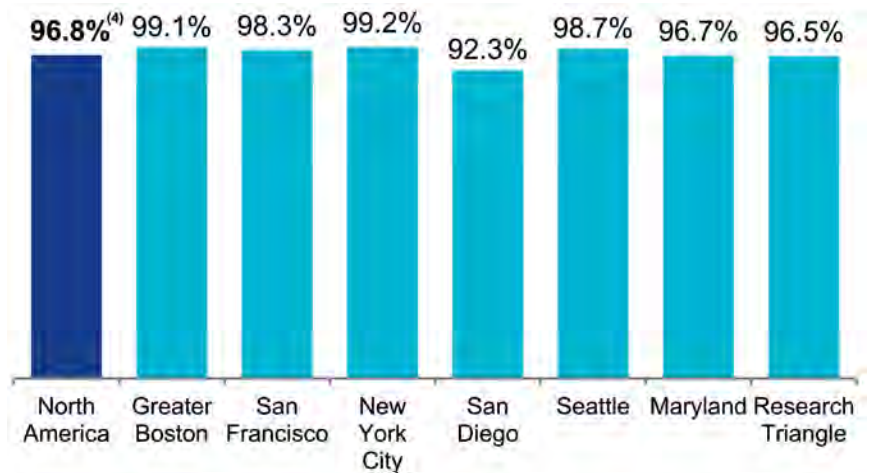
Solid Demand for Class A Properties in AAA Locations Drives Solid Occupancy

Solid Historical Occupancy⁽²⁾

96%

Over 10 Years

Occupancy Across Key Locations⁽³⁾



(1) Represents annual rental revenue in effect as of December 31, 2019. Refer to the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for additional information.
 (2) Represents average occupancy of operating properties in North America as of each December 31 for the last 10 years.
 (3) As of December 31, 2019.
 (4) Includes 259,616 RSF, or 1.0%, of vacancy representing lease-up opportunities at properties recently acquired during the second half of 2019, primarily related to our SD Tech by Alexandria campus. Excluding these vacancies, occupancy of operating properties in North America would have been 97.8% as of December 31, 2019. Refer to the "Summary of Occupancy Percentages in North America" section under this Item 2 in this annual report on Form 10-K for additional information.

Property listing

The following table provides certain information about our properties as of December 31, 2019 (dollars in thousands):

Market / Submarket / Address	RSF			Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment			Operating	Operating and Redevelopment
	Operating	Development	Redevelopment	Total			
Greater Boston							
<i>Cambridge/Inner Suburbs</i>							
Alexandria Center® at Kendall Square 50, 60, 75/125 ⁽¹⁾ , 100, and 225 ⁽¹⁾ Binney Street, 161 and 215 First Street, 150 Second Street, 300 Third Street, and 11 Hurley Street	2,365,487	—	—	2,365,487	10	\$ 168,387	98.9 %
Alexandria Technology Square® 100, 200, 300, 400, 500, 600, and 700 Technology Square	1,181,635	—	—	1,181,635	7	98,283	99.9
The Arsenal on the Charles 311, 321, and 343 Arsenal Street, 300 and 400 North Beacon Street, 1, 2, and 3 Kingsbury Avenue, and 100, 200, and 400 Talcott Avenue	683,131	—	153,157	836,288	11	26,431	100.0
Alexandria Center® at One Kendall Square One Kendall Square – Buildings 100, 200, 300, 400, 500, 600/700, 1400, 1800, 2000, and 399 Binney Street	815,671	—	—	815,671	10	70,531	99.1
480 and 500 Arsenal Street	234,260	—	—	234,260	2	10,647	100.0
640 Memorial Drive	225,504	—	—	225,504	1	13,815	100.0
780 and 790 Memorial Drive	99,658	—	—	99,658	2	7,990	100.0
167 Sidney Street and 99 Erie Street	54,549	—	—	54,549	2	4,023	100.0
79/96 13th Street (Charlestown Navy Yard)	25,309	—	—	25,309	1	620	100.0
<i>Cambridge/Inner Suburbs</i>							
Seaport Innovation District	5,685,204	—	153,157	5,838,361	46	400,727	96.8
5 Necco Street	87,163	—	—	87,163	1	4,646	86.6
Route 128	343,882	—	—	343,882	8	11,876	100.0
<i>Alexandria Park at 128 3 and 6/8 Preston Court, 29, 35, and 44 Hartwell Avenue, 35 and 45/47 Wiggins Avenue, and 60 Westview Street</i>							
225, 266, and 275 Second Avenue	317,617	—	—	317,617	3	13,847	100.0
100 Tech Drive	200,431	—	—	200,431	1	8,455	100.0
19 Presidential Way	144,892	—	—	144,892	1	5,171	99.4
100 Beaver Street	82,330	—	—	82,330	1	3,152	80.0
285 Bear Hill Road	26,270	—	—	26,270	1	1,167	100.0
Route 128	1,115,422	—	—	1,115,422	15	43,668	98.5
Route 495	155,846	—	—	155,846	2	1,543	100.0
111 and 130 Forbes Boulevard	91,045	—	—	91,045	1	649	100.0
20 Walkup Drive	60,759	—	—	60,759	1	2,765	100.0
30 Bearfoot Road	307,650	—	—	307,650	4	4,957	100.0
Route 495	7,195,439	—	153,157	7,348,596	66	\$ 453,998	97.1 %
Greater Boston							

(1) We own a partial interest in this property through a real estate joint venture. Refer to the "Joint Venture Financial Information" section under Item 7 in this annual report in Form 10-K for additional details.

Property listing (continued)

Market / Submarket / Address	RSF			Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment			Operating	Operating and Redevelopment
San Francisco							
<i>Mission Bay/SOMA</i>							
<i>Alexandria Center[®] for Science and Technology – Mission Bay</i>	1,997,819	—	—	9	\$ 88,933	99.8%	99.8%
<i>1455, 1515, 1655⁽¹⁾, and 1725⁽¹⁾ Third Street, 409 and 499 Illinois Street⁽¹⁾, 150Q⁽¹⁾, and 1700 Owens Street, and 455 Mission Bay Boulevard South</i>							
510 Townsend Street	295,333	—	—	1	17,736	100.0	100.0
945 Market Street	—	—	255,765	1	—	N/A	—
505 Brannan Street	148,146	—	—	1	12,129	100.0	100.0
260 Townsend Street	66,682	—	—	1	5,741	100.0	100.0
<i>Mission Bay/SOMA</i>							
South San Francisco	2,507,980	—	255,765	13	124,539	99.9	90.6
213, 249, 259, 269, and 279 East Grand Avenue	919,704	—	—	5	48,394	99.4	99.4
Alexandria Technology Center [®] – Gateway	634,466	—	—	8	31,537	89.6	89.6
<i>600, 630, 650, 681, 685, 701, 901, and 951 Gateway Boulevard</i>							
201 Haskins Way	—	315,000	—	1	—	N/A	N/A
400 and 450 East Jamie Court	163,035	—	—	2	9,436	100.0	100.0
500 Forbes Boulevard ⁽¹⁾	155,685	—	—	1	6,619	100.0	100.0
7000 Shoreline Court	136,395	—	—	1	6,618	100.0	100.0
341 and 343 Oyster Point Boulevard	107,960	—	—	2	5,497	100.0	100.0
849/863 Mitten Road/866 Malcolm Road	103,857	—	—	1	4,169	90.8	90.8
South San Francisco	2,221,102	315,000	—	21	112,270	96.4	96.4
<i>Greater Stanford</i>							
Menlo Gateway ⁽¹⁾	772,983	—	—	3	29,765	100.0	100.0
<i>100 Independence Drive and 125 and 135 Constitution Drive</i>							
Alexandria District for Science and Technology	—	526,178	—	2	—	N/A	N/A
<i>825 and 835 Industrial Road</i>							
3825 and 3875 Fabian Way	478,000	—	—	2	21,577	100.0	100.0
Alexandria Stanford Life Science District	190,270	—	92,147	3	13,902	100.0	67.4
<i>3160, 3165, and 3170 Porter Drive</i>							
Alexandria PARC	197,498	—	—	4	11,274	96.9	96.9
<i>2100, 2200, 2300, and 2400 Geng Road</i>							
960 Industrial Road	110,000	—	—	1	2,749	100.0	100.0
2425 Garcia Avenue/2400/2450 Bayshore Parkway	99,208	—	—	1	4,257	100.0	100.0
Shoreway Science Center	82,462	—	—	2	5,472	100.0	100.0
<i>75 and 125 Shoreway Road</i>							
1450 Page Mill Road	77,634	—	—	1	8,009	100.0	100.0
3350 West Bayshore Road	60,000	—	—	1	2,191	62.3	62.3
2625/2627/2631 Hanover Street	32,074	—	—	1	1,796	100.0	100.0
Greater Stanford	2,100,129	526,178	92,147	21	100,992	98.6	94.5
San Francisco	6,829,211	841,178	347,912	55	\$ 337,801	98.3%	93.6%

(1) We own a partial interest in this property through a real estate joint venture. Refer to the "Joint Venture Financial Information" section under Item 7 in this annual report in Form 10-K for additional information.

Property listing (continued)

Market / Submarket / Address	RSF			Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment			Operating	Operating and Redevelopment
New York City							
New York City							
Alexandria Center® for Life Science – New York City 430 and 450 East 29th Street	740,972	—	—	3	\$ 65,096	98.8 %	98.8 %
219 East 42nd Street	349,947	—	—	1	14,006	100.0	100.0
Alexandria Center® – Long Island City 30-02 48th Avenue	36,661	—	140,098	1	1,017	100.0	20.7
New York City	1,127,580	—	140,098	5	80,119	99.2	88.1
San Diego							
Torrey Pines							
ARE Spectrum 3215 Merryfield Row and 3013 and 3033 Science Park Road	336,461	—	—	3	17,760	100.0	100.0
ARE Torrey Ridge 10578, 10618, and 10628 Science Center Drive	294,326	—	—	3	11,697	83.8	83.8
ARE Sunnise 10931/10933 and 10975 North Torrey Pines Road, 3010 Science Park Road, and 10996 Torreyana Road	236,635	—	—	3	8,901	99.7	99.7
ARE Nautilus 3530 and 3550 John Hopkins Court and 3535 and 3565 General Atomics Court	220,651	—	—	4	10,613	100.0	100.0
3545 Cray Court	116,556	—	—	1	—	—	—
11119 North Torrey Pines Road	72,506	—	—	1	3,676	100.0	100.0
Torrey Pines	1,277,135	—	—	15	52,647	87.1	87.1
University Town Center							
Campus Pointe by Alexandria 9880, 10210 ⁽¹⁾ , 10260 ⁽¹⁾ , 10290 ⁽¹⁾ , and 10300 ⁽¹⁾ Campus Point Drive and 4110 ⁽¹⁾ , 4150 ⁽¹⁾ , 4161 ⁽¹⁾ , 4224 ⁽¹⁾ , and 4242 ⁽¹⁾ Campus Point Court	1,389,867	232,818	—	10	55,873	99.9	99.9
5200 Illumina Way ⁽¹⁾	792,687	—	—	6	29,977	100.0	100.0
University District 9363, 9373, 9393, and 9625 ⁽¹⁾ Towne Centre Drive, 4755, 4757, and 4767 Nexus Center Drive and 4796 Executive Drive	547,130	—	—	8	18,047	94.4	94.4
University Town Center	2,729,684	232,818	—	24	\$ 103,897	98.8 %	98.8 %

(1) We own a partial interest in this property through a real estate joint venture. Refer to the "Joint Venture Financial Information" section under Item 7 in this annual report in Form 10-K for additional information.

Property listing (continued)

Market / Submarket / Address	RSF			Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment			Operating	Operating and Redevelopment
San Diego (continued)							
<i>Sorrento Mesa</i>							
SD Tech by Alexandria ⁽¹⁾	598,316	—	—	10	\$ 14,916	69.6 %	69.6 %
9605, 9645, 9675, 9685, 9725, 9735, 9805, and 9855 Soranton Road and 10055 and 10075 Barnes Canyon							
Summers Ridge Science Park	316,531	—	—	4	11,077	100.0	100.0
9965, 9975, 9985, and 9995 Summers Ridge Road							
10121 and 10151 Barnes Canyon Road	102,392	—	—	2	2,689	100.0	100.0
ARE Portola	101,857	—	—	3	3,603	100.0	100.0
6175, 6225, and 6275 Nancy Ridge Drive							
5810/5820 Nancy Ridge Drive	82,272	—	—	1	2,364	100.0	100.0
7330 Carroll Road	66,244	—	—	1	2,431	100.0	100.0
5871 Oberlin Drive	33,817	—	—	1	—	—	—
<i>Sorrento Mesa</i>							
Sorrento Valley	1,301,429	—	—	22	37,080	83.4	83.4
3911, 3931, 3985, 4025, 4031, 4045, and 4075 Sorrento Valley Boulevard	191,378	—	—	7	5,587	94.3	94.3
11025, 11035, 11045, 11055, 11065, and 11075 Roselle Street	121,655	—	—	6	2,717	84.6	84.6
<i>Sorrento Valley</i>							
I-15 Corridor	313,033	—	—	13	8,304	90.5	90.5
13112 Evening Creek Drive	109,780	—	—	1	2,972	100.0	100.0
San Diego	5,731,061	232,818	—	75	204,900	92.3	92.3
Seattle							
<i>Lake Union</i>							
The Eastlake Life Science Campus by Alexandria – North Campus	631,070	—	—	5	33,818	99.3	99.3
1616 and 1551 Eastlake Avenue East, 188 and 199 East Blaine Street, and 1600 Fairview Avenue East							
The Eastlake Life Science Campus by Alexandria – South Campus	206,134	100,086	—	3	11,702	100.0	100.0
1165, 1201, and 1208 Eastlake Avenue East							
400 Dexter Avenue North	290,111	—	—	1	15,236	100.0	100.0
2301 5th Avenue	197,135	—	—	1	9,890	99.1	99.1
219 Terry Avenue North	30,705	—	—	1	1,835	100.0	100.0
601 Dexter Avenue North	18,680	—	—	1	425	100.0	100.0
<i>Lake Union</i>							
Elliott Bay	1,373,835	100,086	—	12	72,906	99.6	99.6
3000/3018 Western Avenue	47,746	—	—	1	1,839	100.0	100.0
410 West Harrison Street and 410 Elliott Avenue West	36,724	—	—	2	1,025	63.9	63.9
<i>Elliott Bay</i>							
Seattle	84,470	—	—	3	2,864	84.3	84.3
Seattle	1,458,305	100,086	—	15	\$ 75,770	98.7 %	98.7 %

(1) We own a partial interest in this property through a real estate joint venture. Refer to the "Joint Venture Financial Information" section under Item 7 in this annual report in Form 10-K for additional information.

Property listing (continued)

Market / Submarket / Address	RSF			Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment			Operating	Operating and Redevelopment
Maryland							
Rockville							
9800, 9900, 9920, and 9950 Medical Center Drive	383,956	261,096	—	8	\$ 13,864	89.5%	89.5%
9704, 9708, 9712, and 9714 Medical Center Drive	214,725	—	—	4	7,862	100.0	100.0
1330 Piccard Drive	131,511	—	—	1	3,562	100.0	100.0
1500 and 1550 East Gude Drive	90,489	—	—	2	1,804	100.0	100.0
14920 and 15010 Brochart Road	86,703	—	—	2	2,260	100.0	100.0
1405 Research Boulevard	72,170	—	—	1	2,419	100.0	100.0
5 Research Place	63,852	—	—	1	2,734	100.0	100.0
5 Research Court	51,520	—	—	1	1,812	100.0	100.0
9920 Belward Campus Drive	51,181	—	—	1	1,687	100.0	100.0
12301 Parklawn Drive	49,185	—	—	1	1,329	100.0	100.0
Rockville	1,195,292	261,096	—	22	39,333	96.6	96.6
Gaithersburg							
Alexandria Technology Center® – Gaithersburg I 9, 25, 35, 45, 50, and 55 West Watkins Mill Road and 910, 930, and 940 Clopper Road	613,438	—	—	9	15,821	94.8	94.8
Alexandria Technology Center® – Gaithersburg II 704 Quince Orchard Road ⁽¹⁾ , 708 Quince Orchard Road, and 19, 20, 21, and 22 Firstfield Road	273,987	—	41,098	6	7,253	98.7	85.8
401 Professional Drive	63,154	—	—	1	1,595	91.2	91.2
950 Wind River Lane	50,000	—	—	1	1,004	100.0	100.0
620 Professional Drive	27,950	—	—	1	1,191	100.0	100.0
Gaithersburg	1,028,529	—	41,098	18	26,864	96.0	92.3
Beltsville							
8000/9000/10000 Virginia Manor Road	191,884	—	—	1	2,533	96.6	96.6
Northern Virginia							
14225 Newbrook Drive	248,186	—	—	1	5,138	100.0	100.0
Maryland	2,663,891	261,096	41,098	42	\$ 73,868	96.7%	95.2%

(1) We own a partial interest in this property through a real estate joint venture. Refer to the "Joint Venture Financial Information" section under Item 7 in this annual report in Form 10-K for additional information.

Property listing (continued)

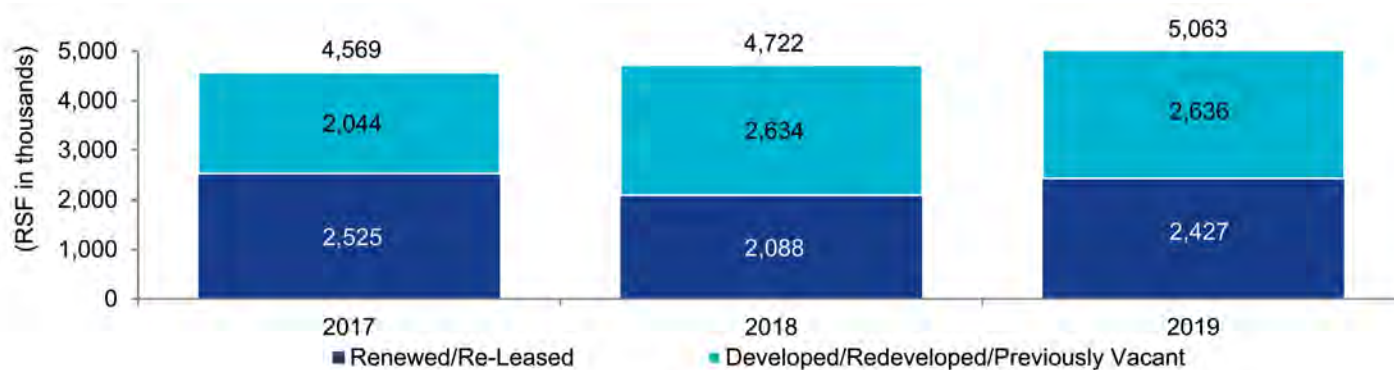
Market / Submarket / Address	RSF			Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment			Operating	Operating and Redevelopment
Research Triangle							
<i>Research Triangle</i>							
Alexandria Technology Center® – Alston 100, 800, and 801 Capitola Drive	186,870	—	—	3	\$ 3,855	95.0 %	95.0 %
Alexandria Center® for AgTech, Phase I – Research Triangle 5 Laboratory Drive	180,400	—	—	1	5,241	95.3	95.3
108/110/112/114 TW Alexander Drive	158,417	—	—	1	4,681	100.0	100.0
Alexandria Innovation Center® – Research Triangle 7010, 7020, and 7030 Kit Creek Road	136,455	—	—	3	3,683	98.1	98.1
6 Davis Drive	100,000	—	—	1	1,909	92.4	92.4
7 Triangle Drive	96,626	—	—	1	3,156	100.0	100.0
2525 East NC Highway 54	82,996	—	—	1	3,651	100.0	100.0
407 Davis Drive	81,956	—	—	1	1,644	100.0	100.0
601 Keystone Park Drive	77,395	—	—	1	1,350	100.0	100.0
6040 George Watts Hill Drive	61,547	—	—	1	2,148	100.0	100.0
5 Triangle Drive	32,120	—	—	1	479	54.2	54.2
6101 Quadrangle Drive	30,122	—	—	1	540	100.0	100.0
Research Triangle	1,224,904	—	—	16	32,337	96.5	96.5
Canada							
Canada	188,967	—	—	2	4,793	93.7	93.7
Non-cluster markets							
Non-cluster markets	369,770	—	—	12	10,597	80.1	80.1
North America, excluding properties held for sale							
North America, excluding properties held for sale	26,789,128	1,435,178	682,265	288	1,274,183	96.8 %	94.4 %
Properties held for sale							
Properties held for sale	191,862	—	—	3	4,073	71.4 %	71.4 %
Total – North America	26,980,990	1,435,178	682,265	291	\$ 1,278,256		

Leasing activity

- Executed a total of 241 leases, with a weighted-average lease term of 7.8 years, for 5.1 million RSF, including 1.4 million RSF related to our development and redevelopment projects, during the year ended December 31, 2019; leasing activity of 5.1 million RSF represents the highest annual leasing activity in Alexandria's history; and
- Strong rental rate increases of 32.2% and 17.6% (cash basis), representing our highest annual increase during the past 10 years.

Approximately 59% of the 241 leases executed during the year ended December 31, 2019, did not include concessions for free rent. During the year ended December 31, 2019, we granted tenant concessions/free rent averaging 2.4 months with respect to the 5.1 million RSF leased.

The following chart presents renewed/re-leased space and development/redevelopment/previously vacant space leased for the years ended December 31, 2019, 2018, and 2017:



Lease structure

Our Same Properties total revenue growth of 4.1% for the year ended December 31, 2019, and our Same Properties net operating income and Same Properties net operating income (cash basis) increases for the year ended December 31, 2019, of 3.1% and 7.1%, respectively, benefited significantly from strong market fundamentals. The limited supply of Class A space in AAA locations and strong demand from innovative tenants drove rental rate increases of 32.2% and 17.6% (cash basis) on 2.4 million renewed/re-leased RSF, while a favorable triple net lease structure with contractual annual rent escalations resulted in both a consistent Same Properties operating margin of 71% and occupancy of 96.6% across our 192 Same Properties aggregating 18.5 million RSF. As of December 31, 2019, approximately 97% of our leases (on an RSF basis) were triple net leases, which require tenants to pay substantially all real estate taxes, insurance, utilities, repairs and maintenance, common area expenses, and other operating expenses (including increases thereto) in addition to base rent. Additionally, approximately 95% of our leases (on an RSF basis) contained contractual annual rent escalations that were either fixed or based on a consumer price index or another index, and approximately 96% of our leases (on an RSF basis) provided for the recapture of certain capital expenditures.

The following table summarizes our leasing activity at our properties for the years ended December 31, 2019 and 2018:

	Year Ended December 31,			
	2019		2018	
	Including Straight-Line Rent	Cash Basis	Including Straight-Line Rent	Cash Basis
<i>(Dollars per RSF)</i>				
<i>Leasing activity:</i>				
Renewed/re-leased space ⁽¹⁾				
Rental rate changes	32.2%	17.6%	24.1%	14.1%
New rates	\$58.65	\$56.19	\$55.05	\$52.79
Expiring rates	\$44.35	\$47.79	\$44.35	\$46.25
RSF	2,427,108		2,088,216	
Tenant improvements/leasing commissions	\$20.28		\$20.61	
Weighted-average lease term	5.7 years		6.1 years	
Developed/redeveloped/previously vacant space leased				
New rates	\$55.95	\$52.19	\$58.45	\$48.73
RSF	2,635,614		2,633,476	
Tenant improvements/leasing commissions	\$13.74		\$12.57	
Weighted-average lease term	9.8 years		11.5 years	
<i>Leasing activity summary (totals):</i>				
New rates	\$57.25	\$54.11	\$56.94	\$50.52
RSF	5,062,722 ⁽²⁾		4,721,692	
Tenant improvements/leasing commissions	\$16.88		\$16.13	
Weighted-average lease term	7.8 years		9.1 years	
<i>Lease expirations⁽¹⁾</i>				
Expiring rates	\$43.43	\$46.59	\$42.98	\$45.33
RSF	2,822,434		2,811,021	

Leasing activity includes 100% of results for properties in which we have an investment in North America. Refer to the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for a description of the basis used to compute the measures above.

- (1) Excludes month-to-month leases aggregating 41,809 RSF and 50,548 RSF as of December 31, 2019 and 2018, respectively.
(2) During the year ended December 31, 2019, we granted tenant concessions/free rent averaging 2.4 months with respect to the 5,062,722 RSF leased. Approximately 59% of the leases executed during the year ended December 31, 2019, did not include concessions for free rent.

Summary of contractual lease expirations

The following table summarizes information with respect to the contractual lease expirations at our properties as of December 31, 2019:

Year	RSF	Percentage of Occupied RSF	Annual Rental Revenue (Per RSF) ⁽¹⁾	Percentage of Total Annual Rental Revenue
2020 ⁽²⁾	1,745,030	6.7%	\$ 35.27	4.7%
2021	1,531,070	5.9%	\$ 42.09	4.9%
2022	2,164,448	8.3%	\$ 42.07	7.0%
2023	2,564,766	9.9%	\$ 45.66	9.0%
2024	2,300,974	8.8%	\$ 46.33	8.2%
2025	1,786,892	6.9%	\$ 48.78	6.7%
2026	1,597,511	6.1%	\$ 49.33	6.0%
2027	2,366,266	9.1%	\$ 51.72	9.4%
2028	1,646,032	6.3%	\$ 60.18	7.6%
2029	1,350,014	5.2%	\$ 57.24	5.9%
Thereafter	6,954,809	26.8%	\$ 57.88	30.6%

(1) Represents amounts in effect as of December 31, 2019.

(2) Excludes month-to-month leases aggregating 41,809 RSF as of December 31, 2019.

The following tables present information by market with respect to our 2020 and 2021 contractual lease expirations in North America as of December 31, 2019:

Market	2020 Contractual Lease Expirations (in RSF)					Annual Rental Revenue (Per RSF) ⁽³⁾
	Leased	Negotiating/Anticipating	Targeted for Redevelopment	Remaining Expiring Leases ⁽¹⁾	Total ⁽²⁾	
Greater Boston	107,773	122,950	75,754 ⁽⁴⁾	232,547	539,024	\$ 41.32
San Francisco	81,493	25,569	—	174,380 ⁽⁵⁾	281,442	44.08
New York City	—	—	—	20,712 ⁽⁶⁾	20,712	99.30
San Diego	37,880	—	—	378,021	415,901	30.85
Seattle	12,727	—	—	32,047	44,774	38.70
Maryland	16,235	33,778	—	97,317	147,330	17.40
Research Triangle	37,881	25,396	—	36,290	99,567	17.74
Canada	72,250	—	—	22,343	94,593	28.22
Non-cluster markets	—	—	—	101,687	101,687	31.29
Total	366,239	207,693	75,754	1,095,344	1,745,030	\$ 35.27
Percentage of expiring leases	21%	12%	4%	63%	100%	

Market	2021 Contractual Lease Expirations (in RSF)					Annual Rental Revenue (Per RSF) ⁽³⁾
	Leased	Negotiating/Anticipating	Targeted for Redevelopment	Remaining Expiring Leases	Total	
Greater Boston	—	25,970	79,101 ⁽⁴⁾	267,624	372,695	\$ 44.10
San Francisco	24,193	9,628	—	364,747	398,568	52.99
New York City	—	19,647	—	15,466	35,113	97.45
San Diego	634	74,557	—	223,991	299,182	38.81
Seattle	—	—	—	52,320	52,320	45.48
Maryland	—	—	—	160,439	160,439	22.51
Research Triangle	3,724	34,553	—	133,592	171,869	25.99
Canada	—	4,345	—	18,612	22,957	27.13
Non-cluster markets	—	—	—	17,927	17,927	42.50
Total	28,551	168,700	79,101	1,254,718	1,531,070	\$ 42.09
Percentage of expiring leases	2%	11%	5%	82%	100%	

(1) The largest remaining contractual lease expiration in 2020 is 60,759 RSF in our Greater Boston market.

(2) Excludes month-to-month leases aggregating 41,809 RSF as of December 31, 2019.

(3) Represents amounts in effect as of December 31, 2019.

(4) Represents office space aggregating 154,855 RSF at The Arsenal on the Charles, a campus acquired on December 17, 2019, in our Cambridge/Inner Suburbs submarket, that is targeted for redevelopment into office/laboratory space upon expiration of existing leases during the third quarter of 2020 and first quarter of 2021.

(5) Includes two leases aggregating 100,560 RSF at 630 and 650 Gateway Boulevard in our South San Francisco submarket that expire during the fourth quarter of 2020. We are considering options to renovate these buildings into Class A office/laboratory properties, which will not be classified as a redevelopment. As such, we expect these properties to remain in our pool of same properties.

(6) Includes 140,398 RSF at 9363, 9373, and 9393 Towne Centre Drive in our University Town Center submarket, a site that is under evaluation to be developed, subject to future market conditions.

Investments in real estate

A key component of our business model is our disciplined allocation of capital to the development and redevelopment of new Class A properties located in collaborative life science, technology, and agtech campuses in AAA urban innovation clusters. These projects are focused on providing high-quality, generic, and reusable spaces that meet the real estate requirements of, and are reusable by, a wide range of tenants. Upon completion, each value-creation project is expected to generate a significant increase in rental income, net operating income, and cash flows. Our development and redevelopment projects are generally in locations that are highly desirable to high-quality entities, which we believe results in higher occupancy levels, longer lease terms, higher rental income, higher returns, and greater long-term asset value. Our pre-construction activities are undertaken in order to get the property ready for its intended use and include entitlements, permitting, design, site work, and other activities preceding commencement of construction of aboveground building improvements.

Our investments in real estate consisted of the following as of December 31, 2019 (dollars in thousands):

	Development and Redevelopment						Total
	Operating	Under Construction	Near-Term	Intermediate-Term	Future	Subtotal	
Investments in real estate							
Book value as of December 31, 2019 ⁽¹⁾	\$ 15,278,779	\$ 991,007	\$ 447,798	\$ 618,279	\$ 182,746	\$ 2,239,830	\$17,518,609
Square footage							
Operating	26,980,990	—	—	—	—	—	26,980,990
New Class A development and redevelopment properties	—	2,117,443	2,127,925	4,884,067	4,585,477	13,714,912	13,714,912
Value-creation square feet currently included in rental properties ⁽²⁾	—	—	—	(702,012)	(823,104)	(1,525,116)	(1,525,116)
Total square footage	26,980,990	2,117,443	2,127,925	4,182,055	3,762,373	12,189,796	39,170,786

(1) Balances exclude our share of the cost basis associated with our unconsolidated properties, which is classified as investments in unconsolidated real estate joint ventures in our consolidated balance sheets.

(2) Refer to the definition of "Investment in Real Estate" in the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for additional detail on value-creation square feet currently included in rental properties.

Our real estate asset acquisitions for the year ended December 31, 2019, consisted of the following (dollars in thousands):

Property	Submarket/Market	Date of Purchase	Number of Properties	Operating Occupancy	Square Footage				Unlevered Yields		
					Future Development	Active Redevelopment	Operating With Future Development/ Redevelopment	Operating	Initial Stabilized	Initial Stabilized (Cash)	Purchase Price
Three months ended March 31, 2019:											
3170 Porter Drive	Greater Stanford/ San Francisco	1/10/19	1	100%	—	—	98,626	—	7.5%	5.1%	\$ 100,250
10 Necco Street	Seaport Innovation District/Greater Boston	3/26/19	—	N/A	175,000	—	—	—	(1)	(1)	81,100
Shoreway Science Center	Greater Stanford/ San Francisco	1/10/19	2	100%	—	—	82,462	—	7.2%	5.5%	73,200
260 Townsend Street	Mission Bay/SoMa/ San Francisco	3/14/19	1	100%	—	—	66,682	—	7.4%	5.8%	66,000
3911 and 3931 Sorrento Valley Boulevard	Sorrento Valley/ San Diego	1/9/19	2	100%	—	53,220	—	—	7.2%	6.6%	23,250
Other			4	100%	—	75,864	—	—	—	—	39,150
Three months ended June 30, 2019:											
5 Necco Street	Seaport Innovation District/Greater Boston	5/9/19	1	87%	—	—	87,163	—	5.2%	5.1%	252,000
15 Necco Street			—	N/A	293,000	—	—	—	(1)	(1)	
601 Dexter Avenue North	Lake Union/Seattle	6/18/19	1	100%	188,400	—	—	18,680	(1)	(1)	28,500
4075 Sorrento Valley Boulevard	Sorrento Valley/ San Diego	5/13/19	1	100%	149,000	—	—	40,000	(1)	(1)	16,000
Three months ended September 30, 2019:											
945 Market Street (99.5% interest in consolidated JV)	Mission Bay/SoMa/ San Francisco	7/31/19	1	N/A	—	255,765	—	—	(1)	(1)	179,000
4224/4242 Campus Point Court and 10210 Campus Point Drive (55% interest in consolidated JV)	University Town Center/San Diego	7/9/19	3	83%	—	—	314,103	—	6.9%	6.0%	255,000 (2)
25, 35, and 45 West Watkins Mill Road	Gaithersburg/ Maryland	8/21/19	3	87%	—	—	138,938	—	N/A	N/A	51,130
3160 Porter Drive	Greater Stanford/ San Francisco	8/12/19	1	N/A	—	92,147	—	—	(1)	(1)	26,000
47-50 30th Street	New York City/ New York City	7/10/19	—	N/A	135,938	—	—	—	(1)	(1)	25,000
Other	Various		3	37%	54,000	—	58,814	34,534	—	—	37,850

(1) We expect to provide total estimated costs and related yields in the future, subsequent to the commencement of development or redevelopment.

(2) Includes \$114.8 million related to our partner's noncontrolling interest in the consolidated real estate joint venture at 4224/4242 Campus Point Court and 10210 Campus Point Drive to reflect the full contractual purchase price.

Acquisitions (continued)

Property	Submarket/Market	Date of Purchase	Number of Properties	Operating Occupancy	Square Footage			Unlevered Yields		
					Future Development	Active Redevelopment	Operating With Future Development/ Redevelopment	Initial Stabilized	Initial Stabilized (Cash)	Purchase Price
Three months ended December 31, 2019										
The Arsenal on the Charles	Cambridge/Inner Suburbs/Greater Boston	12/17/19	11	100 %	200,000	153,157	154,855 ⁽¹⁾	528,276	(2)	\$ 525,500
3825 and 3875 Fabian Way	Greater Stanford/San Francisco	12/10/19	2	100 %	—	—	478,000	—	8.2 % ⁽³⁾	291,000
SD Tech by Alexandria (50% interest in consolidated JV)	Sorrento Mesa/San Diego	10/30/19	10	71 %	720,000	—	—	598,316 ⁽⁴⁾	6.6 % ⁽⁴⁾	114,964
14200 Shady Grove Road	Rockville/Maryland	10/31/19	—	N/A	435,000	—	—	—	(2)	25,000
Other										
10260 Campus Point Drive and 4161 Campus Point Court	University Town Center/San Diego	1/2/19	N/A	N/A	N/A	N/A	N/A	N/A	(5)	65,000 ⁽⁶⁾
2019 acquisitions					83 %	501,069	879,433	1,949,100		\$ 2,274,894

(1) Represents leased square footage with contractual lease expirations in the third quarter of 2020 and first quarter of 2021. Upon expiration of the existing leases, we anticipate this RSF will be redeveloped to office/laboratory space.

(2) We expect to provide total estimated costs and related yields in the future, subsequent to the commencement of development or redevelopment.

(3) Represents the initial stabilized yields related to the fully occupied operating properties upon closing.

(4) The campus includes 10 operating buildings, of which we expect to renovate several vacant suites aggregating 182,056 RSF. We expect to achieve unlevered initial stabilized yields of 6.6% and 6.5% (cash basis) for the operating buildings, and yields for future development will be disclosed subsequent to the commencement of development.

(5) Refer to the "New Class A Development and Redevelopment Properties: Summary of Pipeline" subsection of this "Investments in Real Estate" section under this Item 2 for additional information.

(6) In December 2018, we acquired two buildings adjacent to our Campus Pointe by Alexandria campus. The total purchase price of \$80.0 million was paid in two installments, \$15.0 million in December 2018 and \$65.0 million in January 2019.

Real estate asset sales

Our completed disposition and sales of partial interests in real estate assets during the year ended December 31, 2019, consisted of the following (dollars in thousands, except for sales price per RSF):

Property	Submarket/Market	Date of Sale	Interest Sold	Square Footage		Capitalization Rate ⁽¹⁾	Capitalization Rate ⁽²⁾	Sales Price	Sales Price Per RSF	Consideration in Excess of Book Value ⁽⁴⁾
				Operating	Future Development					
Completed disposition and sales of partial interests:										
75/125 Binney Street	Cambridge/Greater Boston	2/13/19	60%	388,270	N/A	4.3%	4.2%	\$ 438,000	\$ 1,880	\$ 202,246
10260 Campus Point Drive and 4161 Campus Point Court	University Town Center/San Diego	7/26/19	45%	(3)	(3)	(3)	(3)	36,000	N/A	N/A
500 Forbes Boulevard	South San Francisco/San Francisco	8/1/19	90%	155,685	N/A	4.4%	4.2%	139,500	\$ 996	\$ 48,385
5200 Illumina Way	University Town Center/San Diego	8/21/19	49%	792,687	451,832	4.7%	5.7%	286,747	N/A	\$ 131,864 ⁽⁴⁾
6138/6150 Nancy Ridge Drive	Sorrento Mesa/San Diego	12/19/19	100%	56,698	N/A	N/A	N/A	6,625	\$ 117	N/A ⁽⁵⁾
								<u>\$ 906,872</u>		

(1) Capitalization rates are calculated based upon net operating income and net operating income (cash basis), annualized for the quarter preceding the date on which the property is sold.

(2) We retained control over each of these newly formed joint ventures (except as noted in footnote 5) and therefore consolidate these properties. For consolidated joint ventures, we account for the difference between the consideration received and the book value of the interest sold as an equity transaction, with no gain or loss recognized in earnings.

(3) In December 2018, we acquired two buildings adjacent to our Campus Pointe by Alexandria campus aggregating 269,048 RSF, comprising 109,164 RSF at 10260 Campus Point Drive and 159,884 RSF at 4161 Campus Point Court, for a total purchase price of \$80.0 million. In July 2019, as had been contemplated at the time of the original acquisition, we completed the formation of a joint venture through the sale of a 45% noncontrolling interest to an institutional investor.

(4) This transaction values 100% of the campus at \$585.2 million and represents a value in excess of book basis aggregating \$269.1 million.

(5) Upon completion of the sale of 6138/6150 Nancy Ridge Drive, we recognized in earnings a gain on sale of real estate of \$474 thousand.

Making a Positive and Lasting Impact on the World Through Sustainability, Health & Wellness, Philanthropy, and Volunteerism

Climate Change Framework & Green Building



Supporting and aligning our efforts with guidelines issued by the Task Force on Climate-related Financial Disclosures (TCFD)

\$1 Billion GREEN BONDS

Expected Allocation to Projects That Have Achieved or Are Targeting LEED® Gold or Platinum Certification

ESG Practices & Performance



G R E S B
★ ★ ★ ★ ★ 2019

5 STAR RATING

A

DISCLOSURE SCORE 2018 | 2019

2025 GOALS⁽²⁾



Carbon Pollution (MTCO_{2e})

30%

REDUCTION



Energy Consumption (kWh)

25%

REDUCTION



Waste (Ton)⁽³⁾

45%

DIVERSION



Potable Water Consumption (Gal)

10%

REDUCTION

Collaborative Campuses Promote Health & Wellness

37

WELL & FITWEL PROJECTS⁽¹⁾

#1 Company Globally

FOR FINAL GRESB HEALTH & WELL-BEING MODULE IN 2018

Purposeful Philanthropy & Volunteerism

2019 NEW YORK CITY MARATHON
59 EMPLOYEES FINISHED
\$360K RAISED FOR FRED'S TEAM

IN SUPPORT OF MISSION-CRITICAL RESEARCH AT MEMORIAL SLOAN KETTERING CANCER CENTER

250+ NON-PROFIT ORGANIZATIONS SUPPORTED

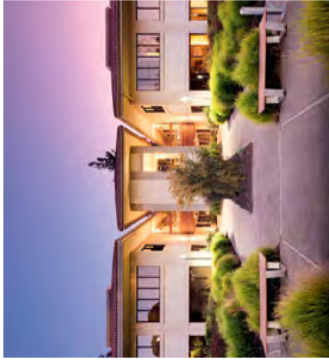

4,500 HOURS VOLUNTEERED BY TEAM MEMBERS

Strategic Partnership With Verily: Pioneering a First-of-Its-Kind Comprehensive Care Model for Opioid Addiction

(1) Upon completion of 26 projects in process targeting either WELL or Fitwel certification.
 (2) Relative to a 2015 baseline. Carbon pollution, energy consumption, and water consumption values are for our directly managed buildings.
 (3) Waste values are for our total portfolio, which includes both indirectly and directly managed buildings.

New Class A development and redevelopment properties: recent deliveries

<p>399 Binney Street Greater Boston/Cambridge 164,000 RSF 98.3% Occupied</p> 	<p>266 and 275 Second Avenue Greater Boston/Route 128 203,757 RSF 100% Occupied</p> 	<p>1655 and 1725 Third Street San Francisco/Mission Bay/SOMA 593,765 RSF 100% Occupied</p> 	<p>279 East Grand Avenue San Francisco/South San Francisco 211,405 RSF 97.5% Occupied</p> 	<p>681 and 685 Gateway Boulevard San Francisco/South San Francisco 142,400 RSF 100% Occupied</p> 
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<p>Menlo Gateway San Francisco/Greater Stanford 772,983 RSF 100% Occupied</p> 	<p>Alexandria PARC San Francisco/Greater Stanford 197,498 RSF 96.8% Occupied</p> 	<p>9880 Campus Point Drive San Diego/University Town Center 98,000 RSF 100% Occupied</p> 	<p>188 East Blaine Street Seattle/Lake Union 201,805 RSF 98.0% Occupied</p> 	<p>Alexandria Center® for AgTech, Phase I Research Triangle/Research Triangle 180,400 RSF 95.3% Occupied</p> 
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Refer to the "New Class A Development and Redevelopment Properties: Projects Under Construction" sections under this Item 2 for information on the RSF in service and under construction, if applicable.

New Class A development and redevelopment properties: recent deliveries (continued)

The following table presents value-creation development and redevelopment of new Class A properties placed into service during the year ended December 31, 2019 (dollars in thousands):

Property/Market/Submarket	Our Ownership Interest	Dev/Redev	RSF Placed Into Service				Occupancy Percentage ⁽¹⁾	Total Project		Unlevered Yields	
			1Q19	2Q19	3Q19	4Q19		RSF	Investment	Initial Stabilized	Initial Stabilized (Cash Basis)
399 Binney Street/Greater Boston/Cambridge	100%	Dev	123,403	—	40,597	—	164,000	164,000	\$ 185,000	7.9%	7.3%
266 and 275 Second Avenue/Greater Boston/Route 128	100%	Redev	—	12,822	—	19,036	31,858	203,757	\$ 91,000	8.5	7.1
1655 and 1725 Third Street/San Francisco/Mission Bay/SOMA ⁽²⁾	10%	Dev	—	—	593,765	—	593,765	593,765	\$ 77,500	7.8	6.1
279 East Grand Avenue/San Francisco/South San Francisco	100%	Dev	139,810	24,396	35,797	11,402	211,405	211,405	\$ 145,000	8.4	8.6
681 and 685 Gateway Boulevard/San Francisco/South San Francisco	100%	Redev	66,000	76,400	—	—	142,400	142,400	\$ 116,300	8.5	8.2
Menlo Gateway/San Francisco/Greater Stanford ⁽²⁾	49%	Dev	—	—	520,988	—	520,988	772,983	\$ 415,000	7.1	6.4
Alexandria PARC/San Francisco/Greater Stanford	100%	Redev	48,547	—	—	—	48,547	197,498	\$ 152,600	7.3	6.2
9880 Campus Point Drive/San Diego/University Town Center	100%	Dev	—	—	—	36,284	36,284	98,000	\$ 255,000	6.3	6.4
188 East Blaine Street/Seattle/Lake Union	100%	Dev	90,615	27,164	39,372	44,654	201,805	201,805	\$ 183,000	6.7	6.7
704 Quince Orchard Road/Maryland/Gaithersburg ⁽²⁾	56.8%	Redev	10,250	3,470	—	—	13,720	80,032	\$ 13,300	8.9	8.8
Alexandria Center [®] for AgTech, Phase I/Research Triangle/Research Triangle	100%	Redev	2,614	73,809	30,900	19,554	126,877	180,400	\$ 88,700	7.5	7.6
Total			<u>481,239</u>	<u>218,061</u>	<u>1,261,419</u>	<u>130,930</u>	<u>2,091,649</u>			<u>7.4%</u>	<u>6.9%</u>

(1) Relates to total operating RSF placed in service as of the most recent delivery.

(2) This property is an unconsolidated real estate joint venture. RSF represents 100% and cost and yields amounts represent our share.









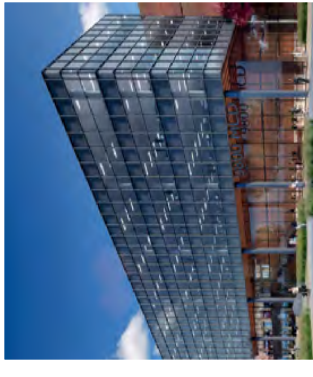

(3) Improvements in initial stabilized yields of 60 bps and 50 bps (cash basis), are due to reduction in costs of \$6 million primarily from core and shell cost savings.

(4) Excludes 685 Gateway Boulevard, a 15,437 RSF amenity building.

(5) Project costs represent aggregate development costs for 9880 Campus Point Drive and 4150 Campus Point Court. Yields represent expected aggregate returns for Campus Pointe by Alexandria, including 9880, 10290, and 10300 Campus Point Drive and 4150 Campus Point Court.

(6) Yields represent aggregate returns for Alexandria Center[®] for AgTech – Research Triangle which consists of Phase I at 5 Laboratory Drive and Phase II at 9 Laboratory Drive.

New Class A development and redevelopment properties: projects under construction

<p>The Arsenal on the Charles</p>	<p>945 Market Street</p>	<p>201 Haskins Way</p>	<p>Alexandria District for Science and Technology</p>	<p>3160 Porter Drive</p>
<p>Greater Boston/ Cambridge/Inner Suburbs 153,157 RSF</p> 	<p>San Francisco/Mission Bay/SoMa 255,765 RSF</p> 	<p>San Francisco/South San Francisco 315,000 RSF</p> 	<p>San Francisco/Greater Stanford 526,178 RSF</p> 	<p>San Francisco/Greater Stanford 92,147 RSF</p> 
<p>Alexandria Center® – Long Island City</p>	<p>9880 Campus Point Drive and 4150 Campus Point Court</p>	<p>1165 Eastlake Avenue East</p>	<p>9800 Medical Center Drive</p>	<p>9950 Medical Center Drive</p>
<p>New York City/New York City 140,098 RSF</p> 	<p>San Diego/University Town Center 232,818 RSF</p> 	<p>Seattle/Lake Union 100,086 RSF</p> 	<p>Maryland/Rockville 176,832 RSF</p> 	<p>Maryland/Rockville 84,264 RSF</p> 

New Class A development and redevelopment properties: projects under construction (continued)

The following table sets forth a summary of our new Class A development and redevelopment properties under construction as of December 31, 2019 (dollars in thousands):

Property/Market/Submarket	Dev/ Redev	Square Footage			Percentage		Occupancy ⁽¹⁾	
		In Service	CIP	Total	Leased	Leased/ Negotiating	Initial	Stabilized
Developments and redevelopments under construction								
The Arsenal on the Charles/Greater Boston/Cambridge/Inner Suburbs	Redev	683,131 ⁽²⁾	153,157	836,288	82%	82%	2021	2022
945 Market Street/San Francisco/Mission Bay/SOMA	Redev	—	255,765	255,765	—	—	4Q20	2021/22
201 Haskins Way/San Francisco/South San Francisco	Dev	—	315,000	315,000	33	33	3Q20	2021
Alexandria District for Science and Technology/San Francisco/Greater Stanford	Dev	—	526,178	526,178	56	65	4Q20	2021
3160 Porter Drive/San Francisco/Greater Stanford	Redev	—	92,147	92,147	—	—	4Q20	2021
Alexandria Center [®] – Long Island City/New York City	Redev	36,661	140,098	176,759	21	21	3Q20	2020
9880 Campus Point Drive and 4150 Campus Point Court/San Diego/ University Town Center ⁽³⁾	Dev	36,284	232,818	269,102	87	89	4Q19	2022
1165 Eastlake Avenue East/Seattle/Lake Union	Dev	—	100,086	100,086	100	100	4Q20	4Q20
9800 Medical Center Drive/Maryland/Rockville	Dev	—	176,832	176,832	100	100	3Q20	3Q20
9950 Medical Center Drive/Maryland/Rockville	Dev	—	84,264	84,264	100	100	3Q20	3Q20
704 Quince Orchard Road/Maryland/Gaithersburg ⁽⁴⁾	Redev	38,934	41,098	80,032	70	70	4Q18	2020
Total		795,010	2,117,443	2,912,453	61%	63%		

(1) Initial occupancy dates are subject to leasing and/or market conditions. Multi-tenant projects may have occupancy by tenants over a period of time. Stabilized occupancy may vary depending on single tenancy versus multi-tenancy.

(2) We expect to redevelop 154,855 RSF of occupied space into office/laboratory space upon expiration of the existing leases in the third quarter of 2020 and first quarter of 2021.

(3) Refer to footnote 2 on the next page.

(4) 704 Quince Orchard is an unconsolidated real estate joint venture. RSF represent 100%.

New Class A development and redevelopment properties: projects under construction (continued)

Property/Market/Submarket	Our Ownership Interest	In Service	CIP	Cost to Complete	Total at Completion	Unlevered Yields	
						Initial Stabilized	Initial Stabilized (Cash Basis)
Developments and redevelopments under construction							
The Arsenal on the Charles/Greater Boston/Cambridge/Inner Suburbs	100%	\$ 440,047	\$ 62,561		TBD		
945 Market Street/San Francisco/Mission Bay/SoMa	99.5%	—	191,424				
201 Haskins Way/San Francisco/South San Francisco	100%	—	152,333	143,667	296,000	6.6%	6.6%
Alexandria District for Science and Technology/San Francisco/Greater Stanford	100%	—	278,448	298,552	577,000	6.5%	6.2%
3160 Porter Drive/San Francisco/Greater Stanford	100%	—	28,759		TBD		
Alexandria Center® – Long Island City/New York City	100%	16,159	72,962	95,179	184,300	5.5%	5.6%
9880 Campus Point Drive and 4150 Campus Point Court/San Diego/University Town Center ⁽¹⁾	(1)	40,397	90,301	124,302	255,000	6.3% ⁽²⁾	6.4% ⁽²⁾
1165 Eastlake Avenue East/Seattle/Lake Union	100%	—	53,931	84,069	138,000	6.5% ⁽³⁾	6.3% ⁽³⁾
9800 Medical Center Drive/Maryland/Rockville	100%	—	33,159	62,241	95,400	7.7%	7.2%
9950 Medical Center Drive/Maryland/Rockville	100%	—	27,129	27,171	54,300	7.3%	6.8%
Consolidated projects		496,603	991,007				
704 Quince Orchard Road/Maryland/Gaithersburg ⁽⁴⁾	56.8%	4,400	5,574	3,326	13,300	8.9%	8.8%
Total		\$ 501,003	\$ 996,581				

(1) Refer to the "Consolidated and Unconsolidated Real Estate Joint Ventures" section under this Item 2 for additional information.

(2) Represents a two-phase development project as follows:

- Initial phase represents 9880 Campus Point Drive, a 98,000 RSF project to develop Alexandria GradLabs™, a highly flexible, first-of-its-kind life science platform designed to provide post-seed-stage life science companies with turnkey, fully furnished office/laboratory suites and an accelerated, scalable path for growth. The R&D building located at 9880 Campus Point Drive was demolished and as of December 31, 2019, continues to be included in our same property performance results. Refer to the "Same Properties" subsection of the "Results of Operations" section under this Item 2 for additional information.
- Subsequent phase represents 4150 Campus Point Court, a 171,102 RSF, 100% leased project with occupancy expected in 2022.

(3) Project costs represent development costs for 9880 Campus Point Drive and 4150 Campus Point Court. Unlevered yields represent expected aggregate returns for Campus Pointe by Alexandria, including 9880, 10290, and 10300 Campus Point Drive and 4150 Campus Point Court.

(4) Unlevered yields represent anticipated aggregate returns for 1165 Eastlake Avenue, an amenity-rich research headquarters for Adaptive Biotechnologies Corporation, and 1208 Eastlake Avenue, an adjacent multi-tenant office/laboratory building.

(5) 704 Quince Orchard is an unconsolidated real estate joint venture. Cost and yields amounts represent our share.

New Class A development and redevelopment properties: summary of pipeline

The following table summarizes the key information for all our development and redevelopment projects in North America as of December 31, 2019 (dollars in thousands):

Property/Submarket	Our Ownership Interest	Book Value	Square Footage				Total
			Under Construction	Development and Redevelopment		Future	
				Near-Term	Intermediate-Term		
Greater Boston							
The Arsenal on the Charles/Cambridge/Inner Suburbs	100%	\$ 97,825	153,157	—	—	200,000	353,157
15 Necco Street/Seaport Innovation District	99.3%	172,114	—	293,000	—	—	293,000
215 Presidential Way/Route 128	100%	6,185	—	112,000	—	—	112,000
325 Binney Street/Cambridge	100%	108,157	—	—	208,965 ⁽¹⁾	—	208,965
99 A Street/Seaport Innovation District	96.2%	40,965	—	—	235,000	—	235,000
10 Necco Street/Seaport Innovation District	100%	85,302	—	—	175,000	—	175,000
Alexandria Technology Square®/Cambridge	100%	7,787	—	—	—	100,000	100,000
100 Tech Drive/Route 128	100%	—	—	—	—	300,000	300,000
231 Second Avenue/Route 128	100%	1,251	—	—	—	32,000	32,000
Other value-creation projects	100%	9,198	—	—	—	41,955	41,955
		528,784	153,157	405,000	618,965	673,955	1,851,077
San Francisco							
201 Haskins Way/South San Francisco	100%	152,333	315,000	—	—	—	315,000
Alexandria District for Science and Technology/Greater Stanford	100%	278,448	526,178	—	—	—	526,178
945 Market Street/Mission Bay/SoMa	99.5%	191,424	255,765	—	—	—	255,765
3160 Porter Drive/Greater Stanford	100%	28,759	92,147	—	—	—	92,147
88 Bluxome Street/Mission Bay/SoMa	100%	199,286	—	1,070,925 ⁽²⁾	—	—	1,070,925
751 Gateway Boulevard/South San Francisco	100%	16,777	—	217,000	—	—	217,000
505 Brannan Street, Phase II/Mission Bay/SoMa	99.7%	18,124	—	—	165,000	—	165,000
960 Industrial Road/Greater Stanford	100%	105,116	—	—	587,000 ⁽³⁾	—	587,000
3825 and 3875 Fabian Way/Greater Stanford	100%	—	—	—	250,000 ⁽³⁾	228,000 ⁽³⁾	478,000
East Grand Avenue/South San Francisco	100%	5,995	—	—	—	90,000	90,000
Gateway Boulevard/Greater Stanford	100%	1,744	—	—	—	31,000	31,000
Other value-creation projects	100%	40,465	—	—	191,000	25,000	216,000
		\$ 1,038,471	1,189,090	1,287,925	1,193,000	374,000	4,044,015

(1) We are seeking additional entitlements to increase the density of the site from its current 208,965 RSF. Includes a 488,899 RSF lease with Pinterest, Inc. which construction is expected to commence in 2020.

(2) Represents total square footage upon completion of development or redevelopment of a new Class A property. RSF presented includes rentable square footage of buildings currently in operation at properties for their inherent future development opportunities, with the intent to demolish the existing property upon expiration of the existing in-place leases and commencement of future construction. Refer to the definition of "Investments in Real Estate – Value-Creation Square Footage" currently in Rental Properties' in the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for additional information.

(3) Square Footage

New Class A development and redevelopment properties: summary of pipeline (continued)

Property/Submarket	Our Ownership Interest	Book Value	Square Footage						
			Development and Redevelopment		Future	Total			
			Under Construction	Near-Term			Intermediate-Term		
New York City									
Alexandria Center [®] – Long Island City/New York City	100%	\$ 72,962	140,098	—	—	—	—	—	140,098
Alexandria Center [®] for Life Science – New York City/New York City	100%	28,262	—	—	550,000	—	—	—	550,000
47-50 30th Street/New York City	100%	27,120	—	—	135,938	—	—	—	135,938
219 East 42nd Street/New York City	100%	—	—	—	—	—	579,947 ⁽¹⁾	—	579,947
		128,344	140,098	—	685,938	—	579,947	—	1,405,983
San Diego									
Campus Pointe by Alexandria/University Town Center	⁽²⁾	142,176	232,818	—	390,164	—	359,281 ⁽³⁾	—	982,263
3115 Merryfield Row/Torrey Pines	100%	38,942	—	125,000	—	—	—	—	125,000
10931 and 10933 Torrey Pines Road/Torrey Pines	100%	—	—	—	242,000 ⁽³⁾	—	—	—	242,000
University District/University Town Center	100%	—	—	—	400,000 ⁽³⁾⁽⁴⁾	—	—	—	400,000
SD Tech by Alexandria/Sorrento Mesa	50%	30,435	—	—	332,000	—	388,000	—	720,000
Townsgate by Alexandria/Del Mar Heights	100%	20,036	—	—	185,000	—	—	—	185,000
5200 Illumina Way/University Town Center	51%	11,772	—	—	—	—	451,832	—	451,832
Vista Wateridge/Sorrento Mesa	100%	4,022	—	—	—	—	163,000	—	163,000
4045 and 4075 Sorrento Valley Boulevard/Sorrento Valley	100%	7,554	—	—	—	—	149,000 ⁽³⁾	—	149,000
Other value-creation projects	100%	—	—	—	—	—	50,000	—	50,000
		254,937	232,818	125,000	1,549,164	—	1,561,113	—	3,468,095
Seattle									
1165 Eastlake Avenue East/Lake Union	100%	53,931	100,086	—	—	—	—	—	100,086
1150 Eastlake Avenue East/Lake Union	100%	35,916	—	—	260,000	—	—	—	260,000
701 Dexter Avenue North/Lake Union	100%	42,185	—	—	217,000	—	—	—	217,000
601 Dexter Avenue North/Lake Union	100%	30,946	—	—	—	—	188,400 ⁽³⁾	—	188,400
		\$ 162,978	100,086	—	477,000	—	188,400	—	765,486

- (1) Includes 349,947 RSF in operation with an opportunity to either convert the existing office space into office/laboratory space through future redevelopment or to expand the building by an additional 230,000 RSF through ground-up development. The building is currently occupied by Pfizer Inc. with a remaining lease term of approximately five years.
- (2) Refer to the "Consolidated and Unconsolidated Real Estate Joint Ventures" section under Item 7 in this annual report on Form 10-K for additional information on our ownership interest.
- (3) Represents total square footage upon completion of development of a new Class A property. RSF presented includes rentable square footage of buildings currently in operation at properties for their inherent future development opportunities, with the intent to demolish the existing property upon expiration of the existing in-place leases and commencement of future construction. Refer to the definition of "Investments in Real Estate – Value-Creation Square Footage Currently in Rental Properties" in the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for additional information.
- (4) Includes 140,398 RSF at the University District project in our University Town Center submarket, which is currently under evaluation for development, subject to future market conditions.

New Class A development and redevelopment properties: summary of pipeline (continued)

Property/Submarket	Our Ownership Interest	Book Value	Square Footage						
			Development and Redevelopment		Total				
			Under Construction	Near-Term		Intermediate-Term	Future		
Maryland									
704 Quince Orchard Road/Gaithersburg	56.8%	\$ — (1)	41,098	—	—	—	—	—	41,098
9800 Medical Center Drive/Rockville	100%	34,390	176,832	—	—	—	64,000	—	240,832
9950 Medical Center Drive/Rockville	100%	27,129	84,264	—	—	—	—	—	84,264
14200 Shady Grove Road/Rockville	100%	25,902	—	—	—	290,000	145,000	—	435,000
		87,421	302,194	—	—	290,000	209,000	—	801,194
Research Triangle									
Alexandria Center® for AgTech, Phase II/Research Triangle	100%	10,464	—	160,000	—	—	—	—	160,000
8 Davis Drive/Research Triangle	100%	4,751	—	150,000	70,000	—	—	—	220,000
6 Davis Drive/Research Triangle	100%	15,688	—	—	—	—	800,000	—	800,000
Other value-creation projects	100%	4,150	—	—	—	—	76,262	—	76,262
		35,053	—	310,000	70,000	—	876,262	—	1,256,262
Other value-creation projects	100%	3,842	—	—	—	—	122,800	—	122,800
		2,239,830	2,117,443	2,127,925	4,884,067	—	4,585,477	—	13,714,912 (2)
Pending acquisition/San Francisco	(3)	(3)	—	—	—	—	700,000	—	700,000
Mercer Mega Block/Lake Union	(3)	(3)	—	—	—	—	800,000	—	800,000
Key 2020 pending acquisitions		—	—	—	—	—	1,500,000	—	1,500,000
		\$ 2,239,830	2,117,443	2,127,925	4,884,067	—	6,085,477	—	15,214,912

(1) This property is held by an unconsolidated real estate joint venture. Refer to the "Consolidated and Unconsolidated Real Estate Joint Ventures" section under Item 7 in this annual report on Form 10-K for additional information on our ownership interest.

(2) Total rentable square footage includes 1,525,116 RSF of buildings currently in operation that will be redeveloped or replaced with new development RSF upon commencement of future construction. Refer to the definition of "Investments in Real Estate - Value-Creation Square Footage Currently in Rental Properties" in the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for additional information.

(3) Refer to the "Acquisitions" subsection of this "Investments in Real Estate" section under this Item 2 for additional information.

Summary of capital expenditures

Our construction spending for the year ended December 31, 2019, consisted of the following (in thousands):

	Year Ended December 31, 2019
Construction Spending	
Additions to real estate – consolidated projects	\$ 1,224,541
Investments in unconsolidated real estate joint ventures	102,081
Contributions from noncontrolling interests	(9,156)
Construction spending (cash basis) ⁽¹⁾	1,317,466
Change in accrued construction	(24)
Construction spending	<u>\$ 1,317,442</u>

(1) Includes revenue-enhancing projects and non-revenue-enhancing capital expenditures.

The following table summarizes the total projected construction spending for the year ending December 31, 2020, which includes interest, property taxes, insurance, payroll, and other indirect project costs (in thousands):

	Year Ending December 31, 2020
Projected Construction Spending	
Development, redevelopment, and pre-construction projects	\$ 1,414,000
Contributions from noncontrolling interests (consolidated real estate joint ventures)	(24,000)
Generic laboratory infrastructure	166,000
Non-revenue-enhancing capital expenditures	44,000
Guidance midpoint	1,600,000
Guidance range	<u>\$ 1,550,000 – 1,650,000</u>

Non-revenue-enhancing capital expenditures

The table below presents the average per RSF of property-related non-revenue-enhancing capital expenditures, excluding capital expenditures and tenant improvements that are recoverable from tenants, revenue enhancing, or related to properties that have undergone redevelopment (dollars in thousands, except per RSF amounts):

Non-Revenue-Enhancing Capital Expenditures ⁽¹⁾	Year Ended December 31, 2019		Recent Average Per RSF ⁽²⁾
	Amount	Per RSF	
Building improvements	\$ 11,453	\$ 0.47	\$ 0.50
Tenant improvements and leasing costs:			
Re-tenanted space	\$ 32,912	\$ 28.20	\$ 22.74
Renewal space	16,310	12.95	13.43
Total tenant improvements and leasing costs/weighted average	<u>\$ 49,222</u>	<u>\$ 20.28</u>	<u>\$ 17.15</u>

(1) Excludes amounts that are recoverable from tenants, related to revenue-enhancing capital expenditures, or related to properties that have undergone redevelopment.

(2) Represents the average for a five-year period from 2015 to 2019.

ITEM 3. LEGAL PROCEEDINGS

To our knowledge, no legal proceedings are pending against us, other than routine actions and administrative proceedings, and other actions not deemed material, substantially all of which are expected to be covered by liability insurance and which, in the aggregate, are not expected to have a material adverse effect on our financial condition, results of operations, or cash flows.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS, AND ISSUER PURCHASES OF EQUITY SECURITIES

Our common stock is traded on the NYSE under the symbol "ARE." On January 15, 2020, the last reported sales price per share of our common stock was \$162.29, and there were 552 holders of record of our common stock (excluding beneficial owners whose shares are held in the name of Cede & Co.).

To maintain our qualification as a REIT, we must make annual distributions to stockholders of at least 90% of our taxable income for the current taxable year, determined without regard to deductions for dividends paid and excluding any net capital gains. Under certain circumstances, we may be required to make distributions in excess of cash flows available for distributions to meet these distribution requirements. In such a case, we may borrow funds or may raise funds through the issuance of additional debt or equity capital. No dividends can be paid on our common stock unless we have paid full cumulative dividends on our preferred stock. From the date of issuance of our preferred stock through December 31, 2019, we have paid full cumulative dividends on our preferred stock. As of December 31, 2019, we had no outstanding shares of preferred stock. Future distributions on our common stock will be determined by, and made at the discretion of, our Board of Directors and will depend on a number of factors, including actual cash available for distribution to our stockholders, our financial condition and capital requirements, the annual distribution requirements under the REIT provisions of the Internal Revenue Code, restrictions under Maryland law, and such other factors as our Board of Directors deems relevant. We cannot assure our stockholders that we will make any future distributions.

Refer to "Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters" in this annual report on Form 10-K for information on securities authorized for issuance under equity compensation plans.

ITEM 6. SELECTED FINANCIAL DATA

The following table should be read in conjunction with our consolidated financial statements and notes thereto appearing elsewhere in this annual report on Form 10-K. Refer to "Item 15. Exhibits and Financial Statement Schedules."

<i>(In thousands, except per share amounts)</i>	Year Ended December 31,				
	2019	2018	2017	2016	2015
Operating Data:					
Revenues:					
Income from rentals	\$ 1,516,864	\$ 1,314,781	\$ 1,122,325	\$ 897,475	\$ 817,887
Other income	14,432	12,678	5,772	24,231	25,587
Total revenues	1,531,296	1,327,459	1,128,097	921,706	843,474
Expenses:					
Rental operations	445,492	381,120	325,609	278,408	261,232
General and administrative	108,823	90,405	75,009	63,884	59,621
Interest	173,675	157,495	128,645	106,953	105,813
Depreciation and amortization	544,612	477,661	416,783	313,390	261,289
Impairment of real estate	12,334	6,311	203	209,261	23,250
Loss on early extinguishment of debt	47,570	1,122	3,451	3,230	189
Total expenses	1,332,506	1,114,114	949,700	975,126	711,394
Equity in earnings (losses) of unconsolidated real estate JVs	10,136	43,981	15,426	(184)	1,651
Investment income	194,647	136,763	—	—	—
Gain on sales of real estate – rental properties	474	8,704	270	3,715	12,426
Income (loss) from continuing operations	404,047	402,793	194,093	(49,889)	146,157
(Loss) income from discontinued operations ⁽¹⁾	—	—	—	—	(43)
Gain on sales of real estate – land parcels	—	—	111	90	—
Net income (loss)	404,047	402,793	194,204	(49,799)	146,114
Net income attributable to noncontrolling interests	(40,882)	(23,481)	(25,111)	(16,102)	(1,897)
Net income (loss) attributable to Alexandria Real Estate Equities, Inc.'s stockholders	363,165	379,312	169,093	(65,901)	144,217
Dividends on preferred stock	(3,204)	(5,060)	(7,666)	(20,223)	(24,986)
Preferred stock redemption charge	(2,580)	(4,240)	(11,279)	(61,267)	—
Net income attributable to unvested restricted stock awards	(6,386)	(6,029)	(4,753)	(3,750)	(2,364)
Net income (loss) attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	<u>\$ 350,995</u>	<u>\$ 363,983</u>	<u>\$ 145,395</u>	<u>\$ (151,141)</u>	<u>\$ 116,867</u>
Net income (loss) per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – basic					
Continuing operations	\$ 3.13	\$ 3.53	\$ 1.59	\$ (1.99)	\$ 1.63
Discontinued operations ⁽¹⁾	—	—	—	—	—
Net income (loss) per share	<u>\$ 3.13</u>	<u>\$ 3.53</u>	<u>\$ 1.59</u>	<u>\$ (1.99)</u>	<u>\$ 1.63</u>
Net income (loss) per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – diluted					
Continuing operations	\$ 3.12	\$ 3.52	\$ 1.58	\$ (1.99)	\$ 1.63
Discontinued operations ⁽¹⁾	—	—	—	—	—
Net income (loss) per share	<u>\$ 3.12</u>	<u>\$ 3.52</u>	<u>\$ 1.58</u>	<u>\$ (1.99)</u>	<u>\$ 1.63</u>
Weighted-average shares of common stock outstanding – basic	112,204	103,010	91,546	76,103	71,529
Weighted-average shares of common stock outstanding – diluted	112,524	103,321	92,063	76,103	71,529
Dividends declared per share of common stock	<u>\$ 4.00</u>	<u>\$ 3.73</u>	<u>\$ 3.45</u>	<u>\$ 3.23</u>	<u>\$ 3.05</u>
Balance Sheet Data (at year end):					
Investments in real estate	\$ 14,844,038	\$ 11,913,693	\$ 10,298,019	\$ 9,077,972	\$ 7,629,922
Total assets	\$ 18,390,503	\$ 14,464,956	\$ 12,103,953	\$ 10,354,888	\$ 8,881,017
Total debt	\$ 6,777,479	\$ 5,478,255	\$ 4,764,807	\$ 4,164,025	\$ 3,935,692
Total liabilities	\$ 8,224,025	\$ 6,570,242	\$ 5,620,784	\$ 4,972,610	\$ 4,587,053
Redeemable noncontrolling interests	\$ 12,300	\$ 10,786	\$ 11,509	\$ 11,307	\$ 14,218
Total equity	\$ 10,154,178	\$ 7,883,928	\$ 6,471,660	\$ 5,370,971	\$ 4,279,746

(1) Refer to Note 2 – "Summary of Significant Accounting Policies" to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information on discontinued operations.

ITEM 6. SELECTED FINANCIAL DATA (CONTINUED)

Year Ended December 31,

<i>(Dollars in thousands, except per occupied RSF amounts)</i>	2019	2018	2017	2016	2015
Other Data:					
Net cash provided by operating activities	\$ 683,857	\$ 570,339	\$ 450,882	\$ 393,487	\$ 342,551
Net cash used in investing activities	\$ 3,641,320	\$ 2,161,760	\$ 1,737,126	\$ 1,498,406	\$ 716,505
Net cash provided by financing activities	\$ 2,927,482	\$ 1,588,433	\$ 1,420,341	\$ 1,093,775	\$ 415,284
Number of properties – North America	291	237	213	199	191
RSF – North America (including development and redevelopment projects under construction)	29,098,433	24,587,438	21,981,133	19,869,729	18,874,070
Occupancy of operating properties – North America	96.8%	97.3%	96.8%	96.6%	97.2%
Occupancy of operating and redevelopment properties – North America	94.4%	95.1%	94.7%	95.7%	93.7%
Annual rental revenue per occupied RSF – North America	\$ 51.04	\$ 48.42	\$ 48.01	\$ 45.15	\$ 41.17
Reconciliation of net income (loss) attributable to Alexandria's common stockholders to funds from operations attributable to Alexandria's common stockholders – diluted:					
Net income (loss) attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 350,995	\$ 363,983	\$ 145,395	\$ (151,141)	\$ 116,867
Depreciation and amortization of real estate assets	541,855	477,661	416,783	313,390	261,289
Noncontrolling share of depreciation and amortization from consolidated real estate JVs	(30,960)	(16,077)	(14,762)	(9,349)	(372)
Our share of depreciation and amortization from unconsolidated real estate JVs ⁽¹⁾	6,366	3,181	1,551	2,707	1,734
Gain on sales of real estate – rental properties	(474)	(8,704)	(270)	(3,715)	(12,426)
Our share of gain on sales of real estate from unconsolidated real estate JVs ⁽¹⁾	—	(35,678)	(14,106)	—	—
Gain on sales of real estate – land parcels	—	—	(111)	(90)	—
Impairment of real estate – rental properties	12,334	—	203	98,194	23,250
Assumed conversion of 7.00% Series D cumulative convertible preferred stock ⁽²⁾	3,204	5,060	—	—	—
Allocation to unvested restricted stock awards	(5,904)	(5,961)	(2,920)	—	(1,758)
Funds from operations attributable to Alexandria's common stockholders – diluted ⁽³⁾	877,416	783,465	531,763	249,996	388,584
Unrealized gains on non-real estate investments	(161,489)	(99,634)	—	—	—
Realized gains on non-real estate investments	—	(14,680)	—	(4,361)	(13,109)
Impairment of real estate – land parcels	—	6,311	—	110,474	—
Impairment of non-real estate investments	17,124	5,483	8,296	3,065	—
Loss on early extinguishment of debt	47,570	1,122	3,451	3,230	189
Loss on early termination of interest rate hedge agreements	1,702	—	—	—	—
Our share of gain on early extinguishment of debt from unconsolidated real estate JVs ⁽¹⁾	—	(761)	—	—	—
Preferred stock redemption charge	2,580	4,240	11,279	61,267	—
Removal of assumed conversion of 7.00% Series D cumulative convertible preferred stock ⁽²⁾	(3,204)	(5,060)	—	—	—
Allocation to unvested restricted stock awards	1,307	1,517	(321)	(2,356)	110
Funds from operations attributable to Alexandria's common stockholders – diluted, as adjusted ⁽³⁾	\$ 783,006	\$ 682,003	\$ 554,468	\$ 421,315	\$ 375,774

- (1) Classified in equity in earnings of unconsolidated real estate joint ventures in our consolidated statements of operations under Item 15 in this annual report on Form 10-K.
- (2) Refer to "Weighted-Average Share of Common Stock Outstanding – Diluted" in the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K for additional information.
- (3) Refer to "Funds From Operations and Funds From Operations, as Adjusted, Attributable to Alexandria Real Estate Equities, Inc.'s Common Stockholders" in the "Non-GAAP Measures and Definitions" section under Item 7 in this annual report on Form 10-K.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion should be read in conjunction with our consolidated financial statements and notes thereto under "Item 15. Exhibits and Financial Statement Schedules" in this annual report on Form 10-K. Forward-looking statements involve inherent risks and uncertainties regarding events, conditions, and financial trends that may affect our future plans of operations, business strategy, results of operations, and financial position. A number of important factors could cause actual results to differ materially from those included within or contemplated by such forward-looking statements, including, but not limited to, those described under "Item 1A. Risk Factors" in this annual report on Form 10-K. We do not undertake any responsibility to update any of these factors or to announce publicly any revisions to any of the forward-looking statements contained in this or any other document, whether as a result of new information, future events, or otherwise.

As used in this annual report on Form 10-K, references to the "Company," "Alexandria," "we," "us," and "our" refer to Alexandria Real Estate Equities, Inc. and its consolidated subsidiaries.

Executive summary

Operating results

	Year Ended December 31,	
	2019	2018
Net income attributable to Alexandria's common stockholders – diluted:		
<i>In millions</i>	\$ 351.0	\$ 364.0
<i>Per share</i>	\$ 3.12	\$ 3.52
Funds from operations attributable to Alexandria's common stockholders – diluted, as adjusted:		
<i>In millions</i>	\$ 783.0	\$ 682.0
<i>Per share</i>	\$ 6.96	\$ 6.60

The operating results shown above include certain items related to corporate-level investing and financing decisions. Refer to the tabular presentation of these items in the "Results of Operations" section under this Item 7 for additional information.

Celebrating our 25th Anniversary; an important milestone in company history

Since our initial launch in January 1994 as a garage startup with a strategic business plan, \$19 million in Series A capital, and a unique vision to create a new kind of real estate company focused on serving the life science industry, we have grown into an investment-grade rated S&P 500[®] company, a recognized leader in life science cluster development, and a trusted partner to innovative companies, highly respected cities, and renowned institutions. From our initial public offering in May 1997 through December 31, 2019, we have generated a total shareholder return of 1,714% and a total market capitalization of \$26.3 billion as of December 31, 2019.

A REIT industry-leading, high-quality tenant roster

- 50% of annual rental revenue from investment-grade or publicly traded large cap tenants.
- Weighted-average remaining lease term of 8.1 years.

Continued growth in common stock dividend

Common stock dividend declared for the three months ended December 31, 2019 of \$1.03 per common share, aggregating \$4.00 per common share for the year ended December 31, 2019, up 27 cents, or 7%, over the year ended December 31, 2018; continuation of our strategy to share growth in cash flows from operating activities with our stockholders while also retaining a significant portion for reinvestment.

Strong internal growth; highest leasing activity in our history and highest annual rental rate increases during the past 10 years

- Total revenues of \$1.5 billion, up 15.4%, for the year ended December 31, 2019, compared to \$1.3 billion for the year ended December 31, 2018.
- Continued strong internal growth; acquired vacancy from recent acquisitions provide opportunity to increase income from rentals and net operating income.
- Net operating income (cash basis) of \$951.8 million for the year ended December 31, 2019, increased by \$121.2 million, or 14.6%, compared to the year ended December 31, 2018.
- Same property net operating income growth of 3.1% and 7.1% (cash basis) for the year ended December 31, 2019, compared to the year ended December 31, 2018.
- Continued strong leasing activity during 2019, representing the highest leasing activity in our history and rental rate growth over expiring rates on renewed and re-leased space during 2019, representing our highest annual rental rate increases during the past 10 years:

	2019
Total leasing activity – RSF	5,062,722
Lease renewals and re-leasing of space:	
RSF (included in total leasing activity above)	2,427,108
Rental rate increases	32.2%
Rental rate increases (cash basis)	17.6%

Strong external growth; disciplined allocation of capital to visible, highly leased value-creation pipeline

- Since the beginning of 2019, we have placed into service 2.1 million RSF of development and redevelopment projects, with weighted-average initial stabilized yields of 7.4% and 6.9% (cash basis).
- Significant near-term growth of annual net operating income (cash basis), including our share of unconsolidated real estate joint ventures, of \$55 million upon the burn-off of initial free rent on recently delivered projects.
- We commenced development and redevelopment projects aggregating 1.9 million RSF during the year ended December 31, 2019.
- During the year ended December 31, 2019, we leased 1.4 million RSF of development and redevelopment space.

Completed acquisitions

Refer to the “Acquisitions” subsection of the “Investments in Real Estate” section under “Item 2. Properties” in this annual report on Form 10-K for information on our opportunistic acquisitions.

Core operating metrics as of December 31, 2019

Percentage of annual rental revenue in effect from:	
Investment-grade or publicly traded large cap tenants	50%
Class A properties in AAA locations	76%
Occupancy of operating properties in North America	96.8% ⁽¹⁾
Operating margin ⁽²⁾	70%
Adjusted EBITDA margin ⁽²⁾	68% ⁽³⁾
Weighted-average remaining lease term:	
All tenants	8.1 years
Top 20 tenants	11.6 years

(1) Includes 259,616 RSF, or 1.0%, of vacancy representing lease-up opportunities at properties recently acquired during the second half of 2019, primarily related to our SD Tech by Alexandria campus. Excluding these vacancies, occupancy of operating properties in North America would have been 97.8% as of December 31, 2019.

Refer to the “Summary of Occupancy Percentages in North America” section under Item 2 in this annual report on Form 10-K for additional information.

(2) Fourth quarter of 2019, annualized.

(3) Represents an increase of 400 bps since the beginning of 2013.

Balance sheet management

Refer to the “Execution of Capital Strategy” section below under this Item 7 in this annual report on Form 10-K.

Industry leadership, strategic initiatives, and corporate responsibility

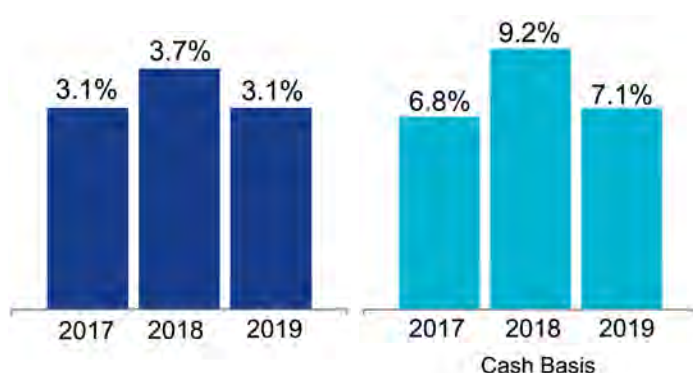
- In February 2019, it was announced that we are working with Verily Life Sciences, LLC, Alphabet's life science division, to build a tech-focused rehabilitation campus in Dayton, Ohio, for the full and sustained recovery of people living with opioid addiction. The campus will provide a comprehensive model of care that will include a behavioral health treatment center, rehabilitation housing, and wrap-around services, and will act as a state of the art model for opioid addiction treatment nationwide.
- In February 2019, we were recognized by the Center for Active Design, which operates Fitwel[®], as the inaugural Industry Leading Company in Fitwel's 2018 Best in Building Health. We were selected based on our 3-Star Fitwel certification (the highest rating possible); our leadership in promoting and educating the real estate industry on the opportunities for and benefits of building design, construction, and operational practices that support high levels of occupant health and wellness; and our #1 global ranking in the 2018 GRESB Health & Well-Being Module.
- In March 2019, Alexandria LaunchLabs[®] – Cambridge, located at the Alexandria Center[®] at One Kendall Square in Greater Boston, achieved LEED gold certification and a Fitwel 3-Star certification.
- In April 2019, we announced the launch of a new strategic agricultural technology (agtech) business initiative and the opening of Phase I of the Alexandria Center[®] for AgTech – Research Triangle, the first and only fully integrated, amenity-rich, multi-tenant agtech R&D and greenhouse campus, in the heart of Research Triangle, the most important, dense, and diverse agtech cluster in the U.S. The campus opened with a 97% leased, 180,400 RSF first phase redevelopment at 5 Laboratory Drive.
- In June 2019, we announced our partnership with Columbia University to open our second Alexandria LaunchLabs[®] in New York City in the spring of 2020. The full-service platform will offer member companies 13,298 RSF of highly flexible, turnkey office/laboratory space and feature a high-tech event center to host workshops, networking events, and educational opportunities for the entrepreneurial life science community.
- In June 2019, we celebrated the opening of the first facilities within the tech-focused opioid rehabilitation campus in Dayton, Ohio. In partnership with Verily Life Sciences, LLC, we are leading the design and development of this 59,000 RSF state-of-the-art campus to provide a comprehensive model of care dedicated to the recovery of people suffering from opioid addiction.
- In September 2019, we achieved the following in the 2019 GRESB Real Estate Assessment: (i) GRESB 5 Star Rating (out of 5 stars), (ii) our third consecutive “Green Star” designation, and (iii) our second consecutive “A” disclosure score.
- In October 2019, we accepted the 2019 Developer of the Year Award from NAIOP, the Commercial Real Estate Development Association. This award annually honors the development company that best exemplifies leadership and innovation as demonstrated by the outstanding quality of projects and services, financial consistency and stability, ability to adapt to market conditions, and support for the local community.
- In November 2019, Alexandria, in collaboration with academic institutions, research hospitals, and life science industry partners, including Harvard University, the Massachusetts Institute of Technology, FUJIFILM Diosynth Biotechnologies, and GE Healthcare Life Sciences, announced the launch of a first-of-its-kind consortium to catalyze advanced biological innovation and manufacturing in Greater Boston with an aim to treat, prevent, and cure diseases.
- In January 2020, we announced our first national \$100,000 AgTech Innovation Prize competition to recognize startup and early-stage agtech and foodtech companies that demonstrate novel approaches to addressing agriculture-, food-, and nutrition-related challenges.
- In January 2020, Alexandria Venture Investments, the company's venture capital arm, was recognized for a third consecutive year as the most active biopharma investor by new deal volume by Silicon Valley Bank in its “2020 Annual Report: Healthcare Investments and Exits.” Alexandria's venture activity provides us with, among other things, mission-critical data and knowledge on innovations and trends.
- Our philanthropy and volunteerism efforts provide mission-critical support to non-profit organizations doing meaningful work in areas of medical research, STEM education, military support services, and serving local communities. During 2019, our team members volunteered more than 4,500 hours to support over 250 non-profit organizations across the country.
- We value both the health and wellness of our team members as well as supporting organizations on the leading edge of medical innovation. In November 2019, we were honored to support 59 of our team members who completed the 2019 New York City Marathon on behalf of Fred's Team and raised approximately \$360 thousand to support the mission-critical research at Memorial Sloan Kettering Cancer Center.

Subsequent events

- As of the date of this report, we completed acquisitions of four properties in 2020 for an aggregate purchase price of \$341.2 million, comprising 800,346 RSF of operating and redevelopment opportunities strategically located across multiple markets.
- In January 2020, we formed a real estate joint venture with Boston Properties, Inc., in which we are targeting a 51% ownership interest over time. We are the managing member with the power to direct the activities that most significantly affect the economic performance of the joint venture, and will consolidate this joint venture pursuant to the applicable accounting standards. Our partner contributed three office buildings and land supporting 260,000 square feet of future development, and we contributed one office building, one office/laboratory building, one amenity building, at 701, 681, and 685 Gateway Boulevard, respectively, and land supporting 377,000 square feet of future development. This future mega campus in our South San Francisco submarket will aggregate 1.7 million RSF, approximately 50% of which represents future development and redevelopment opportunities.
- In January 2020, we entered into forward equity sales agreements to sell an aggregate of 6.9 million shares of our common stock (including the exercise of an underwriters' option) at a public offering price of \$155.00 per share, before underwriting discounts. We expect to settle these forward equity sales agreements in 2020, and receive proceeds of approximately \$1.0 billion, to be further adjusted as provided in the sales agreements, which will fund pending and recently completed acquisitions and the construction of our highly leased development projects.
- We expect to file a new ATM program in the first quarter of 2020.

Operating summary

Same Property Net Operating Income Growth



Favorable Lease Structure⁽¹⁾

Strategic Lease Structure by Owner and Operator of Collaborative Life Science, Technology, and AgTech Campuses

Increasing cash flows

Percentage of leases containing annual rent escalations **95%**

Stable cash flows

Percentage of triple net leases **97%**

Lower capex burden

Percentage of leases providing for the recapture of capital expenditures **96%**

Rental Rate Growth: Renewed/Re-Leased Space



Margins⁽²⁾

Operating	Adjusted EBITDA
70%	68%

(1) Percentages calculated based on RSF as of December 31, 2019.

(2) Represents percentages for the three months ended December 31, 2019.

Execution of capital strategy

During 2019, we continued to execute on many of the long-term components of our capital strategy. Some of our key accomplishments include the following:

2019 capital strategy

Key metrics as of December 31, 2019

- \$26.3 billion of total market capitalization
- \$19.5 billion of total equity capitalization
- \$2.4 billion of liquidity⁽¹⁾

(1) In January 2020, we entered into \$1.0 billion of forward equity sales agreements. Including the outstanding forward equity agreements, we had proforma liquidity of \$3.4 billion.

	As of December 31, 2019		Goal for Fourth Quarter of 2020, Annualized
	Quarter Annualized	Trailing 12 Months	
Net debt and preferred stock to Adjusted EBITDA	5.7x ⁽¹⁾	6.1x	Less than or equal to 5.2x
Fixed-charge coverage ratio	4.2x	4.2x	Greater than 4.5x

(1) Due to the timing of two acquisitions that closed in December 2019, we had a temporary 0.4x increase above our projected net debt and preferred stock to Adjusted EBITDA – fourth quarter of 2019, annualized, for December 31, 2019. We remain committed to our guidance of net debt and preferred stock to Adjusted EBITDA – fourth quarter of 2020, annualized, of less than or equal to 5.2x.

Value-creation pipeline of new Class A development and redevelopment projects as a percentage of gross investments in real estate	As of December 31, 2019
Under construction and 63% leased/negotiating	6%
Income-producing/potential cash flows/covered land play ⁽¹⁾	5%
Land	2%

(1) Includes projects that have existing buildings which are generating or can generate operating cash flows. Also includes development rights associated with existing operating campuses.

Key capital events in 2019

- We had the following dispositions and sales of partial interests in core Class A properties (dollars in millions, except per RSF):

Property	Submarket	RSF	Interest Sold	Sales Price		Capitalization Rate (Cash)
				Total	Per RSF	
5200 Illumina Way	University Town Center	792,687	49%	\$ 286.7	N/A ⁽¹⁾	4.7%
75/125 Binney Street	Cambridge	388,270	60%	438.0	\$ 1,880	4.3%
500 Forbes Boulevard	South San Francisco	155,685	90%	139.5	\$ 996	4.4%
10260 Campus Point Drive and 4161 Campus Point Court	University Town Center	269,048	45%	36.0	N/A	N/A
6138/6150 Nancy Ridge Drive	Sorrento Mesa	56,698	100%	6.6	\$ 117	N/A
		<u>1,662,388</u>		<u>\$ 906.8</u>		

(1) Represents \$264.6 million, or \$681 per RSF, for the operating buildings and \$22.1 million, or \$100 per RSF, for the developable land parcel. This transaction values 100% of the campus at \$585.2 million and represents a value in excess of book basis aggregating \$269.1 million.

- Our issuances and repayments of debt included the following (dollars in millions):

	Date	Effective Interest Rate	Maturity Date	Principal Amount	Loss on Early Extinguishment of Debt
Issuances					
Unsecured senior notes payable – green bond	March	4.03%	1/15/24	\$ 200	
Unsecured senior notes payable – green bond	March	3.96	4/15/26	350	
Unsecured senior notes payable	March	4.93	4/15/49	300	
Unsecured senior notes payable	July	3.48	8/15/31	750	
Unsecured senior notes payable	July/Sept	3.91	2/1/50	700	
Unsecured senior notes payable	Sept	2.87	12/15/29	400	
Weighted average/total		<u>3.77%</u>	<u>16.9 years</u>	<u>\$ 2,700</u>	⁽¹⁾
Repayments of debt					
Secured notes payable	Jan	8.15%	4/1/20	\$ 107	\$ 7.1
Secured construction loan	March	3.29	1/28/20	193	0.3
Unsecured senior notes payable	July/Aug	2.96	1/15/20	400	37.4
Unsecured senior notes payable	July/Aug	4.75	4/1/22	550	
Unsecured senior bank term loan	July/Sept	3.62	1/2/25	350	2.8
Weighted average/total		<u>4.11%</u>	<u>2.4 years</u>	<u>\$ 1,600</u>	⁽¹⁾ <u>\$ 47.6</u>

(1) The remaining proceeds received from our debt issuances, after repayments of debt, were used to fund the construction of our value-creation pipeline and acquisitions completed during 2019. Refer to Note 3 – “Investments in Real Estate” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information.

- In conjunction with the \$350.0 million repayment of our unsecured senior bank term loan, during the three months ended September 30, 2019, we also terminated all of our interest rate hedge agreements aggregating \$350.0 million with a weighted-average interest pay rate of 2.57% and reclassified the entire loss on our interest rate hedge agreements aggregating \$1.7 million from accumulated other comprehensive loss into interest expense in our consolidated statements of operations.
- In September 2019, we established a commercial paper program with the ability to issue up to \$750.0 million of commercial paper notes with a maximum maturity of 397 days from the date of issue. Our commercial paper program is backed by our \$2.2 billion unsecured senior line of credit, and at all times we expect to retain a minimum undrawn amount of borrowing capacity under our unsecured senior line of credit equal to any outstanding balance on our commercial paper program. We use borrowings under the program to fund short-term capital needs. As of December 31, 2019, we had no borrowings outstanding under our commercial paper program.
- During the year ended December 31, 2019, we issued 8.7 million shares of common stock and received net proceeds of \$1.2 billion, as follows:
 - Issued an aggregate of 8.1 million shares of common stock, at a weighted-average price of \$139.32 per share, for aggregate proceeds (net of underwriters’ discounts) of approximately \$1.1 billion. During the year ended December 31, 2019, we incurred initial issuance costs aggregating \$700 thousand in connection with these forward equity sales agreements.
 - Issued 602,484 shares of common stock under our ATM program, at a weighted-average price of \$145.58 per share, for net proceeds of \$86.1 million, during the three months ended June 30, 2019. As of December 31, 2019, we had approximately \$22.5 million of gross proceeds available to be issued under our ATM program.
 - The proceeds were used to fund construction projects and 2019 acquisitions completed prior to December 2019.
- During the year ended December 31, 2019, we repurchased, in privately negotiated transactions, 275,000 outstanding shares of our Series D Convertible Preferred Stock at an aggregate price of \$9.2 million, or \$33.60 per share, and recognized a preferred stock redemption charge of \$2.6 million.
- In September 2019, we elected to convert the remaining 2.3 million outstanding shares of our Series D Convertible Preferred Stock into shares of our common stock. The Series D Convertible Preferred Stock became eligible for mandatory conversion at our discretion, at a set conversion rate of 0.2513 shares of common stock to one share of preferred stock, upon our common stock price exceeding \$149.46 per share for the specified period of time required to cause the mandatory conversion. In October 2019, we converted the Series D Convertible Preferred Stock into 578 thousand shares of common stock. This conversion was accounted for as an equity transaction, and we did not recognize a gain or loss. As of December 31, 2019, we had no outstanding shares of Series D Convertible Preferred Stock.

Investments

We carry our investments in publicly traded companies and certain privately held entities at fair value. During the year ended December 31, 2019, we had investment income of \$194.6 million, comprising \$50.3 million in realized gains, \$17.1 million in impairments related to non-real estate investments in privately held entities, and \$161.5 million in unrealized gains.

2020 Capital strategy

During 2020, we intend to continue to execute our capital strategy to achieve further improvements to our credit rating, which will allow us to further improve our cost of capital and continue our disciplined approach to capital allocation. For further information, refer to the "Projected Results" section below under this Item 7 in this annual report on Form 10-K.

Consistent with 2019, our capital strategy for 2020 includes the following elements:

- Allocate capital to Class A properties located in collaborative life science, technology, and agtech campuses in AAA urban innovation clusters;
- Continue to improve our credit profile;
- Maintain prudent access to diverse sources of capital, which include cash flows from operating activities after dividends, incremental debt supported by our growth in EBITDA, real estate asset sales, non-real estate investment sales, joint venture capital, and other capital such as sales of equity;
- Maintain commitment to long-term capital to fund growth;
- Prudently ladder debt maturities;
- Reduce short-term variable-rate debt;
- Prudently manage equity investments to support corporate-level investment strategies;
- Maintain significant balance sheet liquidity; and
- Maintain a stable and flexible balance sheet.

Given the anticipated delivery of significant incremental EBITDA from our development and redevelopment of new Class A properties, we expect to be able to debt fund a significant portion of construction on a leverage-neutral basis. We expect to continue to maintain access to a diverse source of debt, including unsecured senior notes payable, as well as secured construction loans for our development and redevelopment projects from time to time. We expect to continue to maintain a significant proportion of our net operating income on an unencumbered basis to allow for future flexibility for accessing both unsecured and secured debt markets, although we expect traditional secured mortgage notes payable will remain a small component of our capital structure. In addition to debt funding on a leverage-neutral basis, we intend to supplement our remaining capital needs with net cash flows from operating activities, after dividends and proceeds from real estate asset sales, non-real estate investment sales, partial interest sales, and other debt and equity capital.

Improved cost of capital

As part of our capital strategy to continue strengthening our credit profile, we expect to complete and place into service development and redevelopment projects currently under construction, which we expect will deliver significant incremental EBITDA. The expected growth in our EBITDA in 2020 and beyond should allow us to obtain debt funding on a leverage-neutral basis and provide significant capital to fund our development and redevelopment projects. Additionally, the resulting expected improvement in our balance sheet leverage ratio should allow us to access diverse sources of capital, strengthen our credit profile, and reduce our cost of capital. In addition, we expect to continue to maintain a significant proportion of unencumbered net operating income. For the year ended December 31, 2019, our unencumbered net operating income as a percentage of total net operating income was 94%.

Investments

We present our equity investments at fair value whenever fair value or NAV is readily available. Adjustments for our limited partnership investments represent changes in reported NAV as a practical expedient to estimate fair value. For investments without readily available fair values, we adjust the carrying amount whenever such investments have an observable price change, and further adjustments are not made until another price change, if any, is observed. Refer to Note 7 – “Investments” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information.

	December 31, 2019		Year Ended December 31, 2018
(In thousands)	Three Months Ended	Year Ended	December 31, 2018
Realized gains	\$ 4,399 ⁽¹⁾	\$ 33,158 ⁽¹⁾	\$ 37,129 ⁽²⁾
Unrealized gains	148,268	161,489	99,634
Investment income	\$ 152,667	\$ 194,647	\$ 136,763

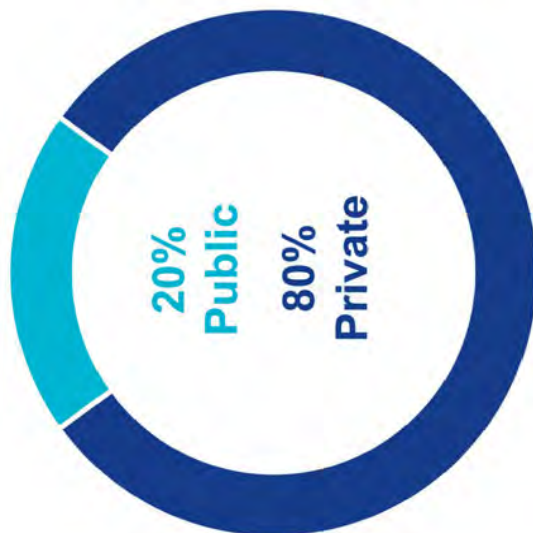
Investments	Cost	Adjustments	Carrying Amount
Fair value:			
Publicly traded companies	\$ 148,109	\$ 170,528 ⁽³⁾	\$ 318,637
Entities that report NAV	271,276	162,626	433,902
Entities that do not report NAV:			
Entities with observable price changes since 1/1/18	42,045	68,489	110,534
Entities without observable price changes	277,521	—	277,521
December 31, 2019	\$ 738,951	\$ 401,643	\$ 1,140,594
September 30, 2019	\$ 737,078	\$ 253,376	\$ 990,454

(1) Includes realized gains for the three months and year ended December 31, 2019, of \$14.4 million and \$50.3 million, respectively, and impairments related to non-real estate investments in privately held entities of \$10.0 million and \$17.1 million, respectively.

(2) Includes realized gains of \$14.7 million related to two publicly traded non-real estate investments and impairment of \$5.5 million primarily related to one non-real estate investment in a privately held entity. Excluding these gains and impairment, our realized gains on non-real estate investments were \$27.9 million for the year ended December 31, 2018.

(3) Includes gross unrealized gains and losses of \$197.3 million and \$26.8 million, respectively.

Public/Private Mix (Cost)



Tenant/Non-Tenant Mix (Cost)



Results of operations

We present a tabular comparison of items, whether gain or loss, that may facilitate a high-level understanding of our results and provide context for the disclosures included in our annual report on Form 10-K. We believe such tabular presentation promotes a better understanding for investors of the corporate-level decisions made and activities performed that significantly affect comparison of our operating results from period to period. We also believe this tabular presentation will supplement for investors an understanding of our disclosures and real estate operating results. Gains or losses on sales of real estate and impairments of held for sale assets are related to corporate-level decisions to dispose of real estate. Gains or losses on early extinguishment of debt, gains or losses on early termination of interest rate hedge agreements, and preferred stock redemption charges are related to corporate-level financing decisions focused on our capital structure strategy. Significant realized and unrealized gains or losses on non-real estate investments and impairments of real estate and non-real estate investments are not related to the operating performance of our real estate assets as they result from strategic, corporate-level non-real estate investment decisions and external market conditions. Impairments of non-real estate investments are not related to the operating performance of our real estate as they represent the write-down of non-real estate investments when their fair values decline below their respective carrying values due to changes in general market or other conditions outside of our control. Significant items, whether a gain or loss, included in the tabular disclosure, for current periods are described in further detail under this Item 7 in this annual report on Form 10-K. Items included in net income attributable to Alexandria's common stockholders were as follows:

	Year Ended December 31,			
	2019	2018	2019	2018
	Amount		Per Share – Diluted	
<i>(In millions, except per share amounts)</i>				
Gains on non-real estate investments ⁽¹⁾ :				
Unrealized	\$ 161.5	\$ 99.6	\$ 1.44	\$ 0.96
Realized	—	14.7	—	0.14
Gain on sales of real estate	0.5	44.4	—	0.43
Impairment of:				
Real estate ⁽²⁾	(12.3)	(6.3)	(0.11)	(0.06)
Non-real estate investments ⁽¹⁾	(17.1)	(5.5)	(0.15)	(0.05)
Early extinguishment of debt:				
Loss ⁽³⁾	(47.6)	(1.1)	(0.42)	(0.01)
Our share of gain	—	0.8	—	0.01
Loss on early termination of interest rate hedge agreements	(1.7)	—	(0.02)	—
Preferred stock redemption charge ⁽⁴⁾	(2.6)	(4.2)	(0.02)	(0.04)
Allocation to invested restricted stock awards	—	(2.2)	—	(0.02)
Total	\$ 80.7	\$ 140.2	\$ 0.72	\$ 1.36
Weighted-average shares of common stock outstanding for calculation of EPS – diluted			112.5	103.3

(1) Refer to Note 7 – “Investments” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for more information.

(2) Refer to Note 3 – “Investments in Real Estate” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for more information.

(3) Refer to Note 10 – “Secured and Unsecured Senior Debt” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for more information.

(4) Refer to Note 16 – “Stockholders’ Equity” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for more information.

Same properties

We supplement an evaluation of our results of operations with an evaluation of operating performance of certain of our properties, referred to as "Same Properties." For more information on the determination of our Same Properties portfolio, refer to the definition of "Same Property Comparisons" in the "Non-GAAP Measures and Definitions" section under this Item 7 in this annual report on Form 10-K. The following table presents information regarding our Same Properties as of December 31, 2019 and 2018:

	December 31,	
	2019	2018
Percentage change in net operating income over comparable period from prior year	3.1%	3.7%
Percentage change in net operating income (cash basis) over comparable period from prior year	7.1%	9.2%
Operating margin	71%	71%
Number of Same Properties	192	185
RSF	18,519,783	17,221,297
Occupancy – current-period average	96.6%	96.6%
Occupancy – same-period prior-year average	96.3%	96.1%

The following table reconciles the number of Same Properties to total properties for the year ended December 31, 2019:

Development – under construction	Properties	Acquisitions after January 1, 2018	Properties
9800 Medical Center Drive	1	100 Tech Drive	1
9950 Medical Center Drive	1	219 East 42nd Street	1
Alexandria District for Science and Technology	2	Summers Ridge Science Park	4
201 Haskins Way	1	2301 5th Avenue	1
1165 Eastlake Avenue East	1	9704, 9708, 9712, and 9714 Medical Center Drive	4
4150 Campus Point Court	1	9920 Belward Campus Drive	1
	7	21 Firstfield Road	1
Development – placed into service after January 1, 2018	Properties	25, 35, 45, 50, and 55 West Watkins Mill Road	5
100 Binney Street	1	10260 Campus Point Drive and 4161 Campus Point Court	2
399 Binney Street	1	3170 Porter Drive	1
213 East Grand Avenue	1	Shoreway Science Center	2
279 East Grand Avenue	1	3911, 3931, and 4075 Sorrento Valley Boulevard	3
188 East Blaine Street	1	260 Townsend Street	1
	5	5 Necco Street	1
Redevelopment – under construction	Properties	601 Dexter Avenue North	1
Alexandria Center [®] – Long Island City	1	4224/4242 Campus Point Court and 10210 Campus Point Drive	3
945 Market Street	1	3825 and 3875 Fabian Way	2
3160 Porter Drive	1	SD Tech by Alexandria	10
The Arsenal on the Charles	4	The Arsenal on the Charles	7
	7	Other	9
Redevelopment – placed into service after January 1, 2018	Properties		60
9625 Towne Centre Drive	1	Unconsolidated real estate JV	6
Alexandria PARC	4	Properties held for sale	3
681 and 685 Gateway Boulevard	2	Total properties excluded from Same Properties	99
9900 Medical Center Drive	1	Same Properties	192 ⁽¹⁾
266 and 275 Second Avenue	2	Total properties in North America as of December 31, 2019	291
Alexandria Center [®] for AgTech, Phase I	1		
	11		

(1) Includes 9880 Campus Point Drive and 3545 Cray Court. The 9880 Campus Point Drive building was occupied through January 2018 and is currently in active development, and 3545 Cray Court is currently undergoing renovations.

Comparison of results for the year ended December 31, 2019, to the year ended December 31, 2018

The following table presents a comparison of the components of net operating income for our Same Properties and Non-Same Properties for the year ended December 31, 2019, compared to the year ended December 31, 2018. Refer to the “Non-GAAP Measures and Definitions” section under this Item 7 in this annual report on Form 10-K for definitions of “Tenant Recoveries” and “Net Operating Income” and their reconciliations from the most directly comparable financial measures presented in accordance with GAAP, income from rentals and net income, respectively. We provide a comparison of the results for the year ended December 31, 2018 to the year ended December 31, 2017, including a comparison of the components of net operating income for our Same Properties and Non-Same Properties for the year ended December 31, 2018, compared to the year ended December 31, 2017, within the “Results of Operations” section in Item 7 of our annual report on Form 10-K for the year ended December 31, 2018.

<i>(Dollars in thousands)</i>	Year Ended December 31,			
	2019	2018	\$ Change	% Change
Income from rentals:				
Same Properties	\$ 927,077	\$ 897,522	\$ 29,555	3.3%
Non-Same Properties	238,711	113,196	125,515	110.9
Rental revenues	1,165,788	1,010,718	155,070	15.3
Same Properties	299,325	281,092	18,233	6.5
Non-Same Properties	51,751	22,971	28,780	125.3
Tenant recoveries	351,076	304,063	47,013	15.5
Income from rentals	1,516,864	1,314,781	202,083	15.4
Same Properties	448	298	150	50.3
Non-Same Properties	13,984	12,380	1,604	13.0
Other income	14,432	12,678	1,754	13.8
Same Properties	1,226,850	1,178,912	47,938	4.1
Non-Same Properties	304,446	148,547	155,899	104.9
Total revenues	1,531,296	1,327,459	203,837	15.4
Same Properties	353,431	332,051	21,380	6.4
Non-Same Properties	92,061	49,069	42,992	87.6
Rental operations	445,492	381,120	64,372	16.9
Same Properties	873,419	846,861	26,558	3.1
Non-Same Properties	212,385	99,478	112,907	113.5
Net operating income	\$ 1,085,804	\$ 946,339	\$ 139,465	14.7%
Net operating income – Same Properties	\$ 873,419	\$ 846,861	\$ 26,558	3.1%
Straight-line rent revenue	(55,393)	(79,475)	24,082	(30.3)
Amortization of acquired below-market leases	(7,249)	(10,196)	2,947	(28.9)
Net operating income – Same Properties (cash basis)	\$ 810,777	\$ 757,190	\$ 53,587	7.1%

Income from rentals

Total income from rentals for the year ended December 31, 2019, increased by \$202.1 million, or 15.4%, to \$1.5 billion, compared to \$1.3 billion for the year ended December 31, 2018, as a result of increases in rental revenues and tenant recoveries, as discussed below.

Rental revenues

Total rental revenues for the year ended December 31, 2019, increased by \$155.1 million, or 15.3%, to \$1.2 billion, compared to \$1.0 billion for the year ended December 31, 2018. The increase was primarily due to an increase in rental revenues from our Non-Same Properties aggregating \$125.5 million related to 1.6 million RSF of development and redevelopment projects placed into service subsequent to January 1, 2018, and 60 operating properties aggregating 4.5 million RSF acquired subsequent to January 1, 2018.

Rental revenues from our Same Properties for the year ended December 31, 2019, increased by \$29.6 million, or 3.3%, to \$927.1 million, compared to \$897.5 million for the year ended December 31, 2018. The increase was primarily due to significant rental rate increases on lease renewals and re-leasing of space since January 1, 2018 and an increase in Same Properties' occupancy to 96.6% for the year ended December 31, 2019, from 96.3% for the year ended December 31, 2018. Refer to the "Leasing Activity" section under Item 2 in this annual report on Form 10-K for additional information.

Tenant recoveries

Tenant recoveries for the year ended December 31, 2019, increased by \$47.0 million, or 15.5%, to \$351.1 million, compared to \$304.1 million for the year ended December 31, 2018. This increase is relatively consistent with the increase in our rental operating expenses of \$64.4 million, or 16.9%, as discussed under "Rental Operations" below. Same Properties' tenant recoveries for the year ended December 31, 2019, increased by \$18.2 million, or 6.5%, primarily due to the increase in recoverable operating expenses for the year ended December 31, 2019, as discussed below. As of December 31, 2019, 97% of our leases (on an RSF basis) were triple net leases, which require tenants to pay substantially all real estate taxes, insurance, utilities, repairs and maintenance, common area expenses, and other operating expenses (including increases thereto) in addition to base rent.

Other income

Other income for the years ended December 31, 2019 and 2018, was \$14.4 million and \$12.7 million, respectively, primarily consisting of construction management fees and interest income earned during each respective period.

Rental operations

Total rental operating expenses for the year ended December 31, 2019, increased by \$64.4 million, or 16.9%, to \$445.5 million, compared to \$381.1 million for the year ended December 31, 2018. Approximately \$43.0 million of the increase was due to an increase in rental operating expenses from our Non-Same Properties, primarily related to 1.6 million RSF of development and redevelopment projects placed into service subsequent to January 1, 2018, and 60 operating properties aggregating 4.5 million RSF acquired subsequent to January 1, 2018.

Same Properties' rental operating expenses increased by \$21.4 million, or 6.4%, to \$353.4 million during the year ended December 31, 2019, compared to the \$332.1 million for the year ended December 31, 2018. Approximately \$6.9 million of the increase was due to the higher tax expense stemming from a new 3.5% gross receipts tax on rental revenues by the city of San Francisco that went into effect on January 1, 2019, and an increase in property tax expense resulting from higher assessed values of certain of our properties in Greater Boston. The remaining \$14.5 million increase was mainly a result of the higher repairs and maintenance expenses, payroll, and additional contract services incurred during the year ended December 31, 2019.

General and administrative expenses

General and administrative expenses for the year ended December 31, 2019, increased by \$18.4 million, or 20.4%, to \$108.8 million, compared to \$90.4 million for the year ended December 31, 2018. Approximately \$5 million of the increase reflects incremental leasing costs recognized in expense in the current period, resulting from our adoption of a new accounting standard on leases on January 1, 2019. For a detailed discussion related to this new standard, refer to the "Lease Accounting" section in Note 2 – "Summary of Significant Accounting Policies" to our consolidated financial statements under Item 15 in this annual report on Form 10-K.

The remaining increase of approximately \$13.4 million of general and administrative expenses was due to a 35.9% increase in our employee headcount since January 1, 2018, to accommodate the continued growth in the depth and breadth of our operations in multiple markets, including development and redevelopment projects placed into service and properties acquired subsequent to January 1, 2018, as discussed under "Income from Rentals" above. As a percentage of net operating income, our general and administrative expenses for the years ended December 31, 2019 and 2018, were 10.0% and 9.6%, respectively.

Interest expense

Interest expense for the years ended December 31, 2019 and 2018, consisted of the following (dollars in thousands):

Component	Year Ended December 31,		Change
	2019	2018	
Interest incurred	\$ 262,238	\$ 223,715	\$ 38,523
Capitalized interest	(88,563)	(66,220)	(22,343)
Interest expense	<u>\$ 173,675</u>	<u>\$ 157,495</u>	<u>\$ 16,180</u>
Average debt balance outstanding ⁽¹⁾	\$ 6,416,773	\$ 5,513,958	\$ 902,815
Weighted-average annual interest rate ⁽²⁾	4.1%	4.1%	—%

(1) Represents the average debt balance outstanding during the respective periods.

(2) Represents total interest incurred divided by the average debt balance outstanding in the respective periods.

The net change in interest expense during the year ended December 31, 2019, compared to the year ended December 31, 2018, resulted from the following (dollars in thousands):

Component	Interest Rate ⁽¹⁾	Effective Date	Change
Increases in interest incurred due to:			
Issuances of debt:			
\$650 million unsecured senior notes payable – green bond	4.03%	June 2018/ March 2019	\$ 13,857
\$750 million unsecured senior notes payable	3.48%	July 2019	11,708
\$300 million unsecured senior notes payable	4.93%	March 2019	11,323
\$700 million unsecured senior notes payable	3.91%	July/September 2019	11,108
\$350 million unsecured senior notes payable – green bond	3.96%	March 2019	10,386
\$450 million unsecured senior notes payable	4.81%	June 2018	10,003
\$400 million unsecured senior notes payable	2.87%	September 2019	3,349
Fluctuations in interest rate and average balance:			
Commercial paper program			2,937
Reclassification of losses related to termination of interest rate hedge agreements			1,702
Higher rates for interest rate hedge agreements in effect			3,134
Total increases			79,507
Decreases in interest incurred due to:			
Repayments of debt:			
\$550 million unsecured senior notes payable	4.75%	July/August 2019	(10,931)
\$400 million unsecured senior notes payable	2.96%	July/August 2019	(4,905)
Secured construction loan	3.29%	March 2019	(7,288)
Secured notes payable	8.15%	January 2019	(8,337)
Unsecured senior bank term loans	Various	Various	(8,057)
Fluctuations in interest rate and average balance:			
Unsecured senior line of credit			(1,007)
Other decrease in interest			(459)
Total decreases			(40,984)
Change in interest incurred			38,523
Increase in capitalized interest			(22,343)
Total change in interest expense			\$ 16,180

(1) Represents the weighted-average interest rate as of the end of the applicable period, including amortization of loan fees, amortization of debt premiums (discounts), and other bank fees.

(2) During the year ended December 31, 2019, we terminated all of our interest rate hedge agreements aggregating \$350.0 million and reclassified a loss of \$1.7 million from accumulated other comprehensive loss into interest expense. Refer to Note 11 – “Interest Rate Hedge Agreements” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information.

In anticipation of LIBOR cessation at the end of 2021, we have been actively reducing LIBOR-based borrowings outstanding on our loans. As of December 31, 2019, our only outstanding LIBOR-based debt, excluding debt held by our unconsolidated joint ventures, included an outstanding balance of \$384.0 million on our unsecured senior line of credit, which represented approximately 6% of our total debt balance outstanding as of December 31, 2019.

Depreciation and amortization

Depreciation and amortization expense for the year ended December 31, 2019, increased by \$67.0 million, or 14.0%, to \$544.6 million, compared to \$477.7 million for the year ended December 31, 2018. The increase is primarily due to additional depreciation from 1.6 million RSF of development and redevelopment projects placed into service subsequent to January 1, 2018, and 60 operating properties aggregating 4.5 million RSF acquired subsequent to January 1, 2018.

Investment income

During the year ended December 31, 2019, we recognized investment income of \$194.6 million, which included \$33.2 million of realized gains and \$161.5 million of unrealized gains. Realized gains consisted of \$50.3 million of realized gains, partially offset by impairment charges of \$17.1 million related to investments in privately held entities that do not report NAV. Unrealized gains of \$161.5 million during the year ended December 31, 2019, primarily consisted of increases in fair values of our investments in publicly traded companies. For more information about our investments, refer to Note 7 – “Investments” to our consolidated financial statements under Item 15 in this annual report Form 10-K. For our impairments accounting policy, refer to the “Investments” section in Note 2 – “Summary of Significant Accounting Policies” to our consolidated financial statements under Item 15 in this annual report Form 10-K.

During the year ended December 31, 2018, we recognized investment income aggregating \$136.7 million, which included \$37.1 million of realized gains and \$99.6 million of unrealized gains. Realized gains consisted of \$42.6 million of realized gains, partially offset by impairment charges of \$5.5 million related to investments in privately held entities that do not report NAV. Unrealized gains of \$99.6 million during the year ended December 31, 2018, primarily consisted of observable price increases in our equity investments in privately held entities that do not report NAV aggregating \$64.1 million, increases in fair values of our investments in privately held entities that report NAV aggregating \$22.4 million, and increases in fair values of our investments in publicly traded companies aggregating \$13.1 million.

Sales of real estate assets and impairment charges

During the three months ended June 30, 2019, we classified as held for sale our property at 6138/6150 Nancy Ridge Drive aggregating 56,698 RSF, located in our Sorrento Mesa submarket. In December 2019, we completed the sale of the property for a sales price of \$6.6 million, or \$117 per RSF, and recognized a gain of \$474 thousand.

During the three months ended December 31, 2019, we decided to sell two of our real estate assets aggregating 123,862 RSF located in non-cluster markets to allow for reinvestment of this capital into our highly leased value-creation pipeline. Upon classification as held for sale, we recognized impairment charges aggregating \$12.3 million to lower the carrying amounts of these real estate assets to their respective estimated fair value less cost to sell. For additional information, refer to Note 19 – “Assets Classified as Held for Sale” to our consolidated financial statements under Item 15 in this annual report on Form 10-K.

During the year ended December 31, 2018, we recognized an impairment of real estate of \$6.3 million related to one land parcel located in Northern Virginia that was classified as held for sale and was subsequently sold during 2018 for a sales price of \$6.0 million with no gain or loss.

Loss on early extinguishment of debt

During the year ended December 31, 2019, we repaid early one secured note payable aggregating \$106.7 million, which was originally due in 2020 and bore interest at 7.75%, and recognized a loss on early extinguishment of debt of \$7.1 million, including the write-off of unamortized loan fees. Additionally during the year ended December 31, 2019, we repaid early the remaining outstanding balance of \$193.1 million under our secured construction loan related to 50/60 Binney Street and recognized a loss on early extinguishment of debt of \$269 thousand. During the year ended December 31, 2019, we also repaid outstanding balance of our unsecured senior bank term loan of \$350.0 million and refinanced an aggregate of \$950.0 million of unsecured senior notes payable which included \$400.0 million of 2.75% unsecured senior notes payable due 2020 and \$550.0 million of 4.60% unsecured senior notes payable due 2022. As a result, we recognized losses of \$40.2 million related to the early extinguishment of debt, including the write-off of unamortized loan fees.

During the year ended December 31, 2018, we amended our unsecured senior line of credit and our unsecured senior bank term loan to, among other changes, extend the maturity dates of each to January 28, 2024. We recognized a loss on early extinguishment of debt of approximately \$634 thousand related to the write-off of unamortized loan fees associated with these amendments. In addition, during the year ended December 31, 2018, we repaid the remaining \$200.0 million and \$150.0 million outstanding balances under our 2019 unsecured senior bank term loan and one secured construction loan, respectively, and recognized a loss on early extinguishment of debt of \$189 thousand and \$299 thousand, respectively, related to the write-off of unamortized loan fees.

Equity in earnings of unconsolidated real estate joint ventures

During the year ended December 31, 2018, we sold our remaining 27.5% ownership interest in the unconsolidated real estate joint venture that owned 360 Longwood Avenue, located in our Longwood Medical Area submarket, and recognized a gain of \$35.7 million. This gain is reflected in equity in earnings of unconsolidated real estate joint ventures in our consolidated statements of operations.

Preferred stock redemption charge

During the year ended December 31, 2019, we repurchased, in privately negotiated transactions, 275,000 outstanding shares of our Series D Convertible Preferred Stock and recognized a preferred stock redemption charge of \$2.6 million. In September 2019, we elected to convert the remaining 2.3 million outstanding shares of our Series D Convertible Preferred Stock into shares of our common stock. The Series D Convertible Preferred Stock became eligible for mandatory conversion at our discretion, at a set conversion rate of 0.2513 shares of common stock to one share of preferred stock, upon our common stock price exceeding \$149.46 per share for the specified period of time required to cause the mandatory conversion. In October 2019, we converted the Series D Convertible Preferred Stock into 578 thousand shares of common stock. This conversion was accounted for as an equity transaction, and we did not recognize a gain or loss. As of December 31, 2019, we had no outstanding shares of Series D Convertible Preferred Stock.

During the year ended December 31, 2018, we repurchased, in privately negotiated transactions, 402,000 outstanding shares of our Series D Convertible Preferred Stock and recognized a preferred stock redemption charge of \$4.2 million.

Inflation

We do not believe that our revenues and earnings from real estate operations are subject to significant risks from inflation. Refer to the "Inflation" subsection of the "Cash Flows" section under this Item 7 for additional information.

Projected results

Based on our current view of existing market conditions and certain current assumptions, we present guidance for EPS attributable to Alexandria's common stockholders – diluted and funds from operations per share attributable to Alexandria's common stockholders – diluted for the year ending December 31, 2020, as set forth in the table below. The tables below also provide a reconciliation of EPS attributable to Alexandria's common stockholders – diluted, the most directly comparable GAAP measure, to funds from operations per share, non-GAAP measure, and other key assumptions included in our updated guidance for the year ending December 31, 2020. There can be no assurance that actual amounts will be materially higher or lower than these expectations. Refer to our discussion of "Forward-Looking Statements" under this Item 1A.

Summary of Key Changes in Guidance	Guidance	
	As of 2/3/20	As of 1/6/20
Occupancy percentage in North America as of December 31, 2020 ⁽¹⁾	95.4% to 96.0%	95.7% to 96.3%

Projected 2020 Earnings per Share and Funds From Operations per Share Attributable to Alexandria's Common Stockholders – Diluted

Earnings per share ⁽²⁾	\$2.17 to \$2.37
Depreciation and amortization of real estate assets	5.15
Allocation of unvested restricted stock awards	(0.04)
Funds from operations per share ⁽³⁾	\$7.28 to \$7.48
Midpoint	\$7.38

- (1) The 0.3% reduction in occupancy guidance is attributable to vacancy aggregating 71,016 RSF representing lease-up opportunities at one acquisition completed in January 2020. Refer to the "Summary of Occupancy Percentages in North America" section under Item 2 in this annual report on Form 10-K for additional information.
- (2) Excludes unrealized gains or losses after December 31, 2019, that are required to be recognized in earnings and are excluded from funds from operations per share, as adjusted.
- (3) Calculated in accordance with standards established by the Advisory Board of Governors of Nareit (the "Nareit Board of Governors"). Refer to the definition of "Funds From Operations and Funds From Operations, As Adjusted, Attributable to Alexandria's Common Stockholders" in the "Non-GAAP Measures and Definitions" section under this Item 7 in this annual report on Form 10-K for additional information.

Key Assumptions⁽¹⁾ (Dollars in millions)

	2020 Guidance	
	Low	High
Occupancy percentage for operating properties in North America as of December 31, 2020 ⁽²⁾	95.4%	96.0%
Lease renewals and re-leasing of space:		
Rental rate increases	28.0%	31.0%
Rental rate increases (cash basis)	14.0%	17.0%
Same property performance:		
Net operating income increase	1.5%	3.5%
Net operating income increase (cash basis)	5.0%	7.0%
Straight-line rent revenue	\$ 113	\$ 123
General and administrative expenses	\$ 121	\$ 126
Capitalization of interest	\$ 108	\$ 118
Interest expense	\$ 169	\$ 179

- (1) The completion of our development and redevelopment projects will result in an increase in interest expense and other project costs, because these project costs will no longer qualify for capitalization and will therefore be expensed as incurred. Our key assumptions, included in the tables above, and are subject to a number of variables and uncertainties, including those discussed under Item 1A and this Item 7 in this annual report on Form 10-K. To the extent our full-year earnings guidance is updated during the year, we will provide additional disclosure supporting reasons for any significant changes to such guidance.
- (2) The 0.3% reduction in occupancy guidance is attributable to vacancy aggregating 71,016 RSF representing lease-up opportunities at one acquisition completed in January 2020. Refer to the "Summary of Occupancy Percentages in North America" section under Item 2 in this annual report on Form 10-K for additional information.

Key Credit Metrics

	2020 Guidance
Net debt and preferred stock to Adjusted EBITDA – fourth quarter of 2020, annualized	Less than or equal to 5.2x
Fixed-charge coverage ratio – fourth quarter of 2020, annualized	Greater than 4.5x

Consolidated and unconsolidated real estate joint ventures

We present components of balance sheet and operating results information for the noncontrolling interests' share of our consolidated real estate joint ventures and for our share of investments in unconsolidated real estate joint ventures to help investors estimate balance sheet and operating results information related to our partially owned entities. These amounts are estimated by computing, for each joint venture that we consolidate in our financial statements, the noncontrolling interest percentage of each financial item to arrive at the cumulative noncontrolling interest share of each component presented. In addition, for our real estate joint ventures that we do not control and do not consolidate, we apply our economic ownership percentage to the unconsolidated real estate joint ventures to arrive at our proportionate share of each component presented.

Consolidated Real Estate Joint Ventures

Property/Market/Submarket	Noncontrolling ⁽¹⁾ Interest Share
225 Binney Street/Greater Boston/Cambridge	70.0%
75/125 Binney Street/Greater Boston/Cambridge	60.0%
409 and 499 Illinois Street/San Francisco/Mission Bay/SoMa	40.0%
1500 Owens Street/San Francisco/Mission Bay/SoMa	49.9%
500 Forbes Boulevard/San Francisco/South San Francisco	90.0%
Campus Pointe by Alexandria/San Diego/University Town Center ⁽²⁾	45.0%
5200 Illumina Way/San Diego/University Town Center	49.0%
9625 Towne Centre Drive/San Diego/University Town Center	49.9%
SD Tech by Alexandria/San Diego/Sorrento Mesa	50.0%

Unconsolidated Real Estate Joint Ventures

Property/Market/Submarket	Our Ownership Share ⁽³⁾
1655 and 1725 Third Street/San Francisco/Mission Bay/SoMa	10.0%
Menlo Gateway/San Francisco/Greater Stanford	49.0%
1401/1413 Research Boulevard/Maryland/Rockville	65.0% ⁽⁴⁾
704 Quince Orchard Road/Maryland/Gaithersburg	56.8% ⁽⁴⁾

- (1) In addition to the consolidated real estate joint ventures listed, various partners hold insignificant noncontrolling interests in six other joint ventures in North America.
(2) Excludes 9880 Campus Point Drive in our University Town Center submarket.
(3) In addition to the unconsolidated real estate joint ventures listed, we hold an interest in one other insignificant unconsolidated real estate joint venture in North America.
(4) Represents our ownership interest; our voting interest is limited to 50%.

Our unconsolidated real estate joint ventures have the following non-recourse secured loans that include the following key terms as of December 31, 2019 (dollars in thousands):

Unconsolidated Joint Venture	Our Share	Maturity Date	Stated Interest Rate	Interest Rate ⁽¹⁾	100% at Joint Venture Level	
					Debt Balance ⁽²⁾	Remaining Commitments
1401/1413 Research Boulevard	65.0%	5/17/20	L+2.50%	5.18%	\$ 26,158	\$ 2,619
1655 and 1725 Third Street ⁽³⁾	10.0%	6/29/21	L+3.70%	5.41%	309,275	65,725
704 Quince Orchard Road	56.8%	3/16/23	L+1.95%	3.94%	9,172	5,709
Menlo Gateway, Phase II	49.0%	5/1/35	4.53%	4.59%	56,321	99,529
Menlo Gateway, Phase I	49.0%	8/10/35	4.15%	4.18%	142,101	—
					<u>\$ 543,027</u>	<u>\$ 173,582</u>

- (1) Includes interest expense and amortization of loan fees.
(2) Represents outstanding principal, net of unamortized deferred financing costs, as of December 31, 2019.
(3) This unconsolidated joint venture is in the process of refinancing this loan to, among other changes, extend the maturity date and fix the interest rate. We expect to complete the refinancing next quarter.

The following tables present information related to the operating results and financial positions of our consolidated and unconsolidated real estate joint ventures (in thousands):

	Noncontrolling Interest Share of Consolidated Real Estate Joint Ventures		Our Share of Unconsolidated Real Estate Joint Ventures	
	December 31, 2019		December 31, 2019	
	Three Months Ended	Year Ended	Three Months Ended	Year Ended
Total revenues	\$ 32,629	\$ 97,989	\$ 10,388	\$ 22,710
Rental operations	(8,935)	(26,675)	(1,174)	(3,070)
	23,694	71,314	9,214	19,640
General and administrative	(127)	(347)	(67)	(158)
Interest	—	—	(1,668)	(2,980)
Depreciation and amortization	(10,176)	(30,960)	(2,702)	(6,366)
Fixed returns allocated to redeemable noncontrolling interests ⁽¹⁾	221	875	—	—
	\$ 13,612	\$ 40,882	\$ 4,777	\$ 10,136
Straight-line rent and below-market lease revenue	\$ 1,948	\$ 5,347	\$ 5,843	\$ 10,172
Funds from operations ⁽²⁾	\$ 23,788	\$ 71,842	\$ 7,479	\$ 16,502

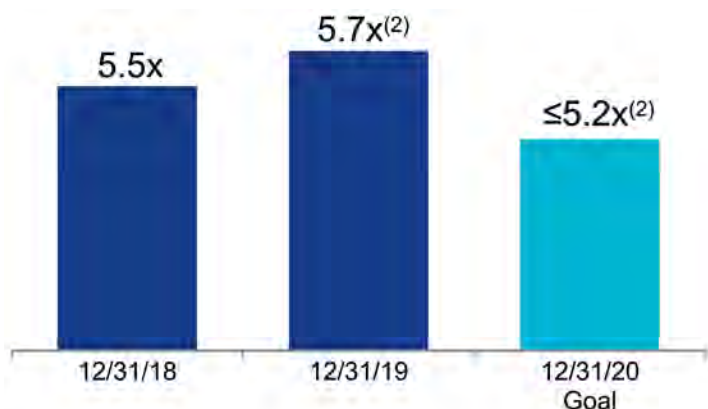
- (1) Represents an allocation of joint venture earnings to redeemable noncontrolling interests primarily in one property in our South San Francisco submarket. These redeemable noncontrolling interests earn a fixed return on their investment rather than participate in the operating results of the property.
- (2) Refer to the definition of "Funds From Operations and Funds From Operations, As Adjusted, Attributable to Alexandria's Common Stockholders" in the "Non-GAAP Measures and Definitions" section under this Item 7 for the definition and the reconciliation from the most directly comparable GAAP measure.

	December 31, 2019	
	Noncontrolling Interest Share of Consolidated Real Estate Joint Ventures	Our Share of Unconsolidated Real Estate Joint Ventures
Investments in real estate	\$ 1,186,585	\$ 466,334
Cash, cash equivalents, and restricted cash	40,128	7,865
Other assets	142,669	41,741
Secured notes payable	—	(149,240)
Other liabilities	(68,730)	(19,810)
Redeemable noncontrolling interests	(12,300)	—
	\$ 1,288,352	\$ 346,890

During the years ended December 31, 2019 and 2018, our consolidated joint ventures distributed an aggregate of \$48.2 million and \$30.7 million, respectively, to our joint venture partners. Refer to our consolidated statements of cash flows and Note 4 – "Consolidated and Unconsolidated Real Estate Joint Ventures" to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information.

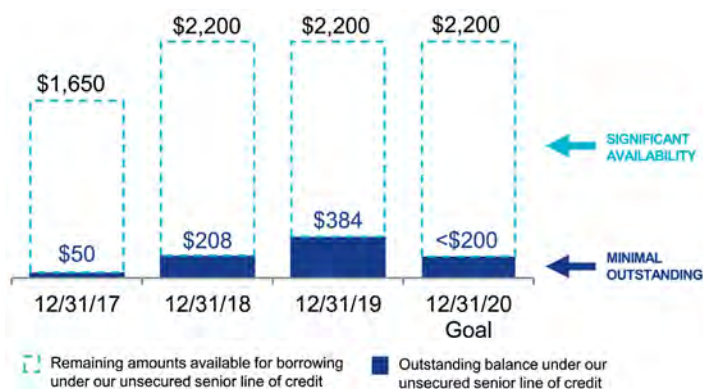
Liquidity

Net Debt and Preferred Stock to Adjusted EBITDA⁽¹⁾

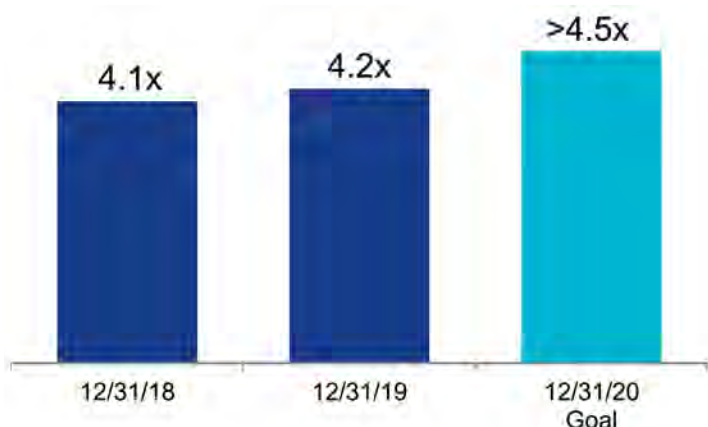


Significant Availability on Unsecured Senior Line of Credit

(in millions)



Fixed-Charge Coverage Ratio⁽¹⁾



Liquidity⁽³⁾

\$2.4B

(In millions)

Availability under our \$2.2 billion unsecured senior line of credit	\$ 1,816
Cash, cash equivalents, and restricted cash	243
Investments in publicly traded companies	319
	<u>\$ 2,378</u> ⁽⁴⁾

(1) Quarter annualized.

(2) Due to the timing of two acquisitions that closed in December 2019, we had a temporary 0.4x increase above our target for December 31, 2019 in our net debt and preferred stock to Adjusted EBITDA – fourth quarter of 2019, annualized. We remain committed to our guidance for net debt and preferred stock to Adjusted EBITDA – fourth quarter of 2020, annualized, of less than or equal to 5.2x.

(3) As of December 31, 2019.

(4) In January 2020, we entered into \$1.0 billion of forward equity sales agreements. Including the outstanding forward equity agreements, we had proforma liquidity of \$3.4 billion.

We expect to meet certain long-term liquidity requirements, such as requirements for development, redevelopment, other construction projects, capital improvements, tenant improvements, property acquisitions, leasing costs, non-revenue-enhancing capital expenditures, scheduled debt maturities, distributions to noncontrolling interests, repurchases/redemptions of preferred stock, and payment of dividends through net cash provided by operating activities, periodic asset sales, strategic real estate joint venture capital, and long-term secured and unsecured indebtedness, including borrowings under our unsecured senior line of credit, commercial paper program, and issuance of additional debt and/or equity securities.

We expect to continue meeting our short-term liquidity and capital requirements, as further detailed in this section, generally through our working capital and net cash provided by operating activities. We believe that the net cash provided by operating activities will continue to be sufficient to enable us to make the distributions necessary to continue qualifying as a REIT.

Over the next several years, our balance sheet, capital structure, and liquidity objectives are as follows:

- Retain positive cash flows from operating activities after payment of dividends and distributions to noncontrolling interests for investment in development and redevelopment projects and/or acquisitions;
- Improve credit profile and relative long-term cost of capital;
- Maintain diverse sources of capital, including sources from net cash provided by operating activities, unsecured debt, secured debt, selective real estate asset sales, partial interest sales, non-real estate investment sales, preferred stock, and common stock;
- Maintain commitment to long-term capital to fund growth;
- Maintain prudent laddering of debt maturities;
- Maintain solid credit metrics;
- Maintain significant balance sheet liquidity;
- Mitigate variable-rate debt exposure through the reduction of short-term and medium-term variable-rate bank debt;
- Maintain a large unencumbered asset pool to provide financial flexibility;
- Fund common stock dividends and distributions to noncontrolling interests from net cash provided by operating activities;
- Manage a disciplined level of value-creation projects as a percentage of our gross investments in real estate; and
- Maintain high levels of pre-leasing and percentage leased in value-creation projects.

The following table presents the availability under our unsecured senior line of credit less amounts outstanding on our commercial paper program; cash, cash equivalents, and restricted cash; and investments in publicly traded companies as of December 31, 2019 (dollars in thousands):

Description	Stated Rate	Aggregate Commitments	Outstanding Balance	Remaining Commitments/ Liquidity
Availability under our unsecured senior line of credit	L+0.825%	\$ 2,200,000	\$ 384,000	\$ 1,816,000
Cash, cash equivalents, and restricted cash				242,689
Investments in publicly traded companies				318,637
Total liquidity				<u>\$ 2,377,326</u>

Refer to Note 10 – “Secured and Unsecured Senior Debt” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for a discussion of our secured construction loans.

Cash, cash equivalents, and restricted cash

As of December 31, 2019 and December 31, 2018, we had \$242.7 million and \$272.1 million, respectively, of cash, cash equivalents, and restricted cash. We expect existing cash, cash equivalents, and restricted cash, cash flows from operating activities, proceeds from real estate asset sales, non-real estate investment sales, borrowings under our unsecured senior line of credit and commercial paper program, issuances of unsecured notes payable, and issuances of common stock to continue to be sufficient to fund our operating activities and cash commitments for investing and financing activities, such as regular quarterly dividends, distributions to noncontrolling interests, scheduled debt repayments, acquisitions, and certain capital expenditures, including expenditures related to construction activities.

Cash flows

We report and analyze our cash flows based on operating activities, investing activities, and financing activities. The following table summarizes changes in our cash flows for the years ended December 31, 2019 and 2018 (in thousands):

	Year Ended December 31,		Change
	2019	2018	
Net cash provided by operating activities	\$ 683,857	\$ 570,339	\$ 113,518
Net cash used in investing activities	\$ (3,641,320)	\$ (2,161,760)	\$ (1,479,560)
Net cash provided by financing activities	\$ 2,927,482	\$ 1,588,433	\$ 1,339,049

Operating activities

Cash flows provided by operating activities are primarily dependent upon the occupancy level of our asset base, the rental rates of our leases, the collectibility of rent and recovery of operating expenses from our tenants, the timing of completion of development and redevelopment projects, and the timing of acquisitions and dispositions of operating properties. Net cash provided by operating activities for the year ended December 31, 2019, increased to \$683.9 million, compared to \$570.3 million for the year ended December 31, 2018. This increase was primarily attributable to (i) cash flows generated from our highly leased development and redevelopment projects recently placed into service, (ii) income-producing acquisitions since January 1, 2018, and (iii) increases in rental rates on lease renewals and re-leasing of space since January 1, 2018.

Investing activities

Cash used in investing activities for the years ended December 31, 2019 and 2018, consisted of the following (in thousands):

	Year Ended December 31,		Increase (Decrease)
	2019	2018	
Sources of cash from investing activities:			
Sales of non-real estate investments	\$ 147,332	\$ 103,679	\$ 43,653
Return of capital from unconsolidated real estate joint ventures	14	68,592	(68,578)
Proceeds from sales of real estate	6,619	20,190	(13,571)
	153,965	192,461	(38,496)
Uses of cash for investing activities:			
Purchases of real estate	2,259,778	1,037,180	1,222,598
Additions to real estate	1,224,541	927,168	297,373
Deposits for investing activities	18,107	2,000	16,107
Acquisitions of interest in unconsolidated real estate joint ventures	—	35,922	(35,922)
Investments in unconsolidated real estate joint ventures	102,081	116,008	(13,927)
Additions to non-real estate investments	190,778	235,943	(45,165)
	3,795,285	2,354,221	1,441,064
Net cash used in investing activities	\$ 3,641,320	\$ 2,161,760	\$ 1,479,560

The change in net cash used in investing activities for the year ended December 31, 2019, is primarily due to an increased use of cash for property acquisitions and for investments in unconsolidated real estate joint ventures, partially offset by proceeds from sale of investments. Refer to Note 3 – “Investments in Real Estate” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for further information.

Financing activities

Cash flows provided by financing activities for the years ended December 31, 2019 and 2018, consisted of the following (in thousands):

	Year Ended December 31,		Change
	2019	2018	
Proceeds from issuance of unsecured senior notes payable	\$ 2,721,169	\$ 899,321	\$ 1,821,848
Repayments of unsecured senior notes payable	(950,000)	—	(950,000)
Repayments of borrowings from unsecured senior bank term loan	(350,000)	(200,000)	(150,000)
Borrowings from secured notes payable	—	17,784	(17,784)
Repayments of borrowings from secured notes payable	(306,199)	(156,888)	(149,311)
Borrowings from unsecured senior line of credit	5,056,000	4,741,000	315,000
Repayments of borrowings from unsecured senior line of credit	(4,880,000)	(4,583,000)	(297,000)
Proceeds from issuance of commercial paper program	2,233,000	—	2,233,000
Repayments of borrowings from commercial paper program	(2,233,000)	—	(2,233,000)
Premium paid for early extinguishment of debt	(41,351)	—	(41,351)
Payments of loan fees	(27,182)	(19,292)	(7,890)
Changes related to debt	1,222,437	698,925	523,512
Contributions from and sales of noncontrolling interests	1,022,712	28,275	994,437
Distributions to and purchases of noncontrolling interests	(48,225)	(32,253)	(15,972)
Proceeds from the issuance of common stock	1,216,445	1,293,301	(76,856)
Dividend payments	(451,170)	(385,839)	(65,331)
Taxes paid related to net settlement of equity awards	(25,477)	—	(25,477)
Repurchase of 7.00% Series D cumulative convertible preferred stock	(9,240)	(13,976)	4,736
Net cash provided by financing activities	<u>\$ 2,927,482</u>	<u>\$ 1,588,433</u>	<u>\$ 1,339,049</u>

Inflation

As of December 31, 2019, approximately 97% of our leases (on an RSF basis) were triple net leases, which require tenants to pay substantially all real estate taxes, insurance, utilities, repairs and maintenance, common area expenses, and other operating expenses (including increases thereto) in addition to base rent. Approximately 95% of our leases (on an RSF basis) contained effective annual rent escalations that were either fixed (generally ranging from 3.0% to 3.5%) or indexed based on a consumer price index or other indices. Accordingly, we do not believe that our cash flows or earnings from real estate operations are subject to significant risks from inflation. A period of inflation, however, could cause an increase in the cost of our variable-rate borrowings, including borrowings related to our unsecured senior line of credit and secured construction loans held by our unconsolidated joint ventures.

Capital resources

We expect that our principal liquidity needs for the year ending December 31, 2020, will be satisfied by the following multiple sources of capital, as shown in the table below. There can be no assurance that our sources and uses of capital will not be materially higher or lower than these expectations.

Key Sources and Uses of Capital (In millions)	2020 Guidance			Certain Completed Items
	Range		Midpoint	
<i>Sources of capital:</i>				
Net cash provided by operating activities after dividends	\$ 200	\$ 240	\$ 220	
Incremental debt	400	360	380	
Real estate dispositions, partial interest sales, and common equity ⁽¹⁾	1,850	2,050	1,950	\$ 1,025 ⁽²⁾
Total sources of capital	\$ 2,450	\$ 2,650	\$ 2,550	
<i>Uses of capital:</i>				
Construction	\$ 1,550	\$ 1,650	\$ 1,600	
Acquisitions ⁽¹⁾	900	1,000	950	\$ 341
Total uses of capital	\$ 2,450	\$ 2,650	\$ 2,550	
<i>Incremental debt (included above):</i>				
Issuance of unsecured senior notes payable	\$ 550	\$ 650	\$ 600	
\$2.2 billion unsecured senior line of credit and commercial paper program/other	(150)	(290)	(220)	
Incremental debt	\$ 400	\$ 360	\$ 380	

(1) Excludes the formation of a consolidated joint venture with Boston Properties, Inc. through non-cash contributions of real estate. Refer to "Subsequent Events" under the "Executive Summary" section of this Item 7 in this annual report on Form 10-K for additional information.

(2) In January 2020, we entered into forward equity sales agreements to sell an aggregate of 6.9 million shares of our common stock (including the exercise of underwriters' option) at a public offering price of \$155.00 per share, before underwriting discounts. We expect to settle these forward equity sales agreements in 2020 and receive proceeds of approximately \$1.0 billion, to be further adjusted as provided in the sales agreements.

The key assumptions behind the sources and uses of capital in the table above include a favorable capital market environment, performance of our core operating properties, lease-up and delivery of current and future development and redevelopment projects, and leasing activity. Our expected sources and uses of capital are subject to a number of variables and uncertainties, including those discussed under Item 1A and under this Item 7 in this annual report on Form 10-K. We expect to update our forecast of sources and uses of capital on a quarterly basis.

Sources of capital

Net cash provided by operating activities after dividends

We expect to retain \$200.0 million to \$240.0 million of net cash flows from operating activities after payment of common stock dividends, and distributions to noncontrolling interests. For purposes of this calculation, changes in operating assets and liabilities are excluded as they represent timing differences. For the year ending December 31, 2020, we expect our recently delivered projects, our highly pre-leased value-creation projects expected to be completed, along with contributions from Same Properties and recently acquired properties, to contribute significant increases in rental revenue, net operating income, and cash flows. We anticipate significant contractual near-term growth in annual cash rents of \$55 million related to the commencement of contractual rents on the projects recently placed into service that are near the end of their initial free rent period. Refer to the “Cash Flows” section under this Item 7 in this annual report on Form 10-K for a discussion of net cash provided by operating activities for the year ended December 31, 2019.

Debt

In February 2019, S&P Global Ratings raised our corporate issuer credit rating to BBB+/Stable from BBB/Positive. The rating upgrade reflects our consistently strong operating performance and continued successful delivery of our value-creation pipeline.

The table below reflects the maximum borrowings, outstanding balances, applicable rates, maturity dates, and facility fees for our unsecured senior line of credit and commercial paper program as of December 31, 2019:

	Maximum Borrowings	Outstanding Balance ⁽¹⁾	Applicable Rate	Maturity Date	Facility Fee
Commercial paper program	\$750 million	\$—	N/A	N/A	N/A
Unsecured senior line of credit	\$2.2 billion	\$384 million	L+0.825%	January 2024 ⁽²⁾	0.15%

(1) Excludes loan fees as of December 31, 2019.

(2) Includes two six-month extension options that we control.

In September 2019, we established a commercial paper program with the ability to issue up to \$750.0 million of commercial paper notes with a maximum maturity of 397 days from the date of issuance. Our commercial paper program is backed by our \$2.2 billion unsecured senior line of credit, and at all times we expect to retain a minimum undrawn amount of borrowing capacity under our unsecured senior line of credit equal to any outstanding balance on our commercial paper program. We use borrowings under the program to fund short-term capital needs. The notes issued under our commercial paper program are sold under customary terms in the commercial paper market. They are typically issued at a discount to par, representing a yield to maturity dictated by market conditions at the time of issuance.

We use our unsecured senior line of credit to fund working capital, construction activities, and, from time to time, acquisition of properties. Borrowings under the unsecured senior line of credit will bear interest at a “Eurocurrency Rate,” a “LIBOR Floating Rate,” or a “Base Rate” specified in the amended unsecured senior line of credit agreement plus, in any case, the Applicable Margin. The Eurocurrency Rate specified in the amended unsecured senior line of credit agreement is, as applicable, the rate per annum equal to either (i) the LIBOR or a successor rate thereto as agreed to by the administrative agent and the Company for loans denominated in a LIBOR quoted currency (i.e., U.S. dollars, euro, sterling, or yen), (ii) the average annual yield rates applicable to Canadian dollar bankers’ acceptances for loans denominated in Canadian dollars, (iii) the Bank Bill Swap Reference Bid rate for loans denominated in Australian dollars, or (iv) the rate designated with respect to the applicable alternative currency for loans denominated in a non-LIBOR quoted currency (other than Canadian or Australian dollars). The LIBOR Floating Rate means, for any day, one month LIBOR, or a successor rate thereto as agreed to by the administrative agent and the Company for loans denominated in U.S. dollars. The Base Rate means, for any day, a fluctuating rate per annum equal to the highest of (i) the federal funds rate plus 1/2 of 1.00%, (ii) the rate of interest in effect for such day as publicly announced from time to time by Bank of America as its “prime rate,” and (iii) the Eurocurrency Rate plus 1.00%. Our unsecured senior line of credit contains a feature that allows lenders to competitively bid on the interest rate for borrowings under the facility. This may result in an interest rate that is below the stated rate. In addition to the cost of borrowing, the unsecured senior line of credit is subject to an annual facility fee of 0.15% based on the aggregate commitments outstanding.

We expect to fund a portion of our capital needs in 2020 from the issuance of unsecured senior notes payable and from borrowings under our unsecured senior line of credit and commercial paper program.

During the year ended December 31, 2019, our issuances of unsecured senior notes payable and repayments of debt included the following (dollars in millions):

	Issuance Date	Stated Interest Rate	Effective Interest Rate	Maturity Date	Principal Amount	Net Proceeds
Issuances						
Unsecured senior notes payable – green bond	March	4.00%	4.03%	1/15/24	\$ 200	\$ 203.0
Unsecured senior notes payable – green bond	March	3.80	3.96	4/15/26	350	346.6
Unsecured senior notes payable	March	4.85	4.93	4/15/49	300	296.5
Unsecured senior notes payable	July	3.375	3.48	8/15/31	750	742.5
Unsecured senior notes payable	July/Sept	4.00	3.91	2/1/50	700	711.1
Unsecured senior notes payable	Sept	2.75	2.87	12/15/29	400	395.8
Weighted average/total		3.71%	3.77%	16.9 years	\$ 2,700 ⁽¹⁾	\$ 2,695.5
Repayments of debt						
Secured notes payable	Jan	7.75%	8.15%	4/1/20	\$ 107	N/A
Secured construction loan	March	3.29	3.29	1/28/20	193	N/A
Unsecured senior notes payable	July/Aug	2.75	2.96	1/15/20	400	N/A
Unsecured senior notes payable	July/Aug	4.60	4.75	4/1/22	550	N/A
Unsecured senior bank term loan	July/Sept	3.62	3.62	1/2/25	350	N/A
Weighted average/total		3.97%	4.11%	2.4 years	\$ 1,600 ⁽¹⁾	

(1) The remaining proceeds received from our debt issuances, after repayments of debt, were used to fund the construction of our value-creation pipeline and acquisitions completed during 2019. Refer to Note 3 – “Investments in Real Estate” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information.

Our \$350.0 million of 3.80% unsecured senior notes payable and our \$200.0 million of 4.00% unsecured senior notes payable issued in March 2019 were allocated to fund recently completed and future eligible green development and redevelopment projects, and to the repayment of the outstanding balance of \$193.1 million under our secured construction loan related to 50/60 Binney Street, a recently completed Class A property, which was awarded LEED® Gold certification.

The proceeds from our \$300.0 million of 4.85% unsecured senior notes payable issued in March 2019 were primarily allocated to fund acquisitions completed during 2019. Refer to Note 3 – “Investments in Real Estate” to our consolidated financial statements under Item 15 of this report for additional information.

The proceeds from our \$750.0 million of 3.375% unsecured senior notes payable issued in July 2019 and partial proceeds from our \$700.0 million of 4.00% unsecured senior notes payable, which were issued in two tranches of \$500.0 million during July 2019 and \$200.0 million during September 2019, were primarily used to refinance \$400.0 million of 2.75% unsecured senior notes payable due 2020 and \$550.0 million of 4.60% unsecured senior notes payable due 2022, pursuant to a partial cash tender offer completed on July 17, 2019. We tendered \$318.6 million, or 79.64%, of our outstanding 2.75% unsecured senior notes payable, and \$384.9 million, including \$135 thousand tendered via guaranteed deliveries, or 69.98%, of our outstanding 4.60% unsecured senior notes payable. A subsequent call for redemption for the remaining outstanding amounts was settled on August 16, 2019. Additionally, a portion of the proceeds from our \$750.0 million of 3.375% unsecured senior notes payable, \$700.0 million of 4.00% unsecured senior notes payable, and \$400.0 million of 2.75% unsecured senior notes payable issued in September 2019 were used to complete the repayment of the remaining principal balance on our unsecured senior bank term loan of \$350.0 million.

As a result of our debt issuances and repayments of debt, we recognized losses of \$47.6 million related to the early extinguishment of debt during the year ended December 31, 2019, including \$40.2 million related to the refinancing of our 2.75% unsecured senior notes payable due 2020 and 4.60% unsecured senior notes payable and the repayment of our unsecured senior bank term loan.

In September 2019, we established a commercial paper program, which received credit ratings of A-2 from S&P Global Ratings and Prime-2 from Moody's Investors Service. Under this program, we have the ability to issue up to \$750.0 million of commercial paper notes with varying maturity lengths, with a maximum maturity of 397 days from the date of issuance. Our commercial paper program is backed by our \$2.2 billion unsecured senior line of credit, and at all times we expect to retain a minimum undrawn amount of borrowing capacity under our unsecured senior line of credit equal to any outstanding balance on our commercial paper program. We use and expect to continue to use net proceeds from the issuances of the commercial paper notes for general working capital and other general corporate purposes. General corporate purposes may include the repayment of other debt and selective development, redevelopment, or acquisition of properties. The commercial paper notes sold during the year ended December 31, 2019, were issued at a yield to maturity of between 1.83% and 2.29%. As of December 31, 2019, we had no outstanding borrowings under our commercial paper program.

Refer to Note 10 – “Secured and Unsecured Senior Debt” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information regarding our unsecured senior notes payable.

Proactive management of transition away from LIBOR

LIBOR has been used extensively in the U.S. and globally as a reference rate for various commercial and financial contracts, including variable-rate debt and interest rate swap contracts. However, it is expected that LIBOR will no longer be used after 2021. To address the increased risk of LIBOR discontinuation, in the U.S. the Alternative Reference Rates Committee (“ARRC”) was established to help ensure the successful transition from LIBOR. In June 2017, the ARRC selected the SOFR, a new index calculated by reference to short-term repurchase agreements backed by Treasury securities, as its preferred replacement for U.S. dollar LIBOR. We have been closely monitoring developments related to the transition away from LIBOR and have implemented numerous proactive measures to minimize the potential impact of the transition to the Company, specifically:

- We have proactively reduced outstanding LIBOR-based borrowings under our unsecured senior bank term loans and secured construction loans through repayments. From January 2017 to December 2018, we retired approximately \$942.0 million of such debt.
- During the year ended December 31, 2019, we further reduced our exposure to LIBOR as follows:
 - Repaid the \$350.0 million balance and extinguished our unsecured senior bank term loan.
 - Terminated our LIBOR-based interest rate hedge agreements aggregating \$350.0 million in conjunction with the extinguishment of our unsecured senior bank term loan. As a result, we had no outstanding interest rate hedge agreements as of December 31, 2019.
 - Fully repaid outstanding balances aggregating \$193.1 million under our LIBOR-based construction loans.
- During the three months ended September 30, 2019, we established a commercial paper program, under which we have the ability to issue up to \$750.0 million of commercial paper notes, which bear interest at short-term fixed rates, with a maximum maturity of 397 days from the date of issuance. Our commercial paper program is not subjected to LIBOR and is used for funding short-term working capital needs. As of December 31, 2019, we had no borrowings outstanding under our commercial paper program.
- We continue to prudently manage outstanding borrowings under our unsecured senior line of credit, which represented less than 6% of our total debt balance outstanding as of December 31, 2019. Excluding LIBOR-based debt held by our unconsolidated joint ventures, borrowings under our unsecured senior line of credit represented our only LIBOR-based debt outstanding as of December 31, 2019.
- Our unsecured senior line of credit contains fallback language generally consistent with the ARRC's Amendment Approach, which provides a streamlined amendment approach for negotiating a benchmark replacement and introduces clarity with respect to the fallback trigger events and an adjustment to be applied to the successor rate.
- We continue to monitor developments by the ARRC and other governing bodies involved in LIBOR transition.

For additional information, refer to Note 10 – “Secured and Unsecured Senior Debt” and Note 11 – “Interest Rate Hedge Agreements” to our consolidated financial statements under Item 15 and “Item 1A. Risk Factors” in this annual report on Form 10-K.

Real estate dispositions and common equity

We expect to continue the disciplined execution of select sales of operating assets. Future sales will provide an important source of capital to fund a portion of our highly leased value-creation development and redevelopment projects. We may also consider additional sales of partial interests in core Class A properties and/or development projects. For 2020, we expect real estate dispositions, partial interest sales, and issuances of common equity ranging from \$1.9 billion to \$2.1 billion. The amount of asset sales necessary to meet our forecasted sources of capital will vary depending upon the amount of EBITDA associated with the assets sold. In addition, the amount of common equity issued will be subject to market conditions.

For additional information, refer to the “Sales of Partial Interests and Formation of Consolidated Joint Ventures in 2019” section in Note 4 – “Consolidated and Unconsolidated Real Estate Joint Ventures” to our consolidated financial statements under Item 15 in this annual report on Form 10-K.

Common equity transactions

During the year ended December 31, 2019, we issued 8.7 million shares of common stock and received net proceeds of \$1.2 billion, as follows:

- Issued an aggregate of 8.1 million shares of common stock, at a weighted-average price of \$139.32 per share, for aggregate proceeds (net of underwriters' discounts) of approximately \$1.1 billion. During the year ended December 31, 2019, we incurred initial issuance costs aggregating \$700 thousand in connection with these forward equity sales agreements.
- Issued 602,484 shares of common stock under our ATM program, at a weighted-average price of \$145.58 per share, for net proceeds of \$86.1 million, during the three months ended June 30, 2019. As of December 31, 2019, we had approximately \$22.5 million of gross proceeds available to be issued under our ATM program. We expect to file a new ATM program in the first quarter of 2020.
- The proceeds were used to fund construction projects and to fund 2019 acquisitions.

In January 2020, we entered into forward equity sales agreements to sell an aggregate of 6.9 million shares of our common stock (including the exercise of an underwriters' option) at a public offering price of \$155.00 per share, before underwriting discounts. We expect to settle these forward equity sales agreements in 2020, and receive proceeds of approximately \$1.0 billion, to be further adjusted as provided in the sales agreements, which will fund pending and recently completed acquisitions and the construction of our highly leased development projects.

Other sources

Under our current shelf registration statement filed with the SEC, we may offer common stock, preferred stock, debt, and other securities. These securities may be issued, from time to time, at our discretion based on our needs and market conditions, including, as necessary, to balance our use of incremental debt capital.

Additionally, we hold interests, together with joint venture partners, in joint ventures that we consolidate in our financial statements. These joint venture partners may contribute equity into these entities primarily related to their share of funds for construction and financing-related activities. During the year ended December 31, 2019, we received \$1.0 billion in contributions from and sales of noncontrolling interests.

Uses of capital

Summary of capital expenditures

One of our primary uses of capital relates to the development, redevelopment, pre-construction, and construction of properties. We currently have projects in our growth pipeline aggregating 2.1 million RSF of Class A office/laboratory and tech office space undergoing construction, 6.3 million RSF of near-term and intermediate-term development and redevelopment projects, and 3.8 million SF of future development projects in North America. We incur capitalized construction costs related to development, redevelopment, pre-construction, and other construction activities. We also incur additional capitalized project costs, including interest, property taxes, insurance, and other costs directly related and essential to the development, redevelopment, pre-construction, or construction of a project, during periods when activities necessary to prepare an asset for its intended use are in progress. Refer to the "New Class A Development and Redevelopment Properties: Projects Under Construction" and "Summary of Capital Expenditures" subsections of the "Investments in Real Estate" section under Item 2 in this annual report on Form 10-K for more information on our capital expenditures.

We capitalize interest cost as a cost of the project only during the period for which activities necessary to prepare an asset for its intended use are ongoing, provided that expenditures for the asset have been made and interest cost has been incurred. Capitalized interest for the years ended December 31, 2019 and 2018, of \$88.6 million and \$66.2 million, respectively, is classified in investments in real estate. Indirect project costs, including construction administration, legal fees, and office costs that clearly relate to projects under development or construction, are capitalized as incurred during the period an asset is undergoing activities to prepare it for its intended use. We capitalized payroll and other indirect project costs related to development, redevelopment, pre-construction, and construction projects, which aggregated \$43.2 million and \$32.5 million for the years ended December 31, 2019 and 2018, respectively. The increase in capitalized payroll and other indirect project costs for the year ended December 31, 2019, compared to the same period in 2018 was primarily due to an increase in our value-creation pipeline projects undergoing construction and pre-construction activities aggregating 15 projects with 3.7 million RSF in 2019 over 2018. Pre-construction activities include entitlements, permitting, design, site work, and other activities preceding commencement of construction of aboveground building improvements. The advancement of pre-construction efforts is focused on reducing the time required to deliver projects to prospective tenants. These critical activities add significant value for future ground-up development and are required for the vertical construction of buildings. Should we cease activities necessary to prepare an asset for its intended use, the interest, taxes, insurance, and certain other direct project costs related to this asset would be expensed as incurred. Expenditures for repairs and maintenance are expensed as incurred.

Fluctuations in our development, redevelopment, and construction activities could result in significant changes to total expenses and net income. For example, had we experienced a 10% reduction in development, redevelopment, and construction activities without a corresponding decrease in indirect project costs, including interest and payroll, total expenses would have increased by approximately \$13.2 million for the year ended December 31, 2019.

We use third-party brokers to assist in our leasing activity, who are paid on a contingent basis upon successful leasing. We are required to capitalize initial direct costs related to successful leasing transactions that result directly from and are essential to the lease transaction and would not have been incurred had that lease transaction not been successfully executed. During the year ended December 31, 2019, we capitalized total initial direct leasing costs of \$73.6 million. Effective January 1, 2019, costs that we incur to negotiate or arrange a lease regardless of its outcome, such as fixed employee compensation, tax, or legal advice to negotiate lease terms, and other costs, are expensed as incurred.

Acquisitions

Refer to the “Acquisitions” section in Note 3 – “Investments in Real Estate” and to Note 4 – “Consolidated and Unconsolidated Real Estate Joint Ventures” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for detailed information on our acquisitions.

7.00% Series D cumulative convertible preferred stock repurchases and conversion

During the year ended December 31, 2019, we repurchased, in privately negotiated transactions, 275,000 shares of our Series D Convertible Preferred Stock at an aggregate price of \$9.2 million, or \$33.60 per share, and recognized a preferred stock redemption charge of \$2.6 million. Additionally, we elected to convert 2.3 million outstanding shares of our Series D Convertible Preferred Stock into shares of our common stock. The Series D Convertible Preferred Stock became eligible for mandatory conversion at our discretion, at a set conversion rate of 0.2513 shares of common stock to one share of preferred stock, upon our common stock price exceeding \$149.46 per share for the specified period of time required to cause the mandatory conversion. We converted the Series D Convertible Preferred Stock into 578 thousand shares of common stock. This conversion was accounted for as an equity transaction, and we did not recognize a gain or loss. As of December 31, 2019, we had no shares of our Series D Convertible Preferred Stock outstanding.

Dividends

During the years ended December 31, 2019 and 2018, we paid the following dividends (in thousands):

	Year Ended December 31,		Change
	2019	2018	
Common stock dividends	\$ 447,029	\$ 380,632	\$ 66,397
7.00% Series D cumulative convertible preferred stock dividends	4,141	5,207	(1,066)
	<u>\$ 451,170</u>	<u>\$ 385,839</u>	<u>\$ 65,331</u>

The increase in dividends paid on our common stock for the year ended December 31, 2019, compared to the year ended December 31, 2018, was primarily due to an increase in number of common shares outstanding subsequent to January 1, 2018, as a result of issuances of common stock under our ATM program and settlement of forward equity sales agreements, and partially due to the increase in the related dividends to \$3.94 per common share paid during the year ended December 31, 2019, from \$3.66 per common share paid during the year ended December 31, 2018.

The decrease in dividends paid on our Series D Convertible Preferred Stock during the year ended December 31, 2019, compared to the year ended December 31, 2018, was due to a decrease in number of shares outstanding as a result of the repurchase of 402,000 and 275,000 outstanding shares of our Series D Convertible Preferred Stock in 2018 and 2019, respectively, and the conversion of the remaining 2.3 million outstanding shares of our Series D Convertible Preferred Stock into shares of our common stock during 2019. As of December 31, 2019, we had no outstanding shares of Series D Convertible Preferred Stock.

Contractual obligations and commitments

Contractual obligations as of December 31, 2019, consisted of the following (in thousands):

	Total	Payments by Period			
		2020	2021-2022	2023-2024	Thereafter
Secured and unsecured debt ⁽¹⁾⁽²⁾	\$ 6,796,440	\$ 6,418	\$ 14,128	\$ 1,822,107	\$ 4,953,787
Estimated interest payments on fixed-rate debt ⁽³⁾	2,815,902	256,996	500,601	442,455	1,615,850
Ground lease obligations	674,741	13,879	28,410	28,979	603,473
Other obligations	25,198	1,253	3,988	4,506	15,451
Total	\$ 10,312,281	\$ 278,546	\$ 547,127	\$ 2,298,047	\$ 7,188,561

(1) Amounts represent principal amounts due and exclude unamortized premiums (discounts) and deferred financing costs reflected on the consolidated balance sheets under Item 15 in this annual report on Form 10-K.

(2) Payment dates reflect any extension options that we control.

(3) Amounts are based upon contractual interest rates, including interest payment dates and scheduled maturity dates.

Secured notes payable

Secured notes payable as of December 31, 2019, consisted of six notes secured by 11 properties. Our secured notes payable typically require monthly payments of principal and interest and had a weighted-average interest rate of approximately 3.57%. As of December 31, 2019, the total book value of our investments in real estate securing debt was approximately \$1.1 billion. As of December 31, 2019, our entire secured notes payable balance of \$349.4 million, including unamortized discounts and deferred financing costs, was fixed-rate debt.

Unsecured senior notes payable and unsecured senior line of credit

The requirements of, and our actual performance with respect to, the key financial covenants under our unsecured senior notes payable as of December 31, 2019, were as follows:

Covenant Ratios ⁽¹⁾	Requirement	December 31, 2019
Total Debt to Total Assets	Less than or equal to 60%	34%
Secured Debt to Total Assets	Less than or equal to 40%	2%
Consolidated EBITDA ⁽²⁾ to Interest Expense	Greater than or equal to 1.5x	7.0x
Unencumbered Total Asset Value to Unsecured Debt	Greater than or equal to 150%	277%

(1) All covenant ratio titles utilize terms as defined in the respective debt agreements.

(2) The calculation of consolidated EBITDA is based on the definitions contained in our loan agreements and is not directly comparable to the computation of EBITDA as described in Exchange Act Release No. 47226.

In addition, the terms of the indentures, among other things, limit the ability of the Company, Alexandria Real Estate Equities, L.P., and the Company's subsidiaries to (i) consummate a merger, or consolidate or sell all or substantially all of the Company's assets, and (ii) incur certain secured or unsecured indebtedness.

The requirements of, and our actual performance with respect to, the key financial covenants under our unsecured senior line of credit as of December 31, 2019, were as follows:

Covenant Ratios ⁽¹⁾	Requirement	December 31, 2019
Leverage Ratio	Less than or equal to 60.0%	29.7%
Secured Debt Ratio	Less than or equal to 45.0%	1.5%
Fixed-Charge Coverage Ratio	Greater than or equal to 1.50x	3.85x
Unsecured Interest Coverage Ratio	Greater than or equal to 1.75x	5.99x

(1) All covenant ratio titles utilize terms as defined in the respective debt agreements.

Estimated interest payments

Estimated interest payments on our fixed-rate debt were calculated based upon contractual interest rates, including interest payment dates and scheduled maturity dates. As of December 31, 2019, 94% of our debt was fixed-rate debt. For additional information regarding our debt, refer to Note 10 – “Secured and Unsecured Senior Debt” to our consolidated financial statements under Item 15 in this annual report on Form 10-K.

Ground lease obligations

Ground lease obligations as of December 31, 2019, included leases for 31 of our properties, which accounted for approximately 11% of our total number of properties. Excluding one ground lease related to one operating property that expires in 2036 with a net book value of \$7.7 million as of December 31, 2019, our ground lease obligations have remaining lease terms ranging from approximately 34 to 95 years, including extension options. Refer to Note 5 – “Leases” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for further information on our ground leases.

As of December 31, 2019, the remaining contractual payments under ground and office lease agreements in which we are the lessee aggregated \$674.7 million and \$25.2 million, respectively. As of December 31, 2019, all of our ground and office leases in which we are the lessee were classified as operating leases. Under the new lease accounting standard effective on January 1, 2019, described in detail under the “Lease Accounting” section in Note 2 – “Summary of Significant Accounting Policies” to our consolidated financial statements under Item 15 in this annual report on Form 10-K, we are required to recognize a right-of-use asset and a related liability to account for our future obligations under operating lease arrangements in which we are the lessee. The operating lease liability is measured based on the present value of the remaining lease payments, including payments during the term under our extension options that we are reasonably certain to exercise. The right-of-use asset is equal to the corresponding operating lease liability, adjusted for the initial direct leasing cost and any other consideration exchanged with the landlord prior to the commencement of the lease, as well as adjustments to reflect favorable or unfavorable terms of an acquired lease when compared with market terms at the time of acquisition. As of December 31, 2019, the present value of the remaining contractual payments, aggregating \$699.9 million, under our operating lease agreements, including our extension options that we are reasonably certain to exercise, was \$271.8 million, which is classified in accounts payable, accrued expenses, and other liabilities in our consolidated balance sheet. As of December 31, 2019, the weighted-average remaining lease term of operating leases in which we are the lessee was approximately 44 years, and the weighted-average discount rate was 5.24%. Our corresponding operating lease right-of-use assets, adjusted for initial direct leasing costs and other consideration exchanged with the landlord prior to the commencement of the lease, aggregated \$264.7 million. We classify the right-of-use asset in other assets in our consolidated balance sheets.

Commitments

As of December 31, 2019, remaining aggregate costs under contract for the construction of properties undergoing development, redevelopment, and improvements under the terms of leases approximated \$1.1 billion. We expect payments for these obligations to occur over one to three years, subject to capital planning adjustments from time to time. We may have the ability to cease the construction of certain properties, which would result in the reduction of our commitments. In addition, we have letters of credit and performance obligations aggregating \$11.1 million primarily related to construction projects.

We are committed to funding approximately \$229.5 million for non-real estate investments primarily related to our investments in limited partnerships. Our funding commitments expire at various dates over the next 12 years, with a weighted-average expiration of 8.6 years as of December 31, 2019.

Exposure to environmental liabilities

In connection with the acquisition of all of our properties, we have obtained Phase I environmental assessments to ascertain the existence of any environmental liabilities or other issues. The Phase I environmental assessments of our properties have not revealed any environmental liabilities that we believe would have a material adverse effect on our financial condition or results of operations taken as a whole, nor are we aware of any material environmental liabilities that have occurred since the Phase I environmental assessments were completed. In addition, we carry a policy of pollution legal liability insurance covering exposure to certain environmental losses at substantially all of our properties.

Accumulated other comprehensive income (loss)

The following table presents the changes in each component of accumulated other comprehensive income (loss) attributable to Alexandria Real Estate Equities, Inc.'s stockholders during the year ended December 31, 2019 (in thousands):

	Net Unrealized Gains (Losses) on:		
	Interest Rate Hedge Agreements	Foreign Currency Translation	Total
Balance as of December 31, 2018	\$ 1,838	\$ (12,273)	\$ (10,435)
Other comprehensive (loss) income before reclassifications	(1,763)	2,524	761
Reclassification of amortization income to interest expense	(1,777)	—	(1,777)
Reclassification of losses in accumulated other comprehensive income to interest expense upon swap termination	1,702	—	1,702
Net other comprehensive (loss) income	(1,838)	2,524	686
Balance as of December 31, 2019	\$ —	\$ (9,749)	\$ (9,749)

Interest rate hedge agreements

Changes in our accumulated other comprehensive income (loss) balance included the reclassification adjustments relate to our interest rate hedge agreements. Upon termination of our hedged variable-rate debt instruments and related interest rate hedge agreements during the year ended December 31, 2019, we reclassified the entire accumulated other comprehensive loss balance related to the terminated interest rate hedge agreements to interest expense in our consolidated statements of operations. Refer to Note 11 – “Interest Rate Hedge Agreements” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information.

Foreign currency translation

Changes in our accumulated other comprehensive income (loss) balance relate to changes in the foreign exchange rates for our real estate investments in Canada and Asia. Additionally, we reclassify unrealized foreign currency translation gains and losses into net income as we dispose of these holdings.

Critical accounting policies

Our consolidated financial statements have been prepared in accordance with GAAP. The preparation of these financial statements in conformity with GAAP requires us to make estimates, judgments, and assumptions that affect the reported amounts of assets, liabilities, revenues, and expenses. We base these estimates, judgments, and assumptions on historical experience and on various other factors that we believe to be reasonable under the circumstances.

We continually evaluate the policies and estimates we use to prepare our consolidated financial statements. Changes in estimates or policies applied could affect our financial position and specific items in our results of operations that are used by our stockholders, potential investors, industry analysts, and lenders in their evaluation of our performance. Our significant accounting policies are described in Note 2 – “Summary of Significant Accounting Policies” to our consolidated financial statements under Item 15 in this annual report on Form 10-K.

REIT compliance

We have elected to be taxed as a REIT under the Internal Revenue Code. Qualification as a REIT involves the application of highly technical and complex provisions of the Internal Revenue Code to our operations and financial results, and the determination of various factual matters and circumstances not entirely within our control. We believe that our current organization and method of operation comply with the rules and regulations promulgated under the Internal Revenue Code to enable us to qualify, and continue to qualify, as a REIT. However, it is possible that we have been organized or have operated in a manner that would not allow us to qualify as a REIT, or that our future operations could cause us to fail to qualify.

If we fail to qualify as a REIT in any taxable year, then we will be required to pay federal and state income taxes on our taxable income at regular corporate rates. If we lose our REIT status, then our net earnings available for investment or distribution to our stockholders will be significantly reduced for each of the years involved and we will no longer be required to make distributions to our stockholders.

Investments in real estate

Recognition of real estate acquired

We evaluate each acquisition of real estate or in-substance real estate (including equity interests in entities that predominantly hold real estate assets) to determine whether the integrated set of assets and activities acquired meets the definition of a business and needs to be accounted for as a business combination. An acquisition of an integrated set of assets and activities that does not meet the definition of a business is accounted for as an asset acquisition.

For acquisitions of real estate or in-substance real estate that are accounted for as business combinations, we allocate the acquisition consideration (excluding acquisition costs) to the assets acquired, liabilities assumed, noncontrolling interests, and previously existing ownership interests at fair value as of the acquisition date. Assets include intangible assets such as tenant relationships, acquired in-place leases, and favorable intangibles associated with in-place leases in which we are the lessor. Liabilities include unfavorable intangibles associated with in-place leases in which we are the lessor. In addition, for acquired in-place finance or operating leases in which we are the lessee, acquisition consideration is allocated to lease liabilities and related right-of-use assets, adjusted to reflect favorable or unfavorable terms of the lease when compared with market terms. Any excess (deficit) of the consideration transferred relative to the fair value of the net assets acquired is accounted for as goodwill (bargain purchase gain). Acquisition costs related to business combinations are expensed as incurred.

Generally, we expect that acquisitions of real estate or in-substance real estate will not meet the definition of a business because substantially all of the fair value is concentrated in a single identifiable asset or group of similar identifiable assets (i.e., land, buildings, and related intangible assets). The accounting model for asset acquisitions is similar to the accounting model for business combinations except that the acquisition consideration (including acquisition costs) is allocated to the individual assets acquired and liabilities assumed on a relative fair value basis. Any excess (deficit) of the consideration transferred relative to the sum of the fair value of the assets acquired and liabilities assumed is allocated to the individual assets and liabilities based on their relative fair values. As a result, asset acquisitions do not result in the recognition of goodwill or a bargain purchase gain. Incremental and external direct acquisition costs (such as legal and third-party services) are capitalized.

We exercise judgment to determine the key assumptions used to allocate the purchase price of real estate acquired among its components. The allocation of the consideration to the various components of properties acquired during the year can have an effect on our net income due to the useful depreciable and amortizable lives applicable to each component and the recognition of the related depreciation and amortization expense in our consolidated statements of operations. We apply judgment in utilizing available comparable market information to assess relative fair value. We assess the relative fair values of tangible and intangible assets and liabilities based on available comparable market information, including estimated replacement costs, rental rates, and recent market transactions. In addition, we may use estimated cash flow projections that utilize appropriate discount and capitalization rates. Estimates of future cash flows are based on a number of factors, including the historical operating results, known and anticipated trends, and market/economic conditions that may affect the property.

The value of tangible assets acquired is based upon our estimation of fair value on an "as if vacant" basis. The value of acquired in-place leases includes the estimated costs during the hypothetical lease-up period and other costs that would have been incurred in the execution of similar leases under the market conditions at the acquisition date of the acquired in-place lease. The value of above-market lease assets and below-market lease liabilities reflects the difference between (i) the contractual rents to be paid over the remaining term for each in-place lease and (ii) the estimated current market lease rates using available comparable market information and tenant credit quality. If there is a bargain fixed-rate renewal option for the period beyond the non-cancelable lease term of an in-place lease, we evaluate intangible factors such as the business conditions in the industry in which the lessee operates, the economic conditions in the area in which the property is located, and the ability of the lessee to sublease the property during the renewal term, in order to determine the likelihood that the lessee will renew. When we determine there is reasonable assurance that such bargain purchase option will be exercised, we consider the option in determining the intangible value of such lease and its related amortization period. We also recognize the relative fair values of assets acquired, the liabilities assumed, and any noncontrolling interest in acquisitions of less than a 100% interest when the acquisition constitutes a change in control of the acquired entity.

We completed acquisitions of 47 properties for a total purchase price of \$2.3 billion during the year ended December 31, 2019. These transactions were accounted for as asset acquisitions, and the purchase price of each was allocated based on the relative fair value of the asset acquired and liabilities assumed.

Depreciation and amortization

The values allocated to buildings and building improvements, land improvements, tenant improvements, and equipment are depreciated on a straight-line basis using the shorter of the respective ground lease term, estimated useful life, or up to 40 years, for buildings and building improvements; an estimated life, or up to 20 years, for land improvements; the respective lease term or estimated useful life for tenant improvements; and the shorter of the lease term or estimated useful life for equipment. The values of acquired in-place leases and associated favorable intangibles (i.e., acquired above-market leases) are classified in other assets in the accompanying consolidated balance sheets and are amortized over the remaining terms of the related leases, as a reduction of income from rentals in our consolidated statements of operations. The values of unfavorable intangibles (i.e., acquired below-market leases associated with acquired in-place leases) are classified in accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets and are amortized over the remaining terms of the related leases, as an increase in income from rentals in our consolidated statements of operations.

Capitalized project costs

We capitalize project costs, including pre-construction costs, interest, property taxes, insurance, and other costs directly related and essential to the development, redevelopment, pre-construction, or construction of a project. Capitalization of development, redevelopment, pre-construction, and construction costs is required while activities are ongoing to prepare an asset for its intended use. Fluctuations in our development, redevelopment, pre-construction, and construction activities could result in significant changes to total expenses and net income. Costs incurred after a project is substantially complete and ready for its intended use are expensed as incurred. Should development, redevelopment, pre-construction, or construction activity cease, interest, property taxes, insurance, and certain other costs would no longer be eligible for capitalization and would be expensed as incurred. Expenditures for repairs and maintenance are expensed as incurred.

Properties classified as held for sale

A property is classified as held for sale when all of the following criteria for a plan of sale have been met: (i) management, having the authority to approve the action, commits to a plan to sell the property; (ii) the property is available for immediate sale in its present condition, subject only to terms that are usual and customary; (iii) an active program to locate a buyer and other actions required to complete the plan to sell have been initiated; (iv) the sale of the property is probable and is expected to be completed within one year; (v) the property is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and (vi) actions necessary to complete the plan of sale indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. Depreciation of assets ceases upon designation of a property as held for sale.

If the disposal of a property represents a strategic shift that has (or will have) a major effect on our operations or financial results, such as (i) a major line of business, (ii) a major geographic area, (iii) a major equity method investment, or (iv) other major parts of an entity, then the operations of the property, including any interest expense directly attributable to it, are classified as discontinued operations in our consolidated statements of operations, and amounts for all prior periods presented are reclassified from continuing operations to discontinued operations. The disposal of an individual property generally will not represent a strategic shift and therefore will typically not meet the criteria for classification as a discontinued operation.

Impairment of long-lived assets

Prior to and subsequent to the end of each quarter, we review current activities and changes in the business conditions of all of our long-lived assets to determine the existence of any triggering events or impairment indicators requiring an impairment analysis. If triggering events or impairment indicators are identified, we review an estimate of the future undiscounted cash flows, including, if necessary, a probability-weighted approach if multiple outcomes are under consideration.

Long-lived assets to be held and used, including our rental properties, CIP, land held for development, right-of-use assets related to operating leases in which we are the lessee, and intangibles, are individually evaluated for impairment when conditions exist that may indicate that the carrying amount of a long-lived asset may not be recoverable. The carrying amount of a long-lived asset to be held and used is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. Triggering events or impairment indicators for long-lived assets to be held and used, including our rental properties, CIP, land held for development, and intangibles, are assessed by project and include significant fluctuations in estimated net operating income, occupancy changes, significant near-term lease expirations, current and historical operating and/or cash flow losses, construction costs, estimated completion dates, rental rates, and other market factors. We assess the expected undiscounted cash flows based upon numerous factors, including, but not limited to, construction costs, available market information, current and historical operating results, known trends, current market/economic conditions that may affect the property, and our assumptions about the use of the asset, including, if necessary, a probability-weighted approach if multiple outcomes are under consideration.

Upon determination that an impairment has occurred, a write-down is recognized to reduce the carrying amount to its estimated fair value. If an impairment loss is not required to be recognized, the recognition of depreciation or amortization is adjusted prospectively, as necessary, to reduce the carrying amount of the real estate to its estimated disposition value over the remaining period

that the asset is expected to be held and used. We may adjust depreciation of properties that are expected to be disposed of or redeveloped prior to the end of their useful lives.

We use the held for sale impairment model for our properties classified as held for sale. The held for sale impairment model is different from the held and used impairment model. Under the held for sale impairment model, an impairment loss is recognized if the carrying amount of the long-lived asset classified as held for sale exceeds its fair value less cost to sell. Because of these two different models, it is possible for a long-lived asset previously classified as held and used to require the recognition of an impairment charge upon classification as held for sale.

Equity investments

We hold investments in publicly traded companies and privately held entities primarily involved in the life science, technology, and agtech industries. As a REIT, we generally limit our ownership percentage in the voting stock of each individual entity to less than 10%.

Our investments in publicly traded companies are classified as investments with readily determinable fair values and are carried at fair value, with changes in fair value recognized in net income. The fair values for our investments in publicly traded companies are determined based on sales prices/quotes available on securities exchanges and therefore generally require no judgment to determine fair value. Investments in privately held entities that report NAV per share, such as our privately held investments in limited partnerships, are carried at fair value using NAV as a practical expedient, with changes in fair value recognized in net income. As a result, fair value estimation for these investments generally requires limited judgment. Investments in privately held entities that do not report NAV are measured at cost, adjusted for observable price changes and impairments, with changes recognized in net income. Observable price changes result from, among other things, equity transactions for the same issuer executed during the reporting period, including subsequent equity offerings or other reported equity transactions related to the same issuer. For these equity transactions to be considered observable price changes of the same issuer, we evaluate whether these transactions have similar rights and obligations, including voting rights, distribution preferences, conversion rights, and other factors, to the investments we hold.

We monitor investments in privately held entities that do not report NAV per share throughout the year for new developments, including operating results, prospects and results of clinical trials, new product initiatives, new collaborative agreements, capital-raising events, and merger and acquisition activities. These investments are evaluated on the basis of a qualitative assessment for indicators of impairment by monitoring the presence of the following triggering events or impairment indicators: (i) a significant deterioration in the earnings performance, asset quality, or business prospects of the investee; (ii) a significant adverse change in the regulatory, economic, or technological environment of the investee, (iii) a significant adverse change in the general market condition, including the research and development of technology and products that the investee is bringing or attempting to bring to the market, or (iv) significant concerns about the investee's ability to continue as a going concern. If such indicators are present, we are required to estimate the investment's fair value and immediately recognize an impairment loss in an amount equal to the investment's carrying value in excess of its estimated fair value.

Interest rate hedge agreements

From time to time, we utilize interest rate hedge agreements to manage a portion of our exposure to variable interest rates. Historically, our interest rate hedge agreements primarily related to our borrowings with variable interest rates based on LIBOR. However, in connection with the LIBOR cessation projected by the end of 2021 and the potential replacement of this rate in the U.S. with the Secured Overnight Financing Rate, we have paid down the majority of our outstanding borrowings of LIBOR-based debt and terminated our related interest rate hedge agreements.

We classify our interest rate hedge agreements as either assets or liabilities on the balance sheet at fair value. The accounting for changes in fair value (i.e., gains or losses) of a derivative instrument depends on whether it has been designated and qualifies as part of a hedging relationship and, further, on the type of hedging relationship. For those derivative instruments that are designated and qualify as hedging instruments, a company must designate the hedging instrument, based on the hedged exposure, as a fair value hedge, a cash flow hedge, or a hedge of a net investment in a foreign operation. Our interest rate hedge agreements are typically considered cash flow hedges because they are designated and qualify as hedges of the exposure to variability in expected future cash flows. Hedge accounting generally provides for the matching of the timing of gain or loss recognition on the hedging instrument with the recognition of the changes in the earnings effect of the hedged transactions in a cash flow hedge.

We formally document all relationships between interest rate hedge agreements and hedged items, including the method for evaluating effectiveness and the risk strategy. Our interest rate hedge agreements generally meet the criteria to be deemed "highly effective" in reducing our exposure to variable interest rates. We make a quantitative assessment at the inception of each interest rate hedge agreement, and qualitatively on an ongoing basis, to determine whether these instruments are "highly effective" in offsetting changes in cash flows associated with the hedged items. The entire change in the fair value of our highly effective interest rate hedge agreements that are designated and that qualify as cash flow hedges is recognized in accumulated other comprehensive income. Amounts classified in accumulated other comprehensive income are reclassified into earnings in the period during which the hedged transactions affect earnings. If our interest rate hedges did not qualify as "highly effective," the changes in the fair values of the

derivatives used as hedges would be reflected in earnings.

The fair value of an interest rate hedge agreement is determined using widely accepted valuation techniques, including discounted cash flow analyses on the expected cash flows of each derivative. These analyses reflect the contractual terms of the derivatives, including the period to maturity, and use observable market-based inputs, including interest rate curves and implied volatilities. The fair values of our interest rate hedge agreements are determined using the market-standard methodology of netting the discounted future fixed-cash payments and the discounted expected variable-cash receipts. The variable-cash receipts are based on an expectation of future interest rates (forward curves) derived from observable market interest rate curves. The fair value calculation also includes an amount for risk of non-performance of our counterparties using “significant unobservable inputs,” such as estimates of current credit spreads, to evaluate the likelihood of default, which we have determined to be insignificant to the overall fair value of our interest rate hedge agreements. As of December 31, 2019, we had no outstanding interest rate hedge agreements.

Liability and right-of-use assets related to operating leases in which we are the lessee

We have operating lease agreements in which we are the lessee consisting of ground and office leases. At the lease commencement date (or at the acquisition date if the lease is acquired as part of a real estate acquisition), we are required to recognize a liability to account for our future obligations under these operating leases, and a corresponding right-of-use asset.

The lease liability is measured based on the present value of the future lease payments, including payments during the term under our extension options that we are reasonably certain to exercise. The present value of the future lease payments is calculated for each operating lease using each respective remaining lease term and a corresponding estimated incremental borrowing rate, which is the interest rate that we estimate we would have to pay to borrow on a collateralized basis over a similar term for an amount equal to the lease payments. Subsequently, the lease liability is accreted by applying a discount rate established at the lease commencement date to the lease liability balance as of the beginning of the period and is reduced by the payments made during the period. We classify the operating lease liability in accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets.

The right-of-use asset is measured based on the corresponding lease liability, adjusted for initial direct leasing costs and any other consideration exchanged with the landlord prior to the commencement of the lease, as well as adjustments to reflect favorable or unfavorable terms of an acquired lease when compared with market terms at the time of acquisition. Subsequently, the right-of-use asset is amortized on a straight-line basis during the lease term. We classify the right-of-use asset in other assets in our consolidated balance sheets. Refer to the “Lessee Accounting” subsection of “Lease Accounting” section within Note 2 – “Summary of Significant Accounting Policies” to our consolidated financial statements under Item 15 in this annual report on Form 10-K.

Monitoring of tenant credit quality

During the term of each lease, we monitor the credit quality and any related material changes of our tenants by (i) monitoring the credit rating of tenants that are rated by a nationally recognized credit rating agency, (ii) reviewing financial statements of the tenants that are publicly available or that are required to be delivered to us pursuant to the applicable lease, (iii) monitoring news reports regarding our tenants and their respective businesses, and (iv) monitoring the timeliness of lease payments.

Non-GAAP measures and definitions

This section contains additional information of certain non-GAAP financial measures and the reasons why we use these supplemental measures of performance and believe they provide useful information to investors, as well as the definitions of other terms used in this annual report on Form 10-K.

Funds from operations and funds from operations, as adjusted, attributable to Alexandria Real Estate Equities, Inc.'s common stockholders

GAAP-basis accounting for real estate assets utilizes historical cost accounting and assumes that real estate values diminish over time. In an effort to overcome the difference between real estate values and historical cost accounting for real estate assets, the Nareit Board of Governors established funds from operations as an improved measurement tool. Since its introduction, funds from operations has become a widely used non-GAAP financial measure among equity REITs. We believe that funds from operations is helpful to investors as an additional measure of the performance of an equity REIT. Moreover, we believe that funds from operations, as adjusted, allows investors to compare our performance to the performance of other real estate companies on a consistent basis, without having to account for differences recognized because of real estate investment and disposition decisions, financing decisions, capital structure, capital market transactions, and variances resulting from the volatility of market conditions outside of our control. On January 1, 2019, we adopted standards established by the Nareit Board of Governors in its November 2018 White Paper (the "Nareit White Paper") on a prospective basis. The Nareit White Paper defines funds from operations as net income (computed in accordance with GAAP), excluding gains or losses on sales of real estate, and impairments of real estate, plus depreciation and amortization of operating real estate assets, and after adjustments for our share of consolidated and unconsolidated partnerships and real estate joint ventures. Impairments represent the write-down of assets when fair value over the recoverability period is less than the carrying value due to changes in general market conditions and do not necessarily reflect the operating performance of the properties during the corresponding period.

We compute funds from operations, as adjusted, as funds from operations calculated in accordance with the Nareit White Paper, excluding significant gains, losses, and impairments realized on non-real estate investments, unrealized gains or losses on non-real estate investments, gains or losses on early extinguishment of debt, gains or losses on early termination of interest rate hedge agreements, preferred stock redemption charges, deal costs, the income tax effect related to such items, and the amount of such items that is allocable to our unvested restricted stock awards. Neither funds from operations nor funds from operations, as adjusted, should be considered as alternatives to net income (determined in accordance with GAAP) as indications of financial performance, or to cash flows from operating activities (determined in accordance with GAAP) as measures of liquidity, nor are they indicative of the availability of funds for our cash needs, including our ability to make distributions.

The following table reconciles net income to funds from operations for the share of consolidated real estate joint ventures attributable to noncontrolling interests and our share of unconsolidated real estate joint ventures for the year ended December 31, 2019 (in thousands):

	Noncontrolling Interest Share of Consolidated Real Estate Joint Ventures		Our Share of Unconsolidated Real Estate Joint Ventures	
	December 31, 2019		December 31, 2019	
	Three Months Ended	Year Ended	Three Months Ended	Year Ended
Net income	\$ 13,612	\$ 40,882	\$ 4,777	\$ 10,136
Depreciation and amortization	10,176	30,960	2,702	6,366
Funds from operations	\$ 23,788	\$ 71,842	\$ 7,479	\$ 16,502

The following tables present a reconciliation of net income (loss) attributable to Alexandria Real Estate Equities, Inc.'s common stockholders, the most directly comparable financial measure presented in accordance with GAAP, including our share of amounts from consolidated and unconsolidated real estate joint ventures, to funds from operations attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – diluted, and funds from operations attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – diluted, as adjusted, and the related per share amounts for the years ended December 31, 2019, 2018, and 2017. Per share amounts may not add due to rounding.

<i>(In thousands)</i>	Year Ended December 31,		
	2019	2018	2017
Net income attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 350,995	\$ 363,983	\$ 145,395
Depreciation and amortization of real estate assets ⁽¹⁾	541,855	477,661	416,783
Noncontrolling share of depreciation and amortization from consolidated real estate JVs	(30,960)	(16,077)	(14,762)
Our share of depreciation and amortization from unconsolidated real estate JVs	6,366	3,181	1,551
Gain on sales of real estate – rental properties	(474)	(8,704)	(270)
Our share of gain on sales of real estate from unconsolidated real estate JVs	—	(35,678)	(14,106)
Gain on sales of real estate – land parcels	—	—	(111)
Impairment of real estate – rental properties	12,334	—	203
Assumed conversion of 7.00% Series D cumulative convertible preferred stock	3,204	5,060	—
Allocation to unvested restricted stock awards	(5,904)	(5,961)	(2,920)
Funds from operations attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – diluted ⁽¹⁾	877,416	783,465	531,763
Unrealized gains on non-real estate investments	(161,489)	(99,634)	—
Realized gains on non-real estate investments	—	(14,680)	—
Impairment of real estate – land parcels	—	6,311	—
Impairment of non-real estate investments	17,124 ⁽²⁾	5,483	8,296
Loss on early extinguishment of debt	47,570 ⁽³⁾	1,122	3,451
Loss on early termination of interest rate hedge agreements	1,702 ⁽⁴⁾	—	—
Our share of gain on early extinguishment of debt from unconsolidated real estate JVs	—	(761)	—
Preferred stock redemption charge	2,580	4,240	11,279
Removal of assumed conversion of 7.00% Series D cumulative convertible preferred stock	(3,204)	(5,060)	—
Allocation to unvested restricted stock awards	1,307	1,517	(321)
Funds from operations attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – diluted, as adjusted	\$ 783,006	\$ 682,003	\$ 554,468

(1) Calculated in accordance with standards established by the Nareit Board of Governors.

(2) Relates to non-real estate investments in privately held entities.

(3) Relates to the repayment of our unsecured senior notes payable due 2020 and 2022, unsecured senior bank term loan, and one secured note payable.

(4) Represents loss on early termination of our interest rate hedge agreements. The loss is included within interest expense in our consolidated statements of operations. Refer to Note 11 – "Interest Rate Hedge Agreements" to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information.

(Dollars per share)	Year Ended December 31,		
	2019	2018	2017
Net income per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – diluted	\$ 3.12	\$ 3.52	\$ 1.58
Depreciation and amortization of real estate assets ⁽¹⁾	4.60	4.50	4.35
Gain on sales of real estate – rental properties	—	(0.08)	—
Our share of gain on sales of real estate from unconsolidated real estate JVs	—	(0.35)	(0.15)
Impairment of real estate – rental properties	0.11	—	—
Allocation to unvested restricted stock awards	(0.06)	(0.06)	—
Funds from operations per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – basic and diluted ⁽¹⁾	7.77	7.53	5.78
Unrealized gains on non-real estate investments	(1.44)	(0.96)	—
Realized gains on non-real estate investments	—	(0.14)	—
Impairment of real estate – land parcels	—	0.06	—
Impairment of non-real estate investments	0.15 ⁽²⁾	0.05	0.09
Loss on early extinguishment of debt	0.42 ⁽²⁾	0.01	0.03
Loss on early termination of interest rate hedge agreements	0.02 ⁽²⁾	—	—
Our share of gain on early extinguishment of debt from unconsolidated real estate JVs	—	(0.01)	—
Preferred stock redemption charge	0.02	0.04	0.12
Allocation to unvested restricted stock awards	0.02	0.02	—
Funds from operations per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – diluted, as adjusted	\$ 6.96	\$ 6.60	\$ 6.02

Weighted-average shares of common stock outstanding⁽³⁾ for calculations of:

EPS – diluted	112,524	103,321	92,063
Funds from operations – diluted, per share	112,966	104,048	92,063
Funds from operations – diluted, as adjusted, per share	112,524	103,321	92,063

(1) Calculated in accordance with standards established by the Nareit Board of Governors.

(2) Refer to footnotes 2, 3, and 4, respectively, on the previous page for additional information.

(3) Refer to the definition of "Weighted-Average Shares of Common Stock Outstanding – Diluted" within this section of this Item 7 for additional information.

Adjusted EBITDA and Adjusted EBITDA margin

We use Adjusted EBITDA as a supplemental performance measure of our operations, for financial and operational decision-making, and as a supplemental means of evaluating period-to-period comparisons on a consistent basis. Adjusted EBITDA is calculated as earnings before interest, taxes, depreciation, and amortization ("EBITDA"), excluding stock compensation expense, gains or losses on early extinguishment of debt, gains or losses on sales of real estate, and impairments of real estate. Adjusted EBITDA also excludes unrealized gains or losses and significant realized gains and impairments that result from our non-real estate investments. These non-real estate investment amounts are classified in our consolidated statements of operations outside of revenues.

We believe Adjusted EBITDA provides investors with relevant and useful information as it allows investors to evaluate the operating performance of our business activities without having to account for differences recognized because of real estate and non-real estate investment and disposition decisions, financing decisions, capital structure, capital market transactions, and variances resulting from the volatility of market conditions outside of our control. For example, we exclude gains or losses on the early extinguishment of debt to allow investors to measure our performance independent of our indebtedness and capital structure. We believe that adjusting for the effects of impairments and gains or losses on sales of real estate, and significant impairments and significant gains on the sale of non-real estate investments allows investors to evaluate performance from period to period on a consistent basis without having to account for differences recognized because of real estate and non-real estate investment and disposition decisions. We believe that excluding charges related to stock compensation and unrealized gains or losses facilitates for investors a comparison of our business activities across periods without the volatility resulting from market forces outside of our control. Adjusted EBITDA has limitations as a measure of our performance. Adjusted EBITDA does not reflect our historical expenditures or future requirements for capital expenditures or contractual commitments. While Adjusted EBITDA is a relevant measure of performance, it does not represent net income or cash flows from operations calculated and presented in accordance with GAAP, and it should not be considered as an alternative to those indicators in evaluating performance or liquidity.

Our calculation of Adjusted EBITDA margin divides Adjusted EBITDA by our revenues, as adjusted. We believe that revenues, as adjusted, provides a denominator for Adjusted EBITDA margin that is calculated on a basis more consistent with that of the Adjusted EBITDA numerator. Specifically, revenues, as adjusted, includes the same realized gains on, and impairments of, non-real estate investments that are included in the reconciliation of Adjusted EBITDA. We believe that the consistent application of results from our non-real estate investments to both the numerator and denominator of Adjusted EBITDA margin provides a more useful calculation for the comparison across periods.

The following table reconciles net income (loss) and revenues, the most directly comparable financial measures calculated and presented in accordance with GAAP, to Adjusted EBITDA and revenues, as adjusted, respectively, for the three months and years ended December 31, 2019 and 2018 (dollars in thousands):

	Three Months Ended December 31,		Year Ended December 31,	
	2019	2018	2019	2018
Net income (loss)	\$ 216,053	\$ (18,631)	\$ 404,047	\$ 402,793
Interest expense	45,493	40,239	173,675	157,495
Income taxes	1,269	613	4,343	3,227
Depreciation and amortization	140,518	124,990	544,612	477,661
Stock compensation expense	10,239	9,810	43,640	35,019
Loss on early extinguishment of debt	—	—	47,570	1,122
Our share of gain on early extinguishment of debt from unconsolidated real estate JVs	—	—	—	(761)
Gain on sales of real estate	(474)	(8,704)	(474)	(8,704)
Our share of gain on sales of real estate from unconsolidated real estate JVs	—	—	—	(35,678)
Significant realized gains on non-real estate investments	—	(6,428)	—	(6,428)
Unrealized (gains) losses on non-real estate investments	(148,268)	94,850	(161,489)	(99,634)
Impairment of real estate	12,334	—	12,334	6,311
Impairment of non-real estate investments	9,991	5,483	17,124	5,483
Adjusted EBITDA	\$ 287,155	\$ 242,222	\$ 1,085,382	\$ 937,906
Revenues	\$ 408,114	\$ 340,463	\$ 1,531,296	\$ 1,327,459
Non-real estate investments – total realized gains	4,399	11,319	33,158	37,129
Significant realized gains on non-real estate investments	—	(6,428)	—	(6,428)
Impairment of non-real estate investments	9,991	5,483	17,124	5,483
Revenues, as adjusted	\$ 422,504	\$ 350,837	\$ 1,581,578	\$ 1,363,643
Adjusted EBITDA margin	68%	69%	69%	69%

Annual rental revenue

Annual rental revenue represents the annualized fixed base rental amount, in effect as of the end of the period, related to our operating RSF. Annual rental revenue is presented using 100% of the annual rental revenue of our consolidated properties and our share of annual rental revenue for our unconsolidated real estate joint ventures. Annual rental revenue per RSF is computed by dividing annual rental revenue by the sum of 100% of the RSF of our consolidated properties and our share of the RSF of properties held in unconsolidated real estate joint ventures. As of December 31, 2019, approximately 97% of our leases (on an RSF basis) were triple net leases, which require tenants to pay substantially all real estate taxes, insurance, utilities, repairs and maintenance, common area expenses, and other operating expenses (including increases thereto) in addition to base rent. Annual rental revenue excludes these operating expenses recovered from our tenants. Amounts recovered from our tenants related to these operating expenses, along with base rent, are classified in income from rentals in our consolidated statements of operations.

Cash interest

Cash interest is equal to interest expense calculated in accordance with GAAP plus capitalized interest, less amortization of loan fees and debt premiums (discounts). Refer to the definition of “Fixed-Charge Coverage Ratio” in this section under this Item 7 in this annual report on 10-K for a reconciliation of interest expense, the most directly comparable financial measure calculated and presented in accordance with GAAP, to cash interest.

Class A properties and AAA locations

Class A properties are properties clustered in AAA locations that provide innovative tenants with highly dynamic and collaborative environments that enhance their ability to successfully recruit and retain world-class talent and inspire productivity, efficiency, creativity, and success. Class A properties generally command higher annual rental rates than other classes of similar properties.

AAA locations are in close proximity to concentrations of specialized skills, knowledge, institutions, and related businesses. Such locations are generally characterized by high barriers to entry for new landlords, high barriers to exit for tenants, and a limited supply of available space.

Development, redevelopment, and pre-construction

A key component of our business model is our disciplined allocation of capital to the development and redevelopment of new Class A properties, and property enhancements identified during the underwriting of certain acquired properties, located in collaborative life science, technology, and agtech campuses in AAA urban innovation clusters. These projects are generally focused on providing high-quality, generic, and reusable spaces that meet the real estate requirements of, and are reusable by, a wide range of tenants. Upon completion, each value-creation project is expected to generate a significant increase in rental income, net operating income, and cash flows. Our development and redevelopment projects are generally in locations that are highly desirable to high-quality entities, which we believe results in higher occupancy levels, longer lease terms, higher rental income, higher returns, and greater long-term asset value.

Development projects generally consist of the ground-up development of generic and reusable facilities. Redevelopment projects consist of the permanent change in use of office, warehouse, and shell space into office/laboratory, tech office, or agtech space. We generally will not commence new development projects for aboveground construction of new Class A office/laboratory, tech office, and agtech space without first securing significant pre-leasing for such space, except when there is solid market demand for high-quality Class A properties.

Pre-construction activities include entitlements, permitting, design, site work, and other activities preceding commencement of construction of aboveground building improvements. The advancement of pre-construction efforts is focused on reducing the time required to deliver projects to prospective tenants. These critical activities add significant value for future ground-up development and are required for the vertical construction of buildings. Ultimately, these projects will provide high-quality facilities and are expected to generate significant revenue and cash flows.

Fixed-charge coverage ratio

Fixed-charge coverage ratio is a non-GAAP financial measure representing the ratio of Adjusted EBITDA to fixed charges. We believe this ratio is useful to investors as a supplemental measure of our ability to satisfy fixed financing obligations and preferred stock dividends. Cash interest is equal to interest expense calculated in accordance with GAAP plus capitalized interest, less amortization of loan fees and debt premiums (discounts).

The following table reconciles interest expense, the most directly comparable financial measure calculated and presented in accordance with GAAP, to cash interest and fixed charges for the three months ended December 31, 2019 and 2018 (dollars in thousands):

	Three Months Ended December 31,	
	2019	2018
Adjusted EBITDA	\$ 287,155	\$ 242,222
Interest expense	\$ 45,493	\$ 40,239
Capitalized interest	23,822	19,902
Amortization of loan fees	(2,241)	(2,401)
Amortization of debt premiums	907	611
Cash interest	67,981	58,351
Dividends on preferred stock	—	1,155
Fixed charges	\$ 67,981	\$ 59,506
Fixed-charge coverage ratio:		
– period annualized	4.2x	4.1x
– trailing 12 months	4.2x	4.2x

Initial stabilized yield (unlevered)

Initial stabilized yield is calculated as the estimated amounts of net operating income at stabilization divided by our investment in the property. Our initial stabilized yield excludes the benefit of leverage. Our cash rents related to our value-creation projects are generally expected to increase over time due to contractual annual rent escalations. Our estimates for initial stabilized yields, initial stabilized yields (cash basis), and total costs at completion represent our initial estimates at the commencement of the project. We expect to update this information upon completion of the project, or sooner if there are significant changes to the expected project yields or costs.

- Initial stabilized yield reflects rental income, including contractual rent escalations and any rent concessions over the term(s) of the lease(s), calculated on a straight-line basis.
- Initial stabilized yield (cash basis) reflects cash rents at the stabilization date after initial rental concessions, if any, have elapsed and our total cash investment in the property.

Investment-grade or publicly traded large cap tenants

Investment-grade or publicly traded large cap tenants represent tenants that are investment-grade rated or publicly traded companies with an average daily market capitalization greater than \$10 billion for the twelve months ended December 31, 2019, as reported by Bloomberg Professional Services. In addition, we monitor the credit quality and related material changes of our tenants. Material changes that cause a tenant's market capitalization to decline below \$10 billion, which are not immediately reflected in the twelve-month average, may result in their exclusion from this measure.

Investments in real estate – value-creation square footage currently in rental properties

The following table represents RSF of buildings in operation as of December 31, 2019, that will be redeveloped or replaced with new development RSF upon commencement of future construction:

Property/Submarket	RSF
Intermediate-term projects:	
3825 Fabian Way/Greater Stanford	250,000
960 Industrial Road/Greater Stanford	110,000
9363, 9373, and 9393 Towne Centre Drive/University Town Center	140,398
10260 Campus Point Drive/University Town Center	109,164
10931 and 10933 North Torrey Pines Road/Torrey Pines	92,450
	<hr/> 702,012
Future projects:	
3875 Fabian Way/Greater Stanford	228,000
219 East 42nd Street/New York City	349,947
4161 Campus Point Court/University Town Center	159,884
4110 Campus Point Court/University Town Center	15,667
4045 Sorrento Valley Boulevard/Sorrento Valley	10,926
4075 Sorrento Valley Boulevard/Sorrento Valley	40,000
601 Dexter Avenue North/Lake Union	18,680
	<hr/> 823,104
Total value-creation RSF currently included in rental properties	<hr/> 1,525,116 <hr/>

Joint venture financial information

We present components of balance sheet and operating results information related to our joint ventures, which are not presented, or intended to be presented, in accordance with GAAP. We present the proportionate share of certain financial line items as follows: (i) for each real estate joint venture that we consolidate in our financial statements, which are controlled by us through contractual rights or majority voting rights, but of which we own less than 100%, we apply the noncontrolling interest economic ownership percentage to each financial item to arrive at the amount of such cumulative noncontrolling interest share of each component presented; and (ii) for each real estate joint venture that we do not control and do not consolidate, and are instead controlled jointly or by our joint venture partners through contractual rights or majority voting rights, we apply our economic ownership percentage to each financial item to arrive at our proportionate share of each component presented.

The components of balance sheet and operating results information related to joint ventures do not represent our legal claim to those items. For each entity that we do not wholly own, the joint venture agreement generally determines what equity holders can receive upon capital events, such as sales or refinancing, or in the event of a liquidation. Equity holders are normally entitled to their respective legal ownership of any residual cash from a joint venture only after all liabilities, priority distributions, and claims have been repaid or satisfied.

We believe this information can help investors estimate the balance sheet and operating results information related to our partially owned entities. Presenting this information provides a perspective not immediately available from consolidated financial statements and one that can supplement an understanding of the joint venture assets, liabilities, revenues, and expenses included in our consolidated results.

The components of balance sheet and operating results information related to joint ventures are limited as an analytical tool as the overall economic ownership interest does not represent our legal claim to each of our joint ventures' assets, liabilities, or results of operations. In addition, joint venture financial information may include financial information related to the unconsolidated real estate joint ventures that we do not control. Refer to Note 4 – "Consolidated and Unconsolidated Real Estate Joint Ventures" to our consolidated financial statements under Item 15 in this annual report on Form 10-K for more information on our unconsolidated real estate joint ventures. We believe that in order to facilitate for investors a clear understanding of our operating results and our total assets and liabilities, joint venture financial information should be examined in conjunction with our consolidated statements of operations and balance sheets. Joint venture financial information should not be considered an alternative to our consolidated financial statements, which are prepared in accordance with GAAP.

Net cash provided by operating activities after dividends

Net cash provided by operating activities after dividends includes the deduction for distributions to noncontrolling interests. For purposes of this calculation, changes in operating assets and liabilities are excluded as they represent timing differences.

Net debt to Adjusted EBITDA and net debt and preferred stock to Adjusted EBITDA

Net debt to Adjusted EBITDA and net debt and preferred stock to Adjusted EBITDA are non-GAAP financial measures that we believe are useful to investors as supplemental measures in evaluating our balance sheet leverage. Net debt is equal to the sum of total consolidated debt less cash, cash equivalents, and restricted cash. Net debt and preferred stock is equal to the sum of net debt, as discussed above, plus preferred stock outstanding as of the end of the period. Refer to the definition of "Adjusted EBITDA and Adjusted EBITDA Margin" in this section under this Item 7 for further information on the calculation of Adjusted EBITDA.

The following table reconciles debt to net debt, and to net debt and preferred stock, and computes the ratio of each to Adjusted EBITDA as of December 31, 2019 and 2018 (dollars in thousands):

	December 31,	
	2019	2018
Secured notes payable	\$ 349,352	\$ 630,547
Unsecured senior notes payable	6,044,127	4,292,293
Unsecured senior line of credit	384,000	208,000
Unsecured senior bank term loan	—	347,415
Unamortized deferred financing costs	47,299	31,413
Cash and cash equivalents	(189,681)	(234,181)
Restricted cash	(53,008)	(37,949)
Net debt	<u>\$ 6,582,089</u>	<u>\$ 5,237,538</u>
Net debt	\$ 6,582,089	\$ 5,237,538
7.00% Series D cumulative convertible preferred stock	— ⁽¹⁾	64,336
Net debt and preferred stock	<u>\$ 6,582,089</u>	<u>\$ 5,301,874</u>
Adjusted EBITDA:		
– quarter annualized	\$ 1,148,620	\$ 968,888
– trailing 12 months	\$ 1,085,382	\$ 937,906
Net debt to Adjusted EBITDA:		
– quarter annualized	5.7x	5.4x
– trailing 12 months	6.1x	5.6x
Net debt and preferred stock to Adjusted EBITDA:		
– quarter annualized	5.7x	5.5x
– trailing 12 months	6.1x	5.7x

(1) In October 2019, we completed the conversion of all 2.3 million outstanding shares of our Series D Convertible Preferred Stock into shares of our common stock. Refer to the "7.00% Series D Convertible Preferred Stock Repurchases and Conversion" section in Note 16 – "Stockholders' Equity" to our consolidated financial statements under Item 15 in this annual report for additional information.

Net operating income, net operating income (cash basis), and operating margin

The following table reconciles net income to net operating income, and to net operating income (cash basis) for the years ended December 31, 2019, 2018, and 2017 (dollars in thousands):

	Year Ended December 31,		
	2019	2018	2017
Net income	\$ 404,047	\$ 402,793	\$ 194,204
Equity in earnings of unconsolidated real estate joint ventures	(10,136)	(43,981)	(15,426)
General and administrative expenses	108,823	90,405	75,009
Interest expense	173,675	157,495	128,645
Depreciation and amortization	544,612	477,661	416,783
Impairment of real estate	12,334	6,311	203
Loss on early extinguishment of debt	47,570	1,122	3,451
Gain on sales of real estate – rental properties	(474)	(8,704)	(270)
Gain on sales of real estate – land parcels	—	—	(111)
Investment income	(194,647)	(136,763)	—
Net operating income	1,085,804	946,339	802,488
Straight-line rent revenue	(104,235)	(93,883)	(107,643)
Amortization of acquired below-market leases	(29,813)	(21,938)	(19,055)
Net operating income (cash basis)	\$ 951,756	\$ 830,518	\$ 675,790
Net operating income (from above)	\$ 1,085,804	\$ 946,339	\$ 802,488
Total revenues	\$ 1,531,296	\$ 1,327,459	\$ 1,128,097
Operating margin	71%	71%	71%

Net operating income is a non-GAAP financial measure calculated as net income, the most directly comparable financial measure calculated and presented in accordance with GAAP, excluding equity in the earnings of our unconsolidated real estate joint ventures, general and administrative expenses, interest expense, depreciation and amortization, impairments of real estate, gains or losses on early extinguishment of debt, gains or losses on sales of real estate, and investment income or loss. We believe net operating income provides useful information to investors regarding our financial condition and results of operations because it primarily reflects those income and expense items that are incurred at the property level. Therefore, we believe net operating income is a useful measure for investors to evaluate the operating performance of our consolidated real estate assets. Net operating income on a cash basis is net operating income adjusted to exclude the effect of straight-line rent and amortization of acquired above- and below-market lease revenue adjustments required by GAAP. We believe that net operating income on a cash basis is helpful to investors as an additional measure of operating performance because it eliminates straight-line rent revenue and the amortization of acquired above- and below-market leases.

Furthermore, we believe net operating income is useful to investors as a performance measure for our consolidated properties because, when compared across periods, net operating income reflects trends in occupancy rates, rental rates, and operating costs, which provide a perspective not immediately apparent from net income or loss. Net operating income can be used to measure the initial stabilized yields of our properties by calculating net operating income generated by a property divided by our investment in the property. Net operating income excludes certain components from net income in order to provide results that are more closely related to the results of operations of our properties. For example, interest expense is not necessarily linked to the operating performance of a real estate asset and is often incurred at the corporate level rather than at the property level. In addition, depreciation and amortization, because of historical cost accounting and useful life estimates, may distort comparability of operating performance at the property level. Impairments of real estate have been excluded in deriving net operating income because we do not consider impairments of real estate to be property-level operating expenses. Impairments of real estate relate to changes in the values of our assets and do not reflect the current operating performance with respect to related revenues or expenses. Our impairments of real estate represent the write-down in the value of the assets to the estimated fair value less cost to sell. These impairments result from investing decisions or a deterioration in market conditions. We also exclude realized and unrealized investment income or loss, which results from investment decisions that occur at the corporate level related to non-real estate investments in publicly traded companies and certain privately held entities. Therefore, we do not consider these activities to be an indication of operating performance of our real estate assets at the property level. Our calculation of net operating income also excludes charges incurred from changes in certain financing decisions, such as losses on early extinguishment of debt, as these charges often relate to corporate strategy. Property operating expenses included in determining net operating income primarily consist of costs that are related to our operating properties, such as utilities, repairs, and

maintenance; rental expense related to ground leases; contracted services, such as janitorial, engineering, and landscaping; property taxes and insurance; and property-level salaries. General and administrative expenses consist primarily of accounting and corporate compensation, corporate insurance, professional fees, office rent, and office supplies that are incurred as part of corporate office management. We calculate operating margin as net operating income divided by total revenues.

We believe that in order to facilitate for investors a clear understanding of our operating results, net operating income should be examined in conjunction with net income or loss as presented in our consolidated statements of operations. Net operating income should not be considered as an alternative to net income or loss as an indication of our performance, nor as an alternative to cash flows as a measure of our liquidity or our ability to make distributions.

Operating statistics

We present certain operating statistics related to our properties, including number of properties, RSF, occupancy percentage, leasing activity, and contractual lease expirations as of the end of the period. We believe these measures are useful to investors because they facilitate an understanding of certain trends for our properties. We compute the number of properties, RSF, occupancy percentage, leasing activity, and contractual lease expirations at 100% for all properties in which we have an investment, including properties owned by our consolidated and unconsolidated real estate joint ventures. For operating metrics based on annual rental revenue, refer to the definition of “Annual Rental Revenue” in this “Non-GAAP Measures and Definitions” section.

Same property comparisons

As a result of changes within our total property portfolio during the comparative periods presented, including changes from assets acquired or sold, properties placed into development or redevelopment, and development or redevelopment properties recently placed into service, the consolidated total income from rentals, as well as rental operating expenses in our operating results, can show significant changes from period to period. In order to supplement an evaluation of our results of operations over a given quarterly or annual period, we analyze the operating performance for all consolidated properties that were fully operating for the entirety of the comparative periods presented, referred to as same properties. We separately present quarterly and year-to-date same property results to align with the interim financial information required by the SEC in our management’s discussion and analysis of our financial condition and results of operations. These same properties are analyzed separately from properties acquired subsequent to the first day in the earliest comparable quarterly or year-to-date period presented, properties that underwent development or redevelopment at any time during the comparative periods, unconsolidated real estate joint ventures, properties classified as held for sale, and corporate entities (legal entities performing general and administrative functions), which are excluded from same property results. Additionally, lease termination fees, if any, are excluded from the results of same properties. Refer to “Same Properties” in the “Results of Operations” under this Item 7 in this annual report on Form 10-K for additional information.

Stabilized occupancy date

The stabilized occupancy date represents the estimated date on which the project is expected to reach occupancy of 95% or greater.

Tenant recoveries

Tenant recoveries represent revenues comprising reimbursement of real estate taxes, insurance, utilities, repairs and maintenance, common area expenses, and other operating expenses and earned in the period during which the applicable expenses are incurred and the tenant’s obligation to reimburse us arises.

On January 1, 2019, we adopted a new lease accounting standard, among other practical expedients and policies, and elected the single component accounting policy. As a result of our election of the single component accounting policy, we account for rental revenues and tenant recoveries generated through the leasing of real estate assets that qualify for this policy as a single component and classify associated revenue in income from rentals in our consolidated statements of operations. Prior to the adoption of the new lease accounting standard, we presented rental revenues and tenant recoveries separately in our consolidated statements of operations. Refer to the “Lease Accounting” section in Note 2 – “Summary of Significant Accounting Policies” in our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information. We continue to provide investors with a separate presentation of rental revenues and tenant recoveries in the “Comparison of Results for the Year Ended December 31, 2019, to the Year Ended December 31, 2018” subsections of the “Results of Operations” section under this Item 7 because we believe it promotes investors’ understanding of the changes in our operating results. We believe that the presentation of tenant recoveries is useful to investors as a supplemental measure of our ability to recover operating expenses under our triple net leases, including recoveries of utilities, repairs and maintenance, insurance, property taxes, common area expenses, and other operating expenses, and of our ability to mitigate the effect to net income for any significant variability to components of our operating expenses.

The following table reconciles income from rentals to tenant recoveries for the years ended December 31, 2019, 2018, and 2017 (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Income from rentals	\$ 1,516,864	\$ 1,314,781	\$ 1,122,325
Rental revenues	(1,165,788)	(1,010,718)	(863,181)
Tenant recoveries	\$ 351,076	\$ 304,063	\$ 259,144

Total market capitalization

Total market capitalization is equal to the outstanding shares of common stock at the end of the period multiplied by the closing price on the last trading day of the period (i.e., total equity capitalization), plus total debt outstanding at period-end.

Unencumbered net operating income as a percentage of total net operating income

Unencumbered net operating income as a percentage of total net operating income is a non-GAAP financial measure that we believe is useful to investors as a performance measure of the results of operations of our unencumbered real estate assets as it reflects those income and expense items that are incurred at the unencumbered property level. Unencumbered net operating income is derived from assets classified in continuing operations, which are not subject to any mortgage, deed of trust, lien, or other security interest, as of the period for which income is presented.

The following table summarizes unencumbered net operating income as a percentage of total net operating income for the years ended December 31, 2019 and 2018 (dollars in thousands):

	Year Ended December 31,	
	2019	2018
Unencumbered net operating income	\$ 1,024,619	\$ 829,834
Encumbered net operating income	61,185	116,505
Total net operating income	\$ 1,085,804	\$ 946,339
Unencumbered net operating income as a percentage of total net operating income	94%	88%

Weighted-average shares of common stock outstanding – diluted

From time to time, we enter into capital market transactions, including forward equity sales agreements, to fund acquisitions, to fund construction of our highly leased development and redevelopment projects, and for general working capital purposes. We are required to consider the potential dilutive effect of our forward equity sales agreements under the treasury stock method while the forward equity sales agreements are outstanding. As of December 31, 2019, we had no forward equity sales agreements outstanding. Prior to the conversion of our remaining outstanding shares in October 2019, we considered the effect of assumed conversion of our outstanding Series D Convertible Preferred Stock when determining potentially dilutive incremental shares to our common stock. When calculating the assumed conversion, we add back to net income or loss the dividends paid on our Series D Convertible Preferred Stock to the numerator and then include additional common shares assumed to have been issued (as displayed in the table below) to the denominator of the per share calculation. The effect of the assumed conversion is considered separately for our per share calculations of net income or loss; funds from operations, computed in accordance with the definition in the Nareit White Paper; and funds from operations, as adjusted. Prior to the conversion of our remaining outstanding shares in October 2019, our Series D Convertible Preferred Stock was dilutive and assumed to be converted when quarterly and annual basic EPS, funds from operations, or funds from operations, as adjusted, exceeded approximately \$1.75 and \$7.00 per share, respectively, subject to conversion ratio adjustments and the impact of repurchases of our Series D Convertible Preferred Stock. The effect of the assumed conversion was included when it was dilutive on a per share basis. The dilutive effect of less than a half cent per share appears as zero in our reconciliation of EPS – diluted to funds from operations per share – diluted, and funds from operations per share – diluted, as adjusted, even when the dilutive effect to the numerator alone appears in our reconciliation. Refer to Note 13 – “Earnings per Share” and Note 16 – “Stockholders’ Equity” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for more information related to our forward equity sales agreements and our Series D Convertible Preferred Stock.

The weighted-average shares of common stock outstanding used in calculating EPS – diluted, funds from operations per share – diluted, and funds from operations per share – diluted, as adjusted, for the years ended December 31, 2019, 2018 and 2017, are calculated as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Weighted-average shares of common stock outstanding:			
Basic shares for EPS	112,204	103,010	91,546
Outstanding forward equity sales agreements	320	311	517
Series D Convertible Preferred Stock	—	—	—
Diluted for EPS	112,524	103,321	92,063
Basic shares for EPS			
Basic shares for EPS	112,204	103,010	91,546
Outstanding forward equity sales agreements	320	311	517
Series D Convertible Preferred Stock	442	727	—
Diluted for FFO	112,966	104,048	92,063
Basic shares for EPS			
Basic shares for EPS	112,204	103,010	91,546
Outstanding forward equity sales agreements	320	311	517
Series D Convertible Preferred Stock	—	—	—
Diluted for FFO, as adjusted	112,524	103,321	92,063

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Interest rate risk

The primary market risk to which we believe we may be exposed is interest rate risk, which may result from many factors, including government monetary and tax policies, domestic and international economic and political considerations, and other factors that are beyond our control.

In order to modify and manage the interest rate characteristics of our outstanding debt and to limit the effects of interest rate risks on our operations, we may utilize a variety of financial instruments, including interest rate hedge agreements, caps, floors, and other interest rate exchange contracts. The use of these types of instruments to hedge a portion of our exposure to changes in interest rates may carry additional risks, such as counterparty credit risk and the legal enforceability of hedge agreements. As of December 31, 2019, we did not have any outstanding hedge agreements.

Our future earnings and fair values relating to our outstanding debt are primarily dependent upon prevalent market rates of interest. The following table illustrates the effect of a 1% change in interest rates on our fixed- and variable-rate debt as of December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Annualized effect on future earnings due to variable-rate debt:		
Rate increase of 1%	\$ (3,600)	\$ (2,524)
Rate decrease of 1%	\$ 3,600	\$ 2,524
Effect on fair value of total consolidated debt:		
Rate increase of 1%	\$ (527,768)	\$ (237,413)
Rate decrease of 1%	\$ 605,862	\$ 254,960

These amounts are determined by considering the effect of the hypothetical interest rates on our borrowings as of December 31, 2019 and 2018, respectively. These analyses do not consider the effects of the reduced level of overall economic activity that could exist in such an environment. Furthermore, in the event of a change of such magnitude, we would consider taking actions to further mitigate our exposure to the change. Because of the uncertainty of the specific actions that would be taken and their possible effects, the sensitivity analyses assume no changes in our capital structure.

Equity price risk

We have exposure to equity price market risk because of our equity investments in publicly traded companies and privately held entities. All of our investments in actively traded public companies are reflected in the consolidated balance sheets at fair value. Our investments in privately held entities that report NAV per share are measured at fair value using NAV as a practical expedient to fair value. Our equity investments in privately held entities that do not report NAV per share are measured at cost less impairments, adjusted for observable price changes during the period. Changes in fair value of public investments, changes in NAV per share reported by privately held entities, and observable price changes of privately held entities that do not report NAV per share are classified as investment income in our consolidated statements of operations. There is no assurance that future declines in value will not have a material adverse effect on our future results of operations. The following table illustrates the effect that a 10% change in the value of our equity investments would have on earnings as of December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Equity price risk:		
Fair value increase of 10%	\$ 114,059	\$ 89,226
Fair value decrease of 10%	\$ (114,059)	\$ (89,226)

Foreign currency exchange rate risk

We have exposure to foreign currency exchange rate risk related to our subsidiaries operating in Canada and Asia. The functional currencies of our foreign subsidiaries are the local currencies in each respective country. Gains or losses resulting from the translation of our foreign subsidiaries' balance sheets and statements of operations are classified in accumulated other comprehensive income (loss) as a separate component of total equity and are excluded from net income (loss). Gains or losses will be reflected in our consolidated statements of operations when there is a sale or partial sale of our investment in these operations or upon a complete or substantially complete liquidation of the investment. The following table illustrates the effect that a 10% change in foreign currency rates relative to the U.S. dollar would have on our potential future earnings and on the fair value of our net investment in foreign subsidiaries based on our current operating assets outside the U.S. as of December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Effect on potential future earnings due to foreign currency exchange rate:		
Rate increase of 10%	\$ 107	\$ 82
Rate decrease of 10%	\$ (107)	\$ (82)
Effect on the fair value of net investment in foreign subsidiaries due to foreign currency exchange rate:		
Rate increase of 10%	\$ 10,120	\$ 9,658
Rate decrease of 10%	\$ (10,120)	\$ (9,658)

These sensitivity analyses assume a parallel shift of all foreign currency exchange rates with respect to the U.S. dollar; however, foreign currency exchange rates do not typically move in such a manner, and actual results may differ materially.

Our exposure to market risk elements for the year ended December 31, 2019, was consistent with the risk elements presented above, including the effects of changes in interest rates, equity prices, and foreign currency exchange rates.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item is included as a separate section in this annual report on Form 10-K. Refer to “Item 15. Exhibits and Financial Statement Schedules.”

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures

As of December 31, 2019, we had performed an evaluation, under the supervision of our Co-Chief Executive Officers (“Co-CEOs”) and our Chief Financial Officer (“CFO”), of the effectiveness of the design and operation of our disclosure controls and procedures. These controls and procedures have been designed to ensure that information required for disclosure is recorded, processed, summarized, and reported within the requisite time periods. Based on our evaluation, the Co-CEOs and the CFO concluded that our disclosure controls and procedures were effective as of December 31, 2019.

Changes in internal control over financial reporting

There has not been any change in our internal control over financial reporting during the three months ended December 31, 2019, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Management’s annual report on internal control over financial reporting

The management of Alexandria Real Estate Equities, Inc. and its subsidiaries (the “Company”) is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is defined in Rule 13a-15(f) and 15d-15(f) promulgated under the Securities Exchange Act of 1934, as amended, and is a process designed by, or under the supervision of, the Co-CEOs and the CFO and effected by the Company’s Board of Directors, management, and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with GAAP. The Company’s internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP, and that receipts and expenditures are being made only in accordance with the authorizations of the Company’s management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management has assessed the effectiveness of the Company’s internal control over financial reporting as of December 31, 2019 and 2018. In making its assessment, management has utilized the criteria set forth by the Committee of Sponsoring Organizations (“COSO 2013”) of the Treadway Commission in *Internal Control – Integrated Framework* (2013 framework). Management concluded that based on its assessment, the Company’s internal control over financial reporting was effective as of December 31, 2019. The effectiveness of our internal control over financial reporting as of December 31, 2019, has been audited by Ernst & Young LLP, an independent registered accounting firm, as stated in its report, which is included herein.

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors of Alexandria Real Estate Equities, Inc.

Opinion on Internal Control over Financial Reporting

We have audited Alexandria Real Estate Equities, Inc.'s internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, Alexandria Real Estate Equities, Inc. (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2019 and 2018, and the related consolidated statements of operations, comprehensive income, changes in stockholders' equity and noncontrolling interests and cash flows for each of the three years in the period ended December 31, 2019 and the related notes and financial statement schedule, and our report dated February 4, 2020, expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying management's annual report on internal control over financial reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Los Angeles, California
February 4, 2020

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

The information required by this Item is incorporated herein by reference from our definitive proxy statement for our 2020 annual meeting of stockholders to be filed pursuant to Regulation 14A within 120 days after the end of our fiscal year (the "2020 Proxy Statement") under the captions "Board of Directors and Executive Officers," and "Corporate Governance Guidelines and Code of Ethics."

ITEM 11. EXECUTIVE COMPENSATION

The information required by this Item is incorporated herein by reference from our 2020 Proxy Statement under the caption "Executive Compensation."

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth information on the Company's equity compensation plan as of December 31, 2019:

Equity Compensation Plan Information

	Number of securities to be issued upon exercise of outstanding options, warrants, and rights	Weighted-average exercise price of outstanding options, warrants, and rights	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
	(a)	(b)	(c)
Equity Compensation Plan Approved by Stockholders — Amended and Restated 1997 Stock Award and Incentive Plan	—	—	1,858,673

The other information required by this Item is incorporated herein by reference from our 2020 Proxy Statement under the caption "Security Ownership of Certain Beneficial Owners and Management."

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this Item is incorporated herein by reference from our 2020 Proxy Statement under the captions "Certain Relationships and Related Transactions," "Policies and Procedures with Respect to Related-Person Transactions," and "Director Independence."

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this Item is incorporated herein by reference from our 2020 Proxy Statement under the caption "Fees Billed by Independent Registered Public Accountants."

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

(a)(1) and (2) Financial Statements and Financial Statement Schedule

The financial statements and financial statement schedule required by this Item are included as a separate section in this annual report on Form 10-K beginning on page F-1.

	Page
Report of Independent Registered Public Accounting Firm	F-1
Audited Consolidated Financial Statements of Alexandria Real Estate Equities, Inc.:	
Consolidated Balance Sheets as of December 31, 2019 and 2018	F-3
Consolidated Financial Statements for the Years Ended December 31, 2019, 2018, and 2017:	
Consolidated Statements of Operations	F-4
Consolidated Statements of Comprehensive Income	F-5
Consolidated Statements of Changes in Stockholders' Equity and Noncontrolling Interests	F-6
Consolidated Statements of Cash Flows	F-8
Notes to Consolidated Financial Statements	F-10
Schedule III – Consolidated Financial Statement Schedule of Real Estate and Accumulated Depreciation	F-67

(a)(3) Exhibits

Exhibit Number	Exhibit Title	Incorporated by Reference to:	Date Filed
3.1*	Articles of Amendment and Restatement of the Company	Form 10-Q	August 14, 1997
3.2*	Certificate of Correction of the Company	Form 10-Q	August 14, 1997
3.3*	Articles of Amendment of the Company, dated May 10, 2017	Form 8-K	May 12, 2017
3.4*	Articles Supplementary, dated June 9, 1999, relating to the 9.50% Series A Cumulative Redeemable Preferred Stock	Form 10-Q	August 13, 1999
3.5*	Articles Supplementary, dated February 10, 2000, relating to the election to be subject to Subtitle 8 of Title 3 of the Maryland General Corporation Law	Form 8-K	February 10, 2000
3.6*	Articles Supplementary, dated February 10, 2000, relating to the Series A Junior Participating Preferred Stock	Form 8-K	February 10, 2000
3.7*	Articles Supplementary, dated January 18, 2002, relating to the 9.10% Series B Cumulative Redeemable Preferred Stock	Form 8-A	January 18, 2002
3.8*	Articles Supplementary, dated June 22, 2004, relating to the 8.375% Series C Cumulative Redeemable Preferred Stock	Form 8-A	June 28, 2004
3.9*	Articles Supplementary, dated March 25, 2008, relating to the 7.00% Series D Cumulative Convertible Preferred Stock	Form 8-K	March 25, 2008
3.10*	Articles Supplementary, dated March 12, 2012, relating to the 6.45% Series E Cumulative Redeemable Preferred Stock	Form 8-K	March 14, 2012
3.11*	Articles Supplementary, dated May 10, 2017, relating to Reclassified Preferred Stock	Form 8-K	May 12, 2017
3.12*	Amended and Restated Bylaws of the Company (Amended July 27, 2018)	Form 8-K	August 2, 2018
4.1*	Specimen certificate representing shares of common stock	Form 10-Q	May 5, 2011
4.2*	Indenture, dated as of February 29, 2012, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and the Bank of New York Mellon Trust Company, N.A., as Trustee	Form 8-K	February 29, 2012

Exhibit Number	Exhibit Title	Incorporated by Reference to:	Date Filed
4.3*	Supplemental Indenture No. 2, dated as of June 7, 2013, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and the Bank of New York Mellon Trust Company, N.A., as Trustee	Form 8-K	June 7, 2013
4.4*	Form of 3.90% Senior Note due 2023 (included in Exhibit 4.3 above)	Form 8-K	June 7, 2013
4.5*	Supplemental Indenture No. 4, dated as of July 18, 2014, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and the Bank of New York Mellon Trust Company, N.A., as Trustee	Form 8-K	July 18, 2014
4.6*	Form of 4.500% Senior Note due 2029 (included in Exhibit 4.5 above)	Form 8-K	July 18, 2014
4.7*	Indenture, dated as of November 17, 2015, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Wilmington Trust, National Association, as Trustee	Form 8-K	November 17, 2015
4.8*	Supplemental Indenture No. 1, dated as of November 17, 2015, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Wilmington Trust, National Association, as Trustee	Form 8-K	November 17, 2015
4.9*	Form of 4.30% Senior Note due 2026 (included in Exhibit 4.8 above)	Form 8-K	November 17, 2015
4.10*	Supplemental Indenture No. 2, dated as of June 10, 2016, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Wilmington Trust, National Association, as Trustee	Form 8-K	June 10, 2016
4.11*	Form of 3.95% Senior Note due 2027 (included in Exhibit 4.10 above)	Form 8-K	June 10, 2016
4.12*	Indenture, dated as of March 3, 2017, among the Company, as Issuer Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	March 3, 2017
4.13*	Supplemental Indenture No. 1, dated as of March 3, 2017, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	March 3, 2017
4.14*	Form of 3.95% Senior Note due 2028 (included in Exhibit 4.13 above)	Form 8-K	March 3, 2017
4.15*	Supplemental Indenture No. 2, dated as of November 20, 2017, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	November 20, 2017
4.16*	Form of 3.45% Senior Note due 2025 (included in Exhibit 4.15 above)	Form 8-K	November 20, 2017
4.17*	Supplemental Indenture No. 3, dated as of June 21, 2018, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	June 21, 2018
4.18*	Supplemental Indenture No. 7, dated as of March 21, 2019, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	March 21, 2019
4.19*	Form of 4.000% Senior Note Due 2024 (included in Exhibit 4.17 above)	Form 8-K	June 21, 2018
4.20*	Supplemental Indenture No.4, dated as of June 21, 2018, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	June 21, 2018
4.21*	Form of 4.700% Senior Note Due 2030 (included in Exhibit 4.20 above)	Form 8-K	June 21, 2018
4.22*	Supplemental Indenture No. 5, dated as of March 21, 2019, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	March 21, 2019
4.23*	Form of 3.800% Senior Note Due 2026 (included in Exhibit 4.22 above)	Form 8-K	March 21, 2019
4.24*	Supplemental Indenture No. 6, dated as of March 21, 2019, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	March 21, 2019
4.25*	Form of 4.850% Senior Note Due 2049 (included in Exhibit 4.24 above)	Form 8-K	March 21, 2019
4.26*	Supplemental Indenture No. 8, dated as of July 15, 2019, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	July 15, 2019
4.27*	Form of 3.375% Senior Note Due 2031 (included in Exhibit 4.26 above)	Form 8-K	July 15, 2019

Exhibit Number	Exhibit Title	Incorporated by Reference to:	Date Filed
4.28*	Supplemental Indenture No. 9, dated as of July 15, 2019, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	July 15, 2019
4.29*	Supplemental Indenture No. 11 dated as of September 12, 2019, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	September 12, 2019
4.30*	Form of 4.000% Senior Note Due 2050 (included in Exhibit 4.28 above)	Form 8-K	July 15, 2019
4.31*	Supplemental Indenture No. 10, dated as of September 12, 2019, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Branch Banking and Trust Company, as Trustee	Form 8-K	September 12, 2019
4.32*	Form of 2.750% Senior Note Due 2029 (included in Exhibit 4.31 above)	Form 8-K	September 12, 2019
4.33	Description of Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934		Filed herewith
10.1*	Sixth Amended And Restated Credit Agreement, dated as of September 28, 2018, among the Company, as the Borrower, Alexandria Real Estate Equities, L.P., as a Guarantor, Bank of America, N.A., as Administrative Agent, and the Other Lenders Party thereto, Merrill Lynch, Pierce, Fenner & Smith Incorporated, JPMorgan Chase Bank, N.A., Citibank, N.A. and Goldman Sachs Bank USA, as Joint Lead Arrangers Merrill Lynch, Pierce, Fenner & Smith Incorporated, JPMorgan Chase Bank, N.A. and Citibank, N.A., as Joint Bookrunners, JPMorgan Chase Bank, N.A., Citibank, N.A. and Goldman Sachs Bank USA, as Co-Syndication Agents, and The Bank of Nova Scotia, Barclays Bank PLC, Capital One, National Association, BBVA Compass, Mizuho Bank, Ltd., Regions Bank, Royal Bank of Canada, Sumitomo Mitsui Banking Corporation, TD Bank, N.A., Wells Fargo Bank, National Association and U.S. Bank National Association, as Co-Documentation Agents	Form 10-Q	October 30, 2018
10.2*	Amended and Restated 1997 Stock Award and Incentive Plan of the Company, dated May 22, 2018	Form 8-K	May 23, 2018
10.3*	(1) Form of Non-Employee Director Stock Option Agreement for use in connection with options issued pursuant to the Amended and Restated 1997 Stock Award and Incentive Plan	Form S-11	May 5, 1997
10.4*	(1) Form of Incentive Stock Option Agreement for use in connection with options issued pursuant to the Amended and Restated 1997 Stock Award and Incentive Plan	Form S-11	May 5, 1997
10.5*	(1) Form of Nonqualified Stock Option Agreement for use in connection with options issued pursuant to the Amended and Restated 1997 Stock Award and Incentive Plan	Form S-11	May 5, 1997
10.6*	(1) Form of Employee Restricted Stock Agreement for use in connection with shares of restricted stock issued to employees pursuant to the Amended and Restated 1997 Stock Award and Incentive Plan	Form 10-K	January 30, 2018
10.7*	(1) Form of Employee Restricted Stock Agreement (U.S. Affiliate) for use in connection with shares of restricted stock issued to employees pursuant to the Amended and Restated 1997 Stock Award and Incentive Plan	Form 10-K	January 30, 2018
10.8*	(1) Form of Independent Director Restricted Stock Agreement for use in connection with shares of restricted stock issued to directors pursuant to the Amended and Restated 1997 Stock Award and Incentive Plan	Form 10-K	January 30, 2018
10.9*	(1) Form of Independent Contractor Restricted Stock Agreement for use in connection with shares of restricted stock issued to independent contractors pursuant to the Amended and Restated 1997 Stock Award and Incentive Plan	Form 10-K	January 30, 2018
10.10*	(1) The Company's 2000 Deferred Compensation Plan, amended and restated effective as of January 1, 2010	Form 10-K	March 1, 2011
10.11*	(1) The Company's 2000 Deferred Compensation Plan for Directors, amended and restated effective as of January 1, 2010	Form 10-K	March 1, 2011

Exhibit Number	Exhibit Title	Incorporated by Reference to:	Date Filed
10.12*	(1) Amended and Restated Executive Employment Agreement, effective as of January 1, 2015, by and between the Company and Joel S. Marcus	Form 8-K	April 7, 2015
10.13*	(1) Letter Amendment to Amended and Restated Executive Employment Agreement, dated July 3, 2017, by and between the Company and Joel S. Marcus	Form 8-K	July 3, 2017
10.14*	(1) Letter Amendment to Amended and Restated Executive Employment Agreement, entered into on March 20, 2018, by and between the Company and Joel S. Marcus	Form 10-Q	May 1, 2018
10.15*	(1) Letter Amendment to Amended and Restate Executive Employment Agreement, dated January 15, 2019, by and between the Company and Joel S. Marcus	Form 8-K	January 18, 2019
10.16*	(1) Fifth Amended and Restated Executive Employment Agreement between the Company and Stephen A. Richardson, entered into on March 20, 2018 and effective as of April 23, 2018	Form 10-Q	May 1, 2018
10.17*	(1) Third Amended and Restated Executive Employment Agreement between the Company and Peter M. Moglia, entered into on May 22, 2018 and effective as of May 22, 2018	Form 10-Q	July 31, 2018
10.18*	(1) Fourth Amended and Restated Executive Employment Agreement between the Company and Dean A. Shigenaga, entered into on March 20, 2018 and effective as of April 23, 2018	Form 10-Q	May 1, 2018
10.19*	(1) Fourth Amended and Restated Executive Employment Agreement between the Company and Thomas J. Andrews, entered into on March 20, 2018 and effective as of April 23, 2018	Form 10-Q	May 1, 2018
10.20*	(1) Amended and Restated Executive Employment Agreement between the Company and Jennifer J. Banks, entered into on March 19, 2018 and effective as of April 23, 2018	Form 10-Q	May 1, 2018
10.21*	(1) Executive Employment Agreement between the Company and Daniel J. Ryan, entered into on May 22, 2018 and effective as of May 22, 2018	Form 10-Q	July 31, 2018
10.22	(1) Summary of Director Compensation Arrangements		Filed herewith
10.23*	(1) Anniversary Bonus Plan of the Company	Form 8-K	June 17, 2010
10.24*	(1) Amended and Restated Consulting Agreement, dated as of September 30, 2011, between the Company and James H. Richardson	Form 10-Q	November 9, 2011
10.25*	(1) Form of Indemnification Agreement between the Company and each of its directors and officers	Form 10-K	March 1, 2011
14.1	The Company's Business Integrity Policy and Procedures for Reporting Non-Compliance (code of ethics pursuant to Item 406 of Regulation S-K)		Filed herewith
21.1	List of Subsidiaries of the Company		Filed herewith
23.1	Consent of Ernst & Young LLP		Filed herewith
31.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		Filed herewith
31.2	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		Filed herewith
31.3	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		Filed herewith
31.4	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002		Filed herewith
32.0	Certification of Principal Executive Officers and Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002		Filed herewith

Exhibit Number	Exhibit Title	Incorporated by Reference to:	Date Filed
101.1	The following materials from the Company's annual report on Form 10-K for the year ended December 31, 2019, formatted in iXBRL (Inline eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of December 31, 2019 and 2018, (ii) Consolidated Statements of Operations for the years ended December 31, 2019, 2018, and 2017, (iii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2019, 2018, and 2017, (iv) Consolidated Statements of Changes in Stockholders' Equity and Noncontrolling Interests for the years ended December 31, 2019, 2018, and 2017, (v) Consolidated Statements of Cash Flows for the years ended December 31, 2019, 2018, and 2017, (vi) Notes to Consolidated Financial Statements, and (vii) Schedule III - Consolidated Financial Statement Schedule of Real Estate and Accumulated Depreciation of the Company.		Filed herewith
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)		

(*) Incorporated by reference.

(1) Management contract or compensatory arrangement.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this annual report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

ALEXANDRIA REAL ESTATE EQUITIES, INC.

Dated: February 4, 2020

By: /s/ Joel S. Marcus

Joel S. Marcus
Executive Chairman
(Principal Executive Officer)

/s/ Stephen A. Richardson

Stephen A. Richardson
Co-Chief Executive Officer
(Principal Executive Officer)

/s/ Peter M. Moglia

Co-Chief Executive Officer and Co-Chief Investment Officer
(Principal Executive Officer)

KNOW ALL THOSE BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Joel S. Marcus, as his or her true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him or her and in his or her name, place, and stead, in any and all capacities, to sign any and all amendments to this annual report on Form 10-K, and to file the same, with exhibits thereto and other documents in connection therewith, if any, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent of their substitute or substitutes may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Exchange Act of 1934, this annual report on Form 10-K has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Joel S. Marcus</u> Joel S. Marcus	Executive Chairman (Principal Executive Officer)	February 4, 2020
<u>/s/ Stephen A. Richardson</u> Stephen A. Richardson	Co-Chief Executive Officer (Principal Executive Officer)	February 4, 2020
<u>/s/ Peter M. Moglia</u> Peter M. Moglia	Co-Chief Executive Officer and Co-Chief Investment Officer (Principal Executive Officer)	February 4, 2020
<u>/s/ Dean A. Shigenaga</u> Dean A. Shigenaga	Co-President and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)	February 4, 2020
<u>/s/ Steven R. Hash</u> Steven R. Hash	Lead Director	February 4, 2020
<u>/s/ John L. Atkins, III</u> John L. Atkins, III	Director	February 4, 2020
<u>/s/ James P. Cain</u> James P. Cain	Director	February 4, 2020
<u>/s/ Maria C. Freire</u> Maria C. Freire	Director	February 4, 2020
<u>/s/ Richard H. Klein</u> Richard H. Klein	Director	February 4, 2020
<u>/s/ James H. Richardson</u> James H. Richardson	Director	February 4, 2020
<u>/s/ Michael A. Woronoff</u> Michael A. Woronoff	Director	February 4, 2020

Report of Independent Registered Public Accounting Firm

To the Stockholders and Board of Directors of Alexandria Real Estate Equities, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Alexandria Real Estate Equities, Inc. (the Company), as of December 31, 2019 and 2018, and the related consolidated statements of operations, comprehensive income, changes in stockholders' equity and noncontrolling interests and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and financial statement schedule listed in the Index at Item 15 (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 4, 2020 expressed an unqualified opinion thereon.

Adoption of New Accounting Standard

As discussed in Notes 2 and 5 to the consolidated financial statements, the Company changed its method of accounting for leases in the year ended December 31, 2019 due to the adoption of ASU No. 2016-02, *Leases*.

As discussed in Notes 2 and 7 to the consolidated financial statements, the Company changed its method of accounting for certain equity investments in the year ended December 31, 2018 due to the adoption of ASU No. 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities*.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which it relates.

Recognition of acquired real estate – Purchase price accounting

Description of the Matter As more fully disclosed in Notes 2 and 3 to the consolidated financial statements, during 2019, the Company completed the acquisition of 47 properties for a total purchase price of \$2.3 billion. The transactions were accounted for as asset acquisitions, and the purchase prices were allocated based on the relative fair values of the assets acquired (including land, buildings and improvements, and the intangible value of acquired above-market leases, acquired in-place leases, tenant relationships and other intangible assets) and liabilities assumed (including the intangible value of acquired below-market leases and other intangible liabilities). The fair value of tangible and intangible assets and liabilities is based on available comparable market information, including estimated replacement costs, rental rates, recent market transactions, and estimated cash flow projections that utilize appropriate discount and capitalization rates. Estimates of future cash flows are based on a number of factors, including the historical operating results, known and anticipated trends, and market or economic conditions, that may affect the property.

Auditing the Company's estimate of the fair value of the acquired tangible and intangible assets and liabilities involves significant estimation uncertainty due to the judgment used by management in selecting key assumptions based on recent comparable transactions or market data, which are primarily unobservable inputs, and the sensitivity of the estimates to changes in assumptions. The allocation of purchase price to the components of properties acquired could have an effect on the Company's net income due to the useful depreciable and amortizable lives applicable to each component and the recognition of the related depreciation or amortization expense in the Company's consolidated statements of operations.

How we Addressed the Matter in Our Audit Our audit procedures related to the key assumptions utilized in the Company's purchase price accounting for acquired real estate included the following procedures, among others:

We tested the design and operating effectiveness of controls over the Company's process for determining and reviewing the key inputs and assumptions used in estimating the fair value of acquired assets and liabilities and allocating purchase price to the various components.

We evaluated the incorporation of the key assumptions in the purchase price accounting model and recalculated the model's results. To test the fair values of acquired tangible and intangible assets and liabilities used in the purchase price allocation, we performed procedures to evaluate the valuation methods and significant assumptions used by management. We evaluated the completeness and accuracy of the underlying data supporting the determination of the various inputs. Our internal valuation specialists assisted us in evaluating the methodology used by the Company and considered the consistency of the land and building values, estimated replacement costs, market rental rates, ground lease rates and discount rates with external data sources.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1994.

Los Angeles, California
February 4, 2020

Alexandria Real Estate Equities, Inc.
Consolidated Balance Sheets
(In thousands, except share and per share amounts)

	December 31,	
	2019	2018
Assets		
Investments in real estate	\$ 14,844,038	\$ 11,913,693
Investments in unconsolidated real estate joint ventures	346,890	237,507
Cash and cash equivalents	189,681	234,181
Restricted cash	53,008	37,949
Tenant receivables	10,691	9,798
Deferred rent	641,844	530,237
Deferred leasing costs	270,043	239,070
Investments	1,140,594	892,264
Other assets	893,714	370,257
Total assets	\$ 18,390,503	\$ 14,464,956
Liabilities, Noncontrolling Interests, and Equity		
Secured notes payable	\$ 349,352	\$ 630,547
Unsecured senior notes payable	6,044,127	4,292,293
Unsecured senior line of credit	384,000	208,000
Unsecured senior bank term loan	—	347,415
Accounts payable, accrued expenses, and other liabilities	1,320,268	981,707
Dividends payable	126,278	110,280
Total liabilities	8,224,025	6,570,242
Commitments and contingencies		
Redeemable noncontrolling interests	12,300	10,786
Alexandria Real Estate Equities, Inc.'s stockholders' equity:		
7.00% Series D cumulative convertible preferred stock, \$0.01 par value per share, 10,000,000 shares authorized; 0 and 2,573,432 shares issued and outstanding as of December 31, 2019 and 2018, respectively; \$25 liquidation value per share	—	64,336
Common stock, \$0.01 par value per share, 200,000,000 shares authorized as of December 31, 2019 and 2018; 120,800,315 and 111,011,816 shares issued and outstanding as of December 31, 2019 and 2018, respectively	1,208	1,110
Additional paid-in capital	8,874,367	7,286,954
Accumulated other comprehensive loss	(9,749)	(10,435)
Alexandria Real Estate Equities, Inc.'s stockholders' equity	8,865,826	7,341,965
Noncontrolling interests	1,288,352	541,963
Total equity	10,154,178	7,883,928
Total liabilities, noncontrolling interests, and equity	\$ 18,390,503	\$ 14,464,956

The accompanying notes are an integral part of these consolidated financial statements.

Alexandria Real Estate Equities, Inc.
Consolidated Statements of Operations
(In thousands, except per share amounts)

	Year Ended December 31,		
	2019	2018	2017
Revenues:			
Income from rentals	\$ 1,516,864	\$ 1,314,781	\$ 1,122,325
Other income	14,432	12,678	5,772
Total revenues	1,531,296	1,327,459	1,128,097
Expenses:			
Rental operations	445,492	381,120	325,609
General and administrative	108,823	90,405	75,009
Interest	173,675	157,495	128,645
Depreciation and amortization	544,612	477,661	416,783
Impairment of real estate	12,334	6,311	203
Loss on early extinguishment of debt	47,570	1,122	3,451
Total expenses	1,332,506	1,114,114	949,700
Equity in earnings of unconsolidated real estate joint ventures	10,136	43,981	15,426
Investment income	194,647	136,763	—
Gain on sales of real estate – rental properties	474	8,704	270
Gain on sales of real estate – land parcels	—	—	111
Net income	404,047	402,793	194,204
Net income attributable to noncontrolling interests	(40,882)	(23,481)	(25,111)
Net income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	363,165	379,312	169,093
Dividends on preferred stock	(3,204)	(5,060)	(7,666)
Preferred stock redemption charge	(2,580)	(4,240)	(11,279)
Net income attributable to unvested restricted stock awards	(6,386)	(6,029)	(4,753)
Net income attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 350,995	\$ 363,983	\$ 145,395
Net income per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders:			
Basic	\$ 3.13	\$ 3.53	\$ 1.59
Diluted	\$ 3.12	\$ 3.52	\$ 1.58

The accompanying notes are an integral part of these consolidated financial statements.

Alexandria Real Estate Equities, Inc.
Consolidated Statements of Comprehensive Income
(In thousands)

	Year Ended December 31,		
	2019	2018	2017
Net income	\$ 404,047	\$ 402,793	\$ 194,204
Other comprehensive income (loss)			
Unrealized gains on available-for-sale equity securities:			
Unrealized holding gains arising during the period	—	—	24,360
Reclassification adjustment for losses included in net income	—	—	6,118
Unrealized gains on available-for-sale equity securities, net	—	—	30,478
Unrealized (losses) gains on interest rate hedge agreements:			
Unrealized interest rate hedge (losses) gains arising during the period	(1,763)	1,622	2,837
Reclassification adjustment for amortization to interest expense included in net income	(1,777)	(4,941)	1,915
Reclassification of losses related to terminated interest rate hedge instruments to interest expense included in net income	1,702	—	—
Unrealized (losses) gains on interest rate hedge agreements, net	(1,838)	(3,319)	4,752
Unrealized gains (losses) on foreign currency translation:			
Unrealized foreign currency translation gains (losses) arising during the period	2,524	(7,369)	7,774
Reclassification adjustment for cumulative foreign currency translation losses included in net income (loss) upon sale or liquidation	—	—	1,599
Unrealized gains (losses) on foreign currency translation, net	2,524	(7,369)	9,373
Total other comprehensive income (loss)	686	(10,688)	44,603
Comprehensive income	404,733	392,105	238,807
Less: comprehensive income attributable to noncontrolling interests	(40,882)	(23,481)	(25,045)
Comprehensive income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	\$ 363,851	\$ 368,624	\$ 213,762

The accompanying notes are an integral part of these consolidated financial statements.

Alexandria Real Estate Equities, Inc.
Consolidated Statements of Changes in Stockholders' Equity and Noncontrolling Interests
(Dollars in thousands)

	Alexandria Real Estate Equities, Inc.'s Stockholders' Equity									
	7.00% Series D Cumulative Convertible Preferred Stock	6.45% Series E Cumulative Redeemable Preferred Stock	Number of Common Shares	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income	Noncontrolling Interests	Total Equity	Redeemable Noncontrolling Interests
Balance as of December 31, 2016	\$ 86,914	\$ 130,000	87,665,880	\$ 877	\$ 4,672,650	\$ —	\$ 5,355	\$ 475,175	\$ 5,370,971	\$ 11,307
Net income	—	—	—	—	—	169,093	—	24,053	193,146	1,058
Total other comprehensive income (loss)	—	—	—	—	—	—	44,669	(66)	44,603	—
Redemption of noncontrolling interests	—	—	—	—	—	—	—	(541)	(541)	—
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(21,505)	(21,505)	(856)
Contributions from and sales of noncontrolling interests	—	—	—	—	7,747	—	—	44,878	52,625	—
Issuance of common stock	—	—	11,694,101	117	1,275,280	—	—	—	1,275,397	—
Issuance pursuant to stock plan	—	—	423,705	4	42,395	—	—	—	42,399	—
Repurchases of 7.00% Series D preferred stock	(12,528)	—	—	—	391	(5,797)	—	—	(17,934)	—
Redemption of 6.45% Series E preferred stock	—	(130,000)	—	—	5,132	(5,482)	—	—	(130,350)	—
Dividends declared on common stock (\$3.45 per share)	—	—	—	—	—	(329,485)	—	—	(329,485)	—
Dividends declared on preferred stock (\$1.75 per share of Series D and \$0.403125 per share of Series E)	—	—	—	—	—	(7,666)	—	—	(7,666)	—
Distributions in excess of earnings	—	—	—	—	(179,337)	179,337	—	—	—	—
Balance as of December 31, 2017	74,386	—	99,783,686	998	5,824,258	—	50,024	521,994	6,471,660	11,509
Net income	—	—	—	—	—	379,312	—	—	401,930	863
Total other comprehensive loss	—	—	—	—	—	—	(10,688)	—	(10,688)	—
Reclassification of net unrealized gains on non-real estate investments upon adoption of new ASU on financial instruments on January 1, 2018	—	—	—	—	—	140,521	(49,771)	—	90,750	—
Redemption of noncontrolling interests	—	—	—	—	—	—	—	—	—	(1,597)
Distributions to noncontrolling interests	—	—	—	—	—	—	—	(29,810)	(29,810)	(846)
Contributions from and sales of noncontrolling interests	—	—	—	—	257	—	—	27,161	27,418	857
Issuance of common stock	—	—	10,915,120	109	1,304,531	—	—	—	1,304,640	—
Issuance pursuant to stock plan	—	—	313,010	3	45,975	—	—	—	45,978	—
Repurchases of 7.00% Series D preferred stock	(10,050)	—	—	—	314	(4,240)	—	—	(13,976)	—
Dividends declared on common stock (\$3.73 per share)	—	—	—	—	—	(398,914)	—	—	(398,914)	—
Dividends declared on preferred stock (\$1.75 per share)	—	—	—	—	—	(5,060)	—	—	(5,060)	—
Reclassification of distributions in excess of earnings	—	—	—	—	111,619	(111,619)	—	—	—	—
Balance as of December 31, 2018	\$ 64,336	\$ —	111,011,816	\$ 1,110	\$ 7,286,954	\$ —	\$ (10,435)	\$ 541,963	\$ 7,883,928	\$ 10,786

Alexandria Real Estate Equities, Inc.
Consolidated Statements of Changes in Stockholders' Equity and Noncontrolling Interests (continued)
(Dollars in thousands)

Alexandria Real Estate Equities, Inc.'s Stockholders' Equity

	7.00% Series D Cumulative Convertible Preferred Stock	Number of Common Shares	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Noncontrolling Interests	Total Equity	Redeemable Noncontrolling Interests
Balance as of December 31, 2018	\$ 64,336	111,011,816	\$ 1,110	\$ 7,286,954	\$ —	(10,435)	\$ 541,963	\$ 7,883,928	\$ 10,786
Net income	—	—	—	—	363,165	—	40,007	403,172	875
Total other comprehensive income	—	—	—	—	—	686	—	686	—
Distributions to noncontrolling interests	—	—	—	—	—	(830)	(47,395)	(47,395)	(830)
Contributions from and sales of noncontrolling interests	—	—	—	381,162	—	—	753,777	1,134,939	1,469
Issuance of common stock	—	8,723,076	87	1,216,358	—	—	—	1,216,445	—
Issuance pursuant to stock plan	—	666,836	7	67,906	—	—	—	67,913	—
Taxes paid related to net settlement of equity awards	—	(179,008)	(2)	(25,475)	—	—	—	(25,477)	—
Repurchases of 7.00% Series D preferred stock	(6,875)	—	—	215	(2,580)	—	—	(9,240)	—
Conversion of 7.00% Series D preferred stock	(57,461)	577,595	6	57,355	—	—	—	(100)	—
Dividends declared on common stock (\$4.00 per share)	—	—	—	—	(463,964)	—	—	(463,964)	—
Dividends declared on preferred stock (\$1.3125 per share)	—	—	—	—	(3,204)	—	—	(3,204)	—
Cumulative effect of adjustment upon adoption of new ASU on lease accounting on January 1, 2019	—	—	—	—	(3,525)	—	—	(3,525)	—
Reclassification of distributions in excess of earnings	—	—	—	(110,108)	110,108	—	—	—	—
Balance as of December 31, 2019	\$ —	120,800,315	\$ 1,208	\$ 8,874,367	\$ —	(9,749)	\$ 1,288,352	\$10,154,178	\$ 12,300

The accompanying notes are an integral part of these consolidated financial statements.

Alexandria Real Estate Equities, Inc.
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2019	2018	2017
Operating Activities			
Net income	\$ 404,047	\$ 402,793	\$ 194,204
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	544,612	477,661	416,783
Loss on early extinguishment of debt	47,570	1,122	3,451
Impairment of real estate	12,334	6,311	203
Gain on sales of real estate – rental properties	(474)	(8,704)	(270)
Gain on sales of real estate – land parcels	—	—	(111)
Equity in earnings of unconsolidated real estate joint ventures	(10,136)	(43,981)	(15,426)
Distributions of earnings from unconsolidated real estate joint ventures	2,796	430	1,618
Amortization of loan fees	9,105	10,271	11,149
Amortization of debt premiums	(3,777)	(2,406)	(2,512)
Amortization of acquired below-market leases	(29,813)	(21,938)	(19,055)
Deferred rent	(104,235)	(93,883)	(107,643)
Stock compensation expense	43,640	35,019	25,610
Investment income	(194,647)	(136,763)	(1,329)
Changes in operating assets and liabilities:			
Tenant receivables	(897)	435	(502)
Deferred leasing costs	(54,455)	(57,088)	(62,639)
Other assets	(20,825)	(20,849)	(18,222)
Accounts payable, accrued expenses, and other liabilities	39,012	21,909	25,573
Net cash provided by operating activities	683,857	570,339	450,882
Investing Activities			
Proceeds from sales of real estate	6,619	20,190	15,432
Additions to real estate	(1,224,541)	(927,168)	(893,685)
Purchases of real estate	(2,259,778)	(1,037,180)	(675,584)
Deposits for investing activities	(18,107)	(2,000)	(2,300)
Acquisitions of interest in unconsolidated real estate joint ventures	—	(35,922)	(60,291)
Investments in unconsolidated real estate joint ventures	(102,081)	(116,008)	(17,876)
Return of capital from unconsolidated real estate joint ventures	14	68,592	38,576
Additions to non-real estate investments	(190,778)	(235,943)	(171,881)
Sales of non-real estate investments	147,332	103,679	30,483
Net cash used in investing activities	\$ (3,641,320)	\$ (2,161,760)	\$ (1,737,126)

Alexandria Real Estate Equities, Inc.
Consolidated Statements of Cash Flows
(In thousands)

	Year Ended December 31,		
	2019	2018	2017
Financing Activities			
Borrowings from secured notes payable	\$ —	\$ 17,784	\$ 153,405
Repayments of borrowings from secured notes payable	(306,199)	(156,888)	(396,240)
Proceeds from issuance of unsecured senior notes payable	2,721,169	899,321	1,023,262
Repayments of unsecured senior notes payable	(950,000)	—	—
Borrowings from unsecured senior line of credit	5,056,000	4,741,000	3,858,000
Repayments of borrowings from unsecured senior line of credit	(4,880,000)	(4,583,000)	(3,836,000)
Proceeds from issuance of commercial paper program	2,233,000	—	—
Repayments of borrowings from commercial paper program	(2,233,000)	—	—
Repayments of borrowings from unsecured senior bank term loan	(350,000)	(200,000)	(200,000)
Premium paid for early extinguishment of debt	(41,351)	—	—
Payments of loan fees	(27,182)	(19,292)	(10,019)
Taxes paid related to net settlement of equity awards	(25,477)	—	—
Repurchases of 7.00% Series D cumulative convertible preferred stock	(9,240)	(13,976)	(17,934)
Redemption of 6.45% Series E cumulative redeemable preferred stock	—	—	(130,350)
Proceeds from issuance of common stock	1,216,445	1,293,301	1,275,397
Dividends on common stock	(447,029)	(380,632)	(312,131)
Dividends on preferred stock	(4,141)	(5,207)	(9,619)
Contributions from and sales of noncontrolling interests	1,022,712	28,275	44,931
Distributions to and purchases of noncontrolling interests	(48,225)	(32,253)	(22,361)
Net cash provided by financing activities	2,927,482	1,588,433	1,420,341
Effect of foreign exchange rate changes on cash and cash equivalents	540	(2,068)	1,723
Net (decrease) increase in cash, cash equivalents, and restricted cash	(29,441)	(5,056)	135,820
Cash, cash equivalents, and restricted cash as of the beginning of period	272,130	277,186	141,366
Cash, cash equivalents, and restricted cash as of the end of period	<u>\$ 242,689</u>	<u>\$ 272,130</u>	<u>\$ 277,186</u>
Supplemental Disclosure and Non-Cash Investing and Financing Activities:			
Cash paid during the period for interest, net of interest capitalized	\$ 146,165	\$ 127,093	\$ 112,113
Change in accrued construction	\$ (24)	\$ 81,177	\$ (11,034)
Accrued construction for current-period additions to real estate	\$ 220,773	\$ 244,147	\$ 179,154
Assumption of secured notes payable in connection with purchase of properties	\$ (28,200)	\$ —	\$ —
Right-of-use asset	\$ 269,189	\$ —	\$ —
Lease liability	\$ (275,175)	\$ —	\$ —
Payable for purchase of real estate	\$ —	\$ (65,000)	\$ —
Contribution of real estate to an unconsolidated real estate joint venture	\$ —	\$ —	\$ 6,998
Contribution of real estate from noncontrolling interests	\$ 115,167	\$ —	\$ 8,597
Issuance of common stock for conversion of 7.00% Series D preferred stock	\$ 57,461	\$ —	\$ —

The accompanying notes are an integral part of these consolidated financial statements.

Alexandria Real Estate Equities, Inc.
Notes to Consolidated Financial Statements

1. Organization and basis of presentation

Alexandria Real Estate Equities, Inc. (NYSE:ARE), an S&P 500[®] urban office REIT, is the first and longest-tenured owner, operator, and developer uniquely focused on collaborative life science, technology, and agtech campuses in AAA innovation cluster locations. As used in this annual report on Form 10-K, references to the “Company,” “Alexandria,” “ARE,” “we,” “us,” and “our” refer to Alexandria Real Estate Equities, Inc. and its consolidated subsidiaries. The accompanying consolidated financial statements include the accounts of Alexandria Real Estate Equities, Inc. and its consolidated subsidiaries. All significant intercompany balances and transactions have been eliminated. Certain prior-period amounts have been reclassified to conform to the current-period presentation. Refer to the “Lease Accounting” section in Note 2 – “Summary of Significant Accounting Policies” to our consolidated financial statements.

Any references to our market capitalization, number or quality of buildings or tenants, quality of location, square footage, number of leases, or occupancy percentage, and any amounts derived from these values in these notes to consolidated financial statements are unaudited.

2. Summary of significant accounting policies

Consolidation

On an ongoing basis, as circumstances indicate the need for reconsideration, we evaluate each legal entity that is not wholly owned by us in accordance with the consolidation guidance. Our evaluation considers all of our variable interests, including equity ownership, as well as fees paid to us for our involvement in the management of each partially owned entity. To fall within the scope of the consolidation guidance, an entity must meet both of the following criteria:

- The entity has a legal structure that has been established to conduct business activities and to hold assets; such entity can be in the form of a partnership, limited liability company, or corporation, among others; and
- We have a variable interest in the legal entity – i.e., variable interests that are contractual, such as equity ownership, or other financial interests that change with changes in the fair value of the entity’s net assets.

If an entity does not meet both criteria above, we apply other accounting literature, such as the cost or equity method of accounting. If an entity does meet both criteria above, we evaluate such entity for consolidation under either the variable interest model if the legal entity meets any of the following characteristics to qualify as a VIE, or under the voting model for all other legal entities that are not VIEs.

A legal entity is determined to be a VIE if it has any of the following three characteristics:

- 1) The entity does not have sufficient equity to finance its activities without additional subordinated financial support;
- 2) The entity is established with non-substantive voting rights (i.e., the entity deprives the majority economic interest holder(s) of voting rights); or
- 3) The equity holders, as a group, lack the characteristics of a controlling financial interest. Equity holders meet this criterion if they lack any of the following:
 - The power, through voting rights or similar rights, to direct the activities of the entity that most significantly influence the entity’s economic performance, as evidenced by:
 - Substantive participating rights in day-to-day management of the entity’s activities; or
 - Substantive kick-out rights over the party responsible for significant decisions;
 - The obligation to absorb the entity’s expected losses; or
 - The right to receive the entity’s expected residual returns.

Our real estate joint ventures consist of limited partnerships or limited liability companies. For an entity structured as a limited partnership or a limited liability company, our evaluation of whether the equity holders (equity partners other than the general partner or the managing member of a joint venture) lack the characteristics of a controlling financial interest includes the evaluation of whether the limited partners or non-managing members (the noncontrolling equity holders) lack both substantive participating rights and substantive kick-out rights, defined as follows:

- Participating rights provide the noncontrolling equity holders the ability to direct significant financial and operating decisions made in the ordinary course of business that most significantly influence the entity’s economic performance.
- Kick-out rights allow the noncontrolling equity holders to remove the general partner or managing member without cause.

2. Summary of significant accounting policies (continued)

If we conclude that any of the three characteristics of a VIE are met, including that the equity holders lack the characteristics of a controlling financial interest because they lack both substantive participating rights and substantive kick-out rights, we conclude that the entity is a VIE and evaluate it for consolidation under the variable interest model.

Variable interest model

If an entity is determined to be a VIE, we evaluate whether we are the primary beneficiary. The primary beneficiary analysis is a qualitative analysis based on power and benefits. We consolidate a VIE if we have both power and benefits – that is, (i) we have the power to direct the activities of a VIE that most significantly influence the VIE's economic performance (power), and (ii) we have the obligation to absorb losses of or the right to receive benefits from the VIE that could potentially be significant to the VIE (benefits). We consolidate VIEs whenever we determine that we are the primary beneficiary. Refer to Note 4 – “Consolidated and Unconsolidated Real Estate Joint Ventures” to our consolidated financial statements for information on specific joint ventures that qualify as VIEs. If we have a variable interest in a VIE but are not the primary beneficiary, we account for our investment using the equity method of accounting.

Voting model

If a legal entity fails to meet any of the three characteristics of a VIE (i.e., insufficiency of equity, existence of non-substantive voting rights, or lack of a controlling financial interest), we then evaluate such entity under the voting model. Under the voting model, we consolidate the entity if we determine that we, directly or indirectly, have greater than 50% of the voting shares and that other equity holders do not have substantive participating rights. Refer to Note 4 – “Consolidated and Unconsolidated Real Estate Joint Ventures” to our consolidated financial statements for further information on our unconsolidated real estate joint ventures that qualify for evaluation under the voting model.

Use of estimates

The preparation of consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the reported amounts of assets, liabilities, and equity; the disclosure of contingent assets and liabilities as of the date of the consolidated financial statements; and the amounts of revenues and expenses during the reporting period. Actual results could materially differ from those estimates.

Reportable segment

We are engaged in the business of providing space for lease to the life science, technology, and agtech industries. Our properties are similar in that they provide space for lease to the aforementioned industries, consist of improvements that are generic and reusable, are primarily located in AAA urban innovation cluster locations, and have similar economic characteristics. Our chief operating decision makers review financial information for our entire consolidated operations when making decisions related to assessing our operating performance, and review financial information for our individual properties when determining how to allocate resources related to capital expenditures. We have aggregated the properties into one reportable segment as the properties share similar long-term economic characteristics and have other similarities, including the fact that they are operated using consistent business strategies, are typically located in major metropolitan areas, and have similar tenant mixes. The financial information disclosed herein represents all of the financial information related to our one reportable segment.

Investments in real estate

Evaluation of business combination or asset acquisition

We evaluate each acquisition of real estate or in-substance real estate (including equity interests in entities that predominantly hold real estate assets) to determine whether the integrated set of assets and activities acquired meets the definition of a business and needs to be accounted for as a business combination. An acquisition of an integrated set of assets and activities that does not meet the definition of a business is accounted for as an asset acquisition. If either of the following criteria is met, the integrated set of assets and activities acquired would not qualify as a business:

- Substantially all of the fair value of the gross assets acquired is concentrated in either a single identifiable asset or a group of similar identifiable assets; or
- The integrated set of assets and activities is lacking, at a minimum, an input and a substantive process that together significantly contribute to the ability to create outputs (i.e., revenue generated before and after the transaction).

An acquired process is considered substantive if:

- The process includes an organized workforce (or includes an acquired contract that provides access to an organized workforce) that is skilled, knowledgeable, and experienced in performing the process;
- The process cannot be replaced without significant cost, effort, or delay; or
- The process is considered unique or scarce.

2. Summary of significant accounting policies (continued)

Generally, our acquisitions of real estate or in-substance real estate do not meet the definition of a business because substantially all of the fair value is concentrated in a single identifiable asset or group of similar identifiable assets (i.e., land, buildings, and related intangible assets) or because the acquisition does not include a substantive process in the form of an acquired workforce or an acquired contract that cannot be replaced without significant cost, effort, or delay. When evaluating acquired service or management contracts, we consider the nature of the services performed, the terms of the contract relative to similar arm's-length contracts, and the availability of comparable vendors in evaluating whether the acquired contract constitutes a substantive process.

Recognition of real estate acquired

We evaluate each acquisition of real estate or in-substance real estate (including equity interests in entities that predominantly hold real estate assets) to determine whether the integrated set of assets and activities acquired meets the definition of a business and needs to be accounted for as a business combination. An acquisition of an integrated set of assets and activities that does not meet the definition of a business is accounted for as an asset acquisition.

For acquisitions of real estate or in-substance real estate that are accounted for as business combinations, we allocate the acquisition consideration (excluding acquisition costs) to the assets acquired, liabilities assumed, noncontrolling interests, and previously existing ownership interests at fair value as of the acquisition date. Assets include intangible assets such as tenant relationships, acquired in-place leases, and favorable intangibles associated with in-place leases in which we are the lessor. Liabilities include unfavorable intangibles associated with in-place leases in which we are the lessor. In addition, for acquired in-place finance or operating leases in which we are the lessee, acquisition consideration is allocated to lease liabilities and related right-of-use assets, adjusted to reflect favorable or unfavorable terms of the lease when compared with market terms. Any excess (deficit) of the consideration transferred relative to the fair value of the net assets acquired is accounted for as goodwill (bargain purchase gain). Acquisition costs related to business combinations are expensed as incurred.

Generally, we expect that acquisitions of real estate or in-substance real estate will not meet the definition of a business because substantially all of the fair value is concentrated in a single identifiable asset or group of similar identifiable assets (i.e., land, buildings, and related intangible assets). The accounting model for asset acquisitions is similar to the accounting model for business combinations, except that the acquisition consideration (including acquisition costs) is allocated to the individual assets acquired and liabilities assumed on a relative fair value basis. Any excess (deficit) of the consideration transferred relative to the sum of the fair value of the assets acquired and liabilities assumed is allocated to the individual assets and liabilities based on their relative fair values. As a result, asset acquisitions do not result in the recognition of goodwill or a bargain purchase gain. Incremental and external direct acquisition costs (such as legal and third-party services) are capitalized.

We exercise judgment to determine the key assumptions used to allocate the purchase price of real estate acquired among its components. The allocation of the consideration to the various components of properties acquired during the year can have an effect on our net income due to the useful depreciable and amortizable lives applicable to each component and the recognition of the related depreciation and amortization expense in our consolidated statements of operations. We apply judgment in utilizing available comparable market information to assess relative fair value. We assess the relative fair values of tangible and intangible assets and liabilities based on available comparable market information, including estimated replacement costs, rental rates, and recent market transactions. In addition, we may use estimated cash flow projections that utilize appropriate discount and capitalization rates. Estimates of future cash flows are based on a number of factors, including the historical operating results, known and anticipated trends, and market/economic conditions that may affect the property.

The value of tangible assets acquired is based upon our estimation of fair value on an "as if vacant" basis. The value of acquired in-place leases includes the estimated costs during the hypothetical lease-up period and other costs that would have been incurred in the execution of similar leases under the market conditions at the acquisition date of the acquired in-place lease. If there is a bargain fixed-rate renewal option for the period beyond the non-cancelable lease term of an in-place lease, we evaluate intangible factors such as the business conditions in the industry in which the lessee operates, the economic conditions in the area in which the property is located, and the ability of the lessee to sublease the property during the renewal term, in order to determine the likelihood that the lessee will renew. When we determine there is reasonable assurance that such bargain purchase option will be exercised, we consider the option in determining the intangible value of such lease and its related amortization period. We also recognize the relative fair values of assets acquired, the liabilities assumed, and any noncontrolling interest in acquisitions of less than a 100% interest when the acquisition constitutes a change in control of the acquired entity.

2. Summary of significant accounting policies (continued)

The values allocated to buildings and building improvements, land improvements, tenant improvements, and equipment are depreciated on a straight-line basis using the shorter of the respective ground lease term, estimated useful life, or up to 40 years, for buildings and building improvements, an estimated life, or up to 20 years, for land improvements; the respective lease term or estimated useful life for tenant improvements; and the shorter of the lease term or estimated useful life for equipment. The values of acquired in-place leases and associated favorable intangibles (i.e., acquired above-market leases) are classified in other assets in the accompanying consolidated balance sheets and are amortized over the remaining terms of the related leases, as a reduction of income from rentals in our consolidated statements of operations. The values of unfavorable intangibles (i.e., acquired below-market leases) associated with acquired in-place leases are classified in accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets and are amortized over the remaining terms of the related leases, as an increase in income from rentals in our consolidated statements of operations.

Capitalized project costs

We capitalize project costs, including pre-construction costs, interest, property taxes, insurance, and other costs directly related and essential to the development, redevelopment, pre-construction, or construction of a project. Capitalization of development, redevelopment, pre-construction, and construction costs is required while activities are ongoing to prepare an asset for its intended use. Fluctuations in our development, redevelopment, pre-construction, and construction activities could result in significant changes to total expenses and net income. Costs incurred after a project is substantially complete and ready for its intended use are expensed as incurred. Should development, redevelopment, pre-construction, or construction activity cease, interest, property taxes, insurance, and certain other costs would no longer be eligible for capitalization and would be expensed as incurred. Expenditures for repairs and maintenance are expensed as incurred.

Real estate sales

A property is classified as held for sale when all of the following criteria for a plan of sale have been met: (i) management, having the authority to approve the action, commits to a plan to sell the property; (ii) the property is available for immediate sale in its present condition, subject only to terms that are usual and customary; (iii) an active program to locate a buyer and other actions required to complete the plan to sell have been initiated; (iv) the sale of the property is probable and is expected to be completed within one year; (v) the property is being actively marketed for sale at a price that is reasonable in relation to its current fair value; and (vi) actions necessary to complete the plan of sale indicate that it is unlikely that significant changes to the plan will be made or that the plan will be withdrawn. Depreciation of assets ceases upon designation of a property as held for sale.

If the disposal of a property represents a strategic shift that has (or will have) a major effect on our operations or financial results, such as (i) a major line of business, (ii) a major geographic area, (iii) a major equity method investment, or (iv) other major parts of an entity, then the operations of the property, including any interest expense directly attributable to it, are classified as discontinued operations in our consolidated statements of operations, and amounts for all prior periods presented are reclassified from continuing operations to discontinued operations. The disposal of an individual property generally will not represent a strategic shift and therefore will typically not meet the criteria for classification as a discontinued operation.

We recognize gains/losses on real estate sales in accordance with the accounting standard on the derecognition of nonfinancial assets arising from contracts with noncustomers. Our ordinary output activities consist of the leasing of space to our tenants in our operating properties, not the sales of real estate. Therefore, sales of real estate (in which we are the seller) qualify as contracts with noncustomers. In our transactions with noncustomers, we apply certain recognition and measurement principles consistent with our method of recognizing revenue arising from contracts with customers. Derecognition of the asset is based on the transfer of control. If a real estate sales contract includes our ongoing involvement with the property, then we evaluate each promised good or service under the contract to determine whether it represents a separate performance obligation, constitutes a guarantee, or prevents the transfer of control. If a good or service is considered a separate performance obligation, an allocated portion of the transaction price is recognized as revenue as we transfer the related good or service to the buyer.

The recognition of gain or loss on the sale of a partial interest also depends on whether we retain a controlling or noncontrolling interest. If we retain a controlling interest upon completion of the sale, we continue to reflect the asset at its book value, record a noncontrolling interest for the book value of the partial interest sold, and recognize additional paid-in capital for the difference between the consideration received and the partial interest at book value. Conversely, if we retain a noncontrolling interest upon completion of the partial sale of real estate, we would recognize a gain or loss as if 100% of the real estate were sold.

Impairment of long-lived assets

Prior to and subsequent to the end of each quarter, we review current activities and changes in the business conditions of all of our long-lived assets to determine the existence of any triggering events or impairment indicators requiring an impairment analysis. If triggering events or impairment indicators are identified, we review an estimate of the future undiscounted cash flows, including, if necessary, a probability-weighted approach if multiple outcomes are under consideration.

2. Summary of significant accounting policies (continued)

Long-lived assets to be held and used, including our rental properties, CIP, land held for development, right-of-use assets related to operating leases in which we are the lessee, and intangibles, are individually evaluated for impairment when conditions exist that may indicate that the carrying amount of a long-lived asset may not be recoverable. The carrying amount of a long-lived asset to be held and used is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. Triggering events or impairment indicators for long-lived assets to be held and used are assessed by project and include significant fluctuations in estimated net operating income, occupancy changes, significant near-term lease expirations, current and historical operating and/or cash flow losses, construction costs, estimated completion dates, rental rates, and other market factors. We assess the expected undiscounted cash flows based upon numerous factors, including, but not limited to, construction costs, available market information, current and historical operating results, known trends, current market/economic conditions that may affect the asset, and our assumptions about the use of the asset, including, if necessary, a probability-weighted approach if multiple outcomes are under consideration.

Upon determination that an impairment has occurred, a write-down is recognized to reduce the carrying amount to its estimated fair value. If an impairment loss is not required to be recognized, the recognition of depreciation or amortization is adjusted prospectively, as necessary, to reduce the carrying amount of the real estate to its estimated disposition value over the remaining period that the asset is expected to be held and used. We may adjust depreciation of properties that are expected to be disposed of or redeveloped prior to the end of their useful lives.

We use the held for sale impairment model for our properties classified as held for sale. The held for sale impairment model is different from the held and used impairment model. Under the held for sale impairment model, an impairment loss is recognized if the carrying amount of the long-lived asset classified as held for sale exceeds its fair value less cost to sell. Because of these two different models, it is possible for a long-lived asset previously classified as held and used to require the recognition of an impairment charge upon classification as held for sale.

International operations

In addition to operating properties in the U.S., we have three operating properties in Canada and one operating property in China. The functional currency for our subsidiaries operating in the U.S. is the U.S. dollar. The functional currencies for our foreign subsidiaries are the local currencies in each respective country. The assets and liabilities of our foreign subsidiaries are translated into U.S. dollars at the exchange rate in effect as of the financial statement date. Revenue and expense accounts of our foreign subsidiaries are translated using the weighted-average exchange rate for the periods presented. Gains or losses resulting from the translation are classified in accumulated other comprehensive income as a separate component of total equity and are excluded from net income.

Whenever a foreign investment meets the criteria for classification as held for sale, we evaluate the recoverability of the investment under the held for sale impairment model. We may recognize an impairment charge if the carrying amount of the investment exceeds its fair value less cost to sell. In determining an investment's carrying amount, we consider its net book value and any cumulative unrealized foreign currency translation adjustment related to the investment.

The appropriate amounts of foreign exchange rate gains or losses classified in accumulated other comprehensive income are reclassified to net income when realized upon the sale of our investment or upon the complete or substantially complete liquidation of our investment.

Investments

We hold investments in publicly traded companies and privately held entities primarily involved in the life science, technology, and agtech industries. As a REIT, we generally limit our ownership percentage in the voting stock of each individual entity to less than 10%.

Our equity investments (except those accounted for under the equity method and those that result in consolidation of the investee) are measured as follows:

- Investments in publicly traded companies are classified as investments with readily determinable fair values. These investments are carried at fair value, with changes in fair value recognized in net income. The fair values for our investments in publicly traded companies are determined based on sales prices/quotes available on securities exchanges.
- Investments in privately held entities without readily determinable fair values fall into two categories:
 - Investments in privately held entities that report NAV per share, such as our privately held investments in limited partnerships, are carried at fair value using NAV as a practical expedient, with changes in fair value recognized in net income. We use NAV per share reported by limited partnerships generally without adjustment, unless we are aware of information indicating that the NAV per share reported by a limited partnership does not accurately reflect the fair value of the investment at our reporting date. We disclose the timing of liquidation of an investee's assets and the date when redemption restrictions will lapse (or indicate if this timing is unknown) if the investee has communicated this information to us or has announced it publicly.

2. Summary of significant accounting policies (continued)

- Investments in privately held entities that do not report NAV per share are accounted for using a measurement alternative under which these investments are measured at cost, adjusted for observable price changes and impairments, with changes recognized in net income.

For investments in privately held entities that do not report NAV per share, an observable price is a price observed in an orderly transaction for an identical or similar investment of the same issuer. Observable price changes result from, among other things, equity transactions for the same issuer executed during the reporting period, including subsequent equity offerings or other reported equity transactions related to the same issuer. For these transactions to be considered observable price changes of the same issuer, we evaluate whether these transactions have similar rights and obligations, including voting rights, distribution preferences, conversion rights, and other factors, to the investments we hold.

We monitor investments in privately held entities that do not report NAV per share throughout the year for new developments, including operating results, prospects and results of clinical trials, new product initiatives, new collaborative agreements, capital-raising events, and merger and acquisition activities. These investments are evaluated on the basis of a qualitative assessment for indicators of impairment by monitoring the presence of the following triggering events or impairment indicators: (i) a significant deterioration in the earnings performance, asset quality, or business prospects of the investee; (ii) a significant adverse change in the regulatory, economic, or technological environment of the investee, (iii) a significant adverse change in the general market condition, including the research and development of technology and products that the investee is bringing or attempting to bring to the market, or (iv) significant concerns about the investee's ability to continue as a going concern. If such indicators are present, we are required to estimate the investment's fair value and immediately recognize an impairment loss in an amount equal to the investment's carrying value in excess of its estimated fair value.

Investments in privately held entities are accounted for under the equity method, unless our interest in the entity is deemed to be so minor that we have virtually no influence over the entity's operating and financial policies. Under the equity method of accounting, we initially recognize our investment at cost and adjust the carrying amount of the investment to recognize our share of the earnings or losses of the investee subsequent to the date of our investment. We had no investments accounted for under the equity method as of December 31, 2019.

We recognize both realized and unrealized gains and losses in our consolidated statements of operations, classified within investment income. Unrealized gains and losses represent changes in fair value for investments in publicly traded companies, changes in NAV, as a practical expedient to estimate fair value, for investments in privately held entities that report NAV per share, and observable price changes on our investments in privately held entities that do not report NAV per share. Impairments are realized losses, which result in an adjusted cost, and represent charges to reduce the carrying values of investments in privately held entities that do not report NAV per share to their estimated fair value. Realized gains and losses represent the difference between proceeds received upon disposition of investments and their historical or adjusted cost.

Revenues

The table below provides detail of our consolidated total revenues for the year ended December 31, 2019 (in thousands):

	Year Ended December 31, 2019
Income from rentals:	
Revenues subject to the new lease accounting standard:	
Operating leases	\$ 1,465,692
Direct financing lease	2,421
Revenues subject to the new lease accounting standard	1,468,113
Revenues subject to the revenue recognition accounting standard	48,751
Income from rentals	1,516,864
Other income	14,432
Total revenues	\$ 1,531,296

During the year ended December 31, 2019, revenues that were subject to the new lease accounting standard aggregated \$1.5 billion and represented 95.9% of our total revenues.

During the year ended December 31, 2019, our total revenues also included \$63.2 million, or 4.1%, subject to other accounting guidance. For a detailed discussion related to our revenue streams, refer to the "Lease Accounting" and "Recognition of Revenue Arising From Contracts With Customers" sections within this Note 2 to our consolidated financial statements.

2. Summary of significant accounting policies (continued)

Lease accounting

Transition

On January 1, 2019, we adopted a new lease accounting standard that sets out the principles for the recognition, measurement, presentation, and disclosure of leases for both parties to a lease agreement (i.e., lessees and lessors). The new lease accounting standard requires the use of the modified retrospective transition method. Upon adoption of the new lease accounting standard, we elected the following practical expedients and accounting policies provided by this lease standard:

- Package of practical expedients – requires us not to reevaluate our existing or expired leases as of January 1, 2019, under the new lease accounting standard.
- Optional transition method practical expedient – requires us to apply the new lease accounting standard prospectively from the adoption date of January 1, 2019.
- Single component accounting policy – requires us to account for lease and nonlease components within a lease under the new lease accounting standard if certain criteria are met.
- Land easements practical expedient – requires us to continue to account for land easements existing as of January 1, 2019, under the accounting standards applied to them prior to January 1, 2019.
- Short-term lease accounting policy – requires us not to record the related lease liabilities and right-of-use assets for operating leases in which we are the lessee with a term of 12 months or less.

Upon adoption of the new lease accounting standard, we elected the package of practical expedients and the optional transition method, which permitted January 1, 2019, to be our initial application date. Our election of the package of practical expedients and the optional transition method allowed us not to reassess:

- **Whether any contracts effective prior to January 1, 2019, are leases or contain leases.** This practical expedient is primarily applicable to entities that have contracts containing embedded leases. As of December 31, 2018, we had no such contracts; therefore, this practical expedient had no effect on us.
- **The lease classification for any leases that commenced prior to January 1, 2019.** Our election of the package of practical expedients requires us not to revisit the classification of our leases that commenced prior to January 1, 2019. For example, all of our leases that were classified as operating leases in accordance with the lease accounting standards in effect prior to January 1, 2019, continue to be classified as operating leases after adoption of the new lease accounting standard.
- **Previously capitalized initial direct costs for any leases that commenced prior to January 1, 2019.** Our election of the package of practical expedients and the optional transition method requires us not to reassess whether initial direct leasing costs capitalized prior to the adoption of the new lease accounting standard in connection with the leases that commenced prior to January 1, 2019, qualify for capitalization under the new lease accounting standard.

We applied the package of practical expedients consistently to all leases (i.e., in which we are the lessee or the lessor) that commenced before January 1, 2019. The election of this package permits us to “run off” our leases that commenced before January 1, 2019, for the remainder of their lease terms and to apply the new lease accounting standard to leases commencing or modified after January 1, 2019.

For our leases that commenced prior to January 1, 2019, under the package of practical expedients and optional transition method, we are not required to reassess whether initial direct leasing costs capitalized prior to the adoption of the new lease accounting standard in connection with such leases qualify for capitalization under the new lease accounting standard. Therefore, we continue to amortize these initial direct leasing costs over their respective lease terms.

On January 1, 2019, as required by the new lease accounting standard, we recognized a cumulative adjustment to retained earnings aggregating \$3.5 million to write off initial direct leasing costs that were capitalized in connection with leases that were executed but had not commenced before January 1, 2019. These costs were capitalized in accordance with the lease accounting standards existing prior to January 1, 2019, and would not qualify for capitalization under the new lease accounting standard.

2. Summary of significant accounting policies (continued)

Under the package of practical expedients that we elected upon adoption of the new lease accounting standard, all of our operating leases existing as of January 1, 2019, in which we are the lessee, continue to be classified as operating leases subsequent to the adoption of the new lease accounting standard. In accordance with the new lease accounting standard, we were required to classify in our consolidated balance sheets the present value of remaining future rental payments aggregating \$590.3 million related to ground and office leases in which we are the lessee existing as of January 1, 2019. Consequently, on January 1, 2019, we recognized a lease liability aggregating \$218.7 million classified within accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets, which included approximately \$27.0 million reclassified out of the deferred rent liabilities balance in accordance with the new lease standard. We have also recognized a corresponding right-of-use asset, which was classified within other assets in our consolidated balance sheets. The present value of the remaining lease payments was calculated for each operating lease existing as of January 1, 2019, in which we were the lessee by using each respective remaining lease term and a corresponding estimated incremental borrowing rate. The incremental borrowing rate is the interest rate that we estimated we would have to pay to borrow on a collateralized basis over a similar term for an amount equal to the lease payments.

Subsequent application of the new lease accounting guidance

Definition of a lease

Effective January 1, 2019, when we enter into a contract or amend an existing contract, we evaluate whether the contract meets the definition of a lease. To meet the definition of a lease, the contract must meet all three criteria:

- (i) One party (lessor) must hold an identified asset;
- (ii) The counterparty (lessee) must have the right to obtain substantially all of the economic benefits from the use of the asset throughout the period of the contract; and
- (iii) The counterparty (lessee) must have the right to direct the use of the identified asset throughout the period of the contract.

Lease classification

The new lease accounting standard also sets new criteria for determining the classification of finance leases for lessees and sales-type leases for lessors. The criteria to determine whether a lease should be accounted for as a finance/sales-type lease include any of the following:

- (i) Ownership is transferred from lessor to lessee by the end of the lease term;
- (ii) An option to purchase is reasonably certain to be exercised;
- (iii) The lease term is for the major part of the underlying asset's remaining economic life;
- (iv) The present value of lease payments equals or exceeds substantially all of the fair value of the underlying asset; or
- (v) The underlying asset is specialized and is expected to have no alternative use at the end of the lease term.

If any of these criteria is met, a lease is classified as a finance lease by the lessee and as a sales-type lease by the lessor. If none of the criteria are met, a lease is classified as an operating lease by the lessee but may still qualify as a direct financing lease or an operating lease for the lessor. The existence of a residual value guarantee from an unrelated third party other than the lessee may qualify the lease as a direct financing lease by the lessor. Otherwise, the lease is classified as an operating lease by the lessor. Therefore, under the new lease accounting standard, lessees apply a dual approach by classifying leases as either finance or operating leases based on the principle of whether the lease is effectively a financed purchase of the leased asset by the lessee. This classification will determine whether the lease expense is recognized based on an effective interest method or on a straight-line basis over the term of the lease, which corresponds to a similar evaluation performed by lessors.

Lessor accounting

Costs to execute leases

The new lease accounting standard requires that lessors (and, if applicable, lessees) capitalize, as initial direct costs, only incremental costs of a lease that would not have been incurred if the lease had not been obtained. Costs that we incur to negotiate or arrange a lease, regardless of its outcome, such as for fixed employee compensation, tax, or legal advice to negotiate lease terms, and other costs, are expensed as incurred.

2. Summary of significant accounting policies (continued)

Operating leases

We account for the revenue from our lease contracts by utilizing the single component accounting policy. This policy requires us to account for, by class of underlying asset, the lease component and nonlease component(s) associated with each lease as a single component if two criteria are met:

- (i) The timing and pattern of transfer of the lease component and the nonlease component(s) are the same; and
- (ii) The lease component would be classified as an operating lease if it were accounted for separately.

Lease components consist primarily of fixed rental payments, which represent scheduled rental amounts due under our leases, and contingent rental payments. Nonlease components consist primarily of tenant recoveries representing reimbursements of rental operating expenses under our triple net lease structure, including recoveries for utilities, repairs and maintenance, and common area expenses.

If the lease component is the predominant component, we account for all revenues under such lease as a single component in accordance with the new lease accounting standard. Conversely, if the nonlease component is the predominant component, all revenues under such lease are accounted for in accordance with the revenue recognition accounting standard. Our operating leases qualify for the single component accounting, and the lease component in each of our leases is predominant. Therefore, we account for all revenues from our operating leases under the new lease accounting standard and classify these revenues as income from rentals in our consolidated statements of operations.

We commence recognition of income from rentals related to the operating leases at the date the property is ready for its intended use by the tenant and the tenant takes possession, or controls the physical use, of the leased asset. Income from rentals related to fixed rental payments under operating leases is recognized on a straight-line basis over the respective operating lease terms. We classify amounts expected to be received in later periods as deferred rent in our consolidated balance sheets. Amounts received currently but recognized as revenue in future periods are classified in accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets.

Income from rentals related to variable payments includes tenant recoveries and contingent rental payments. Tenant recoveries, including reimbursements of utilities, repairs and maintenance, common area expenses, real estate taxes and insurance, and other operating expenses, are recognized as revenue in the period during which the applicable expenses are incurred and the tenant's obligation to reimburse us arises. Income from rentals related to other variable payments is recognized when associated contingencies are removed.

We assess collectibility from our tenants of future lease payments for each of our operating leases. If we determine that collectibility is probable, we recognize income from rentals based on the methodology described above. If we determine that collectibility is not probable, we recognize an adjustment to lower our income from rentals. As of December 31, 2019, we assessed the collectibility of remaining lease payments under each operating lease in which we are the lessor and determined that collectibility of each lease was probable.

Reclassification of the prior-year presentation of rental revenues and tenant recoveries

As described above, rental revenues and tenant recoveries related to operating leases in which we are the lessor qualified for the single component practical expedient and were classified as income from rentals in our consolidated statements of operations. Prior to the adoption of the new lease accounting standard, we classified rental revenues and tenant recoveries separately in our consolidated statements of operations, in accordance with the guidance in effect prior to January 1, 2019. Upon adoption of the new lease accounting standard, our comparative statements of operations of prior periods have been reclassified to conform to the new single component presentation of rental revenues and tenant recoveries.

The table below provides a reconciliation of the prior-period presentation of the line items that were reclassified in our consolidated statements of operations to conform to the current-period presentation, pursuant to our adoption of the new lease accounting standard and election of the single component practical expedient (in thousands):

	Year Ended	
	2018	2017
Rental revenues (presentation prior to January 1, 2019)	\$ 1,010,718	\$ 863,181
Tenant recoveries (presentation prior to January 1, 2019)	304,063	259,144
Income from rentals (presentation effective January 1, 2019)	<u>\$ 1,314,781</u>	<u>\$ 1,122,325</u>

2. Summary of significant accounting policies (continued)

Direct financing and sales-type leases

As of December 31, 2019, we had one direct financing lease and no sales-type leases. Income from rentals related to our direct financing lease is recognized over the lease term using the effective interest rate method. At lease commencement, we record an asset within other assets in our consolidated balance sheets, which represents our net investment in the direct financing lease. This initial net investment is determined by aggregating the total future lease payments attributable to the direct financing lease and the estimated residual value of the property less unearned income. Over the lease term, the investment in the direct financing lease is reduced and rental income is recognized as income from rentals in our consolidated statements of operations, producing a constant periodic rate of return on the net investment in the direct financing lease.

Subsequent to lease commencement, we assess collectibility from our tenants of future lease payments. If we determine that collectibility is probable, we recognize income from rentals based on the methodology described above. If we determine that collectibility is not probable, we evaluate our net investment in the direct financing lease for impairment. Upon determination that an impairment has occurred, an impairment charge is recognized to reduce the carrying balance in the net investment in the direct financing lease to its estimated fair value. As of December 31, 2019, we assessed the collectibility of future lease payments under our direct financing lease and determined that collectibility was probable.

Lessee accounting

We have operating lease agreements in which we are the lessee consisting of ground and office leases. At the lease commencement date (or at the acquisition date if the lease is acquired as part of a real estate acquisition), we are required to recognize a liability to account for our future obligations under these operating leases, and a corresponding right-of-use asset.

The lease liability is measured based on the present value of the future lease payments, including payments during the term under our extension options that we are reasonably certain to exercise. The present value of the future lease payments is calculated for each operating lease using each respective remaining lease term and a corresponding estimated incremental borrowing rate, which is the interest rate that we estimate we would have to pay to borrow on a collateralized basis over a similar term for an amount equal to the lease payments. Subsequently, the lease liability is accreted by applying a discount rate established at the lease commencement date to the lease liability balance as of the beginning of the period and is reduced by the payments made during the period. We classify the operating lease liability in accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets.

The right-of-use asset is measured based on the corresponding lease liability, adjusted for initial direct leasing costs and any other consideration exchanged with the landlord prior to the commencement of the lease, as well as adjustments to reflect favorable or unfavorable terms of an acquired lease when compared with market terms at the time of acquisition. Subsequently, the right-of-use asset is amortized on a straight-line basis during the lease term. We classify the right-of-use asset in other assets in our consolidated balance sheets.

Recognition of revenue arising from contracts with customers

We recognize revenues associated with transactions arising from contracts with customers, excluding revenues subject to the new lease accounting standard discussed in the "Lease Accounting" section above, in accordance with the revenue recognition accounting standard. A customer is distinguished from a noncustomer by the nature of the goods or services that are transferred. Customers are provided with goods or services that are generated by a company's ordinary output activities, whereas noncustomers are provided with nonfinancial assets that are outside of a company's ordinary output activities.

We generally recognize revenue representing the transfer of goods and services to customers in an amount that reflects the consideration to which we expect to be entitled in the exchange. In order to determine the recognition of revenue from customer contracts, we use a five-step model to (i) identify the contract with the customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, including variable consideration to the extent that it is probable that a significant future reversal will not occur, (iv) allocate the transaction price to the performance obligations in the contract, and (v) recognize revenue when (or as) we satisfy the performance obligation.

We identify contractual performance obligations and determine whether revenue should be recognized at a point in time or over time, based on when control of goods and services transfers to a customer. We consider whether we control the goods or services prior to the transfer to the customer in order to determine whether we should account for the arrangement as a principal or agent. If we determine that we control the goods or services provided to the customer, then we are the principal to the transaction, and we recognize the gross amount of consideration expected in the exchange. If we simply arrange but do not control the goods or services being transferred to the customer, then we are considered to be an agent to the transaction, and we recognize the net amount of consideration we are entitled to retain in the exchange.

2. Summary of significant accounting policies (continued)

Total revenues subject to the revenue recognition accounting standard for the year ended December 31, 2019, included \$48.8 million primarily related to short-term parking revenues associated with long-term lease agreements. These revenues are classified within income from rentals in our consolidated statements of operations. Short-term parking revenues do not qualify for the single lease component practical expedient, discussed in the “Lessor Accounting” subsection of the “Lease Accounting” section within this Note 2, due to the difference in the timing and pattern of transfer of our parking service obligations and associated lease components within the same lease agreement. We recognize short-term parking revenues in accordance with the revenue recognition accounting standard when the service is provided and the performance obligation is satisfied, which normally occurs at a point in time.

Monitoring of tenant credit quality

During the term of each lease, we monitor the credit quality and any related material changes of our tenants by (i) monitoring the credit rating of tenants that are rated by a nationally recognized credit rating agency, (ii) reviewing financial statements of the tenants that are publicly available or that are required to be delivered to us pursuant to the applicable lease, (iii) monitoring news reports regarding our tenants and their respective businesses, and (iv) monitoring the timeliness of lease payments.

Income taxes

We are organized and operate as a REIT pursuant to the Internal Revenue Code (the “Code”). Under the Code, a REIT that distributes at least 90% of its REIT taxable income to its stockholders annually (excluding net capital gains) and meets certain other conditions is not subject to federal income tax on its distributed taxable income, but could be subject to certain federal, foreign, state, and local taxes. We distribute 100% of our taxable income annually; therefore, a provision for federal income taxes is not required. In addition to our REIT returns, we file federal, foreign, state, and local tax returns for our subsidiaries. We file with jurisdictions located in the U.S., Canada, India, China, and other international locations. Our tax returns are subject to routine examination in various jurisdictions for the 2013 through 2018 calendar years.

Employee and non-employee share-based payments

We have implemented an entity-wide accounting policy to account for forfeitures of share-based awards granted to employees and non-employees when they occur. As a result of this policy, we recognize expense on share-based awards with time-based vesting conditions without reductions for an estimate of forfeitures. This accounting policy only applies to service condition awards. For performance condition awards, we continue to assess the probability that such conditions will be achieved. Expenses related to forfeited awards are reversed as forfeitures occur. In addition, all nonforfeitable dividends paid on share-based payment awards are initially classified in retained earnings and reclassified to compensation cost only if forfeitures of the underlying awards occur. Our employee and non-employee share-based awards are measured on the grant date and recognized over the required service period of the recipient.

Forward equity sales agreements

We account for our forward equity sales agreements in accordance with the accounting guidance governing financial instruments and derivatives. During 2019, none of our forward equity sales agreements were deemed to be liabilities as they did not embody obligations to repurchase our shares, nor did they embody obligations to issue a variable number of shares for which the monetary value was predominantly fixed, varied with something other than the fair value of our shares, or varied inversely in relation to our shares. We then evaluated whether the agreements met the derivatives and hedging guidance scope exception to be accounted for as equity instruments and concluded that the agreements can be classified as equity contracts based on the following assessment: (i) none of the agreements’ exercise contingencies were based on observable markets or indices besides those related to the market for our own stock price and operations; and (ii) none of the settlement provisions precluded the agreements from being indexed to our own stock. As of December 31, 2019, we had no forward equity sales agreements outstanding.

Loan fees

Fees incurred in obtaining long-term financing are capitalized and classified with the corresponding debt instrument appearing on our consolidated balance sheet. Loan fees related to our unsecured senior line of credit are classified within other assets. Capitalized amounts are amortized over the term of the related loan, and the amortization is classified in interest expense in our consolidated statements of operations.

2. Summary of significant accounting policies (continued)

Hedge accounting

From time to time, we utilize interest rate hedge agreements to manage a portion of our exposure to variable interest rates. Historically, our interest rate hedge agreements have primarily related to our borrowings with variable interest rates based on LIBOR. However, in connection with the LIBOR cessation projected by the end of 2021 and the potential replacement of this rate in the U.S. with the Secured Overnight Financing Rate (“SOFR”), we have paid down the majority of our outstanding LIBOR-based borrowings and terminated our related interest rate hedge agreements to minimize our exposure to LIBOR. As a result, as of December 31, 2019, we had no outstanding interest rate hedge agreements and no LIBOR-based borrowings other than borrowings of \$384.0 million outstanding under our unsecured senior line of credit.

In October 2018, the FASB issued an accounting standard that expanded the list of U.S. benchmark interest rates permitted in the application of hedge accounting to include the overnight index swap rate based on SOFR. The accounting standard became effective for us and was adopted on January 1, 2019. Upon adoption on January 1, 2019, and during the year ended December 31, 2019, we had no hedges based on SOFR; therefore, the adoption of this accounting standard had no effect on our consolidated financial statements. Should we issue variable interest rate debt in the future, including SOFR-based debt, and enter into related interest rate hedge agreements to manage our exposure to variable interest rates, we will continue applying the interest hedge accounting policy, described below, that had been applied to our interest rate hedge agreements based on LIBOR.

When we issue variable interest rate debt, we may enter into interest rate hedge agreements to manage our exposure to variable interest rates. As a result, our interest rate hedge agreements are generally designated as cash flow hedges. At the inception of a hedge agreement, we are required to perform an initial quantitative assessment to determine whether a hedge is highly effective in offsetting changes in cash flows associated with the hedged item. For cash flow hedges that are highly effective at inception and continue to be highly effective, we record all changes (effective and ineffective components) in the fair value of our hedges, including accrued interest and adjustments for non-performance risk, in accumulated other comprehensive income within total equity and reclassify them into earnings when the hedged item affects earnings. Subsequently, we may perform only a qualitative assessment, unless facts and circumstances change.

The fair value of each interest rate hedge agreement is determined using widely accepted valuation techniques, including discounted cash flow analyses on the expected cash flows of each derivative. These analyses reflect the contractual terms of the derivatives, including the period to maturity, and use observable market-based inputs, including interest rate curves and implied volatilities. The fair values of our interest rate hedge agreements are determined using the market-standard methodology of netting the discounted future fixed-cash payments and the discounted expected variable-cash receipts. The variable-cash receipts are based on an expectation of future interest rates (forward curves) derived from observable market interest rate curves. The fair value calculation also includes an amount for risk of non-performance of our counterparties using “significant unobservable inputs,” such as estimates of current credit spreads, to evaluate the likelihood of default.

We classify fair values of our interest rate hedge agreements in asset positions within other assets, and the fair values of our interest rate hedge agreements in liability positions within accounts payable, accrued expenses, and other liabilities, without any offsetting pursuant to master netting agreements. In agreements with certain of our derivative counterparties, we may have provisions wherein we could be declared in default on our derivative obligations if (i) repayment of the underlying indebtedness is accelerated by the lender due to our default on the indebtedness or (ii) we default on any of its indebtedness, including default where repayment of the indebtedness has not been accelerated by the lender.

Joint venture distributions

We use the “nature of the distribution” approach to determine the classification within our statement of cash flows of cash distributions received from equity method investments, including our unconsolidated joint ventures. Under this approach, distributions are classified based on the nature of the underlying activity that generated the cash distributions. If we lack the information necessary to apply this approach in the future, we will be required to apply the “cumulative earnings” approach as an accounting change on a retrospective basis. Under the cumulative earnings approach, distributions up to the amount of cumulative equity in earnings recognized are classified as cash inflows from operating activities, and those in excess of that amount are classified as cash inflows from investing activities.

Cash and cash equivalents

We consider all highly liquid investments with original maturities of three months or less when purchased to be cash and cash equivalents. The majority of our cash and cash equivalents are held at major commercial banks in accounts that may at times exceed the FDIC-insured limit of \$250,000. We have not experienced any losses to date on our invested cash.

2. Summary of significant accounting policies (continued)

Restricted cash

We present cash and cash equivalents separately from restricted cash within our consolidated balance sheets. We include restricted cash with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown in the consolidated statements of cash flows. We provide a reconciliation between the balance sheet and statement of cash flows, as required when the balance includes more than one line item for cash, cash equivalents, and restricted cash. We also provide a disclosure of the nature of the restrictions related to material restricted cash balances.

Recent accounting pronouncements

Allowance for credit losses

In June 2016, the FASB issued an accounting standard (further clarified with subsequently issued updates) that requires companies to estimate and recognize lifetime expected losses, rather than incurred losses, resulting in the earlier recognition of credit losses even if the expected risk of credit loss is remote. The accounting standard applies to most financial assets measured at amortized cost and certain other instruments, including trade and other receivables, loans, held-to-maturity debt securities, net investments in leases arising from sales-type and direct financing leases, and off-balance-sheet credit exposures (e.g., loan commitments). The standard does not apply to the receivables arising from operating leases. An assessment of the collectibility of operating lease payments and the recognition of an adjustment to lease income based on this assessment is governed by the lease accounting standard discussed in the "Lease Accounting" section earlier within this Note 2.

The accounting standard became effective for us and was adopted on January 1, 2020. Upon adoption, we had one lease subject to this standard classified as a direct financing lease with a net investment balance aggregating \$39.9 million prior to the credit loss adjustment. In this direct financing lease, the payment obligation of the lessee is collateralized by real estate property. Historically, we have had no collection issues related to this direct financing lease; therefore, we assessed the probability of default on this lease based on the lessee's financial condition, credit rating, business prospects, remaining term of the lease, expected value of the underlying collateral upon its repossession, and our historical loss experience related to other leases in which we are the lessor. Based on the aforementioned considerations, we estimated a credit loss adjustment related to this direct financing lease totaling \$2.2 million, which was recognized as a cumulative adjustment to retained earnings and as a reduction of the investment in direct financing lease balance from \$39.9 million to \$37.7 million in our consolidated balance sheets on January 1, 2020.

In addition to direct financing lease, the accounting standard on credit losses applies to our receivables that result from revenue transactions within the scope of the revenue recognition standard discussed in the "Recognition of Revenue Arising From Contracts With Customers" section earlier within this Note 2. Upon adoption of the standard on January 1, 2020, our receivables resulting from revenue transactions within the scope of revenue recognition standard aggregated \$16.1 million. Among other factors, we considered the short-term nature of these receivables, our positive assessment of the financial condition and business prospects of the payors, and minimal historical collectibility issues. Based on the aforementioned considerations, we estimated the credit loss related to our trade receivables to approximate \$259,000, which was recognized as a cumulative adjustment to retained earnings and as a reduction of the tenant receivables balance in our consolidated balance sheets on January 1, 2020.

Recognition and measurement of financial instruments

In January 2016, the FASB issued an accounting standard (further clarified with subsequently issued updates) that updated the framework for companies to account for financial instruments. We adopted this accounting standard on January 1, 2018. Subsequently in April 2019, the FASB issued an accounting standard that amends the financial instruments standard by clarifying that all adjustments made under the measurement alternative elected for equity securities without readily determinable fair values represent nonrecurring fair value measurement adjustments and therefore require applicable fair value disclosures, including disclosures about the level of the fair value hierarchy within which the fair value measurements are categorized. The standard is effective for reporting periods beginning after December 15, 2019, with early adoption permitted. We adopted this standard on January 1, 2020. The adoption of this standard is not expected to impact our operating results. The footnotes to our consolidated financial statements will contain the incremental fair value disclosures related to our investments in privately held entities that do not report NAV, beginning with our quarterly report on Form 10-Q for the three months ending March 31, 2020.

3. Investments in real estate

Our consolidated investments in real estate, including real estate assets held for sale as described in Note 19 – “Assets Classified as Held for Sale” to our consolidated financial statements, consisted of the following as of December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Rental properties:		
Land (related to rental properties)	\$ 2,225,785	\$ 1,625,349
Buildings and building improvements	11,775,132	9,986,635
Other improvements	1,277,862	976,627
Rental properties	15,278,779	12,588,611
Development and redevelopment of new Class A properties:		
Development and redevelopment projects	2,057,084	1,460,814
Future development projects	182,746	98,802
Gross investments in real estate	17,518,609	14,148,227
Less: accumulated depreciation	(2,704,657)	(2,263,797)
Net investments in real estate – North America	14,813,952	11,884,430
Net investments in real estate – Asia	30,086	29,263
Investments in real estate	\$ 14,844,038	\$ 11,913,693

Acquisitions

Our real estate asset acquisitions during the year ended December 31, 2019, consisted of the following (dollars in thousands):

Market	Number of Properties	Square Footage				Purchase Price
		Future Development	Active Redevelopment	Operating With Future Development/ Redevelopment	Operating	
Greater Boston	12	668,000	153,157	154,855	615,439	\$ 858,600
San Francisco	8	—	347,912	478,000	247,770	735,450
New York City	—	135,938	—	—	—	25,000
San Diego	16	869,000	—	93,220	912,419	474,214 ⁽¹⁾
Seattle	1	188,400	—	18,680	—	28,500
Maryland	3	435,000	—	—	138,938	76,130
Other	7	54,000	—	134,678	34,534	77,000
Year ended December 31, 2019	47	2,350,338	501,069	879,433	1,949,100	\$ 2,274,894

(1) Includes \$65.0 million paid in January 2019 for two properties at 10260 Campus Point Drive and 4161 Campus Point Court that we acquired in December 2018. The total purchase price was \$80.0 million, of which \$15.0 million was paid in December 2018. Also includes \$114.8 million related to our partner’s noncontrolling interest in the consolidated real estate joint venture at 4224/4242 Campus Point Court and 10210 Campus Point Drive to reflect the full contractual purchase price.

We evaluated each acquisition to determine whether the integrated set of assets and activities acquired met the definition of a business. Acquisitions that do not meet the definition of a business are accounted for as asset acquisitions. An integrated set of assets and activities does not qualify as a business if substantially all of the fair value of the gross assets is concentrated in either a single identifiable asset or a group of similar identifiable assets, or if the acquired assets do not include a substantive process.

Based upon our evaluation of each acquisition, we determined that substantially all of the fair value related to each acquisition is concentrated in a single identifiable asset or a group of similar identifiable assets, or is associated with a land parcel with no operations. Accordingly, each transaction did not meet the definition of a business and consequently was accounted for as an asset acquisition. In each of these transactions, we allocated the total consideration for each acquisition to the individual assets and liabilities acquired on a relative fair value basis.

3. Investments in real estate (continued)

During the year ended December 31, 2019, we acquired 47 properties for an aggregate purchase price of \$2.3 billion. In connection with our acquisitions, we recorded in-place leases aggregating \$197.8 million and below-market leases in which we are the lessor aggregating \$90.2 million. As of December 31, 2019, the weighted-average amortization period remaining on our acquired in-place and below-market leases related to properties acquired in 2019 was 9.0 years and 11.9 years, respectively, and 9.9 years in total.

Acquired below-market leases

The balances of acquired below-market tenant leases, and related accumulated amortization, classified in accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets as of December 31, 2019 and 2018, were as follows (in thousands):

	December 31,	
	2019	2018
Acquired below-market leases	\$ 326,255	\$ 236,026
Accumulated amortization	(131,482)	(101,218)
	<u>\$ 194,773</u>	<u>\$ 134,808</u>

For the years ended December 31, 2019, 2018, and 2017, we recognized in rental revenues approximately \$30.3 million, \$22.3 million, and \$19.3 million, respectively, related to the amortization of acquired below-market leases.

The amounts in the table above excludes the balances of acquired below-market ground leases, and related accumulated amortization, classified in other assets in our consolidated balance sheets as of December 31, 2019 and 2018. Refer to Note 8 – “Other Assets” to our consolidated financial statements.

The weighted-average amortization period of the value of acquired below-market leases was approximately 5.1 years, and the estimated annual amortization of the value of acquired below-market leases as of December 31, 2019, is as follows (in thousands):

Year	Amount
2020	\$ 44,269
2021	20,698
2022	19,503
2023	18,635
2024	16,940
Thereafter	74,728
Total	<u>\$ 194,773</u>

Acquired in-place leases

The balances of acquired in-place leases, and related accumulated amortization, are classified in other assets in our consolidated balance sheets. As of December 31, 2019 and 2018, these amounts were as follows (in thousands):

	December 31,	
	2019	2018
Acquired in-place leases	\$ 426,280	\$ 229,095
Accumulated amortization	(144,630)	(96,189)
	<u>\$ 281,650</u>	<u>\$ 132,906</u>

3. Investments in real estate (continued)

Amortization for these intangible assets, classified in depreciation and amortization expense in our consolidated statements of operations, was approximately \$49.1 million, \$34.3 million, and \$19.6 million for the years ended December 31, 2019, 2018, and 2017, respectively. The weighted-average amortization period of the value of acquired in-place leases was approximately 5.9 years, and the estimated annual amortization of the value of acquired in-place leases as of December 31, 2019, is as follows (in thousands):

Year	Amount
2020	\$ 54,757
2021	49,878
2022	37,006
2023	31,885
2024	24,001
Thereafter	84,123
Total	<u>\$ 281,650</u>

Sales of real estate assets and impairment charges

For the discussion of our sales of partial interests in 75/125 Binney Street, 5200 Illumina Way, and 500 Forbes Boulevard in 2019 and the formation of consolidated joint ventures that own these properties, refer to “Sales of Partial Interests and Formation of Consolidated Joint Ventures in 2019” section within Note 4 – “Consolidated and Unconsolidated Real Estate Joint Ventures” to our consolidated financial statements.

6138/6150 Nancy Ridge Drive

During the three months ended June 30, 2019, we classified as held for sale 6138/6150 Nancy Ridge Drive aggregating 56,698 RSF, located in our Sorrento Mesa submarket. In December 2019, we completed the sale of the property for a sales price of \$6.6 million, or \$117 per RSF, and recognized a gain of \$474 thousand.

Impairment charges

In December 2019, we decided to sell two of our real estate assets aggregating 123,862 RSF located in non-cluster markets to allow for reinvestment of this capital into our highly leased value-creation pipeline. We evaluated these assets under the held for sale impairment model and determined that these investments met the criteria for classification as held for sale but did not meet the criteria for classification as discontinued operations in our consolidated financial statements. Upon classification as held for sale, we recognized impairment charges aggregating \$12.3 million to lower the carrying amounts to their respective estimated fair value less cost to sell. For additional information, refer to Note 19 – “Assets Classified as Held for Sale” to our consolidated financial statements.

4. Consolidated and unconsolidated real estate joint ventures

From time to time, we enter into joint venture agreements through which we own a partial interest in real estate entities that own, develop, and operate real estate properties. As of December 31, 2019, our real estate joint ventures held the following properties:

Property	Market	Submarket	Our Ownership Interest ⁽¹⁾
<i>Consolidated joint ventures</i> ⁽²⁾ :			
225 Binney Street	Greater Boston	Cambridge	30.0%
75/125 Binney Street	Greater Boston	Cambridge	40.0%
409 and 499 Illinois Street	San Francisco	Mission Bay/SoMa	60.0%
1500 Owens Street	San Francisco	Mission Bay/SoMa	50.1%
500 Forbes Boulevard	San Francisco	South San Francisco	10.0%
Campus Pointe by Alexandria ⁽³⁾	San Diego	University Town Center	55.0%
5200 Illumina Way	San Diego	University Town Center	51.0%
9625 Towne Centre Drive	San Diego	University Town Center	50.1%
SD Tech by Alexandria	San Diego	Sorrento Mesa	50.0%
<i>Unconsolidated joint ventures</i> ⁽²⁾ :			
Menlo Gateway	San Francisco	Greater Stanford	49.0%
1401/1413 Research Boulevard	Maryland	Rockville	65.0% ⁽⁴⁾
704 Quince Orchard Road	Maryland	Gaithersburg	56.8% ⁽⁴⁾
1655 and 1725 Third Street	San Francisco	Mission Bay/SoMa	10.0%

(1) Refer to the table on the next page that shows our categorization of our existing significant joint ventures under the consolidation framework.

(2) In addition to the consolidated real estate joint ventures listed, various partners hold insignificant noncontrolling interests in six other joint ventures in North America and we hold an interest in one other insignificant unconsolidated real estate joint venture in North America.

(3) Excludes 9880 Campus Point Drive in our University Town Center submarket.

(4) Represents our ownership interest; our voting interest is limited to 50%.

Our consolidation policy is fully described under the “Consolidation” section in Note 2 – “Summary of Significant Accounting Policies” to our consolidated financial statements. Consolidation accounting is highly technical, but its framework is primarily based on the controlling financial interests and benefits of the joint ventures.

We generally consolidate a joint venture that is a legal entity that we control (i.e., we have the power to direct the activities of the joint venture that most significantly affect its economic performance) through contractual rights, regardless of our ownership interest, and where we determine that we have benefits through the allocation of earnings or losses and fees paid to us that could be significant to the joint venture (the “VIE model”).

We also generally consolidate joint ventures when we have a controlling financial interest through voting rights and where our voting interest is greater than 50% (the “voting model”). Voting interest differs from ownership interest for some joint ventures.

We account for joint ventures that do not meet the consolidation criteria under the equity method of accounting by recognizing our share of income and losses.

4. Consolidated and unconsolidated real estate joint ventures (continued)

The table below shows our categorization of our existing significant joint ventures under the consolidation framework:

Property	Consolidation Model	Voting Interest	Consolidation Analysis	Conclusion
225 Binney Street 75/125 Binney Street 409 and 499 Illinois Street 1500 Owens Street 500 Forbes Boulevard Campus Pointe by Alexandria 5200 Illumina Way 9625 Towne Centre Drive SD Tech by Alexandria Menlo Gateway 1401/1413 Research Boulevard	VIE model	Not applicable under the VIE model	<p>We have:</p> <p>(i) The power to direct the activities of the joint venture that most significantly affect its economic performance; and</p> <p>(ii) Benefits that can be significant to the joint venture.</p> <p>Therefore, we are the primary beneficiary of each VIE</p>	Consolidated
704 Quince Orchard Road 1655 and 1725 Third Street	Voting model	Does not exceed 50%	<p>We do not control the joint venture and are therefore not the primary beneficiary</p> <p>Our voting interest is 50% or less</p>	Equity method of accounting

Sales of partial interests and formation of consolidated joint ventures in 2019

75/125 Binney Street

In February 2019, we completed a partial sale of a 60% interest in 75/125 Binney Street, a Class A property in our Cambridge submarket, aggregating 388,270 RSF, for a sales price of \$438.0 million, or \$1,880 per RSF. We accounted for the \$202.2 million difference between the consideration received and the book value of the 60% interest sold as an equity transaction, with no gain recognized in earnings.

We formed a joint venture with the buyer of the partial interest in 75/125 Binney Street. We hold a 40% ownership interest in this joint venture. As part of the joint venture agreement, we are responsible for operations that most significantly impact the economic performance of the joint venture. Our joint venture partner lacks kick-out rights over our role as property manager. Also, our partner lacks substantive participating rights that would allow it to significantly impact the economic performance of the joint venture, and can affect the operations of the joint venture primarily through the exercise of its protective rights. Therefore, we determined that we are the primary beneficiary of the joint venture. Accordingly, we have consolidated the joint venture under the variable interest model. Refer to the "Consolidation" section in Note 2 – "Summary of Significant Accounting Policies" to our consolidated financial statements for additional information.

500 Forbes Boulevard

In August 2019, we completed the sale of a 90% interest in 500 Forbes Boulevard, located in our South San Francisco submarket, aggregating 155,685 RSF for a sales price of \$139.5 million, or \$996 per RSF. We accounted for the \$48.4 million difference between the consideration received and the book value of the 90% interest sold as an equity transaction with no gain recognized in earnings. The property has been leased to a single investment-grade tenant since 2009.

We formed a joint venture with the buyer of the partial interest in 500 Forbes Boulevard. We hold a 10% ownership interest in this joint venture. As part of the joint venture agreement, we are responsible for operations that most significantly impact the economic performance of the joint venture. Our joint venture partner lacks kick-out rights over our role as property manager. Also, our partner lacks substantive participating rights that would allow it to significantly impact the economic performance of the joint venture, and can affect the operations of the joint venture primarily through the exercise of its protective rights. Therefore, we determined that we are the primary beneficiary of the joint venture. Accordingly, we have consolidated the joint venture under the variable interest model. Refer to the "Consolidation" section in Note 2 – "Summary of Significant Accounting Policies" to our consolidated financial statements for additional information.

4. Consolidated and unconsolidated real estate joint ventures (continued)

5200 Illumina Way

In August 2019, we completed the sale of a 49% interest in 5200 Illumina Way, a Class A campus in our University Town Center submarket of San Diego, aggregating 792,687 RSF across six operating buildings and a land parcel available for future development. The total sales price of \$286.7 million for the 49% partial interest comprises \$264.6 million, or \$681 per RSF, for the operating buildings and \$22.1 million, or \$100 per RSF, for the developable land parcel. The operating buildings are 100% occupied by Illumina, Inc. with a remaining lease term of 12 years. This transaction values 100% of the campus at \$585.2 million and represents a value in excess of book basis aggregating \$269.1 million, or \$131.9 million for the 49% interest sold. We accounted for the \$131.9 million difference between the consideration received and the book value of the 49% interest sold as an equity transaction, with no gain recognized in earnings.

We formed a joint venture with the buyer of the partial interest in 5200 Illumina Way. We hold a 51% ownership interest in this joint venture. As part of the joint venture agreement, we are responsible for operations that most significantly impact the economic performance of the joint venture. Our joint venture partner lacks kick-out rights over our role as property manager. Also, our partner lacks substantive participating rights that would allow them to significantly impact the economic performance of the joint venture, and can affect the operations of the joint venture primarily through the exercise of their protective rights. As a result, we have determined that we are the primary beneficiary of the joint venture. Accordingly, we have consolidated the joint venture under the variable interest model. Refer to the "Consolidation" section in Note 2 – "Summary of Significant Accounting Policies" to our consolidated financial statements for additional information.

Consolidated VIEs' balance sheet information

The table below aggregates the balance sheet information of our consolidated VIEs as of December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Investments in real estate	\$ 2,678,476	\$ 1,108,385
Cash and cash equivalents	81,021	42,178
Other assets	280,343	74,901
Total assets	<u>\$ 3,039,840</u>	<u>\$ 1,225,464</u>
Secured notes payable	\$ —	\$ —
Other liabilities	149,471	59,336
Total liabilities	149,471	59,336
Redeemable noncontrolling interests	2,388	874
Alexandria Real Estate Equities, Inc.'s share of equity	1,600,729	624,349
Noncontrolling interests' share of equity	1,287,252	540,905
Total liabilities and equity	<u>\$ 3,039,840</u>	<u>\$ 1,225,464</u>

In determining whether to aggregate the balance sheet information of our consolidated VIEs, we considered the similarity of each VIE, including the primary purpose of these entities to own, manage, operate, and lease real estate properties owned by the VIEs, and the similar nature of our involvement in each VIE as a managing member. Due to the similarity of the characteristics, we present the balance sheet information of these entities on an aggregated basis. For each of our consolidated VIEs, none of its assets have restrictions that limit their use to settle specific obligations of the VIE. There are no creditors or other partners of our consolidated VIEs that have recourse to our general credit. Our maximum exposure to our consolidated VIEs is limited to our variable interests in each VIE.

4. Consolidated and unconsolidated real estate joint ventures (continued)

Unconsolidated real estate joint ventures

Our investments in unconsolidated real estate joint ventures, accounted for under the equity method of accounting presented in our consolidated balance sheets of December 31, 2019 and 2018, consisted of the following (in thousands):

Property	December 31,	
	2019	2018
Menlo Gateway	\$ 288,408	\$ 186,504
1401/1413 Research Boulevard	7,696	8,197
704 Quince Orchard Road	4,748	4,547
1655 and 1725 Third Street	37,016	34,917
Other	9,022	3,342
	<u>\$ 346,890</u>	<u>\$ 237,507</u>

Our maximum exposure to our unconsolidated VIEs is limited to our investment in each VIE.

Our unconsolidated real estate joint ventures have the following non-recourse secured loans that include the following key terms as of December 31, 2019 (dollars in thousands):

Unconsolidated Joint Venture	Our Share	Maturity Date	Stated Rate	Interest Rate ⁽¹⁾	100% at Joint Venture Level	
					Debt Balance ⁽²⁾	Remaining Commitments
1401/1413 Research Boulevard	65.0%	5/17/20	L+2.50%	5.18%	\$ 26,158	\$ 2,619
1655 and 1725 Third Street	10.0%	6/29/21	L+3.70%	5.41%	309,275	65,725
704 Quince Orchard Road	56.8%	3/16/23	L+1.95%	3.94%	9,172	5,709
Menlo Gateway, Phase II	49.0%	5/1/35	4.53%	4.59%	56,321	99,529
Menlo Gateway, Phase I	49.0%	8/10/35	4.15%	4.18%	142,101	—
					<u>\$ 543,027</u>	<u>\$ 173,582</u>

(1) Includes interest expense and amortization of loan fees.

(2) Represents outstanding principal, net of unamortized deferred financing costs, as of December 31, 2019.

5. Leases

On January 1, 2019, we adopted a new lease accounting standard that sets out the principles for the recognition, measurement, presentation, and disclosure of leases for both parties to a lease agreement (i.e., lessees and lessors).

As a lessor, we are required to disclose, among other things, the following:

- A description of the nature of leases, including terms for any variable payments, options to extend or terminate, and options to purchase the underlying asset;
- Tabular presentation of undiscounted cash flows to be received over the next five years and thereafter separately for operating leases and direct financing leases;
- The amount of lease income and its location on the statements of operations;
- Income classified separately for operating leases and direct financing leases; and
- Our risk management strategy to mitigate declines in residual value of the leased assets.

As a lessee, we are required to disclose, among other things, the following:

- A description of the nature of leases, including terms for any variable payments, options to extend or terminate, and options to purchase the underlying asset;
- The amounts of lease liabilities and corresponding right-of-use assets and their respective locations in the balance sheet;
- The weighted-average remaining lease term and weighted-average discount rate of leases;
- Tabular presentation of undiscounted cash flows of our remaining lease payment obligations over the next five years and thereafter; and
- Total lease costs, including cash paid, amounts expensed, and amounts capitalized.

Refer to the "Lease Accounting" section in Note 2 – "Summary of Significant Accounting Policies" for additional information.

5. Leases (continued)

Leases in which we are the lessor

As of December 31, 2019, we had 291 properties aggregating 27.0 million operating RSF located in key locations, including Greater Boston, San Francisco, New York City, San Diego, Seattle, Maryland, and Research Triangle. We focus on developing Class A properties in AAA innovation cluster locations, which we consider to be highly desirable for tenancy by life science, technology, and agtech entities. Such locations are generally characterized by high barriers to entry for new landlords, high barriers to exit for tenants, and a limited supply of available space. As of December 31, 2019, all leases in which we are the lessor were classified as operating leases with the exception of one direct financing lease. Our operating leases and direct financing lease are described below.

Operating leases

As of December 31, 2019, our 291 properties were subject to operating lease agreements. Two of these properties, representing two land parcels, are subject to lease agreements that each contain an option for the lessee to purchase the underlying asset from us at fair market value during each of the 30-day periods commencing on the dates that are 15 years, 30 years, and 74.5 years after the rent commencement date of October 1, 2017. The remaining lease term related to each of the two land parcels is 72.9 years. Our leases generally contain options to extend lease terms at prevailing market rates at the time of expiration. Certain operating leases contain early termination options that require advance notification and payment of a penalty, which in most cases is substantial enough to be deemed economically disadvantageous by a tenant to exercise. Future lease payments to be received under the terms of our operating lease agreements, excluding expense reimbursements, in effect as of December 31, 2019, are outlined in the table below (in thousands):

Year	Amount
2020	\$ 1,074,698
2021	1,090,837
2022	1,076,898
2023	1,024,652
2024	948,223
Thereafter	6,238,082
Total	<u>\$ 11,453,390</u>

Refer to Note 3 – “Investments in Real Estate” to our consolidated financial statements for additional information on our owned real estate assets, which are the underlying assets under our operating leases.

Direct financing lease

As of December 31, 2019, we had one direct financing lease agreement for a parking structure with a remaining lease term of 72.9 years. The lessee has an option to purchase the underlying asset at fair market value during each of the 30-day periods commencing on the dates that are 15 years, 30 years, and 74.5 years after the rent commencement date of October 1, 2017. The components of our net investment in our direct financing lease as of December 31, 2019 and 2018, are summarized in the table below (in thousands):

	December 31,	
	2019	2018
Gross investment in direct financing lease	\$ 260,457	\$ 262,111
Less: unearned income	(220,541)	(222,962)
Net investment in direct financing lease	<u>\$ 39,916</u>	<u>\$ 39,149</u>

5. Leases (continued)

Future lease payments to be received under the terms of our direct financing lease as of December 31, 2019, are outlined in the table below (in thousands):

Year	Total
2020	\$ 1,705
2021	1,756
2022	1,809
2023	1,863
2024	1,919
Thereafter	251,405
Total	<u>\$ 260,457</u>

Income from rentals

Our total income from rentals includes revenue related to agreements for rental of our investments in real estate, which primarily includes revenues subject to the guidance of the new lease accounting standard and revenues subject to the revenue recognition accounting standard as summarized below (in thousands):

	Year Ended December 31, 2019
Income from rentals:	
Revenues subject to the new lease accounting standard:	
Operating leases	\$ 1,465,692
Direct financing lease	2,421
Revenues subject to the new lease accounting standard	1,468,113
Revenues subject to the revenue recognition accounting standard	48,751
Income from rentals	<u>\$ 1,516,864</u>

Our revenues that are subject to the revenue recognition accounting standard and are classified in income from rentals relate primarily to parking revenues, which consist of short-term rental revenues that are not considered lease revenue under the new lease accounting standard. Refer to the "Revenues" and "Recognition of revenue arising from contracts with customers" sections in Note 2 – "Summary of Significant Accounting Policies" to our consolidated financial statements for additional information.

Deferred leasing costs

The following table summarizes our deferred leasing costs as of December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Deferred leasing costs	\$ 631,416	\$ 557,791
Accumulated amortization	(361,373)	(318,721)
Deferred leasing costs, net	<u>\$ 270,043</u>	<u>\$ 239,070</u>

Residual value risk management strategy

Our leases do not have guarantees of residual value on the underlying assets. We manage risk associated with the residual value of our leased assets by (i) evaluating each potential acquisition of real estate to determine whether it meets our business objective to primarily invest in high-demand markets with limited supply of available space, (ii) directly managing our leased properties, conducting frequent property inspections, proactively addressing potential maintenance issues before they arise, and timely resolving any occurring issues, (iii) carefully selecting our tenants and monitoring their credit quality throughout their respective lease terms, and (iv) focusing on making continuous improvements to our sustainability efforts and achievement of our sustainability goals for ground-up development of new buildings, which are targeting Gold or Platinum LEED® certification. Our environmentally focused design decisions, careful selection of construction materials, and continuous monitoring of our properties throughout their lives are expected to promote the durability of building infrastructure and enhance residual value of our properties.

5. Leases (continued)

Leases in which we are the lessee

We have operating lease agreements in which we are the lessee consisting of ground and office leases. Certain of these leases have options to extend or terminate the contract terms upon meeting certain criteria. There are no notable restrictions or covenants imposed by the leases, nor guarantees of residual value.

Under the new lease accounting standard, we are required to recognize a right-of-use asset and a related liability to account for our future obligations under ground and office lease arrangements in which we are the lessee. Refer to the "Lessee Accounting" section in Note 2 – "Summary of Significant Accounting Policies" to our consolidated financial statements.

As of December 31, 2019, the present value of the remaining contractual payments, aggregating \$699.9 million, under our operating lease agreements, including our extension options that we are reasonably certain to exercise, was \$271.8 million. Our corresponding operating lease right-of-use assets, adjusted for initial direct leasing costs and other consideration exchanged with the landlord prior to the commencement of the lease, aggregated \$264.7 million. As of December 31, 2019, the weighted-average remaining lease term of operating leases in which we are the lessee was approximately 44 years, and the weighted-average discount rate was 5.24%. The weighted-average discount rate is based on the incremental borrowing rate estimated for each lease, which is the interest rate that we estimate we would have to pay to borrow on a collateralized basis over a similar term for an amount equal to the lease payments.

Ground lease obligations as of December 31, 2019, included leases for 31 of our properties, which accounted for approximately 11% of our total number of properties. Excluding one ground lease that expires in 2036 related to one operating property with a net book value of \$7.7 million as of December 31, 2019, our ground lease obligations have remaining lease terms ranging from approximately 34 years to 95 years, including extension options that we are reasonably certain to exercise.

The reconciliation of future lease payments, under non-cancelable operating ground and office leases in which we are the lessee, to the operating lease liability reflected in our consolidated balance sheet as of December 31, 2019, is presented in the table below (in thousands):

	Year	Total
	2020	\$ 15,132
	2021	15,931
	2022	16,467
	2023	16,628
	2024	16,857
	Thereafter	618,924
Total future payments under our operating leases in which we are the lessee		699,939
Effect of discounting		(428,131)
Operating lease liability		\$ 271,808

Lessee operating costs

Operating lease costs relate to our ground and office leases in which we are the lessee. Ground leases generally require fixed annual rent payments and may also include escalation clauses and renewal options. Our operating lease obligations related to our office leases have remaining terms of up to 15 years, exclusive of extension options. For the years ended December 31, 2019, 2018, and 2017, our costs for operating leases in which we are the lessee were as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Gross operating lease costs	\$ 19,740	\$ 16,102	\$ 14,307
Capitalized lease costs	(1,452)	(340)	(340)
Expenses for operating leases in which we are the lessee	\$ 18,288	\$ 15,762	\$ 13,967

For the years ended December 31, 2019, 2018, and 2017, amounts paid and classified as operating activities in our consolidated statements of cash flows for leases in which we are the lessee, were \$17.7 million, \$14.8 million, and \$14.6 million, respectively.

6. Cash, cash equivalents, and restricted cash

Cash, cash equivalents, and restricted cash consisted of the following as of December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Cash and cash equivalents	\$ 189,681	\$ 234,181
Restricted cash:		
Funds held in trust under the terms of certain secured notes payable	24,331	22,681
Funds held in escrow related to construction projects and investing activities	23,252	10,558
Other	5,425	4,710
	53,008	37,949
Total	\$ 242,689	\$ 272,130

7. Investments

We hold investments in publicly traded companies and privately held entities primarily involved in the life science, technology, and agtech industries. Investments in publicly traded companies are classified as investments with readily determinable fair values, and are carried at fair value, with changes in fair value classified in net income. Our investments in privately held entities consist of (i) investments that report NAV, such as our privately held investments in limited partnerships, which are carried at fair value using NAV as a practical expedient, with changes in fair value classified in net income, and (ii) investments in privately held entities that do not report NAV, which are measured at cost, adjusted for observable price changes and impairments, with changes recognized in net income.

Effective January 1, 2018:

- Investments in publicly traded companies are presented at fair value in our consolidated balance sheet, with changes in fair value recognized in net income.
- Investments in privately held entities without readily determinable fair values previously accounted for under the cost method are accounted for as follows:
 - Investments in privately held entities that report NAV are presented at fair value using NAV as a practical expedient, with changes in fair value recognized in net income. We use NAV reported by limited partnerships generally without adjustment, unless we are aware of information indicating that the NAV reported by a limited partnership does not accurately reflect the fair value of the investment at our reporting date.
 - Investments in privately held entities that do not report NAV are carried at cost, adjusted for observable price changes and impairments, with changes recognized in net income. These investments continue to be evaluated on the basis of a qualitative assessment for indicators of impairment by utilizing the same monitoring criteria described in the “Investments” section in Note 2 – “Summary of Significant Accounting Policies” to our consolidated financial statements, and by monitoring the presence of the following impairment indicators: (i) a significant deterioration in the earnings performance, credit rating, asset quality, or business prospects of the investee; (ii) a significant adverse change in the regulatory, economic, or technological environment of the investee, (iii) a significant adverse change in the general market condition of either the geographical area or the industry in which the investee operates, (iv) significant concerns about the investee’s ability to continue as a going concern. If such indicators are present, we are required to estimate the investment’s fair value and immediately recognize an impairment loss, without consideration as to whether the impairment is other-than-temporary, in an amount equal to the investment’s carrying value in excess of its estimated fair value.
- Investments in privately held entities continue to require accounting under the equity method unless our interest in the entity is deemed to be so minor that we have virtually no influence over the entity’s operating and financial policies. Under the equity method of accounting, we initially recognize our investment at cost and adjust the carrying amount of the investment to recognize our share of the earnings or losses of the investee subsequent to the date of our investment. We had no investments accounted for under the equity method as of December 31, 2019.

We classify unrealized and realized gains and losses on our equity investments within investment income in our consolidated statements of operations.

7. Investments (continued)

Unrealized gains and losses represent (i) changes in fair value for investments in publicly traded companies, (ii) changes in NAV, as a practical expedient to estimate fair value, for investments in privately held entities that report NAV, and (iii) observable price changes of our investments in privately held entities that do not report NAV. An observable price is a price observed in an orderly transaction for an identical or similar investment of the same issuer. Observable price changes result from, among other things, equity transactions for the same issuer executed during the reporting period, including subsequent equity offerings or other reported equity transactions related to the same issuer. For these transactions to be considered observable price changes, we evaluate whether these transactions have similar rights and obligations, including voting rights, distribution preferences, conversion rights, and other factors, to the investments we hold.

Realized gains and losses represent the difference between proceeds received upon disposition of investments and their historical or adjusted cost. Impairments are realized losses, which result in an adjusted cost, and represent charges to reduce the carrying values of investments in privately held entities that do not report NAV to their estimated fair value.

The following tables summarize our investments as of December 31, 2019, and 2018 (in thousands):

	December 31, 2019		
	Cost	Adjustments	Carrying Amount
Investments:			
Publicly traded companies	\$ 148,109	\$ 170,528	\$ 318,637
Entities that report NAV	271,276	162,626	433,902
Entities that do not report NAV:			
Entities with observable price changes	42,045	68,489	110,534
Entities without observable price changes	277,521	—	277,521
Total investments	\$ 738,951	\$ 401,643	\$ 1,140,594
	December 31, 2018		
	Cost	Adjustments	Carrying Amount
Investments:			
Publicly traded companies	\$ 121,121	\$ 62,884	\$ 184,005
Entities that report NAV	204,646	113,159	317,805
Entities that do not report NAV:			
Entities with observable price changes	39,421	64,112	103,533
Entities without observable price changes	286,921	—	286,921
Total investments	\$ 652,109	\$ 240,155	\$ 892,264

Cumulative adjustments recognized on investments in privately held entities that do not report NAV held as of December 31, 2019, aggregated \$68.5 million, which consisted of upward adjustments representing unrealized gains of \$69.5 million and downward adjustments representing unrealized losses of \$1.0 million.

During the year ended December 31, 2019, adjustments recognized on investments in privately held entities that do not report NAV aggregated \$4.4 million, which consisted of upward adjustments of \$5.2 million primarily representing unrealized gains, and downward adjustments of \$832 thousand representing unrealized losses. Additionally, we recognized an impairment charge of \$17.1 million related to investments in privately held entities that do not report NAV. Refer to the "Investments" section of Note 2 – "Summary of Significant Accounting Policies" to our consolidated financial statements for further details.

7. Investments (continued)

Our investment income for the years ended December 31, 2019 and 2018, consisted of the following (in thousands):

	Year Ended December 31, 2019		
	Unrealized Gains (Losses)	Realized Gains (Losses)	Total
Investments held at December 31, 2019:			
Publicly traded companies	\$ 130,802	\$ —	\$ 130,802
Entities that report NAV	49,440	—	49,440
Entities that do not report NAV, held at period end	4,378	(17,124)	(12,746)
Total investments held at December 31, 2019	184,620	(17,124)	167,496
Investment dispositions during the year ended December 31, 2019:			
Recognized in the current period	—	27,151	27,151
Previously recognized gains	(23,131)	23,131	—
Total investment dispositions during the year ended December 31, 2019	(23,131)	50,282	27,151
Investment income	\$ 161,489	\$ 33,158	\$ 194,647
	Year Ended December 31, 2018		
	Unrealized Gains	Realized (Losses) Gains	Total
Investments held at December 31, 2018:			
Publicly traded companies	\$ 27,944	\$ —	\$ 27,944
Entities that report NAV	22,389	—	22,389
Entities that do not report NAV, held at period end	64,112	(5,483)	58,629
Total investments held at December 31, 2018	114,445	(5,483)	108,962
Investment dispositions during the year ended December 31, 2018:			
Recognized in the current period	—	27,801	27,801
Previously recognized gains	(14,811)	14,811	—
Total investment dispositions during the year ended December 31, 2018	(14,811)	42,612	27,801
Investment income	\$ 99,634	\$ 37,129	\$ 136,763

Investments in privately held entities that report NAV

Investments in privately held entities that report NAV consist primarily of investments in limited partnerships. We are committed to funding approximately \$229.5 million for all investments primarily related to our investments in limited partnerships. Our funding commitments expire at various dates over the next 12 years, with a weighted-average expiration of 8.6 years as of December 31, 2019.

These investments are not redeemable by us, but we normally receive distributions from these investments throughout their term. Our investments in privately held entities that report NAV generally have expected initial terms in excess of 10 years. The weighted-average remaining term during which these investments are expected to be liquidated was 5.5 years as of December 31, 2019.

8. Other assets

The following table summarizes the components of other assets as of December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Acquired in-place leases	\$ 281,650	\$ 132,906
Acquired below-market leases in which we are the lessee ⁽¹⁾	—	17,434
Deferred compensation plan	22,225	19,238
Deferred financing costs – unsecured senior line of credit	13,064	16,060
Deposits	31,028	12,974
Furniture, fixtures, and equipment	23,031	14,787
Interest rate hedge assets	—	2,606
Net investment in direct financing lease	39,916	39,149
Notes receivable	435	528
Operating lease right-of-use asset ⁽¹⁾	264,709	—
Other assets	32,040	19,861
Prepaid expenses	11,324	13,690
Property, plant, and equipment	174,292	81,024
Total	<u>\$ 893,714</u>	<u>\$ 370,257</u>

(1) Upon the adoption of new lease accounting standards on January 1, 2019, the balance related to the acquired below-market leases in which we are the lessee was included in the calculation of our operating lease right-of-use asset. Refer to Note 2 – “Summary of Significant Accounting Policies” and Note 5 – “Leases” to our consolidated financial statements for additional information.

9. Fair value measurements

We provide fair value information about all financial instruments for which it is practicable to estimate fair value. We measure and disclose the estimated fair value of financial assets and liabilities by utilizing a fair value hierarchy that distinguishes between data obtained from sources independent of the reporting entity and the reporting entity’s own assumptions about market participant assumptions. This hierarchy consists of three broad levels, as follows: (i) quoted prices in active markets for identical assets or liabilities (Level 1), (ii) significant other observable inputs (Level 2), and (iii) significant unobservable inputs (Level 3). Significant other observable inputs can include quoted prices for similar assets or liabilities in active markets, as well as inputs that are observable for the asset or liability, such as interest rates, foreign exchange rates, and yield curves. Significant unobservable inputs are typically based on an entity’s own assumptions, since there is little, if any, related market activity. In instances in which the determination of the fair value measurement is based on inputs from different levels of the fair value hierarchy, the level in the fair value hierarchy within which the entire fair value measurement falls is based on the lowest level of input that is significant to the fair value measurement in its entirety. Our assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment and considers factors specific to the asset or liability. There were no transfers between the levels in the fair value hierarchy during the years ended December 31, 2019 and 2018.

9. Fair value measurements (continued)

The following tables set forth the assets and liabilities that we measure at fair value on a recurring basis by level within the fair value hierarchy as of December 31, 2019 and 2018 (in thousands):

Description	Total	December 31, 2019		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Investments in publicly traded companies	\$ 318,637	\$ 318,637	\$ —	\$ —
December 31, 2018				
Description	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Investments in publicly traded companies	\$ 184,005	\$ 184,005	\$ —	\$ —
Interest rate hedge agreements	\$ 2,606	\$ —	\$ 2,606	\$ —
Liabilities:				
Interest rate hedge agreements	\$ 768	\$ —	\$ 768	\$ —

Our investments in publicly traded companies represent investments with readily determinable fair values, and are carried at fair value, with changes in fair value classified in net income. We also hold investments in privately held entities, which consist of (i) investments that report NAV, and (ii) investments that do not report NAV, further described below.

Our investments in privately held entities that report NAV, such as our privately held investments in limited partnerships, are carried at fair value using NAV as a practical expedient, with changes in fair value classified in net income. As of December 31, 2019 and 2018, the carrying values of investments in privately held entities that report NAV aggregated \$433.9 million and \$317.8 million, respectively. These investments are excluded from the fair value hierarchy above as required by the fair value standards. We estimate the fair value of each of our investments in limited partnerships based on the most recent NAV reported by each limited partnership. As a result, the determination of fair values of our investments in privately held entities that report NAV generally does not involve significant estimates, assumptions, or judgments.

Our investments in privately held entities that do not report NAV are measured at cost, adjusted for observable price changes and impairments, with changes recognized in net income. As of December 31, 2019 and 2018, the carrying values of investments in privately held entities that do not report NAV aggregated \$388.1 million and \$390.5 million, respectively. These investments are evaluated on a nonrecurring basis based on the observable price changes in orderly transactions for the identical or similar investment of the same issuer. Further adjustments are not made until another observable transaction occurs. Therefore, the determination of fair values of our investments in privately held entities that do not report NAV does not involve significant estimates and assumptions or subjective and complex judgments.

We also subject our investments in privately held entities that do not report NAV to a qualitative assessment for indicators of impairment. If indicators of impairment are present, we are required to estimate the investment's fair value and immediately recognize an impairment loss in an amount equal to the investment's carrying value in excess of its estimated fair value. For further details about our investments in privately held entities that do not report NAV and related impairment monitoring criteria refer to the "Investments" section in Note 2 – "Summary of Significant Accounting Policies" and Note 7 – "Investments" to our consolidated financial statements.

Effective on January 1, 2020, in accordance with the new accounting standard described within "Recognition and Measurement of Financial Instruments" subsection of "Recent Accounting Pronouncements" section within Note 2 – "Summary of Significant Accounting Policies," for all investments in privately held entities that do not report NAV that are adjusted during the period under the measurement alternative elected for equity securities without readily determinable fair values, we will provide fair value disclosures, including disclosures about the level in the fair value hierarchy.

During the year ended December 31, 2019, in conjunction with the full repayment of our \$350.0 million unsecured senior bank term loan described in Note 10 – "Secured and Unsecured Senior Debt" to our consolidated financial statements, we also terminated all of our interest rate hedge agreements aggregating \$350.0 million with a weighted-average interest pay rate of 2.57%. Refer to Note 11 – "Interest Rate Hedge Agreements" to our consolidated financial statements for further details.

9. Fair value measurements (continued)

The carrying values of cash and cash equivalents, restricted cash, tenant receivables, other assets, accounts payable, accrued expenses, and other liabilities approximate their fair value.

The fair values of our secured notes payable, unsecured senior notes payable, unsecured senior line of credit, and unsecured senior bank term loans were estimated using widely accepted valuation techniques, including discounted cash flow analyses using significant other observable inputs such as available market information on discount and borrowing rates with similar terms, maturities, and credit ratings. Because the valuations of our financial instruments are based on these types of estimates, the actual fair value of our financial instruments may differ materially if our estimates do not prove to be accurate. Additionally, the use of different market assumptions or estimation methods may have a material effect on the estimated fair value amounts.

As of December 31, 2019 and 2018, the book and estimated fair values of our secured notes payable, unsecured senior notes payable, unsecured senior line of credit and unsecured senior bank term loan were as follows (in thousands):

	December 31,			
	2019		2018	
	Book Value	Fair Value	Book Value	Fair Value
Liabilities:				
Secured notes payable	\$ 349,352	\$ 363,344	\$ 630,547	\$ 638,860
Unsecured senior notes payable	\$ 6,044,127	\$ 6,571,668	\$ 4,292,293	\$ 4,288,335
Unsecured senior line of credit	\$ 384,000	\$ 383,928	\$ 208,000	\$ 208,106
Unsecured senior bank term loan	\$ —	\$ —	\$ 347,415	\$ 350,240

Nonrecurring fair value measurements

Refer to “Sales of Partial Interests and Formation of Consolidated Joint Ventures in 2019” in Note 4 – “Consolidated and Unconsolidated Real Estate Joint Ventures,” Note 7 – “Investments,” and Note 19 – “Assets Classified as Held for Sale” to our consolidated financial statements for further discussion.

10. Secured and unsecured senior debt

The following table summarizes our secured and unsecured senior debt as of December 31, 2019 (dollars in thousands):

	Fixed Rate Debt	Variable-Rate Debt	Total	Percentage	Weighted-Average	
					Interest Rate ⁽¹⁾	Remaining Term (in years)
Secured notes payable	\$ 349,352	\$ —	\$ 349,352	5.2%	3.57%	4.0
Unsecured senior notes payable	6,044,127	—	6,044,127	89.1	3.99	11.2
Commercial paper program	—	—	—	—	N/A	N/A
\$2.2 billion unsecured senior line of credit	—	384,000	384,000	5.7	2.89	4.1
Total/weighted average	\$ 6,393,479	\$ 384,000	\$ 6,777,479	100.0%	3.91%	10.4
Percentage of total debt	94%	6%	100%			

(1) Represents the weighted-average interest rate as of the end of the applicable period, including amortization of loan fees, amortization of debt premiums (discounts), and other bank fees.

10. Secured and unsecured senior debt (continued)

The following table summarizes our outstanding indebtedness and respective principal payments as of December 31, 2019 (dollars in thousands):

Debt	Stated Rate	Interest Rate ⁽¹⁾	Maturity Date ⁽²⁾	Principal Payments Remaining for the Periods Ending December 31,					Principal	Unamortized (Deferred Financing Cost), (Discount) Premium	Total	
				2020	2021	2022	2023	2024				Thereafter
Secured notes payable												
San Diego	4.66%	4.90%	1/1/23	\$ 1,621	\$ 1,852	\$ 1,942	\$ 26,259	\$ —	\$ —	\$ 31,674	\$ (198)	\$ 31,476
Greater Boston	3.93%	3.19	3/10/23	1,565	1,629	1,693	74,517	—	—	79,404	1,771	81,175
Greater Boston	4.82%	3.40	2/6/24	3,207	3,394	3,564	3,742	183,527	—	197,434	10,978	208,412
San Francisco	4.14%	4.42	7/1/26	—	—	—	—	—	28,200	28,200	(639)	27,561
San Francisco	6.50%	6.50	7/1/36	25	26	28	30	32	587	728	—	728
Secured debt weighted-average interest rate/ subtotal	4.55%	3.57		6,418	6,901	7,227	104,548	183,559	28,787	337,440	11,912	349,352
Commercial paper program ⁽³⁾	N/A	N/A	N/A	—	—	—	—	—	—	—	—	—
\$2.2 billion unsecured senior line of credit	L+0.825%	2.89	1/28/24	—	—	—	—	384,000	—	384,000	—	384,000
Unsecured senior notes payable	3.90%	4.04	6/15/23	—	—	—	500,000	—	—	500,000	(2,065)	497,935
Unsecured senior notes payable – green bond	4.00%	4.03	1/15/24	—	—	—	—	650,000	—	650,000	(548)	649,452
Unsecured senior notes payable	3.45%	3.62	4/30/25	—	—	—	—	—	600,000	600,000	(4,667)	595,333
Unsecured senior notes payable	4.30%	4.50	1/15/26	—	—	—	—	—	300,000	300,000	(2,942)	297,058
Unsecured senior notes payable – green bond	3.80%	3.96	4/15/26	—	—	—	—	—	350,000	350,000	(3,081)	346,919
Unsecured senior notes payable	3.95%	4.13	1/15/27	—	—	—	—	—	350,000	350,000	(3,552)	346,448
Unsecured senior notes payable	3.95%	4.07	1/15/28	—	—	—	—	—	425,000	425,000	(3,403)	421,597
Unsecured senior notes payable	4.50%	4.60	7/30/29	—	—	—	—	—	300,000	300,000	(2,126)	297,874
Unsecured senior notes payable	2.75%	2.87	12/15/29	—	—	—	—	—	400,000	400,000	(4,089)	395,911
Unsecured senior notes payable	4.70%	4.81	7/1/30	—	—	—	—	—	450,000	450,000	(3,903)	446,097
Unsecured senior notes payable	3.375%	3.48	8/15/31	—	—	—	—	—	750,000	750,000	(7,527)	742,473
Unsecured senior notes payable	4.85%	4.93	4/15/49	—	—	—	—	—	300,000	300,000	(3,446)	296,554
Unsecured senior notes payable	4.00%	3.91	2/1/50	—	—	—	—	—	700,000	700,000	10,476	710,476
Unsecured debt weighted-average interest rate/ subtotal		3.93		—	—	—	500,000	1,034,000	4,925,000	6,459,000	(30,873)	6,428,127
Weighted-average interest rate/total		3.91%		\$ 6,418	\$ 6,901	\$ 7,227	\$ 604,548	\$ 1,217,559	\$ 4,953,787	\$ 6,796,440	\$ (18,961)	\$ 6,777,479

(1) Represents the weighted-average interest rate as of the end of the applicable period, including amortization of loan fees, amortization of debt premiums (discounts), and other bank fees.

(2) Reflects any extension options that we control.

(3) In September 2019, we established a commercial paper program that has the ability to issue up to \$750.0 million of commercial paper notes with a maximum maturity of 397 days from the date of issuance. Borrowings under the program will be used to fund short-term capital needs and are backed by our \$2.2 billion unsecured senior line of credit. In the event we are unable to refinance outstanding borrowings under terms equal to or more favorable than those under the unsecured senior line of credit, we expect to borrow under the unsecured senior line of credit at L+0.825%. The commercial paper notes sold during the year ended December 31, 2019, were issued at a yield to maturity of between 1.83% and 2.29%.

10. Secured and unsecured senior debt (continued)

\$2.2 billion unsecured senior line of credit

We use our unsecured senior line of credit to fund working capital, construction activities, and, from time to time, acquisition of properties. Borrowings under the unsecured senior line of credit will bear interest at a "Eurocurrency Rate," a "LIBOR Floating Rate," or a "Base Rate" specified in the amended unsecured senior line of credit agreement plus, in any case, the Applicable Margin. The Eurocurrency Rate specified in the amended unsecured senior line of credit agreement is, as applicable, the rate per annum equal to either (i) the LIBOR or a successor rate thereto as agreed to by the administrative agent and the Company for loans denominated in a LIBOR quoted currency (i.e., U.S. dollars, euro, sterling, or yen), (ii) the average annual yield rates applicable to Canadian dollar bankers' acceptances for loans denominated in Canadian dollars, (iii) the Bank Bill Swap Reference Bid rate for loans denominated in Australian dollars, or (iv) the rate designated with respect to the applicable alternative currency for loans denominated in a non-LIBOR quoted currency (other than Canadian or Australian dollars). The LIBOR Floating Rate means, for any day, one month LIBOR, or a successor rate thereto as agreed to by the administrative agent and the Company for loans denominated in U.S. dollars. The Base Rate means, for any day, a fluctuating rate per annum equal to the highest of (i) the federal funds rate plus 1/2 of 1.00%, (ii) the rate of interest in effect for such day as publicly announced from time to time by Bank of America as its "prime rate," and (iii) the Eurocurrency Rate plus 1.00%. Our unsecured senior line of credit contains a feature that allows lenders to competitively bid on the interest rate for borrowings under the facility. This may result in an interest rate that is below the stated rate. In addition to the cost of borrowing, the facility is subject to an annual facility fee of 0.15% based on the aggregate commitments outstanding.

\$750.0 million commercial paper program

In September 2019, we established a commercial paper program, which received credit ratings of A-2 from S&P Global Ratings and Prime-2 from Moody's Investors Service. Under this program, we have the ability to issue up to \$750.0 million of commercial paper notes with a maximum maturity of 397 days from the date of issuance. Our commercial paper program is backed by our \$2.2 billion unsecured senior line of credit, and at all times we expect to retain a minimum undrawn amount of borrowing capacity under our unsecured senior line of credit equal to any outstanding balance on our commercial paper program. The net proceeds of the issuances of the notes are expected to be used for general working capital and other general corporate purposes. General corporate purposes may include, but are not limited to, the repayment of other debt and selective development, redevelopment, or acquisition of properties. During the year ended December 31, 2019, the commercial paper notes were issued at a yield to maturity of between 1.83% and 2.29%. As of December 31, 2019, we had no outstanding borrowings under our commercial paper program.

Unsecured senior notes payable

As of December 31, 2019, we have unsecured senior notes payable aggregating \$6.1 billion, which are unsecured obligations of the Company and are fully and unconditionally guaranteed by Alexandria Real Estate Equities, L.P., a 100% owned subsidiary of the Company. The unsecured senior notes payable rank equally in right of payment with all other senior unsecured indebtedness. However, the unsecured senior notes payable are subordinate to existing and future mortgages and other secured indebtedness (to the extent of the value of the collateral securing such indebtedness) and to all existing and future preferred equity and liabilities, whether secured or unsecured, of the Company's subsidiaries, other than Alexandria Real Estate Equities, L.P. In addition, the terms of the indentures, among other things, limit the ability of the Company, Alexandria Real Estate Equities, L.P., and the Company's subsidiaries to (i) consummate a merger, or consolidate or sell all or substantially all of the Company's assets, and (ii) incur certain secured or unsecured indebtedness.

10. Secured and unsecured senior debt (continued)

During the year ended December 31, 2019, our issuances of unsecured senior notes payable and repayments of debt included the following (dollars in millions):

	Issuance Date	Stated Interest Rate	Effective Interest Rate	Maturity Date	Principal Amount	Net Proceeds
Issuances						
Unsecured senior notes payable – green bond	March	4.00%	4.03%	1/15/24	\$ 200	\$ 203.0
Unsecured senior notes payable – green bond	March	3.80	3.96	4/15/26	350	346.6
Unsecured senior notes payable	March	4.85	4.93	4/15/49	300	296.5
Unsecured senior notes payable	July	3.375	3.48	8/15/31	750	742.5
Unsecured senior notes payable	July/Sept	4.00	3.91	2/1/50	700	711.1
Unsecured senior notes payable	Sept	2.75	2.87	12/15/29	400	395.8
		<u>3.71%</u>	<u>3.77%</u>	<u>16.9 years</u>	<u>\$ 2,700</u> ⁽¹⁾	<u>\$ 2,695.5</u>
Repayments of debt						
Secured notes payable	Jan	7.75%	8.15%	4/1/20	\$ 107	N/A
Secured construction loan	March	3.29	3.29	1/28/20	193	N/A
Unsecured senior notes payable	July/Aug	2.75	2.96	1/15/20	400	N/A
Unsecured senior notes payable	July/Aug	4.60	4.75	4/1/22	550	N/A
Unsecured senior bank term loan	July/Sept	3.62	3.62	1/2/25	350	N/A
Weighted average/total		<u>3.97%</u>	<u>4.11%</u>	<u>2.4 years</u>	<u>\$ 1,600</u> ⁽¹⁾	

(1) The remaining proceeds received from our debt issuances, after repayments of debt, were used to fund the construction of our value-creation pipeline and acquisitions completed during 2019. Refer to Note 3 – “Investments in Real Estate” to our consolidated financial statements for additional information.

Our \$350.0 million of 3.80% unsecured senior notes payable and our \$200.0 million of 4.00% unsecured senior notes payable issued in March 2019 were allocated to fund recently completed and future eligible green development and redevelopment projects, and to the repayment of the outstanding balance of \$193.1 million under our secured construction loan related to 50/60 Binney Street, a recently completed Class A property, which was awarded LEED® Gold certification.

The proceeds from our \$300.0 million of 4.85% unsecured senior notes payable issued in March 2019 were primarily allocated to fund acquisitions completed during 2019. Refer to Note 3 – “Investments in Real Estate” to our consolidated financial statements for additional information.

The proceeds from our \$750.0 million of 3.375% unsecured senior notes payable issued in July 2019 and partial proceeds from our \$700.0 million of 4.00% unsecured senior notes payable, which was issued in two tranches of \$500.0 million during July 2019 and \$200.0 million during September 2019, were primarily used to refinance \$400.0 million of 2.75% unsecured senior notes payable due 2020 and \$550.0 million of 4.60% unsecured senior notes payable due 2022, pursuant to a partial cash tender offer completed on July 17, 2019, and a subsequent call for redemption for the remaining outstanding amounts. The redemption was settled on August 16, 2019. Additionally, a portion of the proceeds from our \$750.0 million of 3.375% unsecured senior notes payable, \$700.0 million of 4.00% unsecured senior notes payable, and \$400.0 million of 2.75% unsecured senior notes payable issued in September 2019 were used to complete the repayment of the remaining principal balance on our unsecured senior bank term loan of \$350.0 million.

As a result of our debt issuances and repayments of debt, we recognized losses of \$47.6 million related to the early extinguishment of debt during the year ended December 31, 2019, including \$40.2 million related to the refinancing of our 2.75% unsecured senior notes payable due 2020 and 4.60% unsecured senior notes payable and the repayment of our unsecured senior bank term loan.

Repayment of secured notes payable

In January 2019, we repaid early one secured note payable aggregating \$106.7 million, which was originally due in 2020 and bore interest at 7.75%, and recognized a loss on early extinguishment of debt of \$7.1 million, including the write-off of unamortized loan fees.

In March 2019, we repaid early the remaining outstanding balance of \$193.1 million under our secured construction loan related to 50/60 Binney Street, which was due in 2020 and bore interest at LIBOR+1.5%, and recognized a loss on early extinguishment of debt of \$269 thousand, including the write-off of unamortized loan fees.

10. Secured and unsecured senior debt (continued)

Interest expense

Interest expense for the years ended December 31, 2019, 2018, and 2017, consisted of the following (dollars in thousands):

	Year Ended December 31,		
	2019	2018	2017
Interest incurred	\$ 262,238	\$ 223,715	\$ 186,867
Capitalized interest	(88,563)	(66,220)	(58,222)
Interest expense	<u>\$ 173,675</u>	<u>\$ 157,495</u>	<u>\$ 128,645</u>

11. Interest rate hedge agreements

Hedge accounting

From time to time, we utilize interest rate hedge agreements to manage a portion of our exposure to variable interest rates. As a result, our interest rate hedge agreements are generally designated as cash flow hedges. At inception of a hedge agreement, we are required to perform an initial quantitative assessment to determine whether a hedge is highly effective in offsetting changes in cash flows associated with the hedged item. For cash flow hedges that are highly effective at inception and continue to be highly effective, we record all changes (effective and ineffective components) in fair value of our hedges, including accrued interest and adjustments for non-performance risk, in accumulated other comprehensive income within total equity and reclassify them into earnings when the hedged item affects earnings. Refer to the "Hedge Accounting" section in Note 2 – "Summary of Significant Accounting Policies" to our consolidated financial statements for further information about our accounting policy for interest-rate hedge instruments.

Historically, our interest rate hedge agreements have primarily related to our borrowings with variable interest rates based on LIBOR. However, in connection with the LIBOR cessation projected by the end of 2021 and potential replacement of this rate in the U.S. with SOFR, we have implemented numerous proactive measures to minimize the potential impact of the transition to the Company, specifically:

- We have proactively reduced outstanding LIBOR-based borrowings under our unsecured senior bank term loans and secured construction loans through repayments. From January 2017 to December 2018, we retired approximately \$942.0 million of such debt.
- During the year ended December 31, 2019, we further reduced our exposure to LIBOR as follows:
 - Repaid the \$350.0 million balance and extinguished our unsecured senior bank term loan.
 - Fully repaid outstanding balances aggregating \$193.1 million under our LIBOR-based construction loans.
- During the three months ended September 30, 2019, we established a commercial paper program, under which we have the ability to issue up to \$750.0 million of commercial paper notes, bearing interest at short-term fixed rates, with a maximum maturity of 397 days from the date of issuance. Our commercial paper program is not subject to LIBOR and is used for funding short-term working capital needs. As of December 31, 2019, we had no outstanding borrowings under our commercial paper program.
- We continue to prudently manage outstanding borrowings under our unsecured senior line of credit, which represented less than 6% of our total debt balance outstanding as of December 31, 2019. Excluding LIBOR-based debt held by our unconsolidated joint ventures, borrowings under our unsecured senior line of credit represented our only LIBOR-based debt outstanding as of December 31, 2019.

In conjunction with the \$350.0 million repayment of our unsecured senior bank term loan, as discussed above, during the three months ended September 30, 2019, we also terminated all of our interest rate hedge agreements with an aggregate notional balance of \$350.0 million and a weighted-average interest pay rate of 2.57%. Upon discontinuation of the hedging relationship as required by the applicable accounting standards, we evaluated the probability of our making variable interest payments on LIBOR-based borrowing by the date the hedging relationship was originally designated to mature, and determined that it was probable that variable interest payments on LIBOR-based borrowing would not occur. As a result, we reclassified the entire loss on our interest rate hedge agreements aggregating \$1.7 million from accumulated other comprehensive loss into interest expense in our consolidated statements of operations. As of December 31, 2019, we had no outstanding interest rate hedge agreements.

12. Accounts payable, accrued expenses, and other liabilities

The following table summarizes the components of accounts payable, accrued expenses, and other liabilities as of December 31, 2019 and 2018 (in thousands):

	December 31,	
	2019	2018
Accounts payable and accrued expenses	\$ 198,994	\$ 215,539
Accrued construction	275,818	275,882
Acquired below-market leases	194,773	134,808
Conditional asset retirement obligations	14,037	10,343
Deferred rent liabilities ⁽¹⁾	2,897	29,547
Interest rate hedge liabilities	—	768
Operating lease liability ⁽¹⁾	271,808	—
Unearned rent and tenant security deposits	275,863	250,923
Other liabilities	86,078	63,897
Total	<u>\$ 1,320,268</u>	<u>\$ 981,707</u>

(1) Refer to Note 2 – “Summary of Significant Accounting Policies” and Note 5 – “Leases” to our consolidated financial statements for additional information.

Some of our properties may contain asbestos, which, under certain conditions, requires remediation. Although we believe that the asbestos is appropriately contained in accordance with environmental regulations, our practice is to remediate the asbestos upon the development or redevelopment of the affected property. We recognize a liability for the fair value of a conditional asset retirement obligation (including asbestos) when the fair value of the liability can be reasonably estimated. For certain properties, we do not recognize an asset retirement obligation when there is an indeterminate settlement date for the obligation because the period in which we may remediate the obligation may not be estimated with any level of precision to provide a meaningful estimate of the retirement obligation.

13. Earnings per share

From time to time, we enter into forward equity sales agreements, discussed in Note 16 – “Stockholders’ Equity” to our consolidated financial statements. We considered the potential dilution resulting from the forward equity sales agreements on the EPS calculations. At inception, the agreements do not have an effect on the computation of basic EPS as no shares are delivered until settlement. The common shares issued upon the settlement of the forward equity sales agreements, weighted for the period these common shares were outstanding, are included in the denominator of basic EPS. To determine the dilution resulting from the forward equity sales agreements during the period of time prior to settlement, we calculate the number of weighted-average shares outstanding – diluted using the treasury stock method.

During the year ended December 31, 2019, we repurchased, in privately negotiated transactions, 275,000 shares of our 7.00% Series D cumulative convertible preferred stock (“Series D Convertible Preferred Stock”). Additionally, in October 2019 we elected to convert 2.3 million outstanding shares of our Series D Convertible Preferred Stock into shares of our common stock. As of December 31, 2019, we had no shares of our Series D Convertible Preferred Stock outstanding. Refer to “7.00% Series D Cumulative Convertible Preferred Stock Repurchases and Conversion” in Note 16 – “Stockholders’ Equity” to our consolidated financial statements for further detail. For the period during which our Series D Convertible Preferred Stock was outstanding, we calculated the number of weighted-average shares outstanding – diluted using the if-converted method. Shares of Alexandria Real Estate Equities, Inc.’s common shares issued upon conversion, weighted for the period the common shares were outstanding, were included in the denominator for the period after the date of conversion. For purposes of calculating diluted EPS, we did not assume conversion of our Series D Convertible Preferred Stock for the years ended December 31, 2019, 2018, and 2017, since the result was antidilutive to EPS attributable to Alexandria Real Estate Equities, Inc.’s common stockholders from continuing operations during those periods.

We account for unvested restricted stock awards that contain nonforfeitable rights to dividends as participating securities and include these securities in the computation of EPS using the two-class method. Our Series D Convertible Preferred Stock and forward equity sales agreements are not participating securities and are therefore not included in the computation of EPS using the two-class method. Under the two-class method, we allocate net income (after amounts attributable to noncontrolling interests, dividends on preferred stock, and preferred stock redemption charge) to common stockholders and unvested restricted stock awards by using the weighted-average shares of each class outstanding for quarter-to-date and year-to-date periods independently, based on their respective participation rights to dividends declared (or accumulated) and undistributed earnings.

The table below is a reconciliation of the numerators and denominators of the basic and diluted EPS computations for the years ended December 31, 2019, 2018, and 2017 (in thousands, except per share amounts):

	Year Ended December 31,		
	2019	2018	2017
Net income	\$ 404,047	\$ 402,793	\$ 194,204
Net income attributable to noncontrolling interests	(40,882)	(23,481)	(25,111)
Dividends on preferred stock	(3,204)	(5,060)	(7,666)
Preferred stock redemption charge	(2,580)	(4,240)	(11,279)
Net income attributable to unvested restricted stock awards	(6,386)	(6,029)	(4,753)
Numerator for basic and diluted EPS – net income attributable to Alexandria Real Estate Equities, Inc.’s common stockholders	<u>\$ 350,995</u>	<u>\$ 363,983</u>	<u>\$ 145,395</u>
Denominator for basic EPS – weighted-average shares of common stock outstanding	112,204	103,010	91,546
Dilutive effect of forward equity sales agreements	320	311	517
Denominator for diluted EPS – weighted-average shares of common stock outstanding	<u>112,524</u>	<u>103,321</u>	<u>92,063</u>
Net income per share attributable to Alexandria Real Estate Equities, Inc.’s common stockholders:			
Basic	\$ 3.13	\$ 3.53	\$ 1.59
Diluted	\$ 3.12	\$ 3.52	\$ 1.58

14. Income taxes

We have elected to be taxed as a REIT, under the Internal Revenue Code of 1986, as amended, or the Code. We believe we have qualified and continue to qualify as a REIT. Under the Code, a REIT that distributes at least 90% of its REIT taxable income to its shareholders annually and meets certain other conditions is not subject to federal income taxes, but could be subject to certain state, local, and foreign taxes. We distribute 100% of our taxable income annually; therefore, a provision for federal income taxes is not required.

We distributed all of our REIT taxable income in 2018 and 2017 and, as a result, did not incur federal income tax in those years on such income. For the year ended December 31, 2019, we expect our distributions to exceed our REIT taxable income and, as a result, do not expect to incur federal income tax. We expect to finalize our 2019 REIT taxable income when we file our 2019 federal income tax return in 2020.

The income tax treatment of distributions and dividends declared on our common stock, our Series D Convertible Preferred Stock, and our Series E Redeemable Preferred Stock for the years ended December 31, 2019, 2018, and 2017, were as follows (unaudited):

	Common Stock			Series D Convertible Preferred Stock ⁽¹⁾			Series E Redeemable Preferred Stock ⁽¹⁾
	Year Ended December 31,						
	2019	2018	2017	2019	2018	2017	2017
Ordinary income	62.4%	69.9%	62.1%	64.4%	72.7%	85.3%	85.3%
Return of capital	3.2	3.8	27.2	—	—	—	—
Capital gains at 25%	2.2	0.1	0.7	2.2	0.1	1.0	1.0
Capital gains at 20%	32.2	26.2	10.0	33.4	27.2	13.7	13.7
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Dividends declared	\$ 4.00	\$ 3.73	\$ 3.45	\$ 1.3125	\$ 1.75	\$ 1.75	\$ 0.4031

(1) Refer to Note 16 - "Stockholders' Equity" to our consolidated financial statements for information regarding the conversion of our Series D Preferred Stock and redemption of our Series E Preferred Stock.

Beginning in 2018, the Tax Cuts and Jobs Act of 2017 added Section 199A to allow for a new tax deduction based on certain qualified business income. Section 199A provides eligible individual taxpayers a deduction of up to 20 percent of their qualified REIT dividends.

Our dividends declared in a given quarter are generally paid during the subsequent quarter. The taxability information presented above for our dividends paid in 2019 is based upon management's estimate. Our federal tax return for 2019 is due on or before October 15, 2020, assuming we file for an extension of the due date. Our federal tax returns for previous tax years have not been examined by the IRS. Consequently, the taxability of distributions and dividends is subject to change. The income tax treatment of distributions and dividends noted above for the year ended December 31, 2019, is inclusive of the changes to taxable income related to our 2019 real estate transactions described in Note 3 - "Investments in Real Estate" to our consolidated financial statements.

In addition to our REIT tax returns, we file federal, state, and local tax returns for our subsidiaries. We file with jurisdictions located in the U.S., Canada, India, China, and other international locations and may be subject to audits, assessments, or other actions by local taxing authorities. We recognize tax benefits of uncertain tax positions only if it is more likely than not that the tax position will be sustained, based solely on its technical merits, with the taxing authority having full knowledge of all relevant information. The measurement of a tax benefit for an uncertain tax position that meets the "more likely than not" threshold is based on a cumulative probability model under which the largest amount of tax benefit recognized is the amount with a greater than 50% likelihood of being realized upon ultimate settlement with the taxing authority that has full knowledge of all relevant information.

As of December 31, 2019, there were no material unrecognized tax benefits. We do not anticipate a significant change to the total amount of unrecognized tax benefits within the next 12 months.

Interest expense and penalties, if any, are recognized in the first period during which the interest or penalties begin accruing, according to the provisions of the relevant tax law at the applicable statutory rate of interest. We did not incur any significant tax-related interest expense or penalties for the years ended December 31, 2019, 2018, and 2017.

14. Income taxes (continued)

The following reconciles net income (loss) (determined in accordance to GAAP) to taxable income as filed with the IRS for the years ended December 31, 2018 and 2017 (in thousands and unaudited):

	Year Ended December 31,	
	2018	2017
Net income	\$ 402,793	\$ 194,204
Net income attributable to noncontrolling interests	(23,481)	(25,111)
Book/tax differences:		
Rental revenue recognition	(65,901)	(121,589)
Depreciation and amortization	161,514	137,576
Share-based compensation	30,771	23,466
Interest expense	(6,414)	(5,256)
Sales of property	(39,393)	12,166
Impairments	—	9,011
Unrealized (gains)/losses on non-real estate investments	(95,757)	—
Other	(5,043)	3,642
Taxable income before dividend deduction	359,089	228,109
Dividend deduction necessary to eliminate taxable income ⁽¹⁾	(359,089)	(228,109)
Estimated income subject to federal income tax	\$ —	\$ —

(1) Total common stock and preferred stock dividend distributions paid were approximately \$385.8 million and \$321.8 million during the years ended December 31, 2018 and 2017, respectively.

15. Commitments and contingencies

Employee retirement savings plan

We have a retirement savings plan pursuant to Section 401(k) of the Internal Revenue Code (the "Code") whereby our employees may contribute a portion of their compensation to their respective retirement accounts in an amount not to exceed the maximum allowed under the Code. In addition to employee contributions, we have elected to provide company discretionary profit-sharing contributions (subject to statutory limitations), which amounted to approximately \$4.9 million, \$4.1 million, and \$3.2 million for the years ended December 31, 2019, 2018, and 2017, respectively. Employees who participate in the plan are immediately vested in their contributions and in the contributions made on their behalf by the Company.

Concentration of credit risk

We maintain our cash and cash equivalents at insured financial institutions. The combined account balances at each institution periodically exceed the Federal Deposit Insurance Corporation (FDIC) insurance coverage of \$250,000, and, as a result, there is a concentration of credit risk related to amounts in excess of FDIC insurance coverage. We have not experienced any losses to date on our invested cash.

We are dependent on rental revenue from relatively few tenants. The inability of any single tenant to make its lease payments could adversely affect our operations. As of December 31, 2019, we had 820 leases with a total of 622 tenants, and 135, or 46%, of our 291 properties were each leased to a single tenant. As of December 31, 2019, our three largest tenants, accounted for 4.1%, 3.1%, and 3.0% of our aggregate annual rental revenue individually, or 10.2% in the aggregate.

Commitments

As of December 31, 2019, remaining aggregate costs under contract for the construction of properties undergoing development, redevelopment, and improvements under the terms of leases approximated \$1.1 billion. We expect payments for these obligations to occur over one year to three years, subject to capital planning adjustments from time to time. We may have the ability to cease the construction of certain properties, which would result in the reduction of our commitments. In addition, we have letters of credit and performance obligations aggregating \$11.1 million primarily related to construction projects.

We are committed to funding approximately \$229.5 million for non-real estate investments primarily related to our investments in limited partnerships. Our funding commitments expire at various dates over the next 12 years, with a weighted-average remaining period of 8.6 years as of December 31, 2019.

16. Stockholders' equity

Common equity transactions

During the year ended December 31, 2019, we issued 8.7 million shares of common stock and received net proceeds of \$1.2 billion, as follows:

- Issued an aggregate of 8.1 million shares of common stock, at a weighted-average price of \$139.32 per share, for aggregate proceeds (net of underwriters' discounts) of approximately \$1.1 billion. During the year ended December 31, 2019, we incurred initial issuance costs aggregating \$700 thousand in connection with these forward equity sales agreements.
- Issued 602,484 shares of common stock under our ATM program, at a weighted-average price of \$145.58 per share, for net proceeds of \$86.1 million, during the three months ended June 30, 2019. As of December 31, 2019, we had approximately \$22.5 million of gross proceeds available to be issued under our ATM program.
- The proceeds were used to fund construction projects and to fund 2019 acquisitions completed prior to December 2019.

In January 2020, we entered into forward equity sales agreements to sell an aggregate of 6.9 million shares of our common stock (including the exercise of underwriters' option) at a public offering price of \$155.00 per share, before underwriting discounts. We expect to settle these forward equity sales agreements in 2020 and receive proceeds of approximately \$1.0 billion, to be further adjusted as provided in the sales agreements, which will fund pending and recently completed acquisitions and the construction of our highly leased development projects.

7.00% Series D cumulative convertible preferred stock repurchases and conversion

As of December 31, 2019, we had no outstanding shares of our Series D Convertible Preferred Stock remaining. During the year ended December 31, 2019, we repurchased, in privately negotiated transactions, 275,000 outstanding shares of our Series D Convertible Preferred Stock at an aggregate price of \$9.2 million, or \$33.60 per share. We recognized a preferred stock redemption charge of \$2.6 million during the year ended December 31, 2019, including the write-off of original issuance costs of approximately \$215 thousand. Additionally, in September 2019, we elected to convert the remaining 2.3 million outstanding shares of our Series D Convertible Preferred Stock into shares of our common stock. The Series D Convertible Preferred Stock became eligible for mandatory conversion at our discretion, at a set conversion rate of 0.2513 shares of common stock to one share of preferred stock, upon our common stock price exceeding \$149.46 per share for the specified period of time required to cause the mandatory conversion. In October 2019, we converted the Series D Convertible Preferred Stock into 578 thousand shares of common stock. This conversion was accounted for as an equity transaction, and we did not recognize a gain or loss.

As of December 31, 2018, we had 2.6 million shares of our Series D Convertible Preferred Stock issued and outstanding. During the year ended December 31, 2018, we repurchased, in privately negotiated transactions, 402,000 outstanding shares for an aggregate price of \$14.0 million, or \$34.77 per share. We recognized a preferred stock redemption charge of \$4.2 million during the year ended December 31, 2018, including the write-off of original issuance costs of approximately \$314 thousand.

As of December 31, 2017, we had 3.0 million shares of our Series D Convertible Preferred Stock issued and outstanding. During the year ended December 31, 2017, we repurchased, in privately negotiated transactions, 501,115 outstanding shares for an aggregate price of \$17.9 million, or \$35.79 per share. We recognized a preferred stock redemption charge of \$5.8 million during the year ended December 31, 2017, including the write-off of original issuance costs of approximately \$391 thousand.

During the years ended December 31, 2019, 2018, and 2017, we declared cash dividends on our Series D Convertible Preferred Stock aggregating \$3.2 million, or \$1.3125 per share, \$5.1 million, or \$1.75 per share, and \$5.2 million, or \$1.75 per share, respectively.

The dividends on our Series D Convertible Preferred Stock were cumulative and accrued from the date of original issuance. We paid dividends quarterly in arrears at an annual rate of \$1.75 per share. Our Series D Convertible Preferred Stock had no stated maturity and was not subject to any sinking fund or mandatory redemption provisions. We were not allowed to redeem our Series D Convertible Preferred Stock, except to preserve our status as a REIT, but could at our option, cause some or all of our Series D Convertible Preferred Stock to be automatically converted if the closing sale price per share of our common stock equaled or exceeded 150% of the then-applicable conversion price of the Series D Convertible Preferred Stock for at least 20 trading days in a period of 30 consecutive trading days ending on the trading day immediately prior to our issuance of a press release announcing the exercise of our conversion option. Investors in our Series D Convertible Preferred Stock generally had no voting rights, and could at any time and from time to time, convert some or all of their outstanding shares initially at a conversion rate of 0.2477 shares of common stock per \$25.00 liquidation preference, which was equivalent to an initial conversion price of approximately \$100.93 per share of common stock. The conversion rate for the Series D Convertible Preferred Stock was subject to adjustments for certain events, including, but not limited to, certain dividends on our common stock in excess of \$0.78 per share per quarter and dividends on our common stock payable in shares of our common stock.

16. Stockholders' equity (continued)

6.45% Series E cumulative redeemable preferred stock redemption

In March 2017, we announced the redemption of our Series E Redeemable Preferred Stock and recognized a preferred stock redemption charge of \$5.5 million related to the write-off of original issuance costs. On April 14, 2017, we completed the redemption of all 5.2 million outstanding shares of our Series E Redeemable Preferred Stock at a redemption price of \$25.00 per share, or an aggregate of \$130.0 million, plus accrued dividends, using funds primarily from the proceeds of our March 2017 common stock offering.

Accumulated other comprehensive income (loss)

The following table presents the changes in each component of accumulated other comprehensive income (loss) attributable to Alexandria Real Estate Equities, Inc.'s stockholders during the year ended December 31, 2019 (in thousands):

	Net Unrealized Gains (Losses) on:		
	Interest Rate Hedge Agreements	Foreign Currency Translation	Total
Balance as of December 31, 2018	\$ 1,838	\$ (12,273)	\$ (10,435)
Other comprehensive (loss) income before reclassifications	(1,763)	2,524	761
Reclassification of amortization income to interest expense	(1,777)	—	(1,777)
Reclassification of losses in accumulated other comprehensive income to interest expense upon swap termination	1,702	—	1,702
Net other comprehensive (loss) income	(1,838)	2,524	686
Balance as of December 31, 2019	\$ —	\$ (9,749)	\$ (9,749)

Common stock, preferred stock, and excess stock authorizations

Our charter authorizes the issuance of 200.0 million shares of common stock, of which 120.8 million shares were issued and outstanding as of December 31, 2019. Our charter also authorizes the issuance of up to 100.0 million shares of preferred stock, none of which were issued and outstanding as of December 31, 2019. In addition, 200.0 million shares of "excess stock" (as defined in our charter) are authorized, none of which were issued and outstanding as of December 31, 2019.

Additional paid-in capital

During 2019, we sold partial interests in three of our properties at 75/125 Binney Street, 500 Forbes Boulevard, and 5200 Illumina Way. Upon completion of the partial interest sales of these properties aggregating 1.3 million RSF for an aggregate sales price of \$864.2 million, we formed real estate joint ventures with our respective joint venture partners in each transaction. Since we retained controlling interests in all of the resulting joint ventures, we continued to consolidate these entities. Accordingly, we accounted for the difference between consideration in excess of book value received and the book value of the interests sold as equity financing transactions, and the amounts were recorded as adjustments to additional paid-in capital in 2019, with no gain or loss recognized in earnings. These transactions did not qualify as sales of real estate and did not result in purchase accounting adjustments to the carrying value. Accordingly, the carrying amounts of our partner's share of assets and liabilities are reported at historical cost.

17. Share-based compensation

Stock plan

For the purpose of attracting and retaining the highest-quality personnel, providing for additional incentives, and promoting the success of our Company, we have historically issued two forms of share-based compensation under our equity incentive plan: (i) options to purchase common stock and (ii) restricted stock. We have not granted any options since 2002. Each restricted share issued reduced the share reserve by three shares (3:1 ratio) prior to March 23, 2018, and by one share (1:1 ratio) on and after March 23, 2018. As of December 31, 2019, there were 1,858,673 shares reserved for the granting of future options and stock awards under the equity incentive plan.

In addition, the stock plan permits us to issue share awards to our employees, non-employees, and non-employee directors. A share award is an award of common stock that (i) may be fully vested upon issuance or (ii) may be subject to the risk of forfeiture under Section 83 of the Internal Revenue Code. Shares issued generally vest over a four-year period from the date of issuance, and the sale of the shares is restricted prior to the date of vesting. The unearned portion of time-based awards is amortized as stock compensation expense on a straight-line basis over the vesting period. Certain restricted share awards are subject to vesting based upon the satisfaction of levels of performance and market conditions. Failure to satisfy the threshold performance conditions will result in the forfeiture of shares. Forfeiture of share awards with time-based or performance-based restrictions results in a reversal of previously recognized share-based compensation expense. Forfeiture of share awards with market-based restrictions does not result in a reversal of previously recognized share-based compensation expense.

The following is a summary of the stock awards activity under our equity incentive plan and related information for the years ended December 31, 2019, 2018, and 2017:

	Number of Share Awards	Weighted-Average Grant Date Fair Value Per Share
Outstanding at December 31, 2016	1,135,788	\$ 87.21
Granted	688,295	\$ 108.22
Vested	(423,705)	\$ 85.16
Forfeited	(5,796)	\$ 101.45
Outstanding at December 31, 2017	1,394,582	\$ 95.79
Granted	741,244	\$ 121.20
Vested	(403,120)	\$ 103.83
Forfeited	(20,330)	\$ 106.38
Outstanding at December 31, 2018	1,712,376	\$ 105.22
Granted	768,625	\$ 134.70
Vested	(666,836)	\$ 96.77
Forfeited	(14,480)	\$ 119.88
Outstanding at December 31, 2019	1,799,685	\$ 119.59

<i>(In thousands)</i>	Year Ended December 31,		
	2019	2018	2017
Total grant date fair value of stock awards vested	\$ 64,530	\$ 41,854	\$ 36,083
Total gross compensation recognized for stock awards	\$ 68,036	\$ 57,341	\$ 42,292
Capitalized stock compensation	\$ 24,396	\$ 22,322	\$ 16,682

Certain restricted stock awards granted during 2016 through 2019 are subject to performance and market conditions. The grant date fair value of these awards is determined using a Monte Carlo simulation pricing model using the following assumptions for 2019 and 2018, respectively: (i) expected term of 3.0 years and 3.0 years (equal to the remaining performance measurement period at the grant date), (ii) volatility of 18.0% and 16.0% (approximating a blended average of implied and historical volatilities), (iii) dividend yield of 3.2% and 3.1%, and (iv) risk-free rate of 2.60% and 2.15%.

As of December 31, 2019, there was \$168.5 million of unrecognized compensation related to unvested share awards under the equity incentive plan, which is expected to be recognized over the next four years and has a weighted-average vesting period of approximately 19 months.

18. Noncontrolling interests

Noncontrolling interests represent the third-party interests in certain entities in which we have a controlling interest. These entities owned 36 properties as of December 31, 2019, and are included in our consolidated financial statements. Noncontrolling interests are adjusted for additional contributions and distributions, the proportionate share of the net earnings or losses, and other comprehensive income or loss. Distributions, profits, and losses related to these entities are allocated in accordance with the respective operating agreements. During the years ended December 31, 2019 and 2018, we distributed \$48.2 million and \$30.7 million, respectively, to our consolidated real estate joint venture partners.

Certain of our noncontrolling interests have the right to require us to redeem their ownership interests in the respective entities. We classify these ownership interests in the entities as redeemable noncontrolling interests outside of total equity in our consolidated balance sheets. Redeemable noncontrolling interests are adjusted for additional contributions and distributions, the proportionate share of the net earnings or losses, and other comprehensive income or loss. If the amount of a redeemable noncontrolling interest is less than the maximum redemption value at the balance sheet date, such amount is adjusted to the maximum redemption value. Subsequent declines in the redemption value are recognized only to the extent that previous increases have been recognized.

19. Assets classified as held for sale

In December 2019, we decided to sell two of our real estate investments aggregating 123,862 RSF located in non-cluster markets to allow for reinvestment of this capital into our highly leased value-creation pipeline. We evaluated these assets under the held for sale impairment model and determined that these investments met the criteria for classification as held for sale but did not meet the criteria for classification as discontinued operations in our consolidated financial statements. Upon classification as held for sale, we recognized impairment charges aggregating \$12.3 million to lower the carrying amounts to their respective estimated fair values less cost to sell. The fair value considered in the impairment of each investment was determined based on several factors, including significant other observable inputs such as the consideration of fair values of comparable assets in the market, and discounted cash flow analyses.

As of December 31, 2019, four properties aggregating 526,006 RSF were classified as held for sale and did not meet the criteria for classification as discontinued operations in our consolidated financial statements.

The following is a summary of net assets as of December 31, 2019 and 2018, for our real estate investments that were classified as held for sale as of each respective date (in thousands):

	December 31,	
	2019	2018
Total assets	\$ 59,412	\$ 31,260
Total liabilities	(2,860)	(2,476)
Total accumulated other comprehensive loss	536	768
Net assets classified as held for sale	\$ 57,088	\$ 29,552

20. Quarterly financial data (unaudited)

The following is a summary of consolidated financial information on a quarterly basis for 2019 and 2018 (in thousands, except per share amounts):

2019	Quarter			
	First	Second	Third	Fourth
Total revenues	\$ 358,842	\$ 373,856	\$ 390,484	\$ 408,114
Net income (loss) attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 123,598	\$ 76,330	\$ (49,773)	\$ 199,618
Net income (loss) per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders:				
Basic ⁽¹⁾	\$ 1.11	\$ 0.68	\$ (0.44)	\$ 1.75
Diluted ⁽¹⁾	\$ 1.11	\$ 0.68	\$ (0.44)	\$ 1.74

2018	Quarter			
	First	Second	Third	Fourth
Total revenues	\$ 320,139	\$ 325,034	\$ 341,823	\$ 340,463
Net income (loss) attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 132,387	\$ 52,016	\$ 208,940	\$ (31,740)
Net income (loss) per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders:				
Basic ⁽¹⁾	\$ 1.33	\$ 0.51	\$ 2.01	\$ (0.30)
Diluted ⁽¹⁾	\$ 1.32	\$ 0.51	\$ 1.99	\$ (0.30)

(1) Quarterly earnings per common share amounts may not total to the annual amounts due to rounding and due to the increase in the weighted-average shares of common stock outstanding.

21. Subsequent events

Real estate asset acquired in January 2020

In January 2020, we completed acquisitions of four properties for an aggregate purchase price of \$341.2 million, comprising 800,346 RSF of operating and redevelopment opportunities strategically located across multiple markets.

Consolidated real estate joint venture with Boston Properties, Inc.

In January 2020, we formed a real estate joint venture with Boston Properties, Inc., through a non-cash contribution, and are targeting a 51% ownership interest over time. We are the managing member with the power to direct the activities that most significantly affect the economic performance of the joint venture, and will consolidate this joint venture pursuant to the applicable accounting standards. Our partner contributed three office buildings and land supporting 260,000 square feet of future development, and we contributed one office building, one office/laboratory building, one amenity building, at 701, 681, and 685 Gateway Boulevard, respectively, and land supporting 377,000 square feet of future development. This future mega campus in our South San Francisco submarket will aggregate 1.7 million RSF, approximately 50% of which represents future development and redevelopment opportunities.

Forward equity sales agreements

In January 2020, we entered into forward equity sales agreements to sell an aggregate of 6.9 million shares of our common stock (including the exercise of underwriters' option) at a public offering price of \$155.00 per share, before underwriting discounts. Refer to Note 16 – "Stockholders' Equity" to our consolidated financial statements for additional information.

22. Condensed consolidating financial information

Alexandria Real Estate Equities, Inc. (the “Issuer”) has sold certain debt securities registered under the Securities Act of 1933, as amended, that are fully and unconditionally guaranteed by Alexandria Real Estate Equities, L.P. (the “LP” or the “Guarantor Subsidiary”), an indirectly 100% owned subsidiary of the Issuer. The Issuer’s other subsidiaries, including, but not limited to, the subsidiaries that own substantially all of its real estate (collectively, the “Combined Non-Guarantor Subsidiaries”), will not provide a guarantee of such securities, including the subsidiaries that are partially or 100% owned by the LP. The following condensed consolidating financial information presents the condensed consolidating balance sheets as of December 31, 2019 and 2018, and the condensed consolidating statements of operations, comprehensive income, and cash flows for the years ended December 31, 2019, 2018, and 2017, for the Issuer, the Guarantor Subsidiary, and the Combined Non-Guarantor Subsidiaries, as well as the eliminations necessary to arrive at the information on a consolidated basis. In presenting the condensed consolidating financial statements, the equity method of accounting has been applied to (i) the Issuer’s interests in the Guarantor Subsidiary and the Combined Non-Guarantor Subsidiaries, (ii) the Guarantor Subsidiary’s interests in the Combined Non-Guarantor Subsidiaries, and (iii) the Combined Non-Guarantor Subsidiaries’ interests in the Guarantor Subsidiary, where applicable, even though all such subsidiaries meet the requirements to be consolidated under GAAP. All intercompany balances and transactions between the Issuer, the Guarantor Subsidiary, and the Combined Non-Guarantor Subsidiaries have been eliminated, as shown in the column “Eliminations.” All assets and liabilities have been allocated to the Issuer, the Guarantor Subsidiary, and the Combined Non-Guarantor Subsidiaries generally based on legal entity ownership.

22. Condensed consolidating financial information (continued)

Condensed Consolidating Balance Sheet as of December 31, 2019 (In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Assets					
Investments in real estate	\$ —	\$ —	\$ 14,844,038	\$ —	\$ 14,844,038
Investments in unconsolidated real estate JVs	—	—	346,890	—	346,890
Cash and cash equivalents	4,202	—	185,479	—	189,681
Restricted cash	230	—	52,778	—	53,008
Tenant receivables	—	—	10,691	—	10,691
Deferred rent	—	—	641,844	—	641,844
Deferred leasing costs	—	—	270,043	—	270,043
Investments	—	1,014	1,139,580	—	1,140,594
Investments in and advances to affiliates	15,498,357	13,950,850	284,207	(29,733,414)	—
Other assets	70,022	—	823,692	—	893,714
Total assets	\$ 15,572,811	\$ 13,951,864	\$ 18,599,242	\$ (29,733,414)	\$ 18,390,503
Liabilities, Noncontrolling Interests, and Equity					
Secured notes payable	\$ —	\$ —	\$ 349,352	\$ —	\$ 349,352
Unsecured senior notes payable	6,044,127	—	—	—	6,044,127
Unsecured senior line of credit	384,000	—	—	—	384,000
Accounts payable, accrued expenses, and other liabilities	152,580	—	1,167,688	—	1,320,268
Dividends payable	126,278	—	—	—	126,278
Total liabilities	6,706,985	—	1,517,040	—	8,224,025
Redeemable noncontrolling interests	—	—	12,300	—	12,300
Alexandria Real Estate Equities, Inc.'s stockholders' equity	8,865,826	13,951,864	15,781,550	(29,733,414)	8,865,826
Noncontrolling interests	—	—	1,288,352	—	1,288,352
Total equity	8,865,826	13,951,864	17,069,902	(29,733,414)	10,154,178
Total liabilities, noncontrolling interests, and equity	\$ 15,572,811	\$ 13,951,864	\$ 18,599,242	\$ (29,733,414)	\$ 18,390,503

22. Condensed consolidating financial information (continued)

Condensed Consolidating Balance Sheet
as of December 31, 2018
(In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Assets					
Investments in real estate	\$ —	\$ —	\$ 11,913,693	\$ —	\$ 11,913,693
Investments in unconsolidated real estate JVs	—	—	237,507	—	237,507
Cash and cash equivalents	119,112	—	115,069	—	234,181
Restricted cash	193	—	37,756	—	37,949
Tenant receivables	—	—	9,798	—	9,798
Deferred rent	—	—	530,237	—	530,237
Deferred leasing costs	—	—	239,070	—	239,070
Investments	—	1,262	891,002	—	892,264
Investments in and advances to affiliates	12,235,577	10,949,631	222,983	(23,408,191)	—
Other assets	56,353	—	313,904	—	370,257
Total assets	\$ 12,411,235	\$ 10,950,893	\$ 14,511,019	\$ (23,408,191)	\$ 14,464,956
Liabilities, Noncontrolling Interests, and Equity					
Secured notes payable	\$ —	\$ —	\$ 630,547	\$ —	\$ 630,547
Unsecured senior notes payable	4,292,293	—	—	—	4,292,293
Unsecured senior line of credit	208,000	—	—	—	208,000
Unsecured senior bank term loan	347,415	—	—	—	347,415
Accounts payable, accrued expenses, and other liabilities	111,282	—	870,425	—	981,707
Dividends payable	110,280	—	—	—	110,280
Total liabilities	5,069,270	—	1,500,972	—	6,570,242
Redeemable noncontrolling interests	—	—	10,786	—	10,786
Alexandria Real Estate Equities, Inc.'s stockholders' equity	7,341,965	10,950,893	12,457,298	(23,408,191)	7,341,965
Noncontrolling interests	—	—	541,963	—	541,963
Total equity	7,341,965	10,950,893	12,999,261	(23,408,191)	7,883,928
Total liabilities, noncontrolling interests, and equity	\$ 12,411,235	\$ 10,950,893	\$ 14,511,019	\$ (23,408,191)	\$ 14,464,956

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Operations
for the Year Ended December 31, 2019
(In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Revenues:					
Income from rentals	\$ —	\$ —	\$ 1,516,864	\$ —	\$ 1,516,864
Other income	22,731	—	14,684	(22,983)	14,432
Total revenues	22,731	—	1,531,548	(22,983)	1,531,296
Expenses:					
Rental operations	—	—	445,492	—	445,492
General and administrative	106,523	—	25,283	(22,983)	108,823
Interest	164,249	—	9,426	—	173,675
Depreciation and amortization	6,949	—	537,663	—	544,612
Impairment of real estate	—	—	12,334	—	12,334
Loss on early extinguishment of debt	40,209	—	7,361	—	47,570
Total expenses	317,930	—	1,037,559	(22,983)	1,332,506
Equity in earnings of unconsolidated real estate JVs	—	—	10,136	—	10,136
Equity in earnings of affiliates	658,364	490,393	9,644	(1,158,401)	—
Investment income	—	34	194,613	—	194,647
Gain on sales of real estate	—	—	474	—	474
Net income	363,165	490,427	708,856	(1,158,401)	404,047
Net income attributable to noncontrolling interests	—	—	(40,882)	—	(40,882)
Net income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	363,165	490,427	667,974	(1,158,401)	363,165
Dividends on preferred stock	(3,204)	—	—	—	(3,204)
Preferred stock redemption charge	(2,580)	—	—	—	(2,580)
Net income attributable to unvested restricted stock awards	(6,386)	—	—	—	(6,386)
Net income attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 350,995	\$ 490,427	\$ 667,974	\$ (1,158,401)	\$ 350,995

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Operations
for the Year Ended December 31, 2018
(In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Revenues:					
Income from rentals	\$ —	\$ —	\$ 1,314,781	\$ —	\$ 1,314,781
Other income	19,275	—	14,941	(21,538)	12,678
Total revenues	19,275	—	1,329,722	(21,538)	1,327,459
Expenses:					
Rental operations	—	—	381,120	—	381,120
General and administrative	88,707	—	23,236	(21,538)	90,405
Interest	136,036	—	21,459	—	157,495
Depreciation and amortization	6,339	—	471,322	—	477,661
Impairment of real estate	—	—	6,311	—	6,311
Loss on early extinguishment of debt	823	—	299	—	1,122
Total expenses	231,905	—	903,747	(21,538)	1,114,114
Equity in earnings of unconsolidated real estate JVs	—	—	43,981	—	43,981
Equity in earnings of affiliates	591,942	455,574	9,057	(1,056,573)	—
Investment income	—	528	136,235	—	136,763
Gain on sales of real estate	—	—	8,704	—	8,704
Net income	379,312	456,102	623,952	(1,056,573)	402,793
Net income attributable to noncontrolling interests	—	—	(23,481)	—	(23,481)
Net income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	379,312	456,102	600,471	(1,056,573)	379,312
Dividends on preferred stock	(5,060)	—	—	—	(5,060)
Preferred stock redemption charge	(4,240)	—	—	—	(4,240)
Net income attributable to unvested restricted stock awards	(6,029)	—	—	—	(6,029)
Net income attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 363,983	\$ 456,102	\$ 600,471	\$ (1,056,573)	\$ 363,983

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Operations for the Year Ended December 31, 2017 (In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Revenues:					
Income from rentals	\$ —	\$ —	\$ 1,122,325	\$ —	\$ 1,122,325
Other income (loss)	15,238	(2,575)	11,278	(18,169)	5,772
Total revenues	15,238	(2,575)	1,133,603	(18,169)	1,128,097
Expenses:					
Rental operations	—	—	325,609	—	325,609
General and administrative	73,897	—	19,281	(18,169)	75,009
Interest	101,876	—	26,769	—	128,645
Depreciation and amortization	7,625	—	409,158	—	416,783
Impairment of real estate	—	—	203	—	203
Loss on early extinguishment of debt	670	—	2,781	—	3,451
Total expenses	184,068	—	783,801	(18,169)	949,700
Equity in losses of unconsolidated real estate JVs	—	—	15,426	—	15,426
Equity in earnings of affiliates	337,923	328,230	6,384	(672,537)	—
Gain on sale of real estate – rental properties	—	—	270	—	270
Gain on sales of real estate – land parcels	—	—	111	—	111
Net income	169,093	325,655	371,993	(672,537)	194,204
Net income attributable to noncontrolling interests	—	—	(25,111)	—	(25,111)
Net income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	169,093	325,655	346,882	(672,537)	169,093
Dividends on preferred stock	(7,666)	—	—	—	(7,666)
Preferred stock redemption charge	(11,279)	—	—	—	(11,279)
Net income attributable to unvested restricted stock awards	(4,753)	—	—	—	(4,753)
Net income attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 145,395	\$ 325,655	\$ 346,882	\$ (672,537)	\$ 145,395

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Comprehensive Income
for the Year Ended December 31, 2019
(In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Net income	\$ 363,165	\$ 490,427	\$ 708,856	\$ (1,158,401)	\$ 404,047
Other comprehensive (loss) income					
Unrealized losses on interest rate hedge agreements:					
Unrealized interest rate hedge losses arising during the period	(1,763)	—	—	—	(1,763)
Reclassification adjustment for amortization to interest expense included in net income	(1,777)	—	—	—	(1,777)
Reclassification of losses related to terminated interest rate hedge instruments to interest expense included in net income	1,702	—	—	—	1,702
Unrealized losses on interest rate hedge agreements, net	(1,838)	—	—	—	(1,838)
Unrealized gains on foreign currency translation:					
Unrealized foreign currency translation gains arising during the period	—	—	2,524	—	2,524
Unrealized gains on foreign currency translation, net	—	—	2,524	—	2,524
Total other comprehensive (loss) income	(1,838)	—	2,524	—	686
Comprehensive income	361,327	490,427	711,380	(1,158,401)	404,733
Less: comprehensive income attributable to noncontrolling interests	—	—	(40,882)	—	(40,882)
Comprehensive income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	<u>\$ 361,327</u>	<u>\$ 490,427</u>	<u>\$ 670,498</u>	<u>\$ (1,158,401)</u>	<u>\$ 363,851</u>

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Comprehensive Income
for the Year Ended December 31, 2018
(In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Net income	\$ 379,312	\$ 456,102	\$ 623,952	\$ (1,056,573)	\$ 402,793
Other comprehensive loss					
Unrealized losses on interest rate hedge agreements:					
Unrealized interest rate hedge gains arising during the period	1,622	—	—	—	1,622
Reclassification adjustment for amortization to interest expense included in net income	(4,941)	—	—	—	(4,941)
Unrealized losses on interest rate hedge agreements, net	(3,319)	—	—	—	(3,319)
Unrealized losses on foreign currency translation:					
Unrealized foreign currency translation losses arising during the period	—	—	(7,369)	—	(7,369)
Unrealized losses on foreign currency translation, net	—	—	(7,369)	—	(7,369)
Total other comprehensive loss	(3,319)	—	(7,369)	—	(10,688)
Comprehensive income	375,993	456,102	616,583	(1,056,573)	392,105
Less: comprehensive income attributable to noncontrolling interests	—	—	(23,481)	—	(23,481)
Comprehensive income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	<u>\$ 375,993</u>	<u>\$ 456,102</u>	<u>\$ 593,102</u>	<u>\$ (1,056,573)</u>	<u>\$ 368,624</u>

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Comprehensive Income
for the Year Ended December 31, 2017
(In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Net income	\$ 169,093	\$ 325,655	\$ 371,993	\$ (672,537)	\$ 194,204
Other comprehensive income (loss)					
Unrealized (losses) gains on available-for-sale equity securities:					
Unrealized holding (losses) gains arising during the period	—	(5)	24,365	—	24,360
Reclassification adjustment for losses included in net income	—	2	6,116	—	6,118
Unrealized (losses) gains on available-for-sale equity securities, net	—	(3)	30,481	—	30,478
Unrealized gains (losses) on interest rate hedge agreements:					
Unrealized interest rate hedge gains (losses) arising during the period	3,025	—	(188)	—	2,837
Reclassification adjustment for amortization to interest expense included in net income	1,914	—	1	—	1,915
Unrealized gains (losses) on interest rate hedge agreements, net	4,939	—	(187)	—	4,752
Unrealized gains on foreign currency translation:					
Unrealized foreign currency translation gains arising during the period	—	—	7,774	—	7,774
Reclassification adjustment for cumulative foreign currency translation losses included in net income upon sale or liquidation	—	—	1,599	—	1,599
Unrealized gains on foreign currency translation, net	—	—	9,373	—	9,373
Total other comprehensive income (loss)	4,939	(3)	39,667	—	44,603
Comprehensive income	174,032	325,652	411,660	(672,537)	238,807
Less: comprehensive income attributable to noncontrolling interests	—	—	(25,045)	—	(25,045)
Comprehensive income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	<u>\$ 174,032</u>	<u>\$ 325,652</u>	<u>\$ 386,615</u>	<u>\$ (672,537)</u>	<u>\$ 213,762</u>

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Cash Flows for the Year Ended December 31, 2019 (In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Operating Activities					
Net income	\$ 363,165	\$ 490,427	\$ 708,856	\$ (1,158,401)	\$ 404,047
Adjustments to reconcile net income to net cash (used in) provided by operating activities:					
Depreciation and amortization	6,949	—	537,663	—	544,612
Loss on early extinguishment of debt	40,209	—	7,361	—	47,570
Impairment of real estate	—	—	12,334	—	12,334
Gain on sales of real estate – rental properties	—	—	(474)	—	(474)
Equity in earnings of unconsolidated real estate JVs	—	—	(10,136)	—	(10,136)
Distributions of earnings from unconsolidated real estate JVs	—	—	2,796	—	2,796
Amortization of loan fees	8,780	—	325	—	9,105
Amortization of debt premiums	(573)	—	(3,204)	—	(3,777)
Amortization of acquired below-market leases	—	—	(29,813)	—	(29,813)
Deferred rent	—	—	(104,235)	—	(104,235)
Stock compensation expense	43,640	—	—	—	43,640
Equity in earnings of affiliates	(658,364)	(490,393)	(9,644)	1,158,401	—
Investment income	—	(34)	(194,613)	—	(194,647)
Changes in operating assets and liabilities:					
Tenant receivables	—	—	(897)	—	(897)
Deferred leasing costs	—	—	(54,455)	—	(54,455)
Other assets	(7,171)	—	(13,654)	—	(20,825)
Accounts payable, accrued expenses, and other liabilities	22,076	—	16,936	—	39,012
Net cash (used in) provided by operating activities	(181,289)	—	865,146	—	683,857
Investing Activities					
Proceeds from sales of real estate	—	—	6,619	—	6,619
Additions to real estate	—	—	(1,224,541)	—	(1,224,541)
Purchases of real estate	—	—	(2,259,778)	—	(2,259,778)
Deposits for investing activities	—	—	(18,107)	—	(18,107)
Investments in subsidiaries	(2,604,416)	(2,510,826)	(51,580)	5,166,822	—
Investments in unconsolidated real estate JVs	—	—	(102,081)	—	(102,081)
Return of capital from unconsolidated real estate JVs	—	—	14	—	14
Additions to non-real estate investments	—	—	(190,778)	—	(190,778)
Sales of non-real estate investments	—	282	147,050	—	147,332
Net cash used in investing activities	\$ (2,604,416)	\$ (2,510,544)	\$ (3,693,182)	\$ 5,166,822	\$ (3,641,320)

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Cash Flows (continued) for the Year Ended December 31, 2019 (In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Financing Activities					
Repayments of borrowings from secured notes payable	\$ —	\$ —	\$ (306,199)	\$ —	\$ (306,199)
Proceeds from issuance of unsecured senior notes payable	2,721,169	—	—	—	2,721,169
Repayments of unsecured senior notes payable	(950,000)	—	—	—	(950,000)
Borrowings from unsecured senior line of credit	5,056,000	—	—	—	5,056,000
Repayments of borrowings from unsecured senior line of credit	(4,880,000)	—	—	—	(4,880,000)
Proceeds from issuance of commercial paper program	2,233,000	—	—	—	2,233,000
Repayments of borrowings from commercial paper program	(2,233,000)	—	—	—	(2,233,000)
Repayments of borrowings from unsecured senior bank term loan	(350,000)	—	—	—	(350,000)
Premium paid for early extinguishment of debt	(34,677)	—	(6,674)	—	(41,351)
Transfer to/from parent company	404,556	2,510,544	2,251,722	(5,166,822)	—
Payments of loan fees	(26,774)	—	(408)	—	(27,182)
Taxes paid related to net settlement of equity awards	(25,477)	—	—	—	(25,477)
Repurchases of 7.00% Series D cumulative convertible preferred stock	(9,240)	—	—	—	(9,240)
Proceeds from the issuance of common stock	1,216,445	—	—	—	1,216,445
Dividends on common stock	(447,029)	—	—	—	(447,029)
Dividends on preferred stock	(4,141)	—	—	—	(4,141)
Contributions from and sales of noncontrolling interests	—	—	1,022,712	—	1,022,712
Distributions to and purchase of noncontrolling interests	—	—	(48,225)	—	(48,225)
Net cash provided by financing activities	2,670,832	2,510,544	2,912,928	(5,166,822)	2,927,482
Effect of foreign exchange rate changes on cash and cash equivalents	—	—	540	—	540
Net (decrease) increase in cash, cash equivalents, and restricted cash	(114,873)	—	85,432	—	(29,441)
Cash, cash equivalents, and restricted cash as of the beginning of period	119,305	—	152,825	—	272,130
Cash, cash equivalents, and restricted cash as of the end of period	\$ 4,432	\$ —	\$ 238,257	\$ —	\$ 242,689
Supplemental Disclosure and Non-Cash Investing and Financing Activities:					
Cash paid during the period for interest, net of interest capitalized	\$ 133,033	\$ —	\$ 13,132	\$ —	\$ 146,165
Change in accrued construction	\$ —	\$ —	\$ (24)	\$ —	\$ (24)
Accrued construction for current-period additions to real estate	\$ —	\$ —	\$ 220,773	\$ —	\$ 220,773
Assumption of secured notes payable in connection with purchase of properties	\$ —	\$ —	\$ (28,200)	\$ —	\$ (28,200)
Right-of-use asset	\$ —	\$ —	\$ 269,189	\$ —	\$ 269,189
Lease liability	\$ —	\$ —	\$ (275,175)	\$ —	\$ (275,175)
Contribution of real estate from noncontrolling interests	\$ —	\$ —	\$ 115,167	\$ —	\$ 115,167
Issuance of common stock for conversion of 7.00% Series D preferred stock	\$ 57,461	\$ —	\$ —	\$ —	\$ 57,461

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Cash Flows for the Year Ended December 31, 2018 (In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Operating Activities					
Net income	\$ 379,312	\$ 456,102	\$ 623,952	\$ (1,056,573)	\$ 402,793
Adjustments to reconcile net income to net cash (used in) provided by operating activities:					
Depreciation and amortization	6,339	—	471,322	—	477,661
Loss on early extinguishment of debt	823	—	299	—	1,122
Impairment of real estate	—	—	6,311	—	6,311
Gain on sales of real estate – rental properties	—	—	(8,704)	—	(8,704)
Equity in earnings from unconsolidated real estate JVs	—	—	(43,981)	—	(43,981)
Distributions of earnings from unconsolidated real estate JVs	—	—	430	—	430
Amortization of loan fees	8,777	—	1,494	—	10,271
Amortization of debt discounts (premiums)	797	—	(3,203)	—	(2,406)
Amortization of acquired below-market leases	—	—	(21,938)	—	(21,938)
Deferred rent	—	—	(93,883)	—	(93,883)
Stock compensation expense	35,019	—	—	—	35,019
Equity in earnings of affiliates	(591,942)	(455,574)	(9,057)	1,056,573	—
Investment income	—	(528)	(136,235)	—	(136,763)
Changes in operating assets and liabilities:					
Tenant receivables	—	—	435	—	435
Deferred leasing costs	—	—	(57,088)	—	(57,088)
Other assets	(14,701)	—	(6,148)	—	(20,849)
Accounts payable, accrued expenses, and other liabilities	20,663	—	1,246	—	21,909
Net cash (used in) provided by operating activities	(154,913)	—	725,252	—	570,339
Investing Activities					
Proceeds from sales of real estate	—	—	20,190	—	20,190
Additions to real estate	—	—	(927,168)	—	(927,168)
Purchases of real estate	—	—	(1,037,180)	—	(1,037,180)
Deposits for investing activities	—	—	(2,000)	—	(2,000)
Investments in subsidiaries	(1,693,774)	(1,463,063)	(30,076)	3,186,913	—
Acquisitions of interest in unconsolidated real estate JVs	—	—	(35,922)	—	(35,922)
Investments in unconsolidated real estate JVs	—	—	(116,008)	—	(116,008)
Return of capital from unconsolidated real estate JVs	—	—	68,592	—	68,592
Additions to non-real estate investments	—	—	(235,943)	—	(235,943)
Sales of non-real estate investments	—	956	102,723	—	103,679
Net cash used in investing activities	\$ (1,693,774)	\$ (1,462,107)	\$ (2,192,792)	\$ 3,186,913	\$ (2,161,760)

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Cash Flows (continued) for the Year Ended December 31, 2018 (In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Financing Activities					
Borrowings from secured notes payable	\$ —	\$ —	\$ 17,784	\$ —	\$ 17,784
Repayments of borrowings from secured notes payable	—	—	(156,888)	—	(156,888)
Proceeds from issuance of unsecured senior notes payable	899,321	—	—	—	899,321
Borrowings from unsecured senior line of credit	4,741,000	—	—	—	4,741,000
Repayments of borrowings from unsecured senior line of credit	(4,583,000)	—	—	—	(4,583,000)
Repayment of borrowings from unsecured senior bank term loan	(200,000)	—	—	—	(200,000)
Transfer to/from parent company	105,961	1,462,098	1,618,854	(3,186,913)	—
Payments of loan fees	(19,292)	—	—	—	(19,292)
Repurchases of 7.00% Series D cumulative convertible preferred stock	(13,976)	—	—	—	(13,976)
Proceeds from the issuance of common stock	1,293,301	—	—	—	1,293,301
Dividends on common stock	(380,632)	—	—	—	(380,632)
Dividends on preferred stock	(5,207)	—	—	—	(5,207)
Contributions from and sales of noncontrolling interests	—	—	28,275	—	28,275
Distributions to and purchase of noncontrolling interests	—	—	(32,253)	—	(32,253)
Net cash provided by financing activities	1,837,476	1,462,098	1,475,772	(3,186,913)	1,588,433
Effect of foreign exchange rate changes on cash and cash equivalents	—	—	(2,068)	—	(2,068)
Net (decrease) increase in cash, cash equivalents, and restricted cash	(11,211)	(9)	6,164	—	(5,056)
Cash, cash equivalents, and restricted cash as of the beginning of period	130,516	9	146,661	—	277,186
Cash, cash equivalents, and restricted cash as of the end of period	\$ 119,305	\$ —	\$ 152,825	\$ —	\$ 272,130
Supplemental Disclosure and Non-Cash Investing and Financing Activities:					
Cash paid during the period for interest, net of interest capitalized	\$ 104,935	\$ —	\$ 22,158	\$ —	\$ 127,093
Change in accrued construction	\$ —	\$ —	\$ 81,177	\$ —	\$ 81,177
Accrued construction for current-period additions to real estate	\$ —	\$ —	\$ 244,147	\$ —	\$ 244,147
Payable for purchase of real estate	\$ —	\$ —	\$ (65,000)	\$ —	\$ (65,000)

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Cash Flows for the Year Ended December 31, 2017 (In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non- Guarantor Subsidiaries	Eliminations	Consolidated
Operating Activities					
Net income	\$ 169,093	\$ 325,655	\$ 371,993	\$ (672,537)	\$ 194,204
Adjustments to reconcile net income to net cash (used in) provided by operating activities:					
Depreciation and amortization	7,625	—	409,158	—	416,783
Loss on early extinguishment of debt	670	—	2,781	—	3,451
Impairment of real estate	—	—	203	—	203
Gains on sales of real estate – rental properties	—	—	(270)	—	(270)
Gains on sales of real estate – land parcels	—	—	(111)	—	(111)
Equity in earnings from unconsolidated real estate JVs	—	—	(15,426)	—	(15,426)
Distributions of earnings from unconsolidated real estate JVs	—	—	1,618	—	1,618
Amortization of loan fees	7,627	—	3,522	—	11,149
Amortization of debt discounts (premiums)	608	—	(3,120)	—	(2,512)
Amortization of acquired below-market leases	—	—	(19,055)	—	(19,055)
Deferred rent	—	—	(107,643)	—	(107,643)
Stock compensation expense	25,610	—	—	—	25,610
Equity in earnings of affiliates	(337,923)	(328,230)	(6,384)	672,537	—
Investment income	—	2,575	(3,904)	—	(1,329)
Changes in operating assets and liabilities:					
Tenant receivables	—	—	(502)	—	(502)
Deferred leasing costs	—	—	(62,639)	—	(62,639)
Other assets	(9,343)	—	(8,879)	—	(18,222)
Accounts payable, accrued expenses, and other liabilities	(10,524)	—	36,097	—	25,573
Net cash (used in) provided by operating activities	(146,557)	—	597,439	—	450,882
Investing Activities					
Proceeds from sales of real estate	—	—	15,432	—	15,432
Additions to real estate	—	—	(893,685)	—	(893,685)
Purchases of real estate	—	—	(675,584)	—	(675,584)
Deposits for investing activities	—	—	(2,300)	—	(2,300)
Investments in subsidiaries	(1,458,973)	(1,257,845)	(25,872)	2,742,690	—
Acquisition of interest in unconsolidated real estate JVs	—	—	(60,291)	—	(60,291)
Investments in unconsolidated real estate joint ventures	—	—	(17,876)	—	(17,876)
Return of capital from unconsolidated real estate JVs	—	—	38,576	—	38,576
Additions to non-real estate investments	—	—	(171,881)	—	(171,881)
Sales of non-real estate investments	—	208	30,275	—	30,483
Net cash used in investing activities	\$ (1,458,973)	\$ (1,257,637)	\$ (1,763,206)	\$ 2,742,690	\$ (1,737,126)

22. Condensed consolidating financial information (continued)

Condensed Consolidating Statement of Cash Flows (continued) for the Year Ended December 31, 2017 (In thousands)

	Alexandria Real Estate Equities, Inc. (Issuer)	Alexandria Real Estate Equities, L.P. (Guarantor Subsidiary)	Combined Non-Guarantor Subsidiaries	Eliminations	Consolidated
Financing Activities					
Borrowings from secured notes payable	\$ —	\$ —	\$ 153,405	\$ —	\$ 153,405
Repayments of borrowings from secured notes payable	—	—	(396,240)	—	(396,240)
Proceeds from issuance of unsecured senior notes payable	1,023,262	—	—	—	1,023,262
Borrowings from unsecured senior line of credit	3,858,000	—	—	—	3,858,000
Repayments of borrowings from unsecured senior line of credit	(3,836,000)	—	—	—	(3,836,000)
Repayment of borrowings from unsecured senior bank term loan	(200,000)	—	—	—	(200,000)
Transfer to/from parent company	64,156	1,257,646	1,420,888	(2,742,690)	—
Payments of loan fees	(9,440)	—	(579)	—	(10,019)
Repurchases of 7.00% Series D cumulative convertible preferred stock	(17,934)	—	—	—	(17,934)
Redemption of 6.45% Series E cumulative redeemable preferred stock	(130,350)	—	—	—	(130,350)
Proceeds from the issuance of common stock	1,275,397	—	—	—	1,275,397
Dividends on common stock	(312,131)	—	—	—	(312,131)
Dividends on preferred stock	(9,619)	—	—	—	(9,619)
Contributions from and sales of noncontrolling interests	—	—	44,931	—	44,931
Distributions to and purchases of noncontrolling interests	—	—	(22,361)	—	(22,361)
Net cash provided by financing activities	1,705,341	1,257,646	1,200,044	(2,742,690)	1,420,341
Effect of foreign exchange rate changes on cash and cash equivalents	—	—	1,723	—	1,723
Net increase in cash, cash equivalents, and restricted cash	99,811	9	36,000	—	135,820
Cash, cash equivalents, and restricted cash as of the beginning of period	30,705	—	110,661	—	141,366
Cash, cash equivalents, and restricted cash as of the end of period	\$ 130,516	\$ 9	\$ 146,661	\$ —	\$ 277,186
Supplemental Disclosure and Non-Cash Investing and Financing Activities:					
Cash paid during the period for interest, net of interest capitalized	\$ 85,705	\$ —	\$ 26,408	\$ —	\$ 112,113
Change in accrued construction	\$ —	\$ —	\$ (11,034)	\$ —	\$ (11,034)
Accrued construction for current-period additions to real estate	\$ —	\$ —	\$ 179,154	\$ —	\$ 179,154
Contribution of real estate from noncontrolling interests	\$ —	\$ —	\$ 8,597	\$ —	\$ 8,597
Contribution of real estate to an unconsolidated real estate JV	\$ —	\$ —	\$ 6,998	\$ —	\$ 6,998

Schedule III

Alexandria Real Estate Equities, Inc. and Subsidiaries
Schedule III
Consolidated Financial Statement Schedule of Real Estate and Accumulated Depreciation
December 31, 2019
(Dollars in thousands)

Property	Market	Encumbrances	Initial Costs			Total Costs			Accumulated Depreciation ⁽²⁾	Net Cost Basis	Date of Construction ⁽³⁾	Date Acquired
			Buildings & Improvements		Land	Buildings & Improvements		Land				
			\$			\$						
Alexandria Center [®] at Kendall Square	Greater Boston	—	\$ 279,668	\$ 205,491	\$ 1,440,945	\$ 279,668	\$ 1,646,436	\$ 1,926,104	\$ 1,684,303	2000 - 2017	2005 - 2015	
Alexandria Technology Square [®]	Greater Boston	—	—	619,668	234,311	—	853,969	853,969	602,952	2001 - 2012	2006	
The Arsenal on the Charles	Greater Boston	—	181,797	354,611	1,464	181,797	356,075	537,872	537,872	2000 - 2017	2019	
Alexandria Center [®] at One Kendall Square	Greater Boston	208,411	349,952	483,816	282,309	349,952	766,125	1,116,077	(80,606)	1985 - 2019	2016 - 2017	
480 and 500 Arsenal Street	Greater Boston	—	9,773	12,773	88,226	9,773	100,999	110,772	(40,689)	2001 - 2003	2000 - 2001	
640 Memorial Drive	Greater Boston	81,175	—	174,878	741	—	175,619	175,619	(36,598)	2011	2015	
780 and 790 Memorial Drive	Greater Boston	—	—	—	54,490	—	54,490	54,490	(24,387)	2002	2001	
167 Sidney Street and 99 Erie Street	Greater Boston	—	—	12,613	13,733	—	26,346	26,346	(7,383)	2006 - 2012	2005 - 2006	
79/96 13th Street (Charlestown Navy Yard)	Greater Boston	—	—	6,247	8,706	—	14,953	14,953	(5,661)	2012	1998	
5 Necco Street	Greater Boston	—	41,958	41,546	582	41,958	42,128	84,086	(250)	2019	2019	
10 Necco Street	Greater Boston	—	67,743	13,357	4,202	67,743	17,559	85,302	(255)	N/A	2019	
15 Necco Street	Greater Boston	—	—	—	172,114	—	172,114	172,114	—	N/A	2019	
99 A Street	Greater Boston	—	31,671	878	9,306	31,671	10,184	41,855	(938)	1968	2018	
Alexandria Park at 128	Greater Boston	—	10,439	41,596	79,501	10,439	121,097	131,536	(44,353)	1997 - 2010	1998 - 2008	
225, 266, and 275 Second Avenue	Greater Boston	—	17,086	69,994	60,562	17,086	130,546	147,632	(19,074)	2014 - 2018	2014 - 2017	
100 Tech Drive	Greater Boston	—	11,977	85,620	235	11,977	85,855	97,832	(4,765)	2015	2018	
19 Presidential Way	Greater Boston	—	12,833	27,333	23,133	12,833	50,466	63,299	(17,114)	1999	2005	
100 Beaver Street	Greater Boston	—	1,466	9,046	22,201	1,466	31,247	32,713	(7,129)	2006	2005	
285 Bear Hill Road	Greater Boston	—	422	3,538	6,905	422	10,443	10,865	(2,417)	2013	2011	
111 and 130 Forbes Boulevard	Greater Boston	—	3,146	15,725	3,165	3,146	18,890	22,036	(6,284)	2006	2006 - 2007	
20 Walkup Drive	Greater Boston	—	2,261	7,099	9,029	2,261	16,128	18,389	(3,833)	2012	2006	
30 Bearfoot Road	Greater Boston	—	1,220	22,375	59	1,220	22,434	23,654	(21,533)	2000	2005	
Alexandria Center [®] for Science and Technology – Mission Bay	San Francisco	—	211,450	210,211	442,961	211,450	653,172	864,622	(145,182)	2007 - 2014	2004 - 2017	
510 Townsend Street	San Francisco	—	52,105	—	174,287	52,105	174,287	226,392	(12,754)	2017	2014	
945 Market Street	San Francisco	—	99,294	86,360	5,770	99,294	92,130	191,424	—	2016	2019	
505 Brannan Street	San Francisco	—	31,710	2,540	107,671	31,710	110,211	141,921	(6,726)	2017	2015	
260 Townsend Street	San Francisco	27,561	26,392	33,921	471	26,392	34,392	60,784	(714)	2017	2019	
88 Bluxome Street	San Francisco	—	148,551	21,514	52,292	148,551	73,806	222,357	(7,951)	N/A	2017	
213, 249, 259, 269, and 279 East Grand Avenue	San Francisco	—	59,199	—	542,156	59,199	542,156	601,355	(47,537)	2008 - 2019	2004	

Schedule III (continued)

Property	Market	Encumbrances	Initial Costs		Costs Capitalized Subsequent to Acquisitions		Total Costs		Accumulated Depreciation ⁽²⁾	Net Cost Basis	Date of Construction ⁽³⁾	Date Acquired
			Land	Buildings & Improvements	Buildings & Improvements	Land	Buildings & Improvements	Total ⁽¹⁾				
Alexandria Technology Center [®] - Gateway	San Francisco	—	71,005	168,894	101,122	71,005	270,016	341,021	(65,979)	275,042	1998 - 2019	2002 - 2017
201 Haskins Way	San Francisco	—	32,245	1,287	118,801	32,245	120,088	152,333	(1,445)	150,888	N/A	2017
400 and 450 East Jamie Court	San Francisco	—	—	—	117,282	—	117,282	117,282	(47,091)	70,191	2012	2002
500 Forbes Boulevard	San Francisco	—	35,596	69,091	17,503	35,596	86,594	122,190	(27,166)	95,024	2001	2007
7000 Shoreline Court	San Francisco	—	7,038	39,704	19,454	7,038	59,158	66,196	(19,317)	46,879	2001	2004
341 and 343 Oyster Point Boulevard	San Francisco	—	7,038	—	43,433	7,038	43,433	50,471	(17,640)	32,831	2009 - 2013	2000
849/863 Mitten Road/866 Malcolm Road	San Francisco	—	3,211	8,665	24,070	3,211	32,735	35,946	(13,318)	22,628	2012	1998
Alexandria District for Science and Technology	San Francisco	—	87,566	—	190,881	87,566	190,881	278,447	—	278,447	N/A	2017
3825 and 3875 Fabian Way	San Francisco	—	194,424	54,519	872	194,424	55,391	249,815	(119)	249,696	1969 - 2014	2019
Alexandria Stamford Life Science District	San Francisco	—	—	152,437	5,536	—	157,973	157,973	(11,248)	146,725	1998 - 2017	2003 - 2019
Alexandria PARC	San Francisco	—	72,859	53,309	16,637	72,859	69,946	142,805	(3,265)	139,540	1984 - 2019	2018
960 Industrial Road	San Francisco	—	79,969	5,558	19,589	79,969	25,147	105,116	(4,852)	100,264	N/A	2017
2425 Garcia Avenue & 2400/2450 Bayshore Parkway	San Francisco	728	1,512	21,323	26,261	1,512	47,584	49,096	(22,637)	26,459	2008	1999
Shoreway Science Center	San Francisco	—	20,049	48,554	152	20,049	48,706	68,755	(1,262)	67,493	2016	2019
1450 Page Mill Road	San Francisco	—	—	84,467	104	—	84,571	84,571	(5,590)	78,981	2017	2017
3350 West Bayshore Road	San Francisco	—	4,800	6,693	20,325	4,800	27,018	31,818	(5,726)	26,092	1982	2005
2625/2627/2631 Hanover Street	San Francisco	—	—	6,628	11,910	—	18,538	18,538	(10,424)	8,114	2000	1999
Alexandria Center [®] for Life Science	New York City	—	—	—	848,102	—	848,102	848,102	(170,156)	677,946	2010 - 2016	2006
219 East 42nd Street	New York City	—	141,266	63,312	2,149	141,266	65,461	206,727	(13,573)	193,154	1995	2018
47-50 30th Street	New York City	—	25,000	—	2,120	25,000	2,120	27,120	—	27,120	1942	2019
Alexandria Center [®] - Long Island City	New York City	—	22,746	53,093	13,283	22,746	66,376	89,122	(369)	88,753	N/A	2018
ARE Spectrum	San Diego	—	32,361	80,957	203,705	32,361	284,662	317,023	(55,306)	261,717	2008 - 2017	2007 - 2017
ARE Torrey Ridge	San Diego	—	22,124	152,840	52,470	22,124	205,310	227,434	(32,702)	194,732	2003 - 2004	2016
ARE Sunrise	San Diego	—	6,118	17,947	82,874	6,118	100,821	106,939	(51,853)	55,086	2000 - 2015	1994 - 2004
ARE Nautilus	San Diego	—	6,684	27,600	123,685	6,684	151,285	157,969	(44,910)	113,059	2009 - 2012	1994 - 1997
3545 Cray Court	San Diego	31,477	7,056	53,944	11,537	7,056	65,481	72,537	(40,636)	31,901	1998	2014
11119 North Torrey Pines Road	San Diego	—	9,994	37,099	34,147	9,994	71,246	81,240	(20,799)	60,441	2012	2007
Campus Pointe by Alexandria	San Diego	—	88,016	393,713	441,342	88,016	835,055	923,071	(110,603)	812,468	1988 - 2019	2010 - 2019
5200 Illumina Way	San Diego	—	38,340	96,606	195,156	38,340	291,762	330,102	(49,000)	281,102	2004 - 2017	2010
University District	San Diego	—	18,221	48,840	203,245	18,221	252,085	270,306	(82,398)	187,908	1989 - 2018	1998 - 2014
SD Tech by Alexandria	San Diego	—	54,648	169,485	4,835	54,648	174,320	228,968	(663)	228,405	2014	2019
Summers Ridge Science Park	San Diego	—	21,154	102,046	3,491	21,154	105,537	126,691	(5,277)	121,414	2005	2018
10121 and 10151 Barnes Canyon Road	San Diego	—	4,608	5,100	19,110	4,608	24,210	28,818	(4,103)	24,715	1988 - 2014	2013

Schedule III (continued)

Property	Market	Encumbrances	Initial Costs			Costs Capitalized Subsequent to Acquisitions			Total Costs	Accumulated Depreciation ⁽²⁾	Net Cost Basis	Date of Construction ⁽³⁾	Date Acquired		
			Buildings & Improvements		Land	Buildings & Improvements		Land						Buildings & Improvements	Total ⁽¹⁾
			Land	Buildings & Improvements	Land	Buildings & Improvements									
ARE Portola	San Diego	—	6,991	25,153	39,893	6,991	65,046	72,037	(12,389)	59,648	2005 - 2012	2007			
5810/5820 Nancy Ridge Drive	San Diego	—	5,476	28,682	(52)	5,476	28,630	34,106	(10,137)	23,969	2000 - 2001	2003 - 2004			
7330 Carroll Road	San Diego	—	2,650	19,878	1,912	2,650	21,790	24,440	(5,860)	18,580	2007	2010			
5871 Oberlin Drive	San Diego	—	1,349	8,016	6,019	1,349	14,035	15,384	(2,232)	13,152	2004	2010			
Vista Wateridge I & II	San Diego	—	3,286	—	735	3,286	735	4,021	—	4,021	N/A	2017			
3911, 3931, 3985, 4025, 4031, 4045, and 4075 Sorrento Valley Boulevard	San Diego	—	18,177	35,178	31,920	18,177	67,098	85,275	(24,580)	60,695	2007 - 2015	2010 - 2019			
11025, 11035, 11045, 11055, 11065, and 11075 Roselle Street	San Diego	—	4,156	11,571	42,744	4,156	54,315	58,471	(12,252)	46,219	2006 - 2014	1997 - 2014			
13112 Evening Creek Drive	San Diego	—	7,393	27,950	232	7,393	28,182	35,575	(13,055)	22,520	2007	2007			
Townsgate by Alexandria	San Diego	—	16,416	—	3,620	16,416	3,620	20,036	—	20,036	N/A	2018			
The Eastlake Life Science Campus by Alexandria - North Campus	Seattle	—	24,205	35,296	391,761	24,205	427,057	451,262	(85,863)	365,399	2007 - 2019	2003 - 2015			
The Eastlake Life Science Campus by Alexandria - South Campus	Seattle	—	22,987	47,149	100,758	22,987	147,907	170,894	(45,301)	125,593	1997	2002 - 2008			
400 Dexter Avenue North	Seattle	—	11,342	—	211,045	11,342	211,045	222,387	(20,303)	202,084	2017	2007			
2301 5th Avenue	Seattle	—	6,543	76,180	1,130	6,543	77,310	83,853	(2,980)	80,873	2002	2018			
219 Terry Avenue North	Seattle	—	1,819	2,302	19,892	1,819	22,194	24,013	(7,143)	16,870	2012	2007			
601 Dexter Avenue North	Seattle	—	29,412	408	1,541	29,412	1,949	31,361	—	31,361	1985	2019			
701 Dexter Avenue North	Seattle	—	35,316	719	6,149	35,316	6,868	42,184	(340)	41,844	1984	2018			
3000/3018 Western Avenue	Seattle	—	1,432	7,497	24,181	1,432	31,678	33,110	(16,287)	16,823	2000	1998			
410 West Harrison/410 Elliott Avenue West	Seattle	—	3,857	1,989	11,266	3,857	13,255	17,112	(5,707)	11,405	2006 - 2008	2004			
9800, 9900, 9920 and 9950 Medical Center Drive	Maryland	—	20,219	112,543	180,483	20,219	293,026	313,245	(76,214)	237,031	1985 - 2018	2004 - 2017			
9704, 9708, 9712, and 9714 Medical Center Drive	Maryland	—	10,258	74,173	766	10,258	74,939	85,197	(3,229)	81,968	2015	2018			
1330 Piccard Drive	Maryland	—	2,800	11,533	34,933	2,800	46,466	49,266	(18,830)	30,436	2005	1997			
1500 and 1550 East Gude Drive	Maryland	—	1,523	7,731	6,445	1,523	14,176	15,699	(8,979)	6,720	1995 - 2003	1997			
14920 and 15010 Brochart Road	Maryland	—	4,904	15,846	5,471	4,904	21,317	26,221	(5,979)	20,242	1998 - 1999	2004 - 2010			
1405 Research Boulevard	Maryland	—	899	21,946	14,363	899	36,309	37,208	(14,621)	22,587	2006	1997			
5 Research Place	Maryland	—	1,466	5,708	28,981	1,466	34,689	36,155	(14,768)	21,387	2010	2001			
5 Research Court	Maryland	—	1,647	13,258	24,060	1,647	37,318	38,965	(14,379)	24,586	2007	2004			
9920 Belward Campus Drive	Maryland	—	2,732	12,308	76	2,732	12,384	15,116	(527)	14,589	2007	2018			
12301 Parklawn Drive	Maryland	—	1,476	7,267	1,184	1,476	8,451	9,927	(2,949)	6,978	2007	2004			
14200 Shady Grove Road	Maryland	—	25,000	—	903	25,000	903	25,903	—	25,903	N/A	2019			
Alexandria Technology Center [®] - Gathersburg I	Maryland	—	20,980	121,952	39,799	20,980	161,751	182,731	(36,204)	146,527	1992 - 2019	1997 - 2019			
Alexandria Technology Center [®] - Gathersburg II	Maryland	—	6,938	34,685	33,085	6,938	67,770	74,708	(27,742)	46,966	2000 - 2015	1997 - 2018			

Schedule III (continued)

Property	Market	Encumbrances	Initial Costs		Costs Capitalized Subsequent to Acquisitions		Total Costs			Accumulated Depreciation ⁽²⁾	Net Cost Basis	Date of Construction ⁽³⁾	Date Acquired
			Land	Buildings & Improvements	Buildings & Improvements	Land	Buildings & Improvements	Total ⁽¹⁾					
401 Professional Drive	Maryland	—	1,129	6,941	10,125	1,129	17,066	18,195	(7,192)	11,003	2007	1996	
950 Wind River Lane	Maryland	—	2,400	10,620	1,050	2,400	11,670	14,070	(3,348)	10,722	2009	2010	
620 Professional Drive	Maryland	—	784	4,705	7,353	784	12,058	12,842	(5,490)	7,352	2012	2005	
8000/9000/10000 Virginia Manor Road	Maryland	—	—	13,679	7,189	—	20,868	20,868	(10,460)	10,408	2003	1998	
14225 Newbrook Drive	Maryland	—	4,800	27,639	11,562	4,800	39,201	44,001	(17,364)	26,637	2006	1997	
Alexandria Technology Center® – Alston	Research Triangle	—	1,430	17,482	31,096	1,430	48,578	50,008	(23,693)	26,315	1985 - 2009	1998	
Alexandria Center® for AgTech, Phase I – Research Triangle	Research Triangle	—	2,000	6,756	69,863	2,000	76,619	78,619	(1,562)	77,057	2018	2017	
Alexandria Center® for AgTech, Phase II – Research Triangle	Research Triangle	—	800	—	9,663	800	9,663	10,463	—	10,463	N/A	2018	
108/110/112/114 TW Alexander Drive	Research Triangle	—	—	376	43,195	—	43,571	43,571	(19,650)	23,921	2000	1999	
Alexandria Innovation Center® – Research Triangle	Research Triangle	—	1,065	21,218	30,249	1,065	51,467	52,532	(18,709)	33,823	2005 - 2008	2000	
6 Davis Drive	Research Triangle	—	9,029	10,712	20,318	9,029	31,030	40,059	(12,914)	27,145	2012	2012	
7 Triangle Drive	Research Triangle	—	701	—	32,502	701	32,502	33,203	(7,289)	25,914	2011	2005	
2525 East NC Highway 54	Research Triangle	—	713	12,827	20,751	713	33,578	34,291	(9,480)	24,811	1995	2004	
407 Davis Drive	Research Triangle	—	1,229	17,733	712	1,229	18,445	19,674	(3,449)	16,225	1998	2013	
601 Keystone Park Drive	Research Triangle	—	785	11,546	7,103	785	18,649	19,434	(6,034)	13,400	2009	2006	
6040 George Watts Hill Drive	Research Triangle	—	—	—	26,344	—	26,344	26,344	(3,127)	23,217	2015	2014	
5 Triangle Drive	Research Triangle	—	161	3,409	7,933	161	11,342	11,503	(5,248)	6,255	1981	1998	
6101 Quadrangle Drive	Research Triangle	—	951	3,982	11,146	951	15,128	16,079	(3,281)	12,798	2012	2008	
Canada	Canada	—	10,350	43,884	15,208	10,350	59,092	69,442	(22,245)	47,197	2004 - 2012	2005 - 2007	
Various	Various	—	64,176	115,107	217,354	64,176	332,461	396,637	(58,994)	337,643	Various	Various	
Total – North America		349,352	3,173,913	5,681,985	8,662,711	3,173,913	14,344,696	17,518,609	(2,704,657)	14,813,952			
Asia		—	—	—	34,347	—	34,347	34,347	(4,261)	30,086	2015	2008	
		\$ 349,352	\$ 3,173,913	\$ 5,681,985	\$ 8,697,058	\$ 3,173,913	\$ 14,379,043	\$ 17,552,956	\$ (2,708,918)	\$ 14,844,038			

Schedule III (continued)

Alexandria Real Estate Equities, Inc.
Consolidated Financial Statement Schedule of Rental Properties and Accumulated Depreciation
December 31, 2019
(Dollars in thousands)

- (1) The aggregate cost of real estate for federal income tax purposes is not materially different from the cost basis under GAAP (unaudited).
- (2) The depreciable life ranges up to 40 years for buildings and improvements, up to 20 years for land improvements, and the term of the respective lease for tenant improvements.
- (3) Represents the later of the date of original construction or the date of the latest renovation.

Schedule III (continued)

Alexandria Real Estate Equities, Inc.
Consolidated Financial Statement Schedule of Real Estate and Accumulated Depreciation
December 31, 2019
(In thousands)

A summary of activity of consolidated investments in real estate and accumulated depreciation is as follows:

Real Estate	December 31,		
	2019	2018	2017
Balance at beginning of period	\$ 14,181,780	\$ 12,178,255	\$ 10,632,518
Acquisitions (including real estate, land, and joint venture consolidation)	2,240,376	1,057,036	707,522
Additions to real estate	1,143,035	959,410	881,463
Deductions (including dispositions and direct financing leases)	(12,235)	(12,921)	(43,248)
Balance at end of period	<u>\$ 17,552,956</u>	<u>\$ 14,181,780</u>	<u>\$ 12,178,255</u>

Accumulated Depreciation	December 31,		
	2019	2018	2017
Balance at beginning of period	\$ 2,268,087	\$ 1,880,236	\$ 1,554,546
Depreciation expense on properties	448,661	390,471	348,064
Sale of properties	(7,830)	(2,620)	(22,374)
Balance at end of period	<u>\$ 2,708,918</u>	<u>\$ 2,268,087</u>	<u>\$ 1,880,236</u>

**DESCRIPTION OF REGISTRANT'S SECURITIES
REGISTERED PURSUANT TO SECTION 12 OF
THE SECURITIES EXCHANGE ACT OF 1934**

The following is a brief description of the securities of Alexandria Real Estate Equities, Inc. (the "Company" or "we," "us" or "our") registered pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). This description of the terms of our stock does not purport to be complete and is subject to and qualified in its entirety by reference to the applicable provisions of Maryland General Corporation Law ("MGCL"), and the full text of our charter and our amended and restated bylaws ("bylaws").

General

Our charter provides that we may issue up to

- 200,000,000 shares of common stock, \$.01 par value per share ("common stock");
- 100,000,000 shares of preferred stock, \$.01 par value per share ("preferred stock"); and
- 200,000,000 shares of excess stock, \$.01 par value per share, or excess stock (as described below).

As of December 31, 2019, the following securities were issued and outstanding:

- 120,800,315 shares of our common stock; and
- No shares of our preferred stock.

Under Maryland law, stockholders generally are not liable for a corporation's debts or obligations.

Common Stock

As of December 31, 2019 and the date hereof, our common stock is the only class of our securities registered under Section 12 of the Exchange Act.

Dividends. Subject to the preferential rights of any other class or series of our stock and to the provisions of our charter regarding restrictions on ownership and transfer of our stock, holders of our common stock are entitled to receive dividends on such shares if, as and when authorized by our board of directors ("Board") and declared by us out of assets legally available therefor. Our holders of common stock are also entitled to share ratably in our assets legally available for distribution to our stockholders in the event of our liquidation, dissolution or winding up after payment of or adequate provision for all our known debts and liabilities.

Voting. Subject to the provisions of our charter regarding the restrictions on ownership and transfer of our stock, each outstanding share of common stock entitles the holder thereof to one vote on all matters submitted to a vote of stockholders, including the election of directors, and, except as provided with respect to any other class or series of our stock, the holders of such shares will possess the exclusive voting power. In uncontested elections of directors, the affirmative vote of a majority of the total votes cast "for" or "against," or withheld as to a director nominee is sufficient to elect such director nominee. In contested elections, a plurality of votes cast is required for the election of a director. There is no cumulative voting in the election of directors, which means that the holders of a majority of the outstanding shares of our common stock can elect all of the directors then standing for election, and the holders of the remaining shares will not be able to elect any directors.

Other Rights. Holders of shares of our common stock generally have no preference, conversion, exchange, sinking fund or appraisal rights and have no preemptive rights to subscribe for any of our securities. Subject to the provisions of our charter regarding restrictions on ownership and transfer of our stock, shares of our common stock will each have equal distribution, liquidation and other rights.

Reclassification. Our charter authorizes our Board to reclassify any unissued shares of our common stock into other classes or series of classes of stock and to establish the number of shares in each class or series and to set the preferences, conversion or other rights, voting powers, restrictions, limitations as to dividends or other distributions, qualifications and terms and conditions of redemption for each such class or series. Thus, our Board could authorize the issuance of shares of common stock or preferred stock with terms and conditions which could have the effect of delaying, deferring or preventing a transaction or a change in control that might involve a premium price for holders of our common stock or otherwise be in their best interest.

Listing. Our outstanding shares of common stock are listed on the New York Stock Exchange under the symbol "ARE." Any additional shares of common stock we issue will also be listed on the New York Stock Exchange upon official notice of issuance.

Preferred Stock

As of December 31, 2019 and the date hereof, we have no outstanding shares of preferred stock.

Our charter authorizes our Board, without the approval of our stockholders, to classify any unissued shares of preferred stock and to reclassify any previously classified but unissued shares of preferred stock of any series. Prior to the issuance of shares of

any series, our Board is required by the MGCL and our charter to set, subject to the provisions of our charter regarding restrictions on transfer of our stock, the terms, preferences, conversion or other rights, voting powers, restrictions, limitations as to dividends or other distributions, qualifications or terms or conditions of redemption for each such series, all of which will be set forth in articles supplementary to our charter adopted for that purpose by our Board or a duly authorized special committee thereof. Using this authority, our Board could authorize the issuance of shares of preferred stock with terms and conditions that could delay, defer or prevent a transaction or a change in control that might involve a premium price for holders of our common stock or for other reasons be desired by them.

Upon issuance against full payment of the purchase price therefor, shares of preferred stock will be fully paid and nonassessable. The specific terms of a particular class or series of preferred stock to be issued will be set forth in articles supplementary or an amendment to our charter and will be described in a prospectus, prospectus supplement or other offering material (collectively, "offering materials") relating to that class or series, including information providing that preferred stock may be issuable upon the exercise of warrants or conversion of other securities issued by us.

Power to Issue Additional Shares of Common Stock and Preferred Stock

We believe that the power of our Board to authorize us to issue additional authorized but unissued shares of common stock or preferred stock and to classify or reclassify unissued shares of our common stock or preferred stock and thereafter to cause us to issue such classified or reclassified shares of stock will provide us with increased flexibility in structuring possible future financing and acquisition transactions and in meeting other needs that may arise. The additional classes or series of our preferred stock, as well as our common stock, will be available for issuance without further action by our stockholders, unless further action is required by applicable law or the rules of any stock exchange or automated quotation system on which our securities may be listed or traded. Although our Board has no present intention to do so, it could authorize us to issue a class or series of stock that could, depending upon the terms of such class or series, delay, defer or prevent a transaction or a change in control that might involve a premium price for holders of common stock or for other reasons be desired by them.

Restrictions on Ownership and Transfer

In order to qualify as a real estate investment trust ("REIT") under the Internal Revenue Code of 1986, as amended (the "Code"), not more than 50% of the value of our outstanding stock may be owned, directly or constructively, by five or fewer individuals or certain tax-exempt entities (as set forth in the Code) during the last half of a taxable year (other than the first year for which an election to be a REIT has been made). Furthermore, shares of our outstanding stock must be beneficially owned by 100 or more persons during at least 335 days of a taxable year of 12 months (other than the first year for which an election to be a REIT has been made) or during a proportionate part of a shorter taxable year.

In order for us to maintain our qualification as a REIT, among other purposes, our charter provides for an ownership limit, which prohibits, with certain exceptions, direct or constructive ownership of shares of stock representing more than 9.8% of the combined total value of our outstanding shares of stock by any person, as defined in our charter.

Our Board, in its sole discretion, may waive the ownership limit for any person. However, our Board may not grant such waiver if, after giving effect to such waiver, five individuals could beneficially own, in the aggregate, more than 49.9% of the value of our outstanding stock. As a condition to waiving the ownership limit, our Board may require a ruling from the Internal Revenue Service (the "IRS") or an opinion of counsel in order to determine our status as a REIT. Notwithstanding the receipt of any such ruling or opinion, our Board may impose such conditions or restrictions as it deems appropriate in connection with granting a waiver.

Our charter further prohibits any person from:

- beneficially or constructively owning shares of our stock that would result in us being "closely held" under Section 856(h) of the Code; and
- transferring shares of our stock if such transfer would result in shares of our stock being owned by fewer than 100 persons.

Any transfer in violation of any of these restrictions is void *ab initio*. Any person who acquires or attempts to acquire beneficial or constructive ownership of shares of our stock in violation of the foregoing restrictions on ownership and transfer is required to give us notice immediately and provide us with such other information as we may request in order to determine the effect of such transfer on our status as a REIT. The foregoing restrictions on ownership and transfer will not apply if our Board determines that it is no longer in our best interests to continue to qualify, or to attempt to qualify, as a REIT.

If any transfer of shares of our stock or other event occurs that would result in any person beneficially or constructively becoming the owner of shares of our stock in excess or in violation of the above ownership or transfer limitations, or becoming a prohibited owner, then that number of shares of our stock (rounded up to the nearest whole share) the beneficial or constructive ownership of which otherwise would cause such person to violate such limitations shall be automatically exchanged for an equal number of shares of excess stock. Those shares of excess stock will be automatically transferred to a trust for the exclusive benefit of one or more charitable beneficiaries, and the prohibited owner will generally not acquire any rights in such shares. This automatic exchange will be deemed to be effective as of the close of business on the business day prior to the date of such violative transfer. Shares of excess stock held in the trust will be issued and outstanding shares of our stock. The prohibited owner will not:

- benefit economically from ownership of any shares of excess stock held in the trust;
- have any rights to distributions thereon; or
- possess any rights to vote or other rights attributable to the shares of excess stock held in the trust.

The trustee of the trust will have all voting rights and rights to dividends or other distributions with respect to shares of stock held in the trust, which rights shall be exercised for the exclusive benefit of the charitable beneficiary. Any dividend or other distribution paid prior to the discovery by us that shares of stock have been transferred to the trustee will be paid by the recipient of such dividend or distribution to us upon demand, or, at our sole election, will be offset against any future dividends or distributions payable to the purported transferee or holder, and any dividend or distribution authorized but unpaid will be rescinded as void *ab initio* with respect to such shares of stock and promptly thereafter paid over to the trustee with respect to such shares of excess stock, as trustee of the trust for the exclusive benefit of the charitable beneficiary. The prohibited owner will have no voting rights with respect to shares of excess stock held in the trust and, subject to Maryland law, effective as of the date that such shares of stock have been transferred to the trustee, the trustee will have the authority (at the trustee's sole discretion) to:

- rescind as void any vote cast by a prohibited owner prior to the discovery by us that such shares have been transferred to the trustee, and
- recast such vote in accordance with the desires of the trustee acting for the benefit of the charitable beneficiary.

However, if we have already taken irreversible corporate action, then the trustee will not have the authority to rescind and recast such vote.

Within 180 days after the date of the event that resulted in shares of our excess stock being transferred to the trust (or as soon as possible thereafter if the trustee did not learn of such event within such period), the trustee shall sell the shares of stock held in the trust to a person, designated by the trustee, whose ownership of the shares will not violate the ownership and transfer limitations set forth in our charter. Upon such sale, the interest of the charitable beneficiary in the shares sold will terminate and those shares of excess stock will be automatically exchanged for an equal number of shares of the same class or series of stock that originally were exchanged for the excess stock.

The trustee shall distribute to the prohibited owner, as appropriate:

- the price paid by the prohibited owner for the shares;
- if the prohibited owner did not give value for the shares in connection with the event causing the shares to be held in the trust (e.g., a gift, devise or other such transaction), the "market price" (as defined in our charter) of such shares on the day of the event causing the shares to be held in the trust; or
- if the exchange for excess stock did not arise as a result of a purported transfer, the market price of such shares on the day of the other event causing the shares to be held in the trust.

If such shares are sold by a prohibited owner, then to the extent that the prohibited owner received an amount for such shares that exceeds the amount that such prohibited owner was entitled to receive pursuant to the aforementioned requirement, such excess shall be paid to the trustee.

All certificates representing shares of common stock and preferred stock will bear a legend referring to the restrictions described above.

Every owner of more than 5% (or such lower percentage as may be required by our charter, the Code or the Treasury regulations promulgated thereunder) of all classes or series of our stock, including shares of common stock, within 30 days after the end of each taxable year, is required to give written notice to us stating the name and address of such owner, the number of shares of each class and series of our stock which the owner beneficially owns and a description of the manner in which such shares are held. Each such owner must provide us such additional information as we may reasonably request in order to determine the effect, if any, of such beneficial ownership on our status as a REIT. In addition, each stockholder will be required upon demand to provide us such information as we may reasonably request in order to determine our status as a REIT, to comply with the requirements of any taxing authority or governmental authority or to determine such compliance, or to comply with the REIT provisions of the Code.

These ownership limits could delay, defer or prevent a transaction or a change in control that might involve a premium price for the holders of our common stock, or might otherwise be desired by such holders.

Certain Provisions of Maryland Law and of Our Charter and Bylaws

The following summary of certain provisions of MGCL and of our charter and bylaws does not purport to be complete and is subject to and qualified in its entirety by reference to MGCL and our charter and bylaws.

Board of Directors

Our bylaws provide that the number of our directors may be established by our Board, but may not be fewer than the minimum number required by the MGCL, which is one, nor more than 15. All directors are elected to serve until the next annual meeting of our stockholders and until their successors are duly elected and qualify.

Our charter and bylaws provide that our stockholders may remove any director by a vote of not less than two-thirds of all the votes entitled to be cast on the matter. Our charter and bylaws further provide that our Board may fill board vacancies and that any director elected to fill a vacancy may hold office for the remainder of the full term of the class of directors in which the vacancy occurred. Holders of shares of common stock will have no right to cumulative voting in the election of directors. Consequently, at each annual meeting of stockholders, the holders of a majority of the shares of common stock will be able to elect all of the directors then standing for election.

Business Combinations

Under the MGCL, specified “business combinations” (including a merger, consolidation, share exchange or, in specified circumstances, an asset transfer or issuance or reclassification of equity securities) between a Maryland corporation and an interested stockholder or an affiliate of an interested stockholder are prohibited for five years after the most recent date on which the 10% or more beneficial owner acquires such status. An interested stockholder is defined as:

- any person who beneficially owns 10% or more of the voting power of the corporation’s outstanding voting stock; or
- an affiliate of the corporation who, at any time within the two-year period prior to the date in question, was the beneficial owner of 10% or more of the voting power of the then-outstanding voting stock of the corporation.

A person is not an interested stockholder under the statute if the board of directors approved in advance the transaction by which he otherwise would have become an interested stockholder. In approving a transaction, the board of directors may provide that its approval is subject to compliance, at or after the time of approval, with any terms and conditions determined by the board.

After the five year period, any such business combination between the Maryland corporation and an interested stockholder must be recommended by the board of directors of such corporation and approved by the affirmative vote of at least:

- 80% of the votes entitled to be cast by holders of outstanding shares of voting stock of the corporation; and
- two-thirds of the votes entitled to be cast by holders of voting stock of the corporation other than shares held by the interested stockholder with whom, or with whose affiliate, the business combination is to be effected, or held by an affiliate or associate of the interested stockholder.

These super-majority vote requirements do not apply if the corporation’s common stockholders receive “a minimum price” (as defined in the MGCL) for their shares; and the consideration is received in cash or in the same form as previously paid by the 10% or more beneficial owner for its shares.

These provisions of the MGCL do not apply, however, to business combinations that are approved or exempted by the board of directors of the corporation prior to the time before the interested stockholder becomes an interested stockholder. Our Board has adopted a resolution providing that the “business combination” provisions of the MGCL shall not apply to us generally and that such resolution is irrevocable unless revocation, in whole or in part, is approved by the holders of a majority of the outstanding shares of common stock, but revocation will not affect any business combination consummated, or any business combination contemplated by any agreement entered into, prior to the revocation. As a result of the foregoing, any person who becomes a 10% or more beneficial owner may be able to enter into business combinations with us that may not be in the best interest of the stockholders, without our compliance with the business combination provisions of the MGCL.

Control Share Acquisitions

The MGCL provides that control shares of a Maryland corporation acquired in a control share acquisition have no voting rights except to the extent approved by the affirmative vote of holders of two-thirds of the votes entitled to be cast on the matter, excluding shares of stock owned by the acquiror, by officers or by directors who are employees of the corporation. Control shares are voting shares of stock which, if aggregated with all other such shares of stock previously acquired by the acquiror or in respect of which the acquiror is able to exercise or direct the exercise of voting power (except solely by virtue of a revocable proxy), would entitle the acquiror to exercise voting power in electing directors within one of the following ranges of voting power:

- one-tenth or more but less than one-third;
- one-third or more but less than a majority; or
- a majority or more of all voting power.

Control shares do not include shares the acquiring person is then entitled to vote as a result of having previously obtained stockholder approval. A control share acquisition means the acquisition of control shares, subject to specified exceptions.

Under Maryland law, a person who has made or proposes to make a control share acquisition, upon satisfaction of specified conditions (including an undertaking to pay expenses of the meeting), may compel the board of directors of the corporation to call a special meeting of stockholders to be held within 50 days of demand to consider the voting rights of the shares. If no request for a meeting is made, the corporation may itself present the question at any meeting of the stockholders.

If voting rights are not approved at the meeting or if the acquiring person does not deliver an acquiring person statement as required by the statute, then, subject to specified conditions and limitations, the corporation may redeem any or all of the control shares (except those for which voting rights have previously been approved) for fair value determined, without regard to the absence of voting rights for the control shares, as of the date of the last control share acquisition by the acquiror or of any meeting of stockholders at which the voting rights of such shares are considered and not approved. If voting rights for control shares are approved at a meeting of the stockholders and the acquiror becomes entitled to vote a majority of the shares entitled to vote, all other stockholders may exercise appraisal rights. The fair value of the shares as determined for purposes of such appraisal rights may not be less than the highest price per share paid by the acquiror in the control share acquisition.

The control share acquisition statute does not apply (a) to shares acquired in a merger, consolidation or share exchange if the corporation is a party to the transaction, or (b) to acquisitions approved or exempted by the charter or bylaws of the corporation.

Our bylaws contain a provision exempting from the control share acquisition statute any acquisition by any person of shares of our stock. Our Board has resolved that, subject to Maryland law, this provision may not be amended or repealed without the approval of holders of at least a majority of the outstanding shares of common stock. There can be no assurance, however, that

the provision will not be amended or eliminated in the future or that the resolution is enforceable under Maryland law.

Advance Notice of Director Nominations and New Business and Proxy Access

Our bylaws provide that:

- with respect to an annual meeting of stockholders, nominations of individuals for election to our Board and the proposal of business to be considered by stockholders may be made only:
 - pursuant to our notice of the meeting;
 - by or at the direction of our Board; or
 - by a stockholder who is entitled to vote at the meeting and has complied with the advance notice procedures set forth in the bylaws; and
- with respect to special meetings of stockholders, only the business specified in our notice of meeting may be brought before the special meeting of stockholders. Nominations of persons for election to our Board may be made at a special meeting of stockholders at which directors are to be elected only:
 - by or at the direction of our Board; or
 - provided that our Board has determined that directors shall be elected at such meeting, by a stockholder who is entitled to vote at the meeting and has complied with the advance notice provisions set forth in the bylaws.

Our bylaws permit qualifying stockholders, or a qualifying group of no more than 20 stockholders, that have continuously owned at least 3% of our outstanding common stock throughout at least a three-year period to nominate and to require us to include in its proxy materials director nominees constituting up to the greater of two director nominees or 25% of the number of directors serving on the Board, provided that the stockholder(s) and the nominee(s) satisfy the requirements specified in our bylaws and subject to the terms and conditions therein.

Amendment to Our Bylaws

Our Board has the exclusive power to adopt, alter, repeal or amend our bylaws.

Extraordinary Actions

Under the MGCL, a Maryland corporation generally cannot dissolve, amend its charter, merge, sell all or substantially all of its assets, engage in a share exchange, convert or engage in similar transactions outside the ordinary course of business unless advised by the board of directors and approved by the affirmative vote of stockholders holding at least two-thirds of the shares entitled to vote on the matter unless a lesser percentage (but not less than a majority of all of the votes entitled to be cast on the matter) is set forth in the corporation's charter. Our charter provides for approval of such matters by the affirmative vote of a majority of all of the votes entitled to be cast thereon. Maryland law permits a corporation to transfer all or substantially all of its assets without the approval of the stockholders of the corporation to one or more persons if all of the equity interests of the person or persons are owned, directly or indirectly, by the corporation. Maryland law also does not require approval of the stockholders of a parent corporation to merge or sell all or substantially all of the assets of a subsidiary entity. Because operating assets may be held by a corporation's subsidiaries, as in our situation, this may mean that a subsidiary may be able to merge or to sell all or substantially all of its assets without a vote of the corporation's stockholders.

Subtitle 8

Subtitle 8 of Title 3 of the MGCL permits a Maryland corporation with a class of equity securities registered under the Exchange Act and at least three independent directors to elect to be subject, by provision in its charter or bylaws or a resolution of its board of directors and notwithstanding any contrary provision in the charter or bylaws, to any or all of five provisions:

- a classified board;
- a two-thirds vote requirement for removing a director;
- a requirement that the number of directors be fixed only by vote of the directors;
- a requirement that a vacancy on the board be filled only by the remaining directors and for the remainder of the full term of the class of directors in which the vacancy occurred; and
- a majority vote requirement for the calling by stockholders of a special meeting of stockholders.

Through provisions in our charter and bylaws unrelated to Subtitle 8, we already:

- vest in the board the exclusive power to fix the number of directorships and
- require, unless called by our chairman of the board, our president, our chief executive officer or the board, the request of holders of a majority of outstanding shares to call a special meeting.

We have also elected to be subject to the provisions of Subtitle 8 relating to:

- a two-thirds vote requirement for the removal of any director from the board and
- the filling of vacancies on the board.

Exclusive Forum

Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Circuit Court for Baltimore City, Maryland, or, if that court does not have jurisdiction, the United States District Court for the District of Maryland, Baltimore Division, will be the sole and exclusive forum for (a) any derivative action or proceeding brought on our behalf, (b) any action

asserting a claim of breach of any duty owed by any of our directors, officers or other employees to us or to our stockholders, (c) any action asserting a claim against us or any of our directors, officers or other employees arising pursuant to any provision of the MGCL or our charter or bylaws or (d) any action asserting a claim against us or any of our directors, officers or other employees that is governed by the internal affairs doctrine.

Anti-Takeover Effect of Certain Provisions of Maryland Law, Our Charter and Our Bylaws

The possible future application of the business combination, the control share acquisition and Subtitle 8 provisions of the MGCL and the current Subtitle 8 elections and advance notice provisions of our bylaws may delay, defer or prevent a transaction or a change in control that might involve a premium price for holders of common stock or for other reasons be desired by them.

SUMMARY OF DIRECTOR COMPENSATION ARRANGEMENTS

Independent non-employee directors of Alexandria Real Estate Equities, Inc. (the "Company") will receive the following compensation in 2020:

An annual retainer fee of \$110,000.

The committee chairpersons will receive additional annual fees as follows:

Lead Independent Director	\$	50,000
Audit Committee Chairperson	\$	35,000
Compensation Committee Chairperson	\$	35,000
Nominating & Governance Committee Chairperson	\$	35,000
Science and Technology Committee Chairperson	\$	20,000

The committee members, other than the chairpersons, will receive additional annual fees as follows:

Audit Committee Member	\$	20,000
Compensation Committee Member	\$	20,000
Nominating & Governance Committee Member	\$	20,000
Science and Technology Committee Member	\$	6,000
Pricing Committee Member	\$	6,000

Reimbursement of out-of-pocket expenses incurred to attend related meetings.

A restricted stock grant of 863 shares of common stock on January 15, 2020, under the Company's Amended and Restated 1997 Stock Award and Incentive Plan. Such shares vest over a period from March 31, 2020 to March 31, 2023.

The Company's independent non-employee directors may elect to defer all or any portion of the fees above in accordance with the Company's deferred compensation plan for its directors.

Directors who are also employees of the Company will not receive any compensation for their services as directors of the Company.

ALEXANDRIA REAL ESTATE EQUITIES, INC.

Business Integrity Policy and Procedures for Reporting Non-Compliance

PURPOSE AND SCOPE

The purposes of this Business Integrity Policy and Procedures for Reporting Non-Compliance (the “Policy”) are to ensure that all employees, officers, directors and consultants of Alexandria Real Estate Equities, Inc. and its affiliates and subsidiaries (collectively, “ARE” or the “Company”) understand that it is the intent of the Company to comply with all laws and regulations and to transact business in accordance with the highest moral and ethical standards, including the requirements of Section 406 of the Sarbanes-Oxley Act of 2002, and to provide procedures for employees, officers and directors to report instances of non-compliance with this Policy. For the purpose of this Policy, “employees” includes all full-time and part-time employees of the Company, including temporary employees employed through third parties.

Any violation of this Policy will result in prompt disciplinary action, up to and including termination of employment and, in appropriate cases, civil action or referral for criminal prosecution.

POLICY SUMMARY

ARE has always sought to maintain a highly ethical and professional posture in the conduct of its business and operations, and to remain in strict compliance with all applicable legal requirements. ARE employees, officers, directors and consultants must not be subject to undue influences, interests or relationships that will conflict with the best interests of ARE. All applicable laws and regulations must be complied with in both form and substance in all transactions and activities. ARE’s accounting and financial records must be accurate and complete and maintained in accordance with generally accepted accounting principles, and internal accounting controls must be adhered to at all times. The making of false or misleading entries on such records, whether they relate to financial results or expenses, is strictly prohibited. In addition, public disclosures of financial and business information must be accurate, timely and in compliance with all laws, regulations and applicable Company policies. Compliance with these basic principles directly contributes to the value of ARE, its stature as a public company, and its reputation as a leader in its niche. Any employee, officer, director or consultant who may become aware of any known or possible instance of non-compliance with this Policy has the affirmative duty to promptly disclose such possible non-compliance in accordance with procedures described in this Policy.

ARE’S BUSINESS INTEGRITY PRINCIPLES

The following principles and guidelines are provided to assist all ARE employees, officers, directors and consultants in the conduct of ARE’s business and operations:

Conflicts of Interest. Conflicts of interest are prohibited. A “conflict of interest” occurs when an individual’s private interest interferes with or undermines, or appears to interfere with or undermine, the interests of ARE as a whole. This can arise when an employee, officer, director or consultant takes actions or has interests that make it difficult to perform his or her work objectively and effectively. Conflicts of interest also include obtaining improper personal benefits, or providing improper personal benefits to others, as a result of a person’s position with ARE. For example, a potential conflict of interest could arise if an employee causes ARE to hire a vendor in which that same employee or his or her close friend and/or relative has a financial interest.

Factors to be considered by an employee, officer, director or consultant in evaluating whether an activity presents a potential conflict of interest include:

- Could my outside business interests affect my job performance or my judgment on behalf of ARE or affect others with whom I work?
- Can I reasonably conduct the activity outside of normal work hours?
- Will I be using ARE equipment, materials or proprietary or confidential information in my activities?
- Could the activity have any potential adverse or beneficial impact on ARE’s business or its relationships with tenants, partners or other entities with which ARE does business?
- Could the activity result in personal financial gain or other direct or indirect benefit to me or a member of my immediate family at the expense of ARE or its tenants, partners or other entities with which ARE does business?

- Could the activity appear improper to an outside observer?

Corporate Opportunities. No employee, officer, director or consultant may take personal advantage of any opportunity that he or she discovers, or that is presented to him or her, as a result of his or her position with ARE or through access to Company information. Similarly, no person subject to this Policy may use ARE property or information or his or her position with ARE for personal gain or for any third party's personal gain.

Loyalty. All employees, officers, directors and consultants have a duty to ARE to advance its legitimate business interests and should not compete with ARE, nor should they own an interest in any entity that competes with ARE, other than passive investments (i.e., less than 1% of outstanding securities) in publicly traded companies.

Confidentiality. Subject to the specific terms of any Employee Proprietary Information and Inventions Agreement between an employee and ARE, all confidential and/or proprietary information about ARE and its business or operations that a person receives as a result of his or her position with ARE, including information about our tenants and other entities and/or persons with whom we do business or come into contact in the course of our work for ARE, should be held in strict confidence, except when disclosure of that information is authorized or legally required, and then only if approved by a duly authorized officer of ARE. ARE business matters and confidential and/or proprietary information should not be discussed with anyone outside ARE, other than ARE's advisors and other persons who have a legitimate need to know the information and who are under an obligation of confidentiality, and should not be discussed in any public place. The obligation to treat certain information as confidential does not end when an employee, officer, director or consultant leaves ARE. Accordingly, employees, officers, directors and consultants may not disclose any confidential information to a new employer or to others, or use any confidential information, after ceasing to be an ARE employee, officer, director or consultant, unless such disclosure or use is expressly authorized in advance by a duly authorized officer of the Company.

Fair Dealing. We must all deal fairly with our tenants, vendors and other parties with whom ARE has a business relationship and with each other. No one associated with ARE should attempt to take unfair advantage of anyone through manipulation, concealment, abuse of confidential and/or proprietary information, misrepresentation of facts or any other unfair practice.

Protection and Proper Use of ARE Assets. All employees, officers, directors and consultants should protect ARE's assets and use them efficiently and only for legitimate business purposes. Theft, misappropriation, unauthorized disclosures, carelessness and waste have a direct impact on ARE's profitability and are contrary to the interests of ARE and its shareholders. It is important that appropriate measures are taken to ensure the security of ARE computers and any computer or voicemail passwords. Whenever you use an ARE computer, phone or other communications device to send a text message, e-mail or voicemail or to access Internet services, remember that you are acting as a representative of the Company. In addition, all text messages, e-mail, voicemail and personal files stored on ARE computers, phones and other communications devices are ARE's property. Employees, officers, directors and consultants have no expectation of privacy in connection with these resources. The use of electronic systems and other technological resources must be consistent with all other ARE policies, including but not limited to those policies relating to systems usage, sexual harassment, privacy and confidential information.

Compliance with Law. All laws, rules and regulations must be complied with, including (without limitation) laws prohibiting fraud, embezzlement, and corruption. We expect employees to understand the legal and regulatory requirements applicable to their business units and areas of responsibility. Further, our employees, officers, directors and consultants are expected to comply with the applicable laws in all countries to which they travel, in which they operate and where we otherwise do business. You must also comply with the securities laws prohibiting trading on the basis of non-public information. Insider trading is both unethical and illegal and will result in prompt disciplinary action by ARE, as well as the possibility of regulatory or criminal enforcement actions and private litigation.

Child, Forced or Compulsory Labor. Alexandria employs individuals that are of legal working age who willingly agree to work for the Company. While not typically germane to ARE's core business, it should be noted that Alexandria:

- Will not tolerate the use of child (under the age of 15), forced or compulsory labor in any of its global operations and facilities.
- Will not tolerate the engagement of any worker in unacceptably hazardous work, nor the physical punishment, abuse, or involuntary servitude of any worker.
- Expects our suppliers and contractors with whom we do business to uphold the same standards. Should a pattern of violation of these principles become known to Alexandria and not corrected, we shall discontinue the business relationship.

Accurate, Fair and Timely Financial Reporting. ARE and each of its employees, officers, directors and consultants are responsible for assuring that all reports and other documents that we file with or submit to the Securities and Exchange Commission or other government agencies contain full, fair, accurate, timely and understandable financial statements and descriptions of ARE's business. All personnel who are requested to assist in preparing any such reports or other communications, including

both the collection of information and review of drafts of any such reports or other communications, should do so diligently and in full compliance with ARE's disclosure controls and procedures.

Anti-Corruption Compliance. You are strictly prohibited from engaging in any act or omission that would result in a violation of any applicable anti-corruption or kickback law or regulation. The Company does not tolerate the provision or acceptance of any improper payments or advantages in relation to its business. Improper benefits can raise significant accounting and internal controls concerns for the Company. Violations of these prohibitions can also result in criminal liability for you and the Company. You must review and comply with the Company's Foreign Corrupt Practices Act and Anti-Corruption Policy. You can obtain a copy of that policy from the Company's General Counsel if you do not already have one.

Diversity and Equal Employment Opportunity. The Company strives to foster a fair and inclusive workplace that respects the rights of our employees. ARE provides equal employment and advancement opportunities to all individuals. Our Equal Employment Opportunity policy is part of our Employee Handbook that all employees acknowledge upon hiring, and Alexandria's Talent Development team provides diversity and equal opportunity in the training it provides for hiring managers.

It is the Company's policy to provide a work environment free of discrimination and harassment, and the Company does not tolerate harassment of employees, contractors, consultants, or others by managers, supervisors, employees, agents of the Company, or any other third party. The Company also maintains a written affirmative action plan, which sets forth the policies, practices, and procedures to which the Company is committed, in order to ensure that our policy of nondiscrimination and affirmative action is followed. Alexandria respects the rights of our employees and seeks to provide a safe, respectful, and productive work environment that helps our employees succeed and advance in their careers.

EXCEPTIONS TO POLICY

Waivers of the specific requirements of this Policy will only be approved in exceptional cases in which it is determined that the requested waiver would not involve a departure from our fundamental commitment to conducting business in compliance with applicable law and the highest ethical standards. Waivers may only be granted by authorized officers or, in the case of any waiver involving an executive officer or director, by the Board of Directors or a duly appointed committee of the Board. Any waivers of, or amendments or changes to, this Policy involving executive officers or directors of ARE will be disclosed through the filing of a Current Report on Form 8-K or other authorized method in accordance with applicable law and the rules of the New York Stock Exchange.

SEEKING HELP AND INFORMATION

This Policy is not intended to be a comprehensive rulebook and cannot address every situation you may face. If you feel uncomfortable about a situation or have any doubts about whether it is consistent with ARE's ethical standards, we encourage you to seek help. We suggest you contact your supervisor for help first. If your supervisor cannot answer your question or if you do not feel comfortable contacting your supervisor, please contact the General Counsel or the Chairperson of the Audit Committee of the Board of Directors. The email address for the Chairperson of the Audit Committee of the Board of Directors is rklein@are.com.

REPORTING OF EVENTS OF KNOWN OR POSSIBLE NON-COMPLIANCE

Facts or events that directly or indirectly conflict with the proper application of this Policy could adversely affect the value and reputation of ARE. Each employee, officer, director and consultant shares in the responsibility for ensuring compliance with this Policy and conducting herself or himself in a manner that is in compliance with all applicable laws and regulations, the highest ethical standards, this Policy and other Company policies and procedures.

Should an employee, officer, director or consultant become aware of any known or possible instance of non-compliance with this Policy, the employee, officer, director or consultant has the affirmative duty to promptly report such possible non-compliance to her/his supervisor, local management, the General Counsel or the Chairperson of the Audit Committee of the Board of Directors. An employee, officer, director or consultant must promptly report any complaint he or she may have or receive from any employee, officer, director or consultant or any client or other person regarding material accounting, internal accounting controls or auditing matters. Any such reports made will be forwarded to the Chairperson of the Audit Committee of the Board of Directors.

If you believe that the person to whom you have reported material non-compliance with this Policy has not taken appropriate action, you should contact the Chairperson of the Audit Committee of the Board of Directors directly. The email address for the Chairperson of the Audit Committee of the Board of Directors is rklein@are.com.

Violation of this Policy, and failure to report material non-compliance with this Policy, may be detrimental to ARE and will subject the employee, officer, director or consultant to disciplinary action, up to and including termination or removal. In some instances, civil or criminal proceedings may be pursued.

It is most helpful if you identify yourself and provide contact information when reporting any instance of possible non-compliance with this Policy so that ARE may contact you if further information is needed to pursue an investigation. All information provided

will be kept confidential to the extent practicable under the circumstances (including as consistent with the needs of a thorough investigation). If you are uncomfortable providing your identity, you may also anonymously disclose instances of possible non-compliance with this Policy by submitting your concerns in writing to the Chairperson of the Audit Committee or the General Counsel. In either case, an employee, officer, director or consultant who discloses instances of possible non-compliance should keep all information related to the matter in strict confidence and not discuss such information with anyone other than ARE officials conducting the investigation or other persons authorized by them, except as required by applicable law.

If you are involved in an event of non-compliance with this Policy, the fact that you voluntarily report such non-compliance in good faith, together with the degree of cooperation displayed by you and whether the non-compliance was intentional or unintentional, will be given appropriate consideration by ARE in its investigation and any resulting disciplinary action.

INVESTIGATIONS OF POSSIBLE EVENTS OF NON-COMPLIANCE

All reports concerning possible events of non-compliance with this Policy will be promptly, fairly and independently investigated and will be treated confidentially to the extent practicable under the circumstances.

It is imperative that persons disclosing possible non-compliance with this Policy not attempt to conduct their own investigations. Investigations may involve complex legal issues. Acting on one's own may compromise the integrity of ARE's investigation and adversely affect both the employee, officer, director or consultant and ARE. However, measures should be taken promptly to preserve documents and other items relevant to any investigation.

Employees, officers, directors and consultants are expected to cooperate in the investigation of any possible non-compliance with this Policy. If the result of the investigation indicates that corrective action is required, ARE will decide what steps it should take to rectify the problem and avoid its recurrence.

The Chairperson of the Audit Committee of the Board of Directors will lead any required investigation and, if deemed necessary, appoint additional individuals to assist in the process. The Chairperson of the Audit Committee will coordinate the investigation, findings and recommendations with ARE management and, if appropriate, the Talent Management & Operations Department before action is taken and the file is closed. The Chairperson of the Audit Committee will report the status and results of any reports received and any resulting investigation to the Audit Committee, which will then take appropriate action with respect to the matter.

If a report of an instance of possible non-compliance with this Policy involves an individual who would normally participate in an investigation, that individual generally will not be notified of the investigation, except as may be necessary to conduct a full and fair investigation of the facts, and such individual will not be allowed to participate in conducting or reviewing the investigation.

All information obtained during an investigation shall be considered confidential and shall be disseminated only on a need-to-know basis, unless otherwise required by law. No information relating to an investigation shall be disposed of or destroyed without the prior written approval of the Chairperson of the Audit Committee and the General Counsel.

It is ARE's objective that all investigations be completed and resolved promptly and, if possible, within 60 days of the Company's receipt of the complaint.

RETALIATION NOT PERMITTED

Retaliation against any person who in good faith reports any instance of non-compliance or possible non-compliance with this Policy or any potential violation of law, who assists another to make a good faith report, or who participates in good faith in an investigation of a report, is strictly prohibited and will not be tolerated. This includes (without limitation) retaliation relating to reports or complaints received from any source regarding accounting, internal accounting controls or auditing matters relating to ARE or any concerns regarding questionable accounting or auditing. This policy also protects those individuals who cooperate in investigations conducted by ARE or any government agency, or who provide information concerning suspected non-compliance or legal violations. In addition, ARE prohibits retaliation against any person who refuses to participate in an act that would result in a violation of state or federal statute, rule or regulation, or who reports any suspected violations of law at a former employer. Any instance of retaliation will result in prompt disciplinary action, up to and including termination of employment with ARE, in addition to any penalty or liability under applicable law. However, any person who makes a report known to be false or provides information known to be false may be subject to disciplinary action, up to and including termination or removal.

OBLIGATIONS OF EMPLOYEES, OFFICERS, DIRECTORS AND CONSULTANTS

Read and understand the Policy. Employees, officers, directors and consultants are expected to read and understand this Policy and comply fully with its terms. Please discuss any questions you may have regarding this Policy with your direct supervisor or the General Counsel to ensure that you understand the Policy.

Follow the Policy. Employees, officers, directors and consultants must act in accordance with this Policy. ARE may periodically require employees, officers, directors and consultants to certify in writing their compliance with this Policy.

Report known or possible violations of the Policy. If you become aware of known or possible instances of non-compliance with this Policy, you must report such instances to your supervisor, local management, the General Counsel or the Chairperson of the Audit Committee of the Board of Directors (anonymously or otherwise), as appropriate. In addition, you may report suspected violations of law to the California Attorney General or other state or federal agencies, or foreign government authorities that have competent jurisdiction over ARE at any time.

List of Subsidiaries of Alexandria Real Estate Equities, Inc.

The list below excludes subsidiaries in the same line of business (ownership and operation of commercial real estate) and includes the immediate parent of each excluded subsidiary. The list also excludes subsidiaries that in the aggregate, as a single subsidiary, would not constitute a significant subsidiary as of December 31, 2019. A total of 429 subsidiaries have been excluded.

<u>Name of Subsidiary</u>	<u>Jurisdiction of Organization</u>
ARE - QRS Corp.	Maryland
Alexandria Real Estate Equities, L.P.	Delaware
Alexandria Venture Investments, LLC	Maryland

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the following registration statements:

- Registration Statements pertaining to the Amended and Restated 1997 Stock Award and Incentive Plan of Alexandria Real Estate Equities, Inc. (Form S-8 No. 333-34223, Form S-8 No. 333-60075, Form S-8 No. 333-152433, Form S-8 No. 333-167889, Form S-8 No. 333-197212, Form S-8 No. 333-212385, and Form S-8 No. 333-226129);
- Registration Statement (Form S-3/A No. 333-56449) and related Prospectus of Alexandria Real Estate Equities, Inc.;
- Registration Statement (Form S-3/A No. 333-81985) and related Prospectus of Alexandria Real Estate Equities, Inc.; and
- Registration Statement (Form S-3ASR No. 333-222136) and related Prospectus of Alexandria Real Estate Equities, Inc.;

of our reports dated February 4, 2020 with respect to the consolidated financial statements and financial statement schedule of Alexandria Real Estate Equities, Inc., and the effectiveness of internal control over financial reporting of Alexandria Real Estate Equities, Inc., included in this Annual Report (Form 10-K) for the year ended December 31, 2019.

/s/ Ernst & Young LLP

Los Angeles, California
February 4, 2020

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Joel S. Marcus, certify that:

1. I have reviewed this Annual Report on Form 10-K of Alexandria Real Estate Equities, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 4, 2020

/s/ Joel S. Marcus

Joel S. Marcus

Executive Chairman

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Stephen A. Richardson, certify that:

1. I have reviewed this Annual Report on Form 10-K of Alexandria Real Estate Equities, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 4, 2020

/s/ Stephen A. Richardson

Stephen A. Richardson

Co-Chief Executive Officer

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER
PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Peter M. Moglia, certify that:

1. I have reviewed this Annual Report on Form 10-K of Alexandria Real Estate Equities, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 4, 2020

/s/ Peter M. Moglia

Peter M. Moglia

Co-Chief Executive Officer and Co-Chief Investment Officer

CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER
PURSUANT TO
SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Dean A. Shigenaga, certify that:

1. I have reviewed this Annual Report on Form 10-K of Alexandria Real Estate Equities, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize, and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 4, 2020

/s/ Dean A. Shigenaga

Dean A. Shigenaga

Co-President and Chief Financial Officer

CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICERS AND PRINCIPAL FINANCIAL OFFICER**PURSUANT TO****18 U.S.C. SECTION 1350.****AS ADOPTED PURSUANT TO****SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

I, Joel S. Marcus, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Alexandria Real Estate Equities, Inc. for the year ended December 31, 2019, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of Alexandria Real Estate Equities, Inc.

Date: February 4, 2020

/s/ Joel S. Marcus

Joel S. Marcus

Executive Chairman

I, Stephen A. Richardson, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Alexandria Real Estate Equities, Inc. for the year ended December 31, 2019, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of Alexandria Real Estate Equities, Inc.

Date: February 4, 2020

/s/ Stephen A. Richardson

Stephen A. Richardson

Co-Chief Executive Officer

I, Peter M. Moglia, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Alexandria Real Estate Equities, Inc. for the year ended December 31, 2019, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of Alexandria Real Estate Equities, Inc.

Date: February 4, 2020

/s/ Peter M. Moglia

Peter M. Moglia

Co-Chief Executive Officer and Co-Chief Investment Officer

I, Dean A. Shigenaga, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that the Annual Report on Form 10-K of Alexandria Real Estate Equities, Inc. for the year ended December 31, 2019, fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, and that the information contained in such report fairly presents, in all material respects, the financial condition and results of operations of Alexandria Real Estate Equities, Inc.

Date: February 4, 2020

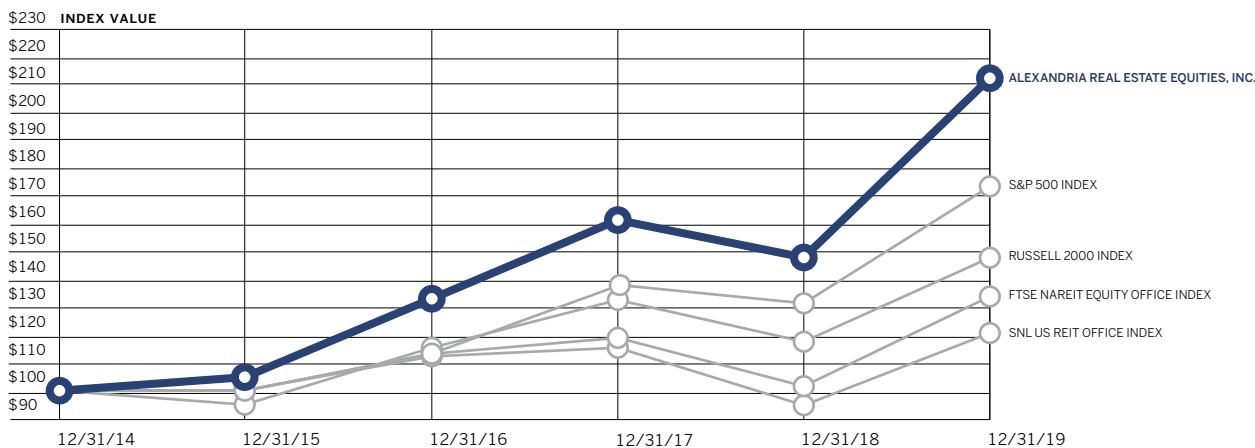
/s/ Dean A. Shigenaga

Dean A. Shigenaga

Co-President and Chief Financial Officer

PERFORMANCE GRAPH

The following performance graph compares the cumulative total return on our common stock over the five-year period ended December 31, 2019, to the cumulative total return of the S&P 500 Index, the Russell 2000 Index, the Equity Office Index prepared by the FTSE and Nareit (“FTSE Nareit Equity Office Index”), and the US REIT Office Index prepared by S&P Global Market Intelligence (“SNL US REIT Office Index”). The graph assumes that \$100 was invested on December 31, 2014, in our common stock, the S&P 500 Index, the FTSE Nareit Equity Office Index, the Russell 2000 Index, and the SNL US REIT Office Index, and that all dividends were reinvested. The returns shown on the graph are not necessarily indicative of future performance.



INDEX	PERIOD ENDED					
	12/31/14	12/31/15	12/31/16	12/31/17	12/31/18	12/31/19
ALEXANDRIA REAL ESTATE EQUITIES, INC.	\$100.00	\$105.30	\$133.68	\$161.69	\$147.18	\$211.99
S&P 500 INDEX	\$100.00	\$101.38	\$113.51	\$138.29	\$132.23	\$173.86
RUSSELL 2000 INDEX	\$100.00	\$ 95.59	\$115.95	\$132.94	\$118.30	\$148.49
FTSE NAREIT EQUITY OFFICE INDEX	\$100.00	\$100.29	\$113.49	\$119.45	\$102.13	\$134.22
SNL US REIT OFFICE INDEX	\$100.00	\$100.88	\$112.58	\$115.61	\$ 95.36	\$121.57

Source: S&P Global Market Intelligence © 2020

CORPORATE INFORMATION

COMMON STOCK

Listed on the New York
Stock Exchange,
Symbol: ARE

CORPORATE OFFICE

26 North Euclid Avenue
Pasadena, California 91101
(626) 578-0777

TRANSFER AGENT

American Stock Transfer &
Trust Company, LLC
6201 15th Avenue
Brooklyn, New York 11219
(800) 937-5449

LEGAL COUNSEL

Morrison & Foerster LLP
Los Angeles, California

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Ernst & Young LLP
Los Angeles, California

ANNUAL MEETING

The annual meeting will be held
at 11:00 a.m., Pacific Daylight Time,
May 5, 2020, at
The Langham Hotel
1401 South Oak Knoll Avenue
Pasadena, California 91106

SEC FORM 10-K

A copy of the Company's Annual Report on
Form 10-K, as filed with the Securities and
Exchange Commission, is available without
charge, upon written request to:

Alexandria Real Estate Equities, Inc.
26 North Euclid Avenue
Pasadena, California 91101
(626) 396-4828
www.are.com

DIRECTORS AND OFFICERS

BOARD OF DIRECTORS

Joel S. Marcus
Executive Chairman and Founder
Alexandria Real Estate Equities, Inc.

Steven R. Hash
President and Chief Operating Officer
Renaissance Macro Research, LLC

John L. Atkins, III
Chairman and Chief Executive Officer
O'Brien Atkins Associates, PA

James P. Cain
Managing Partner
Cain Global Partners, LLC

Maria C. Freire, PhD
President and Executive Director
Foundation for the National Institutes
of Health

Jennifer Friel Goldstein
*Head of Business Development,
Technology and Healthcare*
Silicon Valley Bank

Richard H. Klein, CPA
Chief Financial Officer
Industrial Realty Group, LLC

James H. Richardson
Senior Management Consultant

Michael A. Woronoff
Partner
Kirkland & Ellis LLP

EXECUTIVE OFFICERS

Joel S. Marcus
Executive Chairman and Founder

Stephen A. Richardson
Co-Chief Executive Officer

Peter M. Moglia
*Co-Chief Executive Officer and
Co-Chief Investment Officer*

Dean A. Shigenaga
Co-President and Chief Financial Officer

Thomas J. Andrews
*Co-President and Regional Market
Director – Greater Boston*

Daniel J. Ryan
*Co-Chief Investment Officer and
Regional Market Director – San Diego*

Jennifer J. Banks
*Co-Chief Operating Officer,
General Counsel, and Corporate Secretary*

Lawrence J. Diamond
*Co-Chief Operating Officer and
Regional Market Director – Maryland*

Vincent R. Ciruzzi
Chief Development Officer

John H. Cunningham
*Executive Vice President and
Regional Market Director –
New York City*

Terezia C. Nemeth
*Executive Vice President and
Regional Market Director –
San Francisco*

Marc E. Binda
*Executive Vice President –
Finance and Treasurer*

Andres R. Gavinet
Chief Accounting Officer

Joseph Hakman
Chief Strategic Transactions Officer

ALEXANDRIA REAL ESTATE EQUITIES, INC. (NYSE:ARE), an S&P 500[®] urban office REIT, is the first, longest-tenured, and pioneering owner, operator, and developer uniquely focused on collaborative life science, technology, and agtech campuses in AAA innovation cluster locations, with a total market capitalization of \$26.3 billion as of December 31, 2019, and an asset base in North America of 39.2 million square feet. The asset base in North America includes 27.0 million RSF of operating properties and 2.1 million RSF of Class A properties undergoing construction, 6.3 million RSF of near-term and intermediate-term development and redevelopment projects, and 3.8 million square feet of future development projects. Founded in 1994, Alexandria pioneered this niche and has since established a significant market presence in key locations, including Greater Boston, San Francisco, New York City, San Diego, Seattle, Maryland, and Research Triangle. Alexandria has a longstanding and proven track record of developing Class A properties clustered in urban life science, technology, and agtech campuses that provide our innovative tenants with highly dynamic and collaborative environments that enhance their ability to successfully recruit and retain world-class talent and inspire productivity, efficiency, creativity, and success. Alexandria also provides strategic capital to transformative life science, technology, and agtech companies through our venture capital arm. We believe our unique business model and diligent underwriting ensure a high-quality and diverse tenant base that results in higher occupancy levels, longer lease terms, higher rental income, higher returns, and greater long-term asset value. For additional information on Alexandria, please visit www.are.com.

Alexandria[®], Lighthouse Design[™] logo, Building the Future of Life-Changing Innovation[™], Alexandria Center[®], Alexandria Technology Square[®], Alexandria Technology Center[®], Alexandria Innovation Center[®], LaunchLabs[®], and GradLabs[™] are trademarks of Alexandria Real Estate Equities, Inc. All other company names, trademarks, and logos referenced herein are the property of their respective owners.

FORWARD-LOOKING STATEMENTS: This document includes “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Such forward-looking statements include, without limitation, statements regarding our 2020 earnings per share attributable to Alexandria’s common stockholders – diluted, 2020 funds from operations per share attributable to Alexandria’s common stockholders – diluted, net operating income, our projected sources and uses of capital, and 2025 sustainability goals. You can identify the forward-looking statements by their use of forward-looking words, such as “forecast,” “guidance,” “goals,” “projects,” “estimates,” “anticipates,” “believes,” “expects,” “intends,” “may,” “plans,” “seeks,” “should,” or “will,” or the negative of those words or similar words. These forward-looking statements are based on our current expectations, beliefs, projections, future plans and strategies, anticipated events or trends, and similar expressions concerning matters that are not historical facts, as well as a number of assumptions concerning future events. There can be no assurance that actual results will not be materially higher or lower than these expectations. These statements are subject to risks, uncertainties, assumptions, and other important factors that could cause actual results to differ materially from the results discussed in the forward-looking statements. Factors that might cause such a difference include, without limitation, our failure to obtain capital (debt, construction financing, and/or equity) or refinance debt maturities, increased interest rates and operating costs, adverse economic or real estate developments in our markets, our failure to successfully place into service and lease any properties undergoing development or redevelopment and our existing space held for future development or redevelopment (including new properties acquired for that purpose), our failure to successfully operate or lease acquired properties, decreased rental rates, increased vacancy rates or failure to renew or replace expiring leases, defaults on or non-renewal of leases by tenants, adverse general and local economic conditions, an unfavorable capital market environment, decreased leasing activity or lease renewals, and other risks and uncertainties detailed in our filings with the Securities and Exchange Commission (SEC). Accordingly, you are cautioned not to place undue reliance on such forward-looking statements. All forward-looking statements are made as of the date of this document, and unless otherwise stated, we assume no obligation to update this information and expressly disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events, or otherwise. For more discussion relating to risks and uncertainties that could cause actual results to differ materially from those anticipated in our forward-looking statements, and risks to our business in general, please refer to our SEC filings, including our most recent annual report on Form 10-K and any subsequent quarterly reports on Form 10-Q.



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