

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, 2023

Commission file number 1-12993

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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 every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit 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 an 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 ☒

Smaller reporting company ☐

Accelerated filer ☐

Emerging growth company ☐

Non-accelerated filer ☐

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 has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

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 \$19.5 billion based on the closing price for such shares on the New York Stock Exchange on June 30, 2023.

As of January 12, 2024, 174,968,259 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 14, 2024.

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ALEXANDRIA REAL ESTATE EQUITIES, INC.

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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
CIP	Construction in Progress
EPS	Earnings per Share
FASB	Financial Accounting Standards Board
FDA	U.S. Food and Drug Administration
FDIC	Federal Deposit Insurance Corporation
FFO	Funds From Operations
GAAP	U.S. Generally Accepted Accounting Principles
HVAC	Heating, Ventilation, and Air Conditioning
IRS	Internal Revenue Service
JV	Joint Venture
LEED®	Leadership in Energy and Environmental Design
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
SoDo	South of Downtown submarket of Seattle
SOFR	Secured Overnight Financing Rate
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,” “targets,” or “will,” or the negative of those 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,” “ARE,” “we,” “us,” and “our” refer to Alexandria Real Estate Equities, Inc. and its consolidated subsidiaries. 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.

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. Alexandria Real Estate Equities, Inc. (NYSE: ARE), an S&P 500® company, is a best-in-class, mission-driven life science REIT making a positive and lasting impact on the world. As the pioneer of the life science real estate niche since our founding in 1994, Alexandria is the preeminent and longest-tenured owner, operator, and developer of collaborative life science, agtech, and advanced technology mega campuses in AAA innovation cluster locations, including Greater Boston, the San Francisco Bay Area, New York City, San Diego, Seattle, Maryland, and Research Triangle. Alexandria has a total market capitalization of \$33.1 billion and an asset base in North America of 73.5 million SF as of December 31, 2023. This asset base includes 42.0 million RSF of operating properties, 5.5 million RSF of Class A/A+ properties undergoing construction and one near-term project expected to commence construction in the next two years, 2.1 million RSF of priority anticipated development and redevelopment projects, and 23.9 million SF of future development projects.

We develop dynamic mega campuses and vibrant ecosystems that enable and inspire the world’s most brilliant minds and innovative companies to create life-changing scientific and technological innovations. We believe in the utmost professionalism, humility, and teamwork. Our tenants include multinational pharmaceutical companies; public and private biotechnology companies; life science product, service, and medical device companies; digital health, technology, and agtech companies; academic and medical research institutions; U.S. government research agencies; non-profit organizations; and venture capital firms. Alexandria has a longstanding and proven track record of developing Class A/A+ properties clustered in life science, agtech, and advanced technology mega 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, agrifoodtech, climate innovation, and technology companies through our venture capital platform. 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.

As of December 31, 2023, we had 411 properties in North America consisting of approximately 47.2 million RSF of operating properties and new Class A/A+ development and redevelopment properties under construction, including 68 operating properties and development projects that are held by consolidated real estate joint ventures and four properties that are held by unconsolidated real estate joint ventures. The occupancy percentage of our operating properties in North America was 94.6% as of December 31, 2023. The 10-year average occupancy percentage of our operating properties as of December 31, 2023 was 96%. Investment-grade or publicly traded large cap tenants represented 52% of our total annual rental revenue in effect as of December 31, 2023. 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 stockholder returns based on a multifaceted platform of internal and external growth. A key element of our strategy is our unique focus on Class A/A+ properties located in collaborative life science, agtech, and advanced technology mega campuses in AAA innovation clusters. These key campus 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. They generally represent highly desirable locations for tenancy by life science, agtech, and technology 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, agtech, and technology 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, agtech, and technology 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 (the “Board”) and are led by an executive and senior management team with extensive experience in the real estate, life science, agtech, and technology industries.

Acquisitions

We seek to identify and acquire high-quality properties in our 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, including our mega campus strategy;
- 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;
- Potential impacts of climate change and extreme weather conditions; and
- Our ability to increase the property's long-term financial returns.

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/A+ properties, and property enhancements identified during the underwriting of certain acquired properties, located in collaborative life science, agtech, and advanced technology mega campuses in AAA innovation clusters. These projects are generally focused on providing high-quality, generic, and reusable spaces that meet the real estate requirements of a wide range of tenants. Upon completion, each value-creation project is expected to generate increases 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 laboratory facilities. Redevelopment projects consist of the permanent change in use of acquired office, warehouse, or shell space into laboratory, agtech, or advanced technology space. We generally will not commence new development projects for aboveground construction of new Class A/A+ laboratory, agtech, and advanced technology space without first securing significant pre-leasing for such space, except when there is solid market demand for high-quality Class A/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.

Another key component of our business model is our value-creation redevelopment of acquired office, warehouse, or shell space into high-quality, generic, and reusable 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 strategic investments in publicly traded companies and privately held entities primarily involved in the life science, agtech, and technology industries. We invest primarily in highly innovative entities whose focus on the development of therapies and products that advance human 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 new Class A/A+ properties located in collaborative life science, agtech, and advanced technology mega campuses in AAA innovation clusters, as well as the prudent 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, which include, among others, net cash flows from operating activities after dividends, incremental leverage-neutral debt supported by growth in EBITDA, strategic value harvesting and asset recycling through real estate dispositions and sales of partial interests, non-real estate investment sales, sales of equity, and joint venture capital;
- Maintaining significant liquidity through borrowing capacity under our unsecured senior line of credit and commercial paper program, secured construction loans, marketable securities, issuances of forward equity contracts from time to time, and cash, cash equivalents, and restricted cash;
- Continuing to improve our credit profile;
- Minimizing the amount of debt maturing 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, non-core and "core-like" operating assets, and sales of partial interests, and reinvesting the proceeds into our highly leased value-creation development and redevelopment projects;
- Allocating capital to Class A/A+ properties located in collaborative life science, agtech, and advanced technology mega campuses in AAA innovation clusters;
- Maintaining geographic diversity in intellectual centers of innovation;
- Selectively acquiring high-quality life science, agtech, and advanced technology space in our target innovation cluster submarkets at prices that enable us to realize attractive returns;
- Selectively developing properties in our target innovation cluster submarkets;
- Selectively redeveloping acquired office, warehouse, or shell space, or newly acquired properties, into high-quality, generic, and reusable laboratory space that can be leased at higher rental rates in our target 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 laboratory and technology 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. Alexandria pioneered the life science real estate niche with our founding in 1994, and today is the preeminent and longest-tenured owner, operator, and developer of life science, agtech, and advanced technology mega campuses in AAA innovation cluster locations. We continue to maintain and cultivate many of the most important and strategic relationships in the life science, agtech, and technology 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 remediate 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 capital using the real estate as collateral.

State regulations, such as California’s Connelly Act and Proposition 65, among others, require certain building owners and operators to disclose information on the presence of asbestos or other harmful substances. 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, and ongoing expenditures to comply with existing environmental regulations are not expected to be material. 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 insurance, and all-risk property insurance, including business interruption and loss of rental income coverage. We select policy specifications and insured limits that we believe to be appropriate given the relative risk of loss and the cost of the coverage. 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 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. Additional information about 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 Chief Executive Officer 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.

Human capital

As of December 31, 2023, we had 568 employees. We place a significant focus on building loyalty and trusted relationships with our employees. We have a Business Integrity Policy that applies to all of our employees, and its receipt and review by each employee is documented and verified annually. To promote an exceptional corporate culture, Alexandria continuously monitors employee satisfaction, seeks employee feedback, and proactively enhances our employee offerings. We participate in annual performance reviews with our employees and conduct formal employee surveys, and our talent management team holds regular meetings with employees to continuously gather feedback and improve the employee experience. The positive employee experience is evidenced by our low voluntary and total turnover rates averaging 4.1% and 8.3%, respectively, over the last five years, from 2019 to 2023, which are substantially lower than the average voluntary and total turnover rates of 14.0% and 19.0%, respectively, as reported for the REIT industry in the 2023 Nareit Compensation & Benefits Survey (data for 2022).

We recognize that the fundamental strength of Alexandria results from the contributions of each and every team member within the organization and that our future growth is dependent upon the same. Alexandria devotes extraordinary efforts to hiring, developing, and retaining our talented employees, and we understand firsthand that the health, happiness, and well-being of our best-in-class team are key factors to the success of our employees and that of the Company.

We have an exceptional track record of identifying highly qualified candidates for promotion from within the Company. Alexandria's executive and senior management teams, represented by our senior vice presidents and above, consist of 60 individuals, averaging 23 years of real estate experience, including 13 years with Alexandria. Moreover, our executive management team alone averages 18 years of experience with the Company. Alexandria's executive and senior management teams have unique experience and expertise in creating, owning, and operating highly dynamic and collaborative mega campuses in key life science, agtech, and advanced technology cluster locations. These teams include regional market directors with leading reputations and longstanding relationships within the life science, agtech, and technology communities in their respective innovation clusters. We believe that our expertise, experience, reputation, and key relationships in the real estate, life science, agtech, and technology industries provide Alexandria with significant competitive advantages in attracting new business opportunities.

Building a diverse board of directors and inclusive workforce

Our Corporate Governance Guidelines highlight our Board of Directors' focus on diversity at the board level. The guidelines explicitly state the Board of Directors' commitment to considering qualified women and minority director candidates, as well as its policy of requesting an initial list of diverse candidates from any search firm it retains.

We strive to create an open and respectful environment where our employees can actively contribute, have access to opportunities and resources, and realize their full potential. As an equal opportunity employer, we have an Equal Employment Opportunity Policy and a Diversity, Equal Employment Opportunity, and Fair Labor Policy that emphasizes inclusion through hiring and compensation practices and considers a pool of diverse candidates for open positions and internal advancement opportunities.

Furthermore, as a federal government contractor, Alexandria maintains affirmative action plans, which set forth the policies, practices, and procedures to which the Company is committed in order to ensure that our policies of nondiscrimination and affirmative action are followed for qualified females, minorities, individuals with disabilities, and protected veterans. To address issues related to pay discrimination, the Company has a ban on any and all inquiries into an applicant's salary history, and we incorporate fair pay reviews into every employment compensation decision. To reinforce our corporate culture of respect, diversity, and inclusion, we provide anti-harassment training annually.

Providing exceptional benefits to support our employees' medical and financial health and well-being

We provide a comprehensive benefits package intended to meet and/or exceed the needs of our employees and their families. Our company-sponsored suite of benefits covers 100% of the premiums for our employees and their dependents and includes, but is not limited to, a high-coverage, low-deductible preferred provider organization ("PPO") medical plan, a 24/7 telehealth and concierge medical care services program, PPO dental and orthodontia coverage, a generous vision plan, comprehensive prescription drug plan, infertility and family planning benefits, short-term and long-term disability benefits, and life and accidental death and dismemberment coverage. These benefits support the health of our employees and their families, their overall well-being, and their future plans, and also reward their operational excellence.

In addition, we have prioritized our employees' total well-being with additional benefits that focus on their emotional, mental, physical, financial, and social health including:

- **100% company-paid therapy and life coaching** to help our employees and their eligible dependents prioritize their mental health and provide timely access to professional help;
- **Additional company-paid holidays and paid time off** to encourage employees to rest and recharge;
- **24/7 telehealth and medical care;**

- **Expert-led internal webinar series** leveraging our world-class life science network to educate and inform our employees on relevant and engaging subjects;
- **Wellness reimbursement benefit** for fitness, self-defense, mindfulness applications, subscriptions, and classes, and home exercise equipment to encourage our employees to stay mentally and physically fit;
- **Enhanced social connectedness through Alexandria's Operation CARE program** for giving to, fundraising for, and volunteering at any eligible non-profit organization(s) of an employee's choosing, including:
 - **Paid volunteer time off** of up to 16 hours per calendar year,
 - **Matching gifts** of up to \$5,000 per calendar year,
 - **Volunteer rewards** of up to \$10,000 per calendar year donated by Alexandria based on time volunteered (\$2,500 donated per 25 hours);
- **Alexandria Lifeline™** – Alexandria's unparalleled network in the life science community affords us access to deep medical expertise. Alexandria Lifeline makes this expertise available to our employees and their immediate family members who are suffering from a serious illness or injury and would benefit from specialized medical care.

Investing in professional development and training

Alexandria champions our people as our greatest asset. To attract and retain the best talent, we provide meaningful opportunities for growth and development. We offer a variety of learning opportunities, including custom, cohort-based development programs that leverage social learning, instructor-led trainings, on-demand trainings and resources, and a highly utilized mentoring program.

Development programs and trainings include topics such as leadership development, project management, business writing, change management, interviewing, presentations, productivity, effective one-on-ones, goal setting, delegation, communication, and feedback.

Our mentoring program enables employees to partner with senior leaders throughout the organization for support and career guidance. To further customize development, we partner with key functional leaders to design and implement learning programs for specific functional teams and curated learning cohorts. Lastly, our executive coaching program supports high-potential leaders in their career progression.

To continuously monitor and improve employee performance and engagement, we use employee engagement surveys, the most recent of which was conducted in 2022 and yielded an employee participation rate of 91.4%.

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- (1) As of December 31, 2023, unless stated otherwise. We determine race and gender based on our employees' self-identification or other information compiled to meet requirements of the U.S. government.
- (2) Minorities are defined to include individuals of Asian, Black/African American, Hispanic/Latino, Native American, Pacific Islander, or multiracial background.
- (3) Managers and above include individuals who lead others and/or oversee projects.
- (4) Represents a five-year average from 2019 to 2023.

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.

Risk factors summary

An investment in our securities involves various risks. Such risks, including those set forth in the summary of material risks in this Item 1A, should be carefully considered before purchasing our securities.

Risks related to operating factors

- We may be unable to identify and complete acquisitions, investments, or development or redevelopment projects or to successfully and profitably operate properties.
- We could default on our ground leases or be unable to renew or re-lease our land or space on favorable terms or at all. Our tenants may also be unable to pay us rent.
- The cost of maintaining and improving the quality of our properties may be higher than anticipated, and we may be unable to pass any increased operating costs through to our tenants, which can result in reduced cash flows and profitability.
- We could be held liable for environmental damages resulting from our tenants' use of hazardous materials, or from harmful mold, poor air quality, or other defects from our properties, or we could face increased costs in complying with other environmental laws.
- The loss of services of any of our senior officers or key employees and increased competition for skilled personnel could adversely affect us and/or increase our labor costs.
- We rely on a limited number of vendors to provide utilities and other services at our properties, and disruption in such services may have an adverse effect on our operations and financial condition.
- Our insurance policies may not adequately cover all of our potential losses, or we may incur costs due to the financial condition of our insurance carriers.
- We may change business policies without stockholder approval.
- Failure to maintain effective internal control over financial reporting could have a material adverse effect on our business.
- 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.
- We may not be able to raise sufficient capital to fund our operations due to adverse changes in our credit ratings, our inability to refinance our existing debt or issue new debt, or our inability to sell existing real estate and non-real estate assets timely or at optimal prices.
- We may invest or spend the net proceeds from our equity or debt offerings in ways with which our investors may not agree and in ways that may not earn a profit.
- Our debt service obligations may restrict our ability to engage in some business activities or cause other adverse effects on our business.
- We face risks and liabilities associated with our investments (including those in connection with short-term liquid investments) and the companies in which we invest (including properties owned through partnerships, limited liability companies, and joint ventures, as well as through our non-real estate venture investment portfolio), which expose us to risks similar to those of our tenant base and additional risks inherent in venture capital investing. We may be limited in our ability to diversify our investments.

Risks related to market and industry factors

- There are limits on ownership of our stock under which a stockholder may lose beneficial ownership of its shares, as well as certain provisions of our charter and bylaws that may delay or prevent transactions that otherwise may be desirable to our stockholders.
- Possible future sales of shares of our common stock could adversely affect its market price.
- We are dependent on the health of the life science, agtech, and technology industries, and changes within these industries, increased competition, or the inability of our tenants and non-real estate equity investments within these industries to obtain funding for research, development, and other operations may adversely impact their ability to make rental payments to us or adversely impact their value.

- Market disruption and volatility, poor economic conditions in the capital markets and global economy, including in connection with a widespread pandemic or outbreak of a highly infectious or contagious disease, and tight labor markets could adversely affect the value of the companies in which we hold equity investments or the ability of tenants and the companies in which we invest to continue operations, raise additional capital, or access capital from venture capital investors or financial institutions on favorable terms or at all.

Risks related to government and global factors

- Actions, policy, or key leadership changes in government agencies, or changes to laws or regulations, including those related to tax, accounting, debt, derivatives, government spending, or funding (including those related to the FDA, the National Institutes of Health (the "NIH"), the SEC, and other agencies), and drug and healthcare pricing, costs, and programs could have a significant negative impact on the overall economy, our tenants and companies in which we invest, and our business.
- Partial or complete government shutdown resulting in temporary closures of agencies could adversely affect our tenants (some of which are also government agencies) and the companies in which we invest, including delays in the commercialization of such companies' products, decreased funding of research and development, or delays surrounding approval of budget proposals.
- The outbreak of any highly infectious or contagious disease could adversely impact our financial condition and results of operations, and/or that of our tenants and non-real estate investments.

Risks related to general and other factors

- Social, political, and economic instability, unrest, significant changes, and other circumstances beyond our control, including circumstances related to changes in the U.S. political landscape, could adversely affect our business operations.
- Seasonal weather conditions, climate change and severe weather, changes in the availability of transportation or labor, and other related factors may affect our ability to conduct business, the products and services of our tenants, or the availability of such products and services of our tenants and the companies in which we invest.
- We may be unable to meet our sustainability goals.
- Changes in privacy and information security laws, regulations, policies, and contractual obligations related to data privacy and security, or our failure to comply with such requirements, could subject us to fines or penalties or increase our cost of doing business, compliance risks, and potential liability and otherwise adversely affect our business or results of operations.
- System failures or security incidents through cyberattacks, intrusions, or other methods could disrupt our information technology networks, enterprise applications, and related systems, cause a loss of assets or 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 adversely affect our business and financial condition.
- The enactment of legislation, including the Inflation Reduction Act of 2022, may adversely impact our financial condition and results of operations.

We attempt to mitigate the foregoing risks. However, if we are unable to effectively manage the impact of these and other risks, our ability to meet our investment objectives may be substantially impaired and any of the foregoing risks could materially adversely affect our financial condition, results of operations, and cash flows, our ability to make distributions to our stockholders, or the market price of our common stock.

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 significant risks, including, but not limited to, the following:

- 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 tax 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 remediation 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, and cash flows, our ability to make distributions to our stockholders, our ability to satisfy our debt service obligations, and the market price of our common stock.

The acquisition or 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 achieve the financial results expected from development or redevelopment projects.

There are significant risks associated with development and redevelopment projects, including, but not limited to, the following possibilities:

- 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 projected 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, security, 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, or otherwise elect to terminate their lease prior to delivery, 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, significant project delays, or 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.
- We may be unable to proceed with our development or redevelopment projects as anticipated due to changing zoning, land use, building, occupancy, or other government codes or regulations.
- 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 may face increased risks and costs associated with volatility in commodity and labor prices or as a result of supply chain or procurement disruptions, which may adversely affect the status of and returns on our construction projects.

The price of commodities and skilled labor for our construction projects may increase unpredictably due to external factors, including, but not limited to, performance of third-party suppliers and contractors; overall market supply and demand; inflationary pricing; government regulation; international trade; and changes in general business, economic, or political conditions. As a result, the costs of raw construction materials and skilled labor required for the completion of our development and redevelopment projects may fluctuate significantly from time to time.

We rely on a number of third-party suppliers and contractors to supply raw materials and skilled labor for our construction projects. We believe we have favorable relationships with our suppliers and contractors. We have not encountered significant difficulty collaborating with our suppliers and contractors and obtaining materials and skilled labor, nor experienced significant delays due to disputes, work stoppages, or contractors' misconduct or failure to perform. While we do not rely on any single supplier or vendor for the majority of our materials and skilled labor, we may experience difficulties obtaining necessary materials from suppliers or vendors whose supply chains might become impacted by economic or political changes, or difficulties obtaining adequate skilled labor from third-party contractors in a tightening labor market. It is uncertain whether we would be able to source the essential commodities, supplies, materials, and skilled labor timely or at all without incurring significant costs or delays, particularly during times of economic uncertainty resulting from events outside of our control. We may be forced to purchase supplies and materials in larger quantities or in advance of when we would typically purchase them. This may cause us to require use of capital sooner than anticipated. Alternatively, we may also be forced to seek new third-party suppliers or contractors, whom we have not worked with in the past, and it is uncertain whether these new suppliers will be able to adequately meet our materials or labor needs. Our dependence on unfamiliar supply chains or relatively small supply partners may adversely affect the cost and timely completion of our construction projects. In addition, we may be unable to compete with entities that may have more favorable relationships with their suppliers and contractors or greater access to the required construction materials and skilled labor.

In addition, new climate change-related initiatives entered into by the U.S. government in collaboration with partner countries through global climate agreements may impose stricter requirements for building materials, such as lumber, steel, and concrete, which could significantly increase our construction costs if the manufacturers and suppliers of our materials are burdened with expensive cap-and-trade or similar regulations or requirements, and the costs of which are passed onto customers like us. As a result of the factors discussed above, we may be unable to complete our development or redevelopment projects timely and/or within our budget, which may affect our ability to lease space to potential tenants and adversely affect our business, financial condition, and results of operations.

If we fail to identify and develop relationships with a sufficient number of qualified suppliers and contractors, the quality and status of our construction projects may be adversely affected.

We believe we have favorable relationships with our existing suppliers and contractors, and we generally have not encountered difficulty collaborating with and obtaining materials and skilled labor, nor experienced significant delays or increases in overall project costs due to disputes, work stoppages, or contractors' misconduct or failure to perform. However, it is possible we may experience these events in the future, or our existing suppliers and contractors may encounter supply chain disruptions from time to time that hinder their ability to supply necessary materials and labor to us. As a result, we may be forced to seek new resources for our construction needs. We may become reliant on unfamiliar supply chains or relatively small supply partners, which may cause uncertainty in the quality, cost, and timely completion of our construction projects.

Our ability to continue to identify and develop relationships with a sufficient network of qualified suppliers who can adequately meet our construction timing and quality standards can be a significant challenge, particularly in the event of global supply chain disruptions. If we fail to identify and develop relationships with a sufficient number of suppliers and contractors who can appropriately address our construction needs, we may experience disruptions in our suppliers' logistics or supply chain networks or information technology systems, and other factors beyond our or our suppliers' control. If we are unable to access materials and labor to complete our construction projects within our expected budgets and meet our tenants' demands and expectations in a timely and efficient manner, our results of operations, cash flows, and reputation may be adversely impacted.

Our tenants may face increased risks and costs associated with volatility in commodity and labor prices or the prices or availability of specialized materials or equipment, or as a result of supply chain or procurement disruptions of such items, which may adversely affect their businesses or financial condition.

Our tenants are generally subject to the same generalized risks of commodity and labor price increases and supply chain or procurement as we and many other companies are. A number of our tenants, however, are also involved in highly specialized research or manufacturing activities that may require unique or custom chemical or biologic materials or sophisticated specialty equipment that is not widely available and therefore may be particularly susceptible to supply chain disruption. In addition, these tenants may have complex supply chains due to their specialized activities that are subject to stringent government regulations, which may further hinder their access to necessary materials and equipment. While we are not aware of such issues materially affecting our tenants to date, it is possible that these issues may affect our tenants adversely in the future.

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. Prior to the 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" 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, but not limited to, the following risks:

- 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.
- We may not be able to acquire or sell properties when desired or needed due to the illiquid nature of real estate assets.
- 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.
- We may not be able to complete improvements required to maintain or improve space due to unanticipated delays, significant cost increases by our vendors, or cancellation of construction resulting from shortages in the supply of necessary construction materials.

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.

We have consolidated and unconsolidated real estate joint ventures in which we share 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 our partners and us may result in delayed or unfavorable 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, 2023, approximately 94% of our leases (on an annual rental revenue basis) were triple net leases, which require tenants to pay substantially all real estate and other rent-related taxes, insurance, utilities, security, common area expenses, and other operating expenses (including increases thereto) in addition to base rent.

Our operating expenses may increase as a result of tax reassessments that our properties are subject to on a regular basis (annually, triennially, etc.), which may result in increases in property taxes as property values increase over time. In California, however, pursuant to the existing state law commonly referred to as Proposition 13, properties are generally reassessed to market value at the time of change in ownership or completion of construction; thereafter, annual property reassessments are limited to 2% of previously assessed values. As a result, Proposition 13 generally results in significant below-market assessed values over time. From time to time, lawmakers and political coalitions initiate efforts to repeal or amend Proposition 13 to eliminate its application to commercial and industrial properties, which, if successful, may prohibit or limit the passing of increased property tax assessments onto tenants.

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 tenant recoveries. Consequently, as a result of our triple net leases, we do not expect potential increases on property taxes as a result of tax reassessments to significantly impact our operating results. We cannot be certain, however, that we will be able to continue to negotiate pass-through provisions related to taxes in tenant leases in the future, or that higher pass-through expenses will not lead to lower base rents in the long run as a result of tenants' not being able to absorb higher overall occupancy costs. Thus, the repeal of or amendment to Proposition 13 could lead to a decrease in our income from rentals over time. 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 state of California, which could significantly hinder our ability to increase our rents or to maintain existing occupancy levels. The repeal of or amendment to Proposition 13 in California 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, and cash flows and our ability to make distributions to our stockholders.

In addition, compliance with various laws passed in California and other states in which we conduct business may result in cost increases due to new constraints on our business and the effects of potential non-compliance by us or third-party service providers. Any changes in connection with compliance could be time consuming and expensive, while failure to timely implement required changes could subject us to liability for non-compliance, any of which could adversely affect our business, operating results, and financial condition.

Most of our costs, such as operating and general and administrative expenses, interest expense, and real estate acquisition and construction costs, are subject to inflation.

During the year ended December 31, 2023, the consumer price index ("CPI") rose by approximately 3.4%. During the past three years, the CPI peaked at 9.1%.

As of December 31, 2023, approximately 96% of our leases (on an annual rental revenue basis) contained effective annual rent escalations approximating 3% that were either fixed or indexed based on the CPI or another index. We have long-term lease agreements with our tenants, of which 3%-12% (based on occupied RSF) expire each year. We believe that these annual lease expirations allow us to reset these leases to market rents upon renewal or re-leasing and that annual rent escalations within our long-term leases are generally sufficient to offset the effect of inflation on non-recoverable costs, such as general and administrative and interest expenses. However, during inflationary periods in which the inflation rate exceeds the annual rent escalation percentages within our lease contracts, these rate escalations or the resetting of rents from our renewal and re-leasing activities may not adequately offset the impact of inflation.

Our operating expenses are incurred in connection with, among others, property-related contracted services such as janitorial and engineering services, utilities, security, repairs and maintenance, and insurance. Property taxes are also impacted by inflationary changes as taxes are regularly reassessed based on changes in the fair value of our properties located outside of California. As discussed previously, in California, property taxes are not reassessed based on changes in the fair value of the underlying real estate asset but are instead limited to a maximum 2% annual increase by law.

Our operating expenses, with the exception of ground lease rental expenses, are typically recoverable through our lease arrangements, which allow us to pass through substantially all expenses associated with property taxes, insurance, utilities, security, repairs and maintenance, and other operating expenses (including increases thereto) to our tenants. As of December 31, 2023, approximately 94% of our existing leases (on an annual rental revenue basis) were triple net leases, which allow us to recover operating expenses, and approximately 93% of our existing leases (on an annual rental revenue basis) also provided for the recapture of capital expenditures. Our remaining leases are generally gross leases, which provide for recoveries of operating expenses above the operating expenses from the initial year within each lease.

Due to our ability to largely recover increases in operating expenses from our triple net leases, inflation typically does not have a significant adverse effect on our net operating income, results of operations, and operating cash flows at the property level. However, there is no guarantee that our tenants would be able to absorb these expense increases and to continue to pay us their portion of operating expenses, capital expenditures, and rent, or to be able to continue operating their businesses or conducting research and development activities altogether. Alternatively, our tenants may decide to relocate to areas with lower rent and operating expenses where we may not currently own properties, and, as a result, our tenants may cease leasing properties from us.

Our general and administrative expenses consist primarily of compensation costs, technology services, and professional service fees. Annually, our employee compensation is adjusted to reflect merit increases; however, to maintain our ability to successfully compete for the best talent, especially in a talent shortage environment, rising inflation rates may require us to provide compensation increases beyond historical annual merit increases, which may unexpectedly and/or significantly increase our compensation costs. Similarly, technology services and professional service fees are also subject to the impact of inflation and generally increase proportionately with increasing market prices for such services. Consequently, inflation may increase our general and administrative expenses over time.

During inflationary periods, interest rates have historically increased. For instance, to control the rate of inflation, the Board of Governors of the Federal Reserve System (the "U.S. Federal Reserve") raised its benchmark federal funds rate from nearly zero in March 2022 to a range between 5.25% and 5.50% as of December 31, 2023. Although there are expectations that the U.S. Federal Reserve will begin reducing the federal funds rate in 2024, these expectations might not materialize. A continued increase in interest rates could increase our financing costs over time, either through near-term borrowings on our variable-rate unsecured senior line of credit and commercial paper program, refinancing of our existing borrowings, or the issuance of new debt. In addition, elevated market interest rates may result in a decrease in the value of our real estate and could also adversely affect the securities markets in general, which could impact 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.

Additionally, inflationary pricing may increase the construction costs necessary to complete our development and redevelopment projects, including, but not limited to, costs of construction materials, labor, and services from third-party contractors and suppliers. Certain increases in the costs of construction materials, however, can often be managed in our development and redevelopment projects through either (i) general budget contingencies built into our overall construction costs estimates for each of our projects or (ii) guaranteed maximum price construction contracts, which stipulate a maximum price for certain construction costs and shift inflation risk to our construction general contractors. However, it is not guaranteed that our budget contingencies would accurately account for potential construction cost increases. Nor is it guaranteed that our general contractors would be able to absorb such increases in costs and complete our construction projects timely, within budget, or at all.

We rely on a number of third-party suppliers and contractors to supply raw materials, skilled labor, and services for our construction projects. We have not encountered significant difficulty collaborating with these third-party suppliers and contractors and obtaining materials and skilled labor, nor experienced significant delays or increases in overall project costs due to the factors discussed above. While we do not rely on any single supplier or vendor for the majority of our materials and skilled labor, we may experience difficulties obtaining necessary materials from suppliers or vendors whose supply chains might become impacted by economic or political changes, outmoded technology, aging infrastructure, shortages of shipping containers and/or means of transportation, or difficulties obtaining adequate skilled labor from third-party contractors. It is uncertain whether we would be able to continue to source the essential commodities, supplies, materials, and skilled labor timely or at all without incurring significant costs or delays, particularly during times of economic uncertainty resulting from events outside of our control. Higher construction costs could adversely impact our net investments in real estate and expected yields on our development and redevelopment projects, which may make otherwise lucrative investment opportunities less profitable to us.

Historically, during periods of increasing interest rates, real estate valuations have generally decreased as a result of rising capitalization rates which tend to move directionally with interest rates. Consequently, prolonged periods of higher interest rates may negatively impact the valuation of our real estate asset portfolio and lead to higher cost of capital and/or lower sales proceeds from future real estate dispositions.

The realization of any of the aforementioned risks could adversely affect our financial condition, results of operations, and cash flows, our stock price and market capitalization, as well as our ability to pay dividends.

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. In addition, because of the impact to the business environment due to civil unrest, high cost of living, taxes, and other increased region-specific costs of doing business in certain of our markets and submarkets, such as those located in the states of California and Washington, tenants may choose not to renew or re-lease space. 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 rental 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 biologic 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 or 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 and/or equity markets may result in heavier reliance on alternative financing sources to undertake new investments. An inability to obtain debt and/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 capital.

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 macroeconomic or other conditions. In addition, certain of our properties have low tax bases relative to their estimated current market values. As such, the sale of these assets would generate significant taxable gains that may increase our REIT distribution requirement unless we sold such properties in a qualifying tax-deferred exchange under Section 1031 ("Section 1031 Exchange") of the Internal Revenue Code of 1986, as amended (the "Internal Revenue Code"), or in a similar tax-free or tax-deferred transaction or applied an offsetting tax deduction. For a sale to qualify for tax-deferred treatment under Section 1031, net proceeds from the sale of a property must be held by a third-party escrow agent until applied toward the purchase of a qualifying real estate asset. It is possible we may encounter delays in reinvesting such proceeds, or we may be unable to reinvest such proceeds at all, due to an inability to procure qualifying real estate. Any delay or limitation in using the reinvestment proceeds to acquire additional real estate assets may cause the reinvestment proceeds to become taxable to us. Furthermore, if current laws applicable to such tax-deferred transactions are later amended or repealed, we may no longer be able to sell properties on a tax-deferred basis, which may adversely affect our results of operations and cash flows.

In addition, 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 and/or improve 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.

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, and 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.

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/or 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, but not limited to, 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 secured 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, secured construction loan, or commercial paper program, which could adversely impact our cash flows and operations.
- The terms of our debt obligations may require a reduction in our distributions to stockholders.

If our expenses exceed our revenues, 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, but are not limited to:

- National, local, and worldwide economic and political conditions;
- Competition from other properties;
- Changes in the life science, agtech, and technology industries;
- Real estate conditions in our target markets;
- Our ability to collect rental 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;
- Increases in operating costs; and
- Increases in costs to address environmental impacts related to climate change or natural disasters.

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.

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

Our actual financial results may differ materially from expectations and/or the guidance we provide. 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 leases expire;
- Our ability to reinvest sale proceeds in a timely manner at rates similar to the rate at which assets are sold;
- Our ability to successfully complete developments or redevelopments of properties for lease on time and/or within budget;
- Our ability to procure third-party suppliers or providers of necessary construction materials for our developments and redevelopments of properties;
- 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 a variety of factors, many of which are beyond our control, 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 (or false or misleading information) about us, our tenants, the real estate industry, or the life science, agtech, and technology 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;
- Changes in our analyst ratings;
- Changes in our corporate credit ratings 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 or equity we raise in the future;
- Additions, departures, or other announcements regarding our key management personnel and/or the Board of Directors;
- Actions by institutional stockholders;
- Speculation in the press or investment community;
- Short selling of our common stock or related derivative securities;
- The publication or dissemination of opinions, characterizations, or disinformation that are intended to create negative market momentum, including through the use of social media;
- Risks associated with generative artificial intelligence tools and large language models and the conclusions that these tools and models may draw about our business and prospects in connection with the dissemination of negative opinions, characterizations, or disinformation;
- 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;
- Fluctuations due to general market volatility;
- Disruptions in the banking sector or failures of financial institutions that we or our tenants may or may not have business relationships with;
- Global market factors adversely affecting the U.S. economic and political environment;
- General market and economic conditions; and
- The realization of any of the other risk factors included in this annual report on Form 10-K.

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, or the perception that such sales may occur, could adversely affect the prevailing market price for our common stock. Refer to “Other sources” 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, but not limited to:

- 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 a small portfolio of operating properties outside the U.S., primarily in Canada. 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, data privacy and security, 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;
- 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 invest in foreign markets under the assumption that our future earnings there 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 markets will not increase significantly, thus impacting our ability to repatriate our foreign investments and related earnings. Moreover, 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.

Investments in international markets may also subject us to risks associated with establishing effective controls and procedures to regulate the operations in foreign locations 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, and cash flows, and the market price of our common stock could be adversely affected.

Furthermore, we may in the future enter into agreements with foreign 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;
- Our partners may file for bankruptcy protection or otherwise fail to fund their share of required capital contributions;
- Our partners may 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 partners may have banking or financial relationships with institutions that become insolvent or otherwise fail, which could affect our access to capital;
- Our joint venture partners may have rights to sell their interests to us, which we may face challenges in fulfilling due to potential capital constraints, or alternatively, if we elect not to buy their interests, we may be forced to sell the underlying asset when we otherwise would not decide to do so;
- 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.

The risks noted above could negatively impact us or require us to:

- Contribute additional capital if our partners fail to fund their share of any required capital contributions or are unable to access capital as a result of disruptions in the banking sector;
- Experience substantial unanticipated delays that could hinder either the initiation or completion of redevelopment activities or new construction;
- Incur additional expenses that could prevent the achievement of yields or returns that were initially anticipated;
- Become engaged in a dispute with our joint venture partner that could lead to the sale of either party's ownership interest or the property at a price below estimated fair market value;
- Initiate litigation or settle disagreements with our partners through litigation or arbitration; and
- Suffer losses or less than optimal returns as a result of actions taken by our partners with respect to our joint venture investments.

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, and cash flows, our ability to make distributions to our stockholders, and the market price of our common stock.

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.

As a part of Alexandria's risk management program, we maintain all-risk property insurance for our portfolio to mitigate risks posed by extreme weather events, natural disasters (including floods, wildfires, earthquakes, and wind events), and terrorism. Our all-risk property insurance currently provides a \$2.0 billion per occurrence limit for our operating portfolio. However, it may not fully cover all potential losses. There is no assurance that we will maintain current levels of insurance coverage in the future.

A significant portion of our real estate portfolio is located in seismically active regions, including the San Francisco Bay Area, San Diego, and Seattle, and a damaging earthquake in any region could significantly impact multiple properties. For these properties, we have obtained earthquake insurance in an amount and with deductibles we believe are commercially reasonable. For properties in California, coverage is \$335 million, per occurrence and has an annual aggregate limit, subject to a 5% deductible of the property's replacement value. For the Seattle region, the coverage is \$200 million, per occurrence and has an annual aggregate limit, subject to a 2% deductible. Nevertheless, a major earthquake in any region could lead to substantial losses, potentially exceeding our insurance coverage and resulting in material aggregate deductible amounts. This could adversely affect our business, financial condition, results

of operations, and cash flows.

In addition, we carry environmental 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, current property values may exceed the amount covered by a related title insurance policy.

We regularly evaluate the insurance market, including for coverage against terrorism, earthquakes, and other catastrophic events. However, we cannot predict the availability and affordability of such coverage in the future. Should the premiums for our earthquake and other insurance policies become prohibitively expensive or if we decide to self-insure some of our risks, we may modify or discontinue the coverage for some or all of our properties.

If we experience a loss at any of our properties that is not covered by insurance, exceeds our insurance policy limits, or 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 be responsible for other obligations related to the affected properties. All of our wholly owned properties, including properties partially owned through joint ventures that are managed by our joint venture partners, carry comprehensive liability, fire, extended coverage, and rental loss insurance.

For our properties in wildfire- or flood-prone areas, we are evaluating mitigation strategies and potential operational and physical improvements. For example, resilience measures that may be implemented at some of our properties may include:

- *Fire-resilience measures.* Incorporation of brush management practices into landscape design; selection and positioning of less flammable vegetation species at a reasonable distance from a property; construction of building envelopes with fire-resistant materials; and installation of HVAC systems that are able to filter smoke particulates from the air in the event of a fire.
- *Flood-resilience measures.* Positioning of critical building mechanical equipment on roofs or significantly above projected potential flood elevations; storage of temporary flood barriers on site to be deployed at building entrances in the event of a flood; elevation of property entrances or the first floor above projected present-day and future flood elevations; installation of backflow preventors on storm/sewer utilities that discharge from the building; and waterproofing of the building envelope up to the projected flood elevation.

Our tenants are also required to maintain comprehensive insurance policies, including commercial general liability insurance typically obtained for similar properties. However, we and our tenants do not generally insure against certain types of losses that are either uninsurable or prohibitively costly to insure. We cannot predict the future availability of insurance coverage against any risk of loss. Insurance companies may discontinue coverage for certain risks, or, if offered, such coverage may become excessively expensive.

The loss of services of any of our executive and/or senior officers could adversely affect us.

We depend upon the services and contributions of relatively few executive and 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 laboratory, agtech, and advanced technology properties and with major tenants and venture investment portfolio companies in the life science, agtech, and technology industries. We cannot assure our stockholders that our senior officers will remain employed with us. In California and certain other regions where we have operations, there is intense competition for individuals with skill sets needed for our business. Moreover, in California, where our headquarters and many of our properties are located, high state and local taxes and increased home prices contribute to the high cost of living, which may impair our ability to attract and retain employees locally in the future. Due to the long-term nature of our investments and properties, we are unable to predict and may be unable to effectively control such costs. If we do not succeed in attracting new personnel and retaining and motivating existing personnel, our business may suffer, and we may be unable to implement our current initiatives or grow effectively.

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.

We have elected to be taxed as a REIT under the Internal Revenue Code. 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 may 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, as well as 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 our current organization and method of operation comply with the rules and regulations promulgated under the Internal Revenue Code to enable us to qualify as a REIT, we cannot assure our stockholders that we are or will remain so qualified. To qualify as a REIT, we must satisfy a number of requirements, including those regarding the ownership of our stock and the composition of our assets and gross income. We must also make distributions to stockholders aggregating at least 90% of our annual REIT taxable income, excluding net capital gains.

We currently own, and may acquire in the future, direct or indirect interests in one or more entities that have elected or may elect to be taxed as REITs under the Internal Revenue Code, which are subject to the various REIT qualification requirements and limitations described herein. If any of these entities were to fail to qualify as a REIT, then (i) the entity would become subject to federal and state income taxes, (ii) shares in such an entity would cease to be qualifying assets for purposes of asset tests applicable to REITs, and (iii) we may fail certain of the asset tests applicable to REITs, in which event we would fail to qualify as a REIT unless we qualify for certain relief provisions.

In addition, we currently own interests in certain taxable REIT subsidiaries and may continue to acquire such interests in the future. A taxable REIT subsidiary is a corporation (or entity treated as a corporation for federal income tax purposes), other than a REIT, that has made a joint election with a parent REIT (which directly or indirectly owns stock in the REIT subsidiary) to be treated as a taxable REIT subsidiary. The subsidiary is subject to federal and state income taxes as a regular C corporation and is further subject to a 100% excise tax for certain transactions between the taxable REIT subsidiary and its parent REIT that are not conducted on an arm's-length basis. We intend to structure our transactions with any taxable REIT subsidiaries that we own to ensure that they are entered into on arm's-length terms to avoid incurring the 100% excise tax mentioned above. However, there can be no assurance that we will be able to successfully structure future transactions to avoid being subject to the 100% excise tax, which may adversely impact our cash flows, ability to make distributions to stockholders, and results of operations.

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 the U.S. 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 certain 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 or businesses 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, security, 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, cyberattacks, pandemics, 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, security, 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 damage to our reputation.

In addition, difficulties encountered by key vendors in providing necessary services at our properties could result in 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. Also, 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.

Pacific Gas and Electric Company ("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 Bay Area market depend on PG&E for the delivery of these essential services. PG&E initiated voluntary reorganization proceedings under Chapter 11 of the U.S. Bankruptcy Code in January 2019 in response to potential liabilities arising from a series of catastrophic wildfires that occurred in Northern California in 2017 and 2018. While PG&E emerged from bankruptcy in July 2020, there is no guarantee that PG&E, or other major utilities providers on which we rely in other cities in which we operate, will be able to sustain safe operations and continue to provide consistent utilities services during similar or future incidents. During periods of high winds and high fire danger in past fire seasons, PG&E preemptively shut off power to areas of Central and Northern California. The shutoffs 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 shutoffs while the utility company addresses maintenance issues. Future shutoffs 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. Similarly, we rely on a limited number of vendors that provide utilities services to our properties in other regions. There is no guarantee that similar events of bankruptcy or distress would not cause unanticipated disruptions in service to any of our properties in affected areas.

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:

- REIT qualification;
- 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 legal 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. These entities may also have more favorable relationships and pricing with suppliers and contractors and may complete construction projects sooner and at lower costs than we are able. We may also face competition with these entities for access to the same or similar raw materials and labor resources from suppliers and contractors, as well as access to the specific suppliers and contractors we use. 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. If there is no matching growth in demand, the intensified competition may lead to oversupply of available space comparable to ours and result in the pressure on rental rates and greater incentives awarded to tenants. To maintain our ability to retain current and attract new tenants, we may be forced to reduce the rental rates that our tenants are currently willing to pay or offer greater tenant concessions. Should we encounter intensified competition or oversupply, we cannot be certain that we will be able to compete successfully, maintain our occupancy and rental rates, and continue to expand our business. As a result, our financial condition, results of operations, and cash flows, our ability to pay dividends, and our stock price may be adversely affected.

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

Our properties are primarily located in the following markets:

- Greater Boston
- San Francisco Bay Area
- New York City
- San Diego
- Seattle
- Maryland
- 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, agtech, and technology 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 infrastructure 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 and fume hoods.

Because many of our infrastructure improvements are specialized and costlier than those for other property types, we may be more significantly impacted by any unanticipated delays or increased costs due to price volatility or supply shortages of construction materials or labor. As a result, we may be unable to complete our improvements as scheduled or within budgeted amounts, which may adversely affect our ability to lease available space to potential tenants or to reduce our projected project returns.

Our tenants and venture investments are primarily in the life science, agtech, and technology industries, and changes within these industries may adversely impact our revenues from lease payments, the value of our non-real estate investments, and our operating results.

In general, our business strategy is to invest primarily in properties used by tenants in the life science, agtech, and technology industries. Through our venture investment portfolio, we also hold investments in companies that, similar to our tenant base, are concentrated in the life science, agtech, and technology industries. Our business could be adversely affected if the life science, agtech, or technology industries are impacted by an economic, financial, or banking crisis, or if these 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 tenants and investments. Also, some of our properties may be better suited for a particular life science, agtech, or technology industry tenant and could require significant modification before we are able to re-lease space to a tenant that does not operate in one of these industries. 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 laboratory, agtech, and advanced technology space at the time the leases are negotiated and the increases are proposed.

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

It is also possible that our tenants or venture investments within these industries may be adversely affected by crises involving financial institutions with which they have business relationships. On March 10, 2023, Silicon Valley Bank ("SVB"), the 16th largest bank in the U.S. at the time and headquartered in California, was closed by the California Department of Financial Protection and Innovation, which appointed the FDIC as receiver. SVB was a provider of commercial and private banking products and services to industries including life science, technology, and healthcare. SVB is now a division of First Citizens Bank. Additionally, on March 12, 2023, the New York State Department of Financial Services announced that it had closed New York-based Signature Bank and appointed the FDIC as a receiver, and on May 1, 2023, regulators seized control of First Republic Bank and sold the majority of its assets and deposits to JPMorgan Chase.

Although we did not have bank accounts, loans to or from, or investments in any venture funds led by SVB or any other recently failed financial institution, some of our tenants and venture investments may have banking or other business relationships with such entities. Despite protections by the U.S. Federal Reserve, the FDIC, and the Treasury, if our tenants or venture investments are unable to access cash or other capital from these institutions or any other financial institution that might fail in the future, their liquidity, ability to meet operating expense obligations, and financial performance may be adversely affected. Accordingly, such tenants may be unable to pay us rent, or our venture investments may decline in value, which may negatively impact our financial results.

Some of our current or future tenants may also include technology companies in their startup or growth phases of their life cycle. Fluctuations in market confidence in these companies or adverse changes in economic, financial, or banking conditions, such as the failure of financial institutions, including the events discussed above, may have a disproportionate effect on the operations of such companies. Deterioration of our tenants' financial condition may result in our inability to collect lease payments from them and therefore may negatively impact our operating results.

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 determine their research and development budgets based on several factors, including the need to develop new products, the availability of government and other funding, competition, and the general availability of resources. Our investments through our venture investment portfolio are also in companies that, similar to our tenant base, are concentrated in the life science, agtech, and technology industries.

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 our tenants, our venture investment portfolio companies, or the life science, agtech, and technology industries.

Our tenants also include research institutions whose funding is largely dependent on grants from government agencies, such as 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 FDA or NIH, which could adversely affect business operations of our tenants that 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 life science/laboratory space and their ability to make lease payments to us and thus adversely impact our results of operations.

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

Changes in technology, patent expiration, and intellectual property rights and protection

- Our tenants and venture investment portfolio companies develop and 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.
- Many of our tenants and venture investment portfolio companies, and their licensors, require patent, copyright, or trade secret protection and/or rights to use third-party intellectual property to develop, make, market, and sell their products and technologies. A tenant or venture investment portfolio company 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. Additionally, a third party may own intellectual property that limits a tenant's or venture investment portfolio company's ability to bring to market its product or technology without securing a license or other rights to use the third-party intellectual property, which may require the tenant to pay an upfront fee or royalty. Failure to obtain these rights from third parties may make it challenging or impossible for a tenant or venture investment portfolio company to develop and commercialize its products or technologies, which could adversely affect its competitive position and operations.
- Many of our tenants and venture investment portfolio companies depend upon patents to provide exclusive marketing rights for their products. As their product patents expire, competitors may be able to legally produce and market products similar to the products of our tenants or venture investment portfolio companies, which could have a material adverse effect on their sales and results of operations.

High levels of regulation

- Some of our life science industry tenants and venture investment portfolio companies develop and manufacture products that require regulatory approval, including approval from the FDA, prior to being manufactured, marketed, sold, and used. The regulatory approval process to manufacture and market drugs is costly, typically takes many years, requires validation through clinical trials and the use of substantial resources, and is often unpredictable. A tenant or venture investment portfolio company may fail to obtain or may experience significant delays in obtaining these approvals. Even if the tenant or venture investment portfolio company obtains regulatory approvals, marketed products will be subject to ongoing regulatory review and potential loss of approvals.
- The ability of some of our life science industry tenants and venture investment portfolio companies 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 payors. Additionally, reimbursements may decrease in the future.

Failures in the safety and efficacy of their products

- Some of our life science industry tenants and venture investment portfolio companies may find that their potential products are not effective, or are even harmful, when tested in humans.
- Some of our life science industry tenants and venture investment portfolio companies depend upon the commercial success of certain products. Even if a product developed by a life science industry tenant or venture investment portfolio company is 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 product developed, manufactured, marketed, or sold by a life science industry tenant or venture investment portfolio company may not be well accepted by doctors and patients, or may be less effective or accepted than a competitor's product.
- The negative results of safety signals arising from the clinical trials of the competitors of our life science industry tenants or venture investment portfolio companies may prompt regulatory agencies to take actions that may adversely affect the clinical trials or products of our tenants or venture investment portfolio companies.

Significant funding requirements for product research and development

- Some of our life science industry tenants and venture investment portfolio companies require significant funding to develop and commercialize their products and technologies, which must be obtained from venture capital firms; private investors; public markets; other 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 or venture investment portfolio company to raise capital will depend on its financial and operating condition, viability of its products and technology, and the overall condition of the financial, banking, and economic environment, as well as government budget policies.
- Even with sufficient funding, some of our life science industry tenants or venture investment portfolio companies 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 life science industry tenants or venture investment portfolio companies may not be able to successfully manufacture their products economically, even if such products are proven through human clinical trials to be safe and effective in humans.
- Marketed products also face commercialization risk, and some of our life science industry tenants and venture investment portfolio companies may never realize projected levels of product utilization or revenues.
- Negative news regarding the products, the clinical trials, or other business developments of our life science industry tenants or venture investment portfolio companies may cause their stock price or credit profile to deteriorate.

We cannot assure our stockholders that our life science industry tenants or venture investment portfolio companies will be able to develop, manufacture, market, or sell their products and technologies due to the risks inherent in the life science industry. Any life science industry tenant or venture investment portfolio company that is unable to avoid, or sufficiently mitigate, the risks described above may have difficulty making rental payments or satisfying its other lease obligations to us or may have difficulty maintaining the value of our investment. Such risks may also decrease the credit quality of our life science industry tenants and venture investment portfolio companies 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 and venture investment portfolio companies may also adversely impact our stock price.

Our agtech industry tenants and venture investment portfolio companies are subject to a number of risks unique to their industry, including (i) uncertain regulatory environment, (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 our tenants' ability to make rental payments or satisfy their other lease obligations to us or may impact our venture investment portfolio companies' value, which consequently 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 continue to evolve. 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 and venture investment portfolio companies. 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 industry tenants' and venture investment portfolio companies' 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 industry tenants and venture investment portfolio companies offer.

Unavailability of transportation mechanisms for carrying products and raw materials

- Some of our agtech industry tenants' and venture investment portfolio companies' businesses depend on transportation services to deliver their products or to deliver raw materials to their clients. If transportation service providers are unavailable or fail to deliver our agtech industry tenants' or venture investment portfolio companies' products in a timely manner, they may be unable 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 industry tenants' and venture investment portfolio companies' businesses.

Strikes or labor slowdowns or labor contract negotiations

- Our agtech industry tenants and venture investment portfolio companies 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 agtech industry tenants or venture investment portfolio companies may not have the ability to adequately staff their businesses, which could have an adverse effect on their operations and revenue.

Rapid technological changes in agriculture

- The agtech industry is characterized by regular 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 and venture investment portfolio companies.
- Technological advances in agriculture could decrease the demand for crop nutrients, energy, and other crop input products and services our agtech industry tenants and venture investment portfolio companies provide. Genetically engineered crops that resist disease and insects could affect the demand for certain of our tenants' or venture investment portfolio companies' 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 and venture investment portfolio companies will be able to develop, produce, market, or sell their products and services due to the risks inherent in the agtech industry. Any agtech industry tenant or venture investment portfolio company that is unable to avoid, or sufficiently mitigate, the risks described above may have difficulty making rental payments or satisfying its other lease obligations to us. Such risks may also decrease the credit quality of our agtech industry tenants or venture investment portfolio companies 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 and venture investment portfolio companies may also adversely impact our stock price.

Our technology industry tenants and venture investment portfolio companies 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 sales growth, and (v) inadequate intellectual property protections. These risks may adversely affect our tenants' ability to make rental payments to us or satisfy their other lease obligations or may impact our venture investment portfolio companies' value, which consequently 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 continue to evolve. 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 and venture investment portfolio companies. These laws and regulations may cover, among other areas, taxation, worker classification, 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 and venture investment portfolio companies.

Dependency on the maintenance and security of the Internet infrastructure

- Some of our technology industry tenants and venture investment portfolio companies 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, venture investment portfolio companies, or users of their products and services.
- 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 cyberattacks and computer malware, viruses, worms, and similar programs, may materially affect the ability of our technology industry tenants and venture investment portfolio companies to conduct business.
- Reliance on a limited number of cloud provider vendors may result in detrimental impacts on or halts of operations during instances of network outages or interruptions.
- Security breaches or network attacks may delay or interrupt the services provided by our technology industry tenants and venture investment portfolio companies and could harm their reputations or subject them to significant liability.

Significant funding requirements for product research and development and sales growth

- Some of our technology industry tenants and venture investment portfolio companies require significant funding to develop and commercialize their products and technologies, which must be obtained from venture capital firms; private investors; 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 or venture investment portfolio company 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 technology industry tenants and venture investment portfolio companies 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 technology industry tenants and venture investment portfolio companies may not be able to successfully manufacture their products economically.
- Marketed products also face commercialization risk, and some of our technology industry tenants and venture investment portfolio companies may never realize projected levels of product utilization or revenues.
- Unfavorable news regarding the products or other business developments of our technology industry tenants or venture investment portfolio companies may cause their stock price or credit profile to deteriorate.

Inadequate intellectual property protections

- The products and services provided by some of our technology industry tenants and venture investment portfolio companies 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 and venture investment portfolio companies 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 and venture investment portfolio companies to incur significant costs to protect their intellectual property rights.

We cannot assure our stockholders that our technology industry tenants and venture investment portfolio companies will be able to develop, manufacture, market, or sell their products and services due to the risks inherent in the technology industry. Any technology industry tenant or venture investment portfolio company that is unable to avoid, or sufficiently mitigate, the risks described above may have difficulty making rental payments or satisfying its other lease obligations to us or may have difficulty maintaining the value of our investment. Such risks may also decrease the credit quality of our technology industry tenants or venture investment portfolio companies 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 and venture investment portfolio companies may also adversely impact our stock price.

The companies in which we invest through our non-real estate venture investment portfolio expose us to risks similar to those of our tenant base and additional risks inherent in venture capital investing, which could materially affect our reported asset and liability values and earnings and may materially and adversely affect our reported results of operations.

Through our strategic venture investment portfolio, we hold investments in companies that, similar to our tenant base, are concentrated in the life science, agtech, and technology industries. The venture investment portfolio companies in which we invest are accordingly subject to risks similar to those posed by our tenant base, including those disclosed in this annual report on Form 10-K. In addition, the companies in which we invest through our venture investment portfolio are subject to the risks inherent in venture capital investing and may be adversely affected by external factors beyond our control and other risks, including, but not limited to the following:

- Risks inherent in venture capital investing, which typically focuses on small early-stage companies with unproven technologies and limited access to capital and is therefore generally considered more speculative than investment in larger, more established companies.
- Market disruption and volatility, which may adversely affect the value of the companies in which we hold equity investments and, in turn, our ability to realize gains upon sales of these investments.
- Disruptions, uncertainty, or volatility in the capital markets and global economy, which may impact the ability of the companies in which we invest to raise additional capital or access capital from venture capital investors or financial institutions on favorable terms.
- Liquidity of the companies in which we invest, which may (i) impede our ability to realize the value at which these investments are carried if we are required to dispose of them, (ii) make it difficult for us to sell these investments on a timely basis, and (iii) impair the value of such investments.
- Changes in the political climate, potential reforms and changes to government negotiation and regulation, the effect of healthcare reform legislation, including those that may limit pricing of pharmaceutical products and drugs, market prices and conditions, 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, all of which may affect the valuation, funding opportunities, business operations, and financial results of the companies in which we invest.
- Changes in U.S. federal government organizations or other agencies, including changes in policy, regulations, budgeting, retention of key leadership and other personnel, administration of drug approvals or restrictions on drug product or service development or commercialization, or a partial or complete future government shutdown resulting in temporary closures of agencies such as the FDA and SEC, could adversely affect the companies in which we invest, including delays in the commercialization of such companies' products, decreased funding of research and development in the life science, agtech, and technology industries, or delays surrounding approval of budget proposals for any of these industries.
- Impacts or changes in business for any reason, including diversion of healthcare resources away from clinical trials, delays, or difficulties enrolling patients or maintaining scheduled appointments in clinical trials, interruptions, and delays in laboratory research due to the reduction in employee resources stemming from social distancing requirements and the desire of employees to avoid contact with people, insufficient inventory of supplies and reagents necessary for laboratory research due to interruptions in supply chain, delays or difficulties obtaining clinical site locations or engaging clinical site staff, interruptions on clinical site monitoring due to travel restrictions, delays in interacting with or receiving approval from regulatory agencies in connection with research activities or clinical trials, and disruptions to manufacturing facilities and supply lines.
- Reduction in revenue or revenue growth, deterioration in the global economy, or other reasons, may impair the value of the companies in which we hold equity investments or impede their ability to raise additional capital.

- Seasonal weather conditions, changes in availability of transportation or labor, and other related factors may affect the products and services or the availability of the products and services of the companies in which we invest in the agtech sector.

Many of the factors listed above are beyond our control and, if the venture investment portfolio companies are adversely affected by any of the foregoing, could materially affect our reported asset and liability values and earnings and may materially and adversely affect our reported results of operations. The occurrence of any of these adverse events could cause the market price of shares of our common stock to decline regardless of the performance of our primary real estate business.

Market and other external factors may adversely impact the valuation of our non-real estate equity investments.

We hold equity investments in certain publicly traded companies, limited partnerships, and privately held entities primarily involved in the life science, agtech, and technology industries through our venture investment portfolio. 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 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 non-real estate equity investments.

We make and hold investments in privately held life science, agtech, and technology companies through our venture investment portfolio. 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.

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 and 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.

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

Changes to U.S. tax laws that may be enacted in the future could negatively impact the overall economy, government revenues, the real estate industry, our tenants, and us, in ways that cannot be reliably predicted. Furthermore, any future changes to U.S. tax laws may negatively impact certain of our tenants' operating results, financial condition, and future business plans. Such changes to the tax laws 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. For example, the Tax Cuts and Jobs Act of 2017 was enacted on December 20, 2017, and significantly revised the U.S. corporate income tax law by, among other things, reducing the corporate income tax rate to 21% for tax years beginning in 2018, imposing additional limitations on the deductibility of interest, changing the utilization of net operating loss carryforwards, allowing for the expensing of certain capital expenditures, and implementing a modified territorial system. We are currently unable to predict whether any future changes will occur and any impact such changes could have on 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 payors, 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 payors 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 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, then President Trump issued an executive order, "Promoting Healthcare Choice and Competition Across the United States," which the Biden administration repealed in January 2021. It is unknown what other changes will be implemented through the U.S. Congress or future executive orders and how these would impact our tenants. 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 tax reform or 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, 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 future 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, 2023, leases with U.S. government tenants at our properties accounted for approximately 1.1% of our aggregate annual rental revenue in effect as of December 31, 2023.

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 implementing, 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 payors inside and outside the U.S. will become more severe over time.

Changes in U.S. federal government funding for the FDA, the 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 industry tenants and venture investment portfolio companies, 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.

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 the event of a partial or complete government shutdown, the FDA and certain other science agencies may temporarily cease certain operations. Furthermore, during such shutdown, the FDA may maintain only operations deemed to be essential for public health while suspending the acceptance of new medical product applications and routine regulatory and compliance work related to medical products, certain drugs, and foods.

Disruptions at the FDA and other agencies, such as those resulting from a government shutdown, or uncertainty from stopgap spending bills may slow the time necessary for new drugs and devices to be reviewed and/or approved by necessary government agencies and may affect the ability of the healthcare and drug industries 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 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.

On August 22, 2022, the Inflation Reduction Act of 2022 was signed into law. This legislation allows, for the first time ever, the U.S. Department of Health and Human Services to negotiate Medicare drug prices directly with manufacturers. Specifically, the law requires manufacturers to charge a negotiated "maximum fair price" for select drugs covered by Medicare Part B and Part D or be subject to an excise tax for noncompliance, introduces penalties for drug manufacturers that increase drug prices over the rate of inflation, and caps additional out-of-pocket expenses for Medicare beneficiaries.

We cannot predict the ultimate impact of this legislation or the content and outcome of future potential reforms and changes to the government's ability to regulate and negotiate drug pricing. 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' and venture investment portfolio companies' businesses, including life science, agtech, and technology companies, which may reduce the demand for life science/laboratory space and negatively impact our operating results and our business.

Global factors

The outbreak of any highly infectious or contagious disease could adversely impact or cause disruption to our financial condition and results of operations.

The effects of any future outbreak of any highly infectious or contagious disease on our (or our tenants') ability to successfully operate could be adversely impacted by the following factors, among others:

- The continued service and availability of personnel, including our executive officers and other leaders who are part of our management team, and our ability to recruit, attract, and retain skilled personnel. To the extent our management or personnel are impacted in significant numbers by the outbreak of pandemic or epidemic disease and are not available or allowed to conduct work, our business and operating results may be negatively impacted.
- Our (or our tenants') ability to operate, generally or in affected areas, or delays in the supply of products or services from our vendors that are necessary for us to operate effectively.
- Our tenants' ability to pay rent on their leases in full and timely and, to the extent necessary, our inability to restructure our tenants' long-term rent obligations on terms favorable to us or to timely recapture the space for re-leasing.

- Difficulty in our accessing debt and/or equity capital on attractive terms, or at all, and a severe disruption and instability in the global financial markets, or deterioration in credit and financing conditions, which may affect our (or our tenants') ability to access capital necessary to fund business operations or replace or renew maturing liabilities on a timely basis and may adversely affect the valuation of financial assets and liabilities, any of which could affect our (or our tenants') ability to meet liquidity and capital expenditure requirements or could have a material adverse effect on our business, financial condition, results of operations, and cash flows.
- Complete or partial closures of, or other operational issues at, one or more of our properties resulting from government action or directives.
- Our (or our tenants') ability to continue or complete construction as planned for our tenants' operations, or delays in the supply of materials or labor necessary for construction, which may affect our (or our tenants') ability to complete construction or to complete it timely, our ability to prevent a lease termination, and our ability to collect rent, which may have a material adverse effect on our business, financial condition, results of operations, and cash flows.
- The cost of implementing precautionary measures, including, but not limited to, potential additional health insurance and labor-related costs.
- Governmental efforts (such as moratoriums on or suspensions of eviction proceedings) that may affect our ability to collect rent or enforce remedies for the failure of our tenants to pay rent.
- Uncertainty related to whether the U.S. Congress or state legislatures will pass additional laws providing for additional economic stimulus packages, governmental funding, or other relief programs, whether such measures will be enacted, whether our tenants will be eligible or will apply for any such funds, whether the funds, if available, could be used by our tenants to pay rent, and whether such funds will be sufficient to supplement our tenants' rent and other obligations to us.
- Deterioration of global economic conditions and job losses, which may decrease demand for and occupancy levels of our rental properties and may cause our rental rates and property values to be negatively impacted.
- Our dependence on short-term and long-term debt sources, including our unsecured senior line of credit, commercial paper program, and unsecured senior notes, which may affect our ability to continue our investing activities and make distributions to our stockholders.
- Declines in the valuation of our properties, which may affect our ability to dispose of assets at attractive prices or to obtain debt financing secured by our properties and may reduce the availability of debt funding.
- Declines in the valuation of our venture investment portfolio, which may (i) impede our ability to realize the value at which these investments are carried if we are required to dispose of them, (ii) make it difficult for us to sell these investments on a timely basis, and (iii) impair the value of such investments.
- Refusal, failure, or delay by one or more of our lenders under our unsecured senior line of credit to fund their financing commitment to us, which we may not be able to replace on favorable terms, or at all.
- To the extent we enter into derivative financial instruments, one or more counterparties to our derivative financial instruments could default on their obligations to us or could fail, increasing the risk that we may not realize the benefits of utilizing these instruments.
- Any possession taken of our properties, in whole or in part, by governmental authorities for public purposes in eminent domain proceedings.
- Our level of insurance coverage and recovery we receive under any insurance we maintain, which may be delayed by, or insufficient to fully offset potential/actual losses caused by any highly infectious or contagious disease.
- Any increase in insurance premiums and imposition of large deductibles.
- Our level of dependence on the Internet, as it relates to employees' working remotely, and increases in malware campaigns and phishing attacks preying on the uncertainties surrounding any highly infectious or contagious disease, which may increase our vulnerability to cyberattacks.
- Our ability to ensure business continuity in the event our continuity of operations plan is not effective or is improperly implemented or deployed during a disruption.
- Our ability to operate, which may cause our business and operating results to decline or may impact our ability to comply with regulatory obligations and may lead to reputational harm and regulatory issues or fines.

The rapid spread, development, and fluidity of a highly infectious or contagious disease may result in significant disruption of the global financial market and labor markets and may lead to a deterioration of economic conditions, an economic downturn, and/or a recession at a global scale, which could materially affect our (or our tenants') performance, financial condition, results of operations, and cash flows.

The outbreak or spread of any highly infectious or contagious disease could adversely impact or cause disruption to our tenants' financial condition and results of operations, which may adversely impact our ability to generate income sufficient to meet operating expenses or generate income and capital appreciation.

Our tenants, many of which conduct business in the life science, agtech, or technology industries, may incur significant costs or losses responding to any highly infectious or contagious disease, lose business due to interruption in their operations, or incur other liabilities related to shelter-in-place orders, quarantines, infection, or other related factors. Tenants that experience deteriorating financial conditions as a result of the outbreak or spread of such disease may be unwilling or unable to pay rent in full or timely due to bankruptcy, lack of liquidity, lack of funding, operational failures, or other reasons. Our tenants' defaults and delayed or partial rental payments could adversely impact our rental revenues and operating results.

The negative effects of any highly infectious or contagious disease on our tenants in the life science industry may include, but are not limited to:

- Delays or difficulties in enrolling patients or maintaining scheduled study visits in clinical trials;
- Delays or difficulties in clinical site initiation, including difficulties in recruiting clinical site investigators and staff;
- Diversion of healthcare resources away from clinical trials, including the diversion of hospitals serving as our tenants' clinical trial sites and hospital staff supporting the conduct of our tenants' clinical trials;
- Interruptions of key clinical trial or other research activities, such as clinical trial site monitoring, due to limitations on travel imposed or recommended by federal or state governments, employers, and others;
- Limitations in employee resources that would otherwise be focused on our tenants' research, business, or clinical trials, including because of sickness of employees or their families, the desire of employees to avoid contact with large groups of people, or as a result of the governmental imposition of shelter-in-place or similar working restrictions;
- Interruptions in supply chain, manufacturing, and global shipping, or other delays that may affect the transport of materials necessary for our tenants' research, clinical trials, or manufacturing activities;
- Reduction in revenue projections for our tenants' products due to the prioritization of the treatment of affected patients over other treatments, such as specialty and elective procedures;
- Delays in necessary interactions with ethics committees, regulators, and other important agencies and contractors due to limitations in employee resources or forced furlough of government employees;
- Delays in receiving approval from regulatory authorities to initiate planned clinical trials or research activities;
- Delays in commercialization of our tenants' products and approval by government authorities (such as the FDA and the federal and state Emergency Management Agencies) of our tenants' products caused by disruptions, funding shortages, or health concerns, as well as by the prioritization by the FDA of the review and approvals of diagnostics, therapeutics, and vaccines that are related to an outbreak;
- Difficulty in retaining staff or rehiring staff in connection with layoffs caused by deteriorating global market conditions;
- Changes in local regulations as part of a response to an outbreak or spread that may require our tenants to change the ways in which their clinical trials are conducted, which may result in unexpected costs or the discontinuation of the clinical trials altogether;
- Refusal or reluctance of the FDA to accept data from clinical trials in affected geographies outside the U.S.;
- Diminishing public trust in healthcare facilities or other facilities that are treating (or have treated) patients affected by contagious diseases; and
- Inability to access capital on terms favorable to our tenants because of changes in company valuation and/or investor appetite due to a general downturn in economic and financial conditions and the volatility of the market.

The negative effects of any highly infectious or contagious disease on our tenants in the agtech industry may include:

- Reduction in productive capacity and profitability because of decreased labor availability due, for example, to government restrictions, the inability of employees to report to work, or collective bargaining efforts;
- Potential contract cancellations, project reductions, and reduction in demand for our tenants' products due to the adverse effect on business confidence and consumer sentiments and the general downturn in economic conditions;
- Disruption of the logistics necessary to import, export, and deliver products to target companies and their customers due to ports and other channels of entry being closed or operating at only a portion of capacity;
- Disruptions to manufacturing facilities and supply lines; and
- Inability to access capital on terms favorable to our tenants because of changes in company valuation and/or investor appetite due to a general downturn in economic and financial conditions and the volatility of the market.

The negative effects of any highly infectious or contagious disease on our tenants in the technology industry may include:

- Reduction in staff productivity due to business closures, alternative working arrangements, or illness of staff and/or illness in the family;
- Reduction in sales of our tenants' services and products, longer sales cycles, reduction in subscription duration and value, slower adoption of new technologies, and increase in price competition due to economic uncertainties and downturns;
- Disruptions to our tenants' supply chain, manufacturing vendors, or logistics providers of products or services;

- Limitations on business and marketing activities due to travel restrictions, virtualization, or cancellation of related events;
- Adverse impact on customer relationships and our ability to recognize revenues due to our tenants' inability to access their clients' sites for implementation and on-site consulting services;
- Inability to recruit and develop highly skilled employees with appropriate qualifications, to conduct background checks on potential employees, and to provide necessary equipment and training to new and existing employees;
- Network infrastructure and technology system failures of our tenants, or of third-party services used by our tenants, which may result in system interruptions, reputational harm, loss of intellectual property, delays in product development, lengthy interruptions in services, breaches of data security, and loss of critical data;
- Higher employment compensation costs that may not be offset by improved productivity or increased sales; and
- Inability to access capital on terms favorable to our tenants because of changes in company valuation and/or investor appetite due to a general downturn in of economic and financial conditions and the volatility of the market.

The potential impact of any highly infectious or contagious disease with respect to our tenants or our properties is difficult to predict and could have a material adverse impact on our tenants' operations and, in turn, on our revenues, business, and results of operations, as well as the value of our stock. Any highly infectious or contagious disease may directly or indirectly cause the realization of any of the other risk factors included in this annual report on Form 10-K.

Other factors

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, environmental, 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. Certain of our properties are also located along shorelines and may be vulnerable to coastal hazards, such as sea level rise, severe weather patterns and storm surges, land erosion, and groundwater intrusion. 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 costs of energy, maintenance, repair of water and/or wind damage, and snow removal at our properties.

In addition, to combat the cause of global warming domestically, President Biden identified climate change as one of his administration's top priorities and pledged to seek measures that would pave the path for the U.S. to eliminate net greenhouse gas ("GHG") pollution by 2050. In April 2021, President Biden announced the administration's plan to reduce U.S. GHG emissions by at least 50% by 2030.

In March 2022, the SEC released a proposed standard that would require quantitative disclosures of certain climate-related metrics and GHG emissions, including within the footnotes to our consolidated financial statements. As of the date of this report, the standard has not been finalized, and our assessment of the potential effect of this standard, if adopted as proposed, on our consolidated financial statements is ongoing.

In August 2022, the U.S. Congress signed into law the Inflation Reduction Act of 2022 ("IRA"), which directed nearly \$400 billion of federal spending to be used toward reducing carbon emissions and funding clean energy over the next 10 years and was designed to encourage private investment in clean energy, transport, and manufacturing. During its inaugural year in 2023, over \$278 billion in new green investments and new green jobs across the U.S. was attributed to the IRA. However, long-term impacts and benefits, if any, resulting from the IRA are still to be determined.

Numerous states and municipalities have adopted state and local laws and policies on climate disclosures and climate change and emission reduction targets impacting the building sector. For example, the State of California enacted legislation requiring certain companies to disclose GHG emissions and climate-related financial risk information. Further cities, including Boston, Cambridge, New York, and Seattle, have passed ordinances that set limits on GHG emissions associated with building operations. Some municipalities, including the Cities of New York and San Francisco, have also implemented legislation to eliminate the use of natural gas in new construction projects.

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), and in our and our tenants' increased compliance and other costs, without a corresponding increase in revenue, which may result in adverse impacts to our and our tenants' operating results.

Also, 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. If, as a result of unanticipated events, including those resulting from climate change, these vendors fail to adequately provide key 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 damage to our reputation. Nearly 40% of the properties we own and operate are located in California, where climate change has been linked to the progressively warmer and drier weather associated with ideal conditions for highly destructive wildfires.

For example, most of our properties located in our San Francisco Bay Area market depend on PG&E for the delivery of electric and gas services. In January 2019, in response to potential liabilities arising from a series of catastrophic wildfires that occurred in Northern California in 2017 and 2018, PG&E initiated voluntary reorganization proceedings under Chapter 11 of the U.S. Bankruptcy Code. While PG&E emerged from bankruptcy in July 2020, 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 in recent fire seasons, PG&E has preemptively shut off power to areas of Central and Northern California. The shutoffs 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 shutoffs while the utility company addresses maintenance issues. Future shutoffs of power may impact the reliability of access to a stable power supply at our properties. There is no guarantee that in the future climate change and severe weather will not adversely affect PG&E or any of our other key vendors, which in turn could have a material adverse effect on our properties and our tenants' operations, as well as on our financial condition, results of operations, and cash flows.

There can be no assurance that climate change and severe weather, or the potential impacts of these events on our vendors and suppliers, 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 remediate hazardous or toxic substances or petroleum products released at or from any of our properties. The cost of investigating and remediating 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 remediate, 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 remediation 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 remediation 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 GHG 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 timelines. The costs of complying with evolving regulatory requirements, including GHG 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, and 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 may consider setting specific sustainability goals to reduce the environmental impact of buildings in operation and for new ground-up development projects. There are significant risks that may prevent us from achieving such goals, including, but not limited to, the following possibilities:

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

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 that include LEED certification among their priorities when selecting a location to lease.

We may invest or spend the net proceeds from the offerings of our unsecured senior notes payable earmarked for Eligible Green Projects (the “Green Bonds”) in ways investors may not agree with and in ways that may not earn a profit.

The respective net proceeds from issuances of Green Bonds (including our \$500 million unsecured senior notes payable issued in February 2023) are expected to 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 these offerings are typically initially used to reduce the outstanding balance on our unsecured senior line of credit or amounts outstanding under our commercial paper program. We then allocate the funds to recently completed and future Eligible Green Projects.

“Eligible Green Projects” are defined as:

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

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 regarding 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. Furthermore, from time to time, we may refinance our debt to take advantage of lower market rates or other favorable terms, and we may pursue this strategy in the future in connection with our Green Bonds. If the terms of the refinanced agreements set different or no restrictions on the range of purposes the funds can be allocated to, we can provide no assurance that allocations to future Eligible Green Projects established prior to the refinancing of our Green Bonds will remain unchanged after the refinancing has been completed.

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 SEC, continually change and update the financial accounting standards we must follow.

From time to time, the FASB issues ASUs that 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, significant changes to the timing or methodology of revenue or expense recognition, or significant fluctuations in our reported results of operations, including an increase in our operating expenses or general and administrative expenses related to payroll costs, legal costs, and other out-of-pocket costs incurred in order to comply with the requirements of these ASUs.

Any difficulties in the implementation of changes in accounting principles, including the ability to modify our accounting systems and to update our policies, procedures, information systems, and internal control 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 that may be introduced by ASUs could cause fluctuations in revenue and expense recognition and materially affect our results of operations. We may also experience an increase in general and administrative expenses resulting from additional resources required for the initial implementation of such ASUs. This could adversely affect our reported results of operations, profitability, and financial statements. Additionally, the adoption of new accounting standards could affect the results of our debt covenant calculations. 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.

We are subject to evolving privacy and information security laws, regulations, policies, and contractual obligations related to data privacy and security. Changes to these requirements, or our noncompliance therewith, could subject us to fines or penalties, increased costs of doing business, compliance risks, and potential liability and could materially and adversely affect our business, financial condition, and results of operations.

In the ordinary course of business, we handle personal data and other sensitive information, including that of our tenants, vendors, and employees. As such, we are subject to numerous data privacy and security mandates, including laws, regulations, external and internal data privacy and security policies, and contractual requirements.

For example, the California Privacy Rights Act ("CPRA"), which became effective on January 1, 2023, significantly expanded the definition of "consumer," originally defined by the California Consumer Privacy Act ("CCPA"), to include job applicants, employees, and independent contractors. Additionally, the CPRA introduced new rights of consumers to limit the use of their sensitive personal information and mandated employers disclose personal information usage, an individual's rights under the CCPA, and their personal information retention period or the criteria they use to determine their retention period.

The CCPA, which became effective on January 1, 2020, applies to consumers, business entities, and residents of California. It broadly defined "personal information," providing California residents with expanded privacy rights and protections, and established civil penalties for violations for certain data breaches. It also enabled California residents to opt out of the sales of their personal information, with noncompliant businesses facing significant penalties.

We have taken actions to proactively enhance our handling of personal information, including, but not limited to:

- Updating external and internal privacy notices and policies;
- Implementing procedures to comply with the CCPA and CPRA, including procedures to effectively address potential requests from California residents, including our employees, regarding their personal information;
- Revising our document retention policy to minimize the storage of information subject to the CCPA and CPRA; and
- Amending contracts with our partners and vendors to incorporate data use restrictions, security measures, and other required provisions.

However, there is no guarantee that we will adequately address the requirements of the CCPA and CPRA, or evolving laws in other jurisdictions. The data privacy and security landscape is becoming increasingly complex. Differing regulations may result in inconsistent applications and interpretations across multiple jurisdictions. As such, we may be required to devote significant resources and implement or significantly change existing technologies, systems, or practices in order to prepare for and comply with new regulations. Our failure to comply with applicable federal, state, and local privacy laws could lead to:

- Damage to our reputation;
- Increased remediation and compliance costs;
- Government investigations and enforcement actions;
- Fines, penalties, or litigation, including class actions;
- Challenges in raising capital; and
- Inability to execute on our business strategy, including our growth plans.

Changes in the aforementioned laws may subject us to increased compliance risks and potential liability, and materially and adversely impact our business, financial condition, and results of operations.

If our information technology networks or data, or those of third parties upon which we rely, are or were disrupted or otherwise compromised, we could experience costly remediation or other expenses, liability under federal and state laws, and litigation and investigations, any of 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, enterprise applications, and related systems, including those in our properties, are essential to the operation of our business. In the ordinary course of our business, we use these systems to service our tenants, manage our tenant and vendor relationships, internal communications, accounting, financial reporting, and record-keeping systems, and many other key aspects of our business. These operations rely on the secure collection, storage, transmission, and other processing of confidential and other information in our computer systems and networks and subject us, and the third parties upon which we rely, to a variety of evolving threats, including, but not limited to ransomware attacks, which could cause security incidents.

Cyberattacks, malicious Internet-based activity, online and offline fraud, and other similar activities threaten the confidentiality, integrity, and availability of our confidential, proprietary, and sensitive data and information technology systems, and those of the third parties upon which we rely. Such threats are prevalent and continue to rise, are increasingly difficult to detect, and come from a variety of sources, including traditional computer "hackers," threat actors, "hacktivists," organized criminal threat actors, personnel (such as through theft or misuse), sophisticated nation states, and nation-state-supported actors.

Some actors now engage and are expected to continue to engage in cyberattacks, including, without limitation, nation-state actors for geopolitical reasons and in conjunction with military conflicts and defense activities. During times of war and other major conflicts, we and the third parties upon which we rely may be vulnerable to a heightened risk of these attacks, including retaliatory cyberattacks, that could materially disrupt our systems and operations, supply chain, and ability to produce, sell, and distribute our services.

We and the third parties upon which we rely are subject to a variety of evolving threats, including, but not limited to, physical break-ins; disruptions due to power outages or catastrophic events, such as fires, floods, hurricanes, and earthquakes; breaches of our secure network by an unauthorized party (including those caused by supply chain breaches); software vulnerabilities or bugs; malware (including as a result of advanced persistent threat intrusions); malicious code (such as computer viruses and worms); attachments to emails; denial-of-service attacks; credential stuffing; credential harvesting; employee error, theft, or misuse; social engineering attacks (including through deep fakes, which may be increasingly more difficult to identify as fake, and phishing attacks); ransomware; server malfunctions; software or hardware failures; loss of data or other information technology assets; adware; telecommunications failures; or other similar threats.

In particular, severe ransomware attacks are becoming increasingly prevalent and can lead to significant interruptions in our operations and properties; loss of confidential, proprietary, and sensitive data; reputational harm; and diversion of funds. Extortion payments may alleviate the negative impact of a ransomware attack, but we may be unwilling or unable to make such payments due to, for example, applicable laws or regulations prohibiting such payments.

Remote work has become more common and has increased risks to our information technology systems and confidential, proprietary, and sensitive data as more of our employees utilize network connections, computers, and devices outside our premises or network, including working at home, while in transit, and in public locations. Employees working remotely could expose us to additional cybersecurity risks and vulnerabilities as our systems could be negatively affected by vulnerabilities present in external systems and technologies outside of our control.

In addition, our reliance on third-party service providers could introduce new cybersecurity risks and vulnerabilities, including supply chain attacks, and other threats to our business operations. We rely on third-party service providers and technologies to operate critical business systems to process confidential, proprietary, and sensitive data in a variety of contexts, including, without limitation, cloud-based infrastructure, data center facilities, encryption and authentication technology, employee email, and other functions. We also rely on third-party service providers to provide other products, services, or otherwise to operate our business. Our ability to monitor these third parties' information security practices is limited, and these third parties may not have adequate information security measures in place. If our third-party service providers experience a security incident or other interruption, we could experience adverse consequences. While we may be entitled to damages if our third-party service providers fail to satisfy their data privacy or security-related obligations to us, any award may be insufficient to cover our damages, or we may be unable to recover such award. In addition, supply chain attacks have increased in frequency and severity, and we cannot guarantee that third parties' infrastructure in our supply chain or our third-party partners' supply chains have not been compromised.

We may expend significant resources or modify our business activities to try to protect against security incidents. Additionally, certain data privacy and security obligations may require us to implement and maintain specific security measures or industry-standard or reasonable security measures to protect our information technology systems and confidential, proprietary, and sensitive data.

While we have implemented security measures designed to safeguard our systems and confidential, proprietary, and sensitive data and to manage cybersecurity risks, there can be no assurance that these measures will be effective. We take steps to monitor and develop our information technology networks and infrastructure and invest in the development and enhancement of our controls designed to prevent, detect, respond to, and mitigate the risk of unauthorized access, misuse, computer viruses, and other events that could have a security impact. We also have policies and procedures in place for the identification of cybersecurity incidents and technology vulnerabilities, and their timely elevation to senior management for remediation. Additionally, we take steps to detect and remediate vulnerabilities, but we may not be able to detect and remediate all vulnerabilities because the threats and techniques used to exploit the vulnerability change frequently and are often sophisticated in nature. Therefore, such vulnerabilities could be exploited but may not be detected until after a security incident has occurred. Undetected and/or unremediated critical vulnerabilities that are exploited could pose material risks to our business. Further, we may experience delays in developing and deploying remedial measures designed to address any such identified vulnerabilities.

Any of the previously identified or similar threats could cause a security incident or other interruption that could result in unauthorized, unlawful, or accidental acquisition, modification, destruction, loss, alteration, encryption, disclosure of, or access to our confidential, proprietary, and sensitive data or our information technology systems, or those of the third parties upon which we rely. There can be no assurance that our actions, security measures, and controls designed to prevent, detect, or respond to intrusion; to limit access to critical data; to prevent loss, destruction, alteration, or theft 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, cybersecurity service providers, or other third parties upon which we rely could lead to, among other things:

- 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;
- Our 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;
- 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;
- Difficulties in employee retention and recruitment;
- Unauthorized access to, and destruction, disruption, loss, or denial of service to our buildings;
- Increase in the cost of proactive defensive measures to prevent future cyber incidents, including hiring personnel and consultants or investing in additional technologies; and
- Increase in our cybersecurity insurance premiums.

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. We may not be able to immediately address the consequences of a security incident. A successful breach of our computer systems, software, networks, or other technology assets 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 wide breadth of software required to run our business, and the increase in supply chain attacks by advanced persistent threats;
- The large number of our business partners;
- The frequency and wide variety of sources from which a cyberattack can originate;
- An increase in supply chain attacks;
- The severity of cyberattacks; and
- The proliferation and increasing sophistication and types of cyberattacks.

Furthermore, the extent of a particular cyberattack 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 cyberattack. Additionally, applicable data privacy and security obligations may require us to notify relevant stakeholders of security incidents. Such disclosures are costly, and the disclosure or the failure to comply with such disclosure requirements could lead to adverse consequences.

Our contracts may not contain limitations of liability, and even where they do, there can be no assurance that limitations of liability in our contracts are sufficient to protect us from liabilities, damages, or claims related to our data privacy and security obligations. We cannot be sure that our insurance coverage will be adequate or sufficient to protect us from or to mitigate liabilities arising out of our data privacy and security practices, that such coverage will continue to be available on commercially reasonable terms or at all, or that such coverage will pay future claims.

In addition to experiencing a security incident, third parties may gather, collect, or infer sensitive information about us from public sources, data brokers, or other means that reveals competitively sensitive details about our organization and could be used to undermine our competitive advantage or market position. Additionally, proprietary, confidential, and/or sensitive information of the Company or our tenants could be leaked, disclosed, or revealed as a result of or in connection with our employees', personnel's, or vendors' use of generative artificial intelligence technologies.

Even if we are not targeted directly, cyberattacks on the U.S. government, financial markets, financial institutions, or other businesses, including our tenants, vendors, software creators, cloud providers, cybersecurity service providers, and other third parties upon which we rely, may occur, and such events could disrupt our normal business operations and networks in the future.

In March 2022, President Biden signed into law the Cyber Incident Reporting for Critical Infrastructure Act ("CIRCIA"), which will require critical infrastructure entities to report to the Cybersecurity and Infrastructure Security Agency ("CISA") of the U.S. Department of Homeland Security any substantial cyber incidents within 72 hours and ransomware payments made within 24 hours of occurrence, among other items. CISA has until September 2025 to release a final rule, and it is yet unknown whether we will be subject to these rules under CIRCIA.

General risk factors

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.

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 the 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 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, 2023, we had no interest rate hedge agreements outstanding.

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, including through our non-real estate venture investment portfolio, 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.

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 and 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 man-made accidents or incidents. Our corporate 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 man-made disaster, which may lead to a material adverse effect on our properties, operations, and our business, or those of our tenants.

Failure of the U.S. federal government to manage its fiscal matters or to avoid a government shutdown may negatively impact the economic environment and adversely impact our results of operations.

Congressional disagreement over the federal budget and the maximum amount of debt the federal government is permitted to have outstanding (commonly referred to as the "debt ceiling") has previously caused the U.S. federal government to shut down for periods of time. Generally, if effective legislation to fund government operations and manage the level of federal debt is not enacted, the federal government may suspend its investments for certain government accounts, among other available options, in order to prioritize payments on its obligations. A failure by the U.S. Congress to pass spending bills or address the debt ceiling at any point in the future would increase the risk of default by the U.S. on its obligations, the risk of a lowering of the U.S. federal government's credit rating, and the risk of other economic dislocations. 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 globally. Twice in the past decade, by the appropriations legislation deadline Congress failed to pass a new appropriations bill or continuing resolution to temporarily extend funding, resulting in U.S. government shutdowns that caused federal agencies to halt non-essential operations. Current funding measures will only fund the government through February 2, 2024, and if lawmakers cannot pass a continuing resolution or a new federal budget by such time, another federal government shutdown could begin. If economic conditions severely deteriorate as a result of U.S. federal 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.

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 2008 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 2008 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 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.

A global financial stress, 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.

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. 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 have rebounded, the potential of significant future bank credit losses creates uncertainty for the lending outlook.

Downgrades of the U.S. federal 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 and cause the U.S. to default on its obligations, which would likely cause the U.S. credit rating to degrade.

Standard & Poor's Ratings Services lowered its long-term sovereign credit rating on the U.S. from "AAA" to "AA+" in 2011, which it affirmed in 2023. However, further fiscal impasses within the federal government may result in future downgrades. 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. This could cause further increases in interest rates and borrowing costs, 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.

Economic and social volatility and geopolitical instability outside of the U.S. due to large-scale conflicts, including warfare among countries, may adversely impact us, the U.S., and global economies.

From time to time, tensions between countries may erupt into warfare and may adversely affect neighboring countries and those who conduct trade or foreign relations with those affected regions. Such acts of war may cause widespread and lingering damage on a global scale, including, but not limited to, (i) safety and cyber security, (ii) the economy, and (iii) global relations.

In February 2022, Russia invaded Ukraine. In response to the invasion and ensuing war, many countries, including the U.S., imposed significant economic and other sanctions against Russia. The war has created the largest refugee crisis in Europe since World War II and has inflicted significant damage to Ukraine's infrastructure and economy. Both countries' economies may be significantly affected, which may also adversely impact the global economy, including that of the U.S. Further, Russia has launched an onslaught of cyberwarfare against Ukraine following its invasion, targeting the country's critical infrastructure, government agencies, media organizations, and related think tanks in the U.S. and EU.

The U.S. federal government has cautioned Americans on the possibility of Russia targeting the U.S. with cyberattacks in retaliation for sanctions that the U.S. has imposed and has urged both the public and private sectors to strengthen their cyber defenses and protect critical services and infrastructure. Additionally, President Biden directed government bodies to mandate cybersecurity and network defense measures within their respective jurisdictions and has initiated action plans to reinforce cybersecurity within the electricity, pipeline, and water sectors. The current administration also launched joint efforts with CISA through its "Shields Up" campaign to defend the U.S. against possible cyberattacks. CISA published advisories warning of Russian state-sponsored threat actors targeting "COVID-19 research, governments, election organizations, healthcare and pharmaceutical, defense, energy, video gaming, nuclear, commercial facilities, water, aviation, and critical manufacturing" sectors in the U.S. and other Western nations. While we have not experienced such cyberattacks to date, it is yet unknown whether Russia will be successful in breaching our network defenses or, more broadly, those within the areas listed above, which, if successful, may cause disruptions to critical infrastructure required for our operations and livelihoods, or those of our tenants, communities, and business partners.

Disruption, instability, volatility, and decline in economic activity, regardless of where it occurs, whether caused by acts of war, other acts of aggression, or terrorism, could in turn also harm the demand for, the safety of, and the value of our properties. As a result of the factors discussed above, we may be unable to operate our business as usual, which may adversely affect our cash flows, financial condition, and results of operations.

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 having commenced in 2014 and incrementally implemented through 2020, though progress was limited during 2020 due to the impact of the COVID-19 pandemic.

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 U.S. Federal Reserve 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 Wall Street Reform and Consumer Protection Act 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.

In March 2020, the Basel Committee announced a deferral of Basel III implementation to January 1, 2023 due to impacts from the COVID-19 pandemic. In 2023, the U.S. regulators proposed July 2025 for compliance with the new requirements.

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.

Social, political, and economic instability, unrest, and other circumstances beyond our control could adversely affect our business operations.

Our business may be adversely affected by social, political, and economic instability, unrest, or disruption in a geographic region in which we operate, regardless of cause, including legal, regulatory, and policy changes by a new presidential administration in the U.S., protests, demonstrations, strikes, riots, civil disturbance, disobedience, insurrection, or social and other political unrest.

Such events may result in restrictions, curfews, or other actions and give rise to significant changes in regional and global economic conditions and cycles, which may adversely affect our financial condition and operations. In the past several years, there have been protests in cities throughout the U.S. in connection with civil rights, liberties, and social and governmental reform. While protests were peaceful in many locations, looting, vandalism, and fires occurred in cities such as Seattle, Portland, Los Angeles, Washington, D.C., New York City, and Minneapolis that led to the imposition of mandatory curfews and, in some locations, deployment of the U.S. National Guard. Government actions in an effort to protect people and property, including curfews and restrictions on business operations, may disrupt operations, harm perceptions of personal well-being, and increase the need for additional expenditures on security resources. In addition, action resulting from such social or political unrest may pose significant risks to our personnel, facilities, and operations. The effect and duration of demonstrations, protests, or other factors is uncertain, and we cannot ensure there will not be further political or social unrest in the future or that there will not be other events that could lead to social, political, and economic disruptions. If such events or disruptions persist for a prolonged period of time, our overall business and results of operations may be adversely affected.

Changes in federal policy, including tax policies, and at regulatory agencies occur over time through policy and personnel changes following elections, which lead to changes involving the level of oversight and focus on certain industries and corporate entities. The nature, timing, and economic and political effects of potential changes to the current legal and regulatory frameworks affecting the life science, agtech, and technology industries, as well as the real estate industry in general, remain highly uncertain. For example, any proposals to make changes related to U.S. tax law, such as those involving Section 1031 Exchanges, may have a material adverse effect on our future business, financial condition, results of operations, and growth prospects. From time to time, we dispose of properties in transactions qualified as Section 1031 Exchanges. If certain proposed changes were ultimately effected and the laws surrounding Section 1031 Exchanges 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 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.

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 foreign or domestic terrorist attacks may result in declining economic activity, which could reduce the demand for, and the value of, our properties. To the extent that any future foreign or domestic 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.

Short sellers may engage in manipulative activity intended to drive down the market price of our common stock, which could result in a material diversion of our management's time and may also lead to related governmental or regulatory inquiries or other legal actions, among other effects.

Short selling is the practice of selling securities that the seller does not own but rather has borrowed or intends to borrow from a third party with the intention of subsequently buying lower-priced identical securities to return to the lender. Accordingly, it is in the interest of a short seller to want the price of our common stock to decline. At any time, short sellers may publish, or arrange for the dissemination of, opinions, or characterizations that are intended to create negative market momentum, including through the use of social media. In light of the recent proliferation of generative artificial intelligence tools and large language models, there is also a risk that the dissemination of such opinions, characterizations or disinformation may negatively impact the conclusions that these tools and models draw about our business and prospects.

Short selling reports may potentially lead to increased volatility in an issuer's stock price and to regulatory and governmental inquiries. In June 2023, a short seller published reports that contained certain negative and false allegations regarding our business and financial prospects. Regardless of merit, these allegations and false statements may spread quickly and diminish confidence in our business, financial prospects, or reputation. As a result, maintaining or reinforcing our reputation may require us to devote significant resources to refuting incorrect or misleading allegations, pursuing or defending related legal actions, or engaging in other activities that could be costly, time consuming, or unsuccessful. Additionally, any potential inquiry or formal investigation from a governmental organization or other regulatory body, including an inquiry from the SEC, arising from the presence of such allegations could result in a material diversion of our management's time and may have a material adverse effect on our business and results of operations.

We hold a portion of our cash and cash equivalents in deposit accounts that could be adversely affected if the financial institutions holding such deposits fail.

We maintain our cash and cash equivalents at insured financial institutions. The combined account balances at each institution periodically substantially exceed the 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. As such, we may be subject to a risk of loss or delay in accessing all or a portion of our funds exceeding the FDIC insurance coverage, which could adversely impact our short-term liquidity, ability to operate our business, and financial performance.

Any or all of the foregoing could have a material adverse effect on our financial condition, results of operations, and cash flows, or the market price of our common stock. Additional risks and uncertainties not currently known to us, or that we presently deem to be immaterial, may also have potential to materially adversely affect our business, financial condition, and results of operations.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

Risk management and strategy

Our corporate information technology, communication networks, enterprise applications, accounting and financial reporting platforms, and related systems, and those that we offer to our tenants are necessary for the operation of our business. We use these systems, among others, to manage our tenant and vendor relationships, for internal communications, for accounting to operate record-keeping function, and for many other key aspects of our business. Our business operations rely on the secure collection, storage, transmission, and other processing of proprietary, confidential, and sensitive data.

We have implemented and maintain various information security processes designed to identify, assess and manage material risks from cybersecurity threats to our critical computer networks, third-party hosted services, communications systems, hardware and software, and our critical data, including intellectual property, confidential information that is proprietary, strategic or competitive in nature, and tenant data ("Information Systems and Data").

We rely on a multidisciplinary team, including our information security function, legal department, management, and third-party service providers, as described further below, to identify, assess, and manage cybersecurity threats and risks. We identify and assess risks from cybersecurity threats by monitoring and evaluating our threat environment and our risk profile using various methods including, for example, using manual and automated tools, subscribing to reports and services that identify cybersecurity threats, analyzing reports of threats and threat actors, conducting scans of the threat environment, evaluating our industry's risk profile, utilizing internal and external audits, and conducting threat and vulnerability assessments.

Depending on the environment, we implement and maintain various technical, physical, and organizational measures, processes, standards, and/or policies designed to manage and mitigate material risks from cybersecurity threats to our Information Systems and Data, including risk assessments, incident detection and response, vulnerability management, disaster recovery and business continuity plans, internal controls within our accounting and financial reporting functions, encryption of data, network security controls, access controls, physical security, asset management, systems monitoring, vendor risk management program, employee training, and penetration testing.

We work with third parties from time to time that assist us to identify, assess, and manage cybersecurity risks, including professional services firms, consulting firms, threat intelligence service providers, and penetration testing firms.

To operate our business, we utilize certain third-party service providers to perform a variety of functions. We seek to engage reliable, reputable service providers that maintain cybersecurity programs. Depending on the nature of the services provided, the sensitivity and quantity of information processed, and the identity of the service provider, our vendor management process may include reviewing the cybersecurity practices of such provider, contractually imposing obligations on the provider, conducting security assessments, and conducting periodic reassessments during their engagement.

We are not aware of any risks from cybersecurity threats, including as a result of any cybersecurity incidents, which have materially affected or are reasonably likely to materially affect our Company, including our business strategy, results of operations, or financial condition. Refer to "Item 1A. Risk factors" in this annual report on Form 10-K, including "If our information technology networks or data, or those of third parties upon which we rely, are or were disrupted or otherwise compromised, we could experience costly remediation or other expenses, liability under federal and state laws, and litigation and investigations, any of 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", for additional discussion about cybersecurity-related risks.

Governance

Our Board of Directors holds oversight responsibility over the Company's strategy and risk management, including material risks related to cybersecurity threats. This oversight is executed directly by the Board of Directors and through its committees. The Audit Committee of the Board of Directors (the "Audit Committee") oversees the management of systemic risks, including cybersecurity, in accordance with its charter. The Audit Committee engages in regular discussions with management regarding the Company's significant financial risk exposures and the measures implemented to monitor and control these risks, including those that may result from material cybersecurity threats. These discussions include the Company's risk assessment and risk management policies.

Our management, represented by our Chief Technology Officer, Greg C. Thomas, and our Chief Financial Officer and Treasurer, Marc E. Binda, leads our cybersecurity risk assessment and management processes and oversees their implementation and maintenance.

Greg C. Thomas is an experienced information technology professional in our information technology department and has served as Chief Technology Officer since 2018. He works with the Company's internal information technology department and external partners to monitor and improve our cybersecurity capabilities. Mr. Thomas possesses a proven real estate industry track record of guiding organizations through strategic technology, organizational, risk mitigation, process improvement initiatives, and digital transformations. He also possesses extensive experience in technology and cybersecurity, gained over his career spanning more than 30 years, including as Chief Information Officer at two other large real estate firms, as well as in leadership roles within the real estate industry technology practices of Ernst & Young LLP and Deloitte LLP. He earned Bachelor of Science degrees in Systems Analysis and Finance from Miami University.

Marc E. Binda, CPA, is an experienced risk management professional in our finance and risk management function and has served as Chief Financial Officer since September 2023 and as Treasurer since April 2018. Mr. Binda previously served as Executive Vice President - Finance and Treasurer from June 2019 to September 2023, as Senior Vice President - Finance and Treasurer from April 2018 to June 2019, as Senior Vice President - Finance from April 2012 to April 2018, and in other capacities from January 2005 to April 2012. Mr. Binda currently oversees key functions for the Company's accounting, finance, and treasury strategies, including risk management. In addition, Mr. Binda leads the Company's cybersecurity risk oversight and the development and enhancement of internal controls designed to prevent, detect, address, and mitigate the risk of cyber incidents.

Management, in coordination with our information technology department, is responsible for hiring appropriate personnel, helping to integrate cybersecurity risk considerations into the Company's overall risk management strategy, and communicating key priorities to relevant personnel. Management is responsible for approving budgets, approving cybersecurity processes, and reviewing cybersecurity assessments and other cybersecurity-related matters.

Our cybersecurity incident response and vulnerability management processes are designed to escalate certain cybersecurity incidents to members of management depending on the circumstances. Management, including the Chief Technology Officer and Chief Financial Officer and Treasurer, serves on the Company's incident response team to help the Company mitigate and remediate cybersecurity incidents of which they are notified. In addition, the Company's incident response processes include reporting to the Audit Committee for certain cybersecurity incidents. The Audit Committee holds quarterly meetings and receives periodic reports from management, including our Chief Technology Officer and Chief Financial Officer and Treasurer, concerning the Company's significant cybersecurity threats and risk and the processes the Company has implemented to address them.

ITEM 2. PROPERTIES

General

As of December 31, 2023, we had 411 properties in North America consisting of approximately 47.2 million RSF of operating properties and new Class A/A+ development and redevelopment properties under construction, including 68 properties that are held by consolidated real estate joint ventures and four properties that are held by unconsolidated real estate joint ventures. The occupancy percentage of our operating properties in North America was 94.6% as of December 31, 2023. The exteriors of our properties typically resemble traditional office properties, but the interior infrastructures are designed to accommodate the needs of life science, agtech, and technology 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, 2023, we held a fee simple interest in each of our properties, with the exception of 36 properties in North America subject to ground leasehold interests, which accounted for approximately 9% of our total number of properties. Of these 36 properties, we held 10 properties in the Greater Boston market, 20 properties in the San Francisco Bay Area market, two properties in the New York City market, one property in the Seattle market, one property in the Maryland market, and two properties in the Research Triangle market. During the year ended December 31, 2023, as a percentage of net operating income our ground lease rental expense aggregated 1.5%. Refer to our consolidated financial statements and notes thereto in "Item 15. Exhibits and financial statement schedules" in this annual report on Form 10-K for further discussion.

As of December 31, 2023, we had over 1,000 leases with a total of approximately 800 tenants, and 198, or 48%, of our 411 properties were single-tenant properties. Leases in our multi-tenant buildings typically have initial terms of 4 to 11 years, while leases in our single-tenant buildings typically have initial terms of 11 to 21 years. Additionally, as of December 31, 2023:

- Investment-grade or publicly traded large cap tenants represented 52% of our total annual rental revenue;
- Approximately 96% of our leases (on an annual rental revenue basis) contained effective annual rent escalations approximating 3% that were either fixed or indexed based on a consumer price index or other index;
- Approximately 94% of our leases (on an annual rental revenue 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 93% of our leases (on an annual rental revenue 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.

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.

Locations of properties

The locations of our properties are diversified among a number of Class A/A+ assets strategically clustered in life science, agtech, and advanced technology mega campuses in AAA innovation cluster markets. The following table sets forth the total RSF, number of properties, and annual rental revenue in effect as of December 31, 2023 in each of our markets in North America (dollars in thousands, except per RSF amounts):

Market	RSF				% of Total	Number of Properties	Annual Rental Revenue		
	Operating	Development	Redevelopment	Total			Total	% of Total	Per RSF
Greater Boston	10,836,743	975,419	1,304,051 ⁽¹⁾	13,116,213	28 %	72	\$ 820,759	38 %	\$ 79.82
San Francisco Bay Area	7,906,198	498,142	300,010	8,704,350	18	67	460,272	21	66.04
New York City	922,477	—	—	922,477	2	4	72,993	3	92.75
San Diego	7,831,370	1,187,796	—	9,019,166	19	90	320,460	14	43.48
Seattle	2,962,995	33,349	148,890	3,145,234	7	44	131,377	6	46.57
Maryland	3,582,494	510,601	—	4,093,095	9	51	123,780	6	36.57
Research Triangle	3,840,876	—	—	3,840,876	8	39	120,982	6	32.20
Texas	1,845,159	—	73,298	1,918,457	4	15	57,591	3	32.80
Canada	898,740	—	172,936	1,071,676	2	12	17,222	1	22.01
Non-cluster/other markets	347,806	—	—	347,806	1	10	15,827	1	57.96
Properties held for sale	1,049,135	—	—	1,049,135	2	7	26,907	1	N/A
North America	42,023,993	3,205,307	1,999,185	47,228,485	100 %	411	\$ 2,168,170	100 %	\$ 56.08
			5,204,492						

(1) Primarily relates to our active redevelopment projects at 840 Winter Street and 40, 50, and 60 Sylvan Road, aggregating 716,604 RSF located in our Alexandria Center® for Life Science – Waltham mega campus, which are 43% leased/negotiating on a combined basis. This mega campus project is expected to capture demand in our Route 128 submarket of Greater Boston.

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		
	12/31/23	12/31/22	12/31/21	12/31/23	12/31/22	12/31/21
Greater Boston	94.9 %	94.5 %	95.2 %	84.7 %	85.5 %	83.2 %
San Francisco Bay Area	94.8	96.7	93.0	91.4	93.3	92.6
New York City	85.3 ⁽¹⁾	92.3	98.4	85.3	92.3	91.0
San Diego	94.1	95.4	93.1	94.1	95.4	91.7
Seattle	95.2	97.0	95.6	90.7	90.1	88.5
Maryland	95.6	95.8	99.8	95.6	93.3	96.0
Research Triangle	97.8	94.0	94.6	97.8	85.0	86.1
Texas	95.1	91.2	N/A	91.5	81.6	N/A
Subtotal	94.9	95.1	94.9	90.7	89.9	89.1
Canada	87.1	80.8	78.6	73.0	68.2	78.6
Non-cluster/other markets	78.5	75.0	75.1	78.5	75.0	75.1
North America	94.6 %	94.8 %	94.0 %	90.2 %	89.4 %	88.5 %

(1) Occupancy in our New York City market includes vacancy at our Alexandria Center® for Life Science – Long Island City property that is 41.7% occupied as of December 31, 2023. In addition, our mega campus at Alexandria Center® for Life Science – New York City is 95.8% occupied as of December 31, 2023.

Top 20 tenants

92% of Top 20 Tenants Annual Rental Revenue Is From Investment-Grade or Publicly Traded Large Cap Tenants⁽¹⁾

Our properties are leased to a high-quality and diverse group of tenants, with no individual tenant accounting for more than 5.7% of our annual rental revenue in effect as of December 31, 2023. 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, 2023 (dollars in thousands, except average market cap amounts):

	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	Moderna, Inc.	13.2	1,370,536	\$ 122,763	5.7 %	—	—	\$ 47.4
2	Eli Lilly and Company	9.1	1,154,917	93,815	4.3	A2	A+	\$ 440.5
3	Bristol-Myers Squibb Company	6.7	852,830	66,339	3.1	A2	A+	\$ 131.5
4	Roche	6.4	770,279	46,192	2.1	Aa2	AA	\$ 242.1
5	Takeda Pharmaceutical Company Limited	6.0	549,760	37,399	1.7	Baa2	BBB+	\$ 49.0
6	Alphabet Inc.	2.9	654,423	36,809	1.7	Aa2	AA+	\$ 1,509.5
7	Illumina, Inc.	6.6	890,389	36,204	1.7	Baa3	BBB	\$ 27.9
8	2seventy bio, Inc. ⁽²⁾	9.7	312,805	33,617	1.6	—	—	\$ 0.4
9	Harvard University	6.0	389,233	32,494	1.5	Aaa	AAA	\$ —
10	Novartis AG	4.6	450,563	31,196	1.4	A1	AA-	\$ 221.7
11	Cloud Software Group, Inc.	3.2 ⁽³⁾	292,013	28,537	1.3	—	—	\$ —
12	Uber Technologies, Inc.	58.7 ⁽⁴⁾	1,009,188	27,750	1.3	—	—	\$ 84.8
13	Pfizer Inc.	1.2 ⁽⁵⁾	524,159	25,242	1.2	A1	A+	\$ 208.5
14	AstraZeneca PLC	6.0	416,761	24,583	1.1	A3	A	\$ 212.5
15	United States Government	6.8	340,238	23,023	1.1	Aaa	AA+	\$ —
16	Sanofi	7.0	267,278	21,444	1.0	A1	AA	\$ 129.2
17	New York University	8.1	218,983	21,056	1.0	Aa2	AA-	\$ —
18	Massachusetts Institute of Technology	5.4	246,725	20,504	0.9	Aaa	AAA	\$ —
19	Boston Children's Hospital	12.8	266,857	20,066	0.9	Aa2	AA	\$ —
20	Merck & Co., Inc.	9.9	312,935	20,033	0.9	A1	A+	\$ 274.8
Total/weighted-average		9.6 ⁽⁴⁾	11,290,872	\$ 769,066	35.5 %			

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

- (1) Based on total annual rental revenue in effect as of December 31, 2023. 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 in this annual report on Form 10-K for our methodologies of calculating annual rental revenue from unconsolidated real estate joint ventures and average market capitalization, respectively.
- (2) As of September 30, 2023, 2seventy bio, Inc. held \$250.6 million of cash, cash equivalents, and marketable securities. Additionally, 90.0% of the annual rental revenue generated by 2seventy bio, Inc. is guaranteed by another public biotechnology company (a party related to 2seventy bio, Inc.).
- (3) Includes one lease at a recently acquired property with future development and redevelopment opportunities. This lease with Cloud Software Group, Inc. (formerly known as TIBCO Software, Inc.) was in place when we acquired the properties.
- (4) Includes (i) ground leases for land at 1455 and 1515 Third Street (two buildings aggregating 422,980 RSF) and (ii) leases at 1655 and 1725 Third Street (two buildings aggregating 586,208 RSF) in our Mission Bay submarket owned by our unconsolidated real estate joint venture in which we have an ownership interest of 10%. Annual rental revenue is presented using 100% of the annual rental revenue from our consolidated properties and our share of annual rental revenue from our unconsolidated real estate joint ventures. Refer to footnote 1 for additional details. Excluding the ground leases, the weighted-average remaining lease term for our top 20 tenants was 7.8 years as of December 31, 2023.
- (5) Primarily relates to one office building in our New York City submarket aggregating 349,947 RSF with a contractual lease expiration in the third quarter of 2024, which was classified as held for sale as of December 31, 2023.

**Long-Duration and Stable Cash Flows From
High-Quality and Diverse Tenants**

**REIT Industry-Leading Client Base
Investment-Grade or Publicly Traded Large Cap Tenants**

92%

of ARE's Top 20 Tenants
Annual Rental Revenue⁽¹⁾

52%

of ARE's Total
Annual Rental Revenue⁽¹⁾

Long-Duration Lease Terms

9.6 Years

Top 20 Tenants

7.4 Years

All Tenants

Weighted-Average Remaining Term⁽²⁾

Sustained Strength in Tenant Collections⁽³⁾

99.9%

For the Three Months Ended
December 31, 2023

99.4%

January 2024

(1) Represents annual rental revenue in effect as of December 31, 2023. 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 total annual rental revenue in effect as of December 31, 2023.

(3) Represents the portion of total receivables billed for each indicated period collected through the date of this report.

High-Quality and Diverse Client Base in AAA Locations Solid and Well-Diversified Tenant Base

q423clienttenantmixv4.jpg



Percentage of ARE's Annual Rental Revenue⁽¹⁾

Industry	Annual Rental Revenue ⁽¹⁾ per RSF
Multinational Pharmaceutical	\$ 64.22
Public Biotechnology – Approved or Marketed Product	\$ 68.98
Institutional (Academic/Medical, Non-Profit, and U.S. Government)	\$ 59.95
Public Biotechnology – Preclinical or Clinical Stage	\$ 70.25
Private Biotechnology	\$ 82.51
Life Science Product, Service, and Device	\$ 43.45
Future Change in Use ⁽²⁾	\$ 44.38
Investment-Grade or Large Cap Tech	\$ 31.93
Other ⁽³⁾	\$ 32.61

Solid Historical Occupancy of 96% Over Past 10 Years⁽⁴⁾ From Historically Strong Demand for Our Class A/A+ Properties in AAA Locations

AAA Locations

q423realestatev5.jpg



Percentage of ARE's
Annual Rental Revenue⁽¹⁾

Occupancy Across Key Locations

q423occupancyv10Kv2.jpg



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

(1) Represents annual rental revenue in effect as of December 31, 2023.

(2) Represents annual rental revenue currently generated from space that is targeted for a future change in use, including 1.1% of total annual rental revenue that is generated from covered land play projects for future development opportunities. The weighted-average remaining term of these leases is 4.0 years.

(3) Our "Other" tenants, which represent an aggregate of 3.0% of our annual rental revenue, comprise technology, professional services, finance, telecommunications, and construction/real estate companies, and (by less than 1.0% of our annual rental revenue) retail-related tenants.

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

(5) Refer to footnote 1 in the "Summary of occupancy percentages in North America" section within this Item 2 for additional details.

(6) Acquired vacancy of 1.7% from properties recently acquired in 2021 and 2022 primarily represents lease-up opportunities. Excluding acquired vacancy, occupancy of operating properties in North America was 96.3% as of December 31, 2023.

Property listing

Mega Campuses Encompass 75% of Our Annual Rental Revenue⁽¹⁾

The following table provides certain information about our properties as of December 31, 2023 (dollars in thousands):

Market / Submarket / Address	RSF				Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment	Total			Operating	Operating and Redevelopment
Greater Boston								
Cambridge/Inner Suburbs								
Mega Campus: Alexandria Center® at Kendall Square 50 ⁽²⁾ , 60 ⁽²⁾ , 75/125 ⁽²⁾ , 100 ⁽²⁾ , and 225 ⁽²⁾ Binney Street, 140 and 215 First Street, 150 Second Street, 300 Third Street ⁽²⁾ , 11 Hurley Street, and 100 Edwin H. Land Boulevard	2,856,043	—	—	2,856,043	11	\$ 266,549	99.6 %	99.6 %
Mega Campus: Alexandria Center® at One Kendall Square One Kendall Square (Buildings 100, 200, 300, 400, 500, 600/700, 1400, 1800, and 2000), 325 and 399 Binney Street, and One Hampshire Street	1,370,989	—	—	1,370,989	12	140,216	88.0	88.0
Mega Campus: Alexandria Technology Square® 100, 200, 300, 400, 500, 600, and 700 Technology Square	1,185,284	—	—	1,185,284	7	115,886	99.9	99.9
Mega Campus: The Arsenal on the Charles 311, 321, and 343 Arsenal Street, 300, 400, and 500 North Beacon Street, 1, 2, 3, and 4 Kingsbury Avenue, and 100, 200, and 400 Talcott Avenue	872,883	248,018	—	1,120,901	13	51,957	97.6	97.6
Mega Campus: 480 Arsenal Way and 446, 458, 500, and 550 Arsenal Street	521,735	—	—	521,735	5	27,136	99.2	99.2
99 Coolidge Avenue ⁽²⁾	43,568	277,241	—	320,809	1	5,221	100.0	100.0
Cambridge/Inner Suburbs	6,850,502	525,259	—	7,375,761	49	606,965	97.0	97.0
Fenway								
Mega Campus: Alexandria Center® for Life Science - Fenway 401 and 421 ⁽²⁾ Park Drive and 201 Brookline Avenue ⁽²⁾	1,234,888	450,160	133,578	1,818,626	3	98,035	92.0	83.0
Seaport Innovation District								
5 and 15 ⁽²⁾ Necco Street	441,396	—	—	441,396	2	39,724	75.7	75.7
Seaport Innovation District	441,396	—	—	441,396	2	39,724	75.7	75.7
Route 128								
Mega Campus: Alexandria Center® for Life Science - Waltham 40, 50, and 60 Sylvan Road, 35 Gatehouse Drive, and 840 Winter Street	326,110	—	716,604	1,042,714	5	22,738	100.0	31.3
Mega Campus: One Moderna Way 19, 225, and 235 Presidential Way	706,988	—	—	706,988	4	29,059	100.0	100.0
	585,226	—	—	585,226	3	13,374	100.0	100.0
Route 128	1,618,324	—	716,604	2,334,928	12	65,171	100.0	69.3
Other	691,633	—	453,869	1,145,502	6	10,864	79.2	47.8
Greater Boston	10,836,743	975,419	1,304,051	13,116,213	72	\$ 820,759	94.9 %	84.7 %

- (1) As of December 31, 2023. Refer to “New Class A/A+ development and redevelopment properties: summary of pipeline” section within this Item 2 and the definition of “Mega campus” in the “Non-GAAP measures and definitions” section under Item 7 in this annual report on Form 10-K for additional information.
- (2) We own a partial interest in this property through a 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 details.

Property listing (continued)

Market / Submarket / Address	RSF				Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment	Total			Operating	Operating and Redevelopment
San Francisco Bay Area								
Mission Bay								
Mega Campus: Alexandria Center® for Science and Technology - Mission Bay ⁽¹⁾ 1455 ⁽²⁾ , 1515 ⁽²⁾ , 1655, and 1725 Third Street, 409 and 499 Illinois Street, 1450, 1500, and 1700 Owens Street, and 455 Mission Bay Boulevard South	2,012,791	212,796	—	2,225,587	10	\$ 91,856	94.9 %	94.9 %
Mission Bay	2,012,791	212,796	—	2,225,587	10	91,856	94.9	94.9
South San Francisco								
Mega Campus: Alexandria Technology Center® – Gateway ⁽¹⁾ 600 ⁽²⁾ , 601, 611, 630 ⁽²⁾ , 650 ⁽²⁾ , 651, 681, 685, 701, 751, 901 ⁽²⁾ , and 951 ⁽²⁾ Gateway Boulevard	1,342,194	—	300,010	1,642,204	12	75,299	86.6	70.8
Mega Campus: Alexandria Center® for Advanced Technologies - South San Francisco 213 ⁽¹⁾ , 249, 259, 269, and 279 East Grand Avenue	919,704	—	—	919,704	5	57,055	100.0	100.0
Alexandria Center® for Life Science – South San Francisco 201 Haskins Way and 400 and 450 East Jamie Court	503,388	—	—	503,388	3	32,372	89.8	89.8
Mega Campus: Alexandria Center® for Advanced Technologies - Tanforan 1122 and 1150 El Camino Real	445,232	—	—	445,232	2	4,011	100.0	100.0
Alexandria Center® for Life Science – Millbrae ⁽¹⁾ 230 Harriet Tubman Way	—	285,346	—	285,346	1	—	N/A	N/A
500 Forbes Boulevard ⁽¹⁾ South San Francisco	155,685	—	—	155,685	1	10,680	100.0	100.0
	3,366,203	285,346	300,010	3,951,559	24	179,417	93.1	85.5
Greater Stanford								
Mega Campus: Alexandria Center® for Life Science – San Carlos 825, 835, 960, and 1501-1599 Industrial Road	739,157	—	—	739,157	9	50,755	99.0	99.0
Alexandria Stanford Life Science District 3160, 3165, 3170, and 3181 Porter Drive and 3301, 3303, 3305, 3307, and 3330 Hillview Avenue	703,570	—	—	703,570	9	65,005	98.3	98.3
3412, 3420, 3440, 3450, and 3460 Hillview Avenue	338,751	—	—	338,751	5	24,275	83.2	83.2
3875 Fabian Way	228,000	—	—	228,000	1	9,402	100.0	100.0
2475 and 2625/2627/2631 Hanover Street and 1450 Page Mill Road	194,503	—	—	194,503	3	18,294	100.0	100.0
2100, 2200, 2300, and 2400 Geng Road	162,584	—	—	162,584	4	12,241	100.0	100.0
2425 Garcia Avenue/2400/2450 Bayshore Parkway	99,208	—	—	99,208	1	4,257	100.0	100.0
3350 West Bayshore Road	61,431	—	—	61,431	1	4,770	100.0	100.0
Greater Stanford	2,527,204	—	—	2,527,204	33	188,999	97.0	97.0
San Francisco Bay Area	7,906,198	498,142	300,010	8,704,350	67	460,272	94.8	91.4
New York City								
New York City								
Mega Campus: Alexandria Center® for Life Science – New York City 430 and 450 East 29th Street	743,377	—	—	743,377	3	67,706	95.8	95.8
Alexandria Center® for Life Science – Long Island City 30-02 48th Avenue	179,100	—	—	179,100	1	5,287	41.7	41.7
New York City	922,477	—	—	922,477	4	\$ 72,993	85.3 %	85.3 %

Refer to "New Class A/A+ development and redevelopment properties: summary of pipeline" section within this Item 2 and the definition of "Mega campus" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

- (1) We own a partial interest in this property through a real estate joint venture. Refer to the "Consolidated and unconsolidated real estate joint ventures" section under Item 7 in this annual report in Form 10-K for additional information.
(2) We own 100% of this property.

Property listing (continued)

Market / Submarket / Address	RSF				Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment	Total			Operating	Operating and Redevelopment
San Diego								
Torrey Pines								
Mega Campus: One Alexandria Square 3115 and 3215 ⁽¹⁾ Merryfield Row, 3010, 3013, and 3033 Science Park Road, 10935, 10945, and 10955 Alexandria Way, 10975 North Torrey Pines Road, 10975, 10995, and 10996 Torreyana Road, and 3545 Cray Court	833,589	334,996	—	1,168,585	12	\$ 49,861	100.0 %	100.0 %
ARE Torrey Ridge 10578, 10618, and 10628 Science Center Drive	296,290	—	—	296,290	3	13,969	85.8	85.8
ARE Nautilus 3530 and 3550 John Hopkins Court and 3535 and 3565 General Atomics Court	213,900	—	—	213,900	4	8,729	88.2	88.2
Torrey Pines	1,343,779	334,996	—	1,678,775	19	72,559	95.0	95.0
University Town Center								
Mega Campus: Campus Point by Alexandria ⁽¹⁾ 9880 ⁽²⁾ , 10010 ⁽²⁾ , 10140 ⁽²⁾ , 10210, 10260, 10290, and 10300 Campus Point Drive and 4135, 4155, 4161, 4224, 4242, and 4275 ⁽²⁾ Campus Point Court	1,666,590	598,029	—	2,264,619	13	77,574	99.0	99.0
Mega Campus: 5200 Illumina Way ⁽¹⁾	792,687	—	—	792,687	6	29,978	100.0	100.0
ARE Esplanade 4755, 4757, and 4767 Nexus Center Drive and 4796 Executive Drive	243,084	—	—	243,084	4	5,022	47.7	47.7
9625 Towne Centre Drive ⁽¹⁾	163,648	—	—	163,648	1	6,528	100.0	100.0
Costa Verde by Alexandria 8505 Costa Verde Boulevard and 4260 Nobel Drive	8,730	—	—	8,730	2	879	100.0	100.0
University Town Center	2,874,739	598,029	—	3,472,768	26	119,981	95.0	95.0
Sorrento Mesa								
Mega Campus: SD Tech by Alexandria ⁽²⁾ 9605, 9645, 9675, 9685, 9725, 9735, 9808, 9855, and 9868 Scranton Road, 5505 Morehouse Drive ⁽²⁾ , and 10055, 10065, 10075, 10121 ⁽²⁾ , and 10151 ⁽²⁾ Barnes Canyon Road	1,064,267	254,771	—	1,319,038	15	44,628	95.6	95.6
Mega Campus: Sequence District by Alexandria 6260, 6290, 6310, 6340, 6350, 6420, and 6450 Sequence Drive	800,151	—	—	800,151	7	23,930	89.0	89.0
Pacific Technology Park ⁽¹⁾ 9389, 9393, 9401, 9455, and 9477 Waples Street	544,352	—	—	544,352	5	8,969	89.1	89.1
Summers Ridge Science Park ⁽¹⁾ 9965, 9975, 9985, and 9995 Summers Ridge Road	316,531	—	—	316,531	4	11,521	100.0	100.0
Scripps Science Park by Alexandria 10102 Hoyt Park Drive	144,113	—	—	144,113	1	11,069	100.0	100.0
ARE Portola 6175, 6225, and 6275 Nancy Ridge Drive	101,857	—	—	101,857	3	4,034	100.0	100.0
5810/5820 Nancy Ridge Drive	83,354	—	—	83,354	1	4,693	100.0	100.0
9877 Waples Street	63,774	—	—	63,774	1	2,680	100.0	100.0
5871 Oberlin Drive	33,842	—	—	33,842	1	1,799	100.0	100.0
Sorrento Mesa	3,152,241	254,771	—	3,407,012	38	\$ 113,323	93.8 %	93.8 %

Refer to "New Class A/A+ development and redevelopment properties: summary of pipeline" section within this Item 2 and the definition of "Mega campus" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

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(2) We own 100% of this property.

Property listing (continued)

Market / Submarket / Address	RSF				Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment	Total			Operating	Operating and Redevelopment
San Diego (continued)								
Sorrento Valley								
3911, 3931, and 3985 Sorrento Valley Boulevard	108,812	—	—	108,812	3	\$ 4,112	85.0 %	85.0 %
11045 and 11055 Roselle Street	42,055	—	—	42,055	2	2,156	100.0	100.0
Sorrento Valley	150,867	—	—	150,867	5	6,268	89.2	89.2
Other	309,744	—	—	309,744	2	8,329	87.6	87.6
San Diego	7,831,370	1,187,796	—	9,019,166	90	320,460	94.1	94.1
Seattle								
Lake Union								
Mega Campus: The Eastlake Life Science Campus by Alexandria 1150, 1165, 1201 ⁽¹⁾ , 1208 ⁽¹⁾ , 1551, and 1616 Eastlake Avenue East, 188 and 199 ⁽¹⁾ East Blaine Street, and 1600 Fairview Avenue East	1,214,448	33,349	—	1,247,797	9	80,053	95.9	95.9
Mega Campus: Alexandria Center® for Life Science - South Lake Union 400 Dexter Avenue North ⁽¹⁾	290,754	—	—	290,754	1	17,969	100.0	100.0
219 Terry Avenue North	25,966	—	—	25,966	1	1,372	90.7	90.7
Lake Union	1,531,168	33,349	—	1,564,517	11	99,394	96.6	96.6
SoDo								
830 4th Avenue South	42,380	—	—	42,380	1	1,052	70.5	70.5
Elliott Bay								
3000/3018 Western Avenue	47,746	—	—	47,746	1	3,147	100.0	100.0
410 West Harrison Street and 410 Elliott Avenue West	36,849	—	—	36,849	2	1,586	100.0	100.0
Elliott Bay	84,595	—	—	84,595	3	4,733	100.0	100.0
Bothell								
Mega Campus: Alexandria Center® for Advanced Technologies - Canyon Park 22121 and 22125 17th Avenue Southeast, 22021, 22025, 22026, 22030, 22118, and 22122 20th Avenue Southeast, 22333, 22422, 22515, 22522, 22722, and 22745 29th Drive Southeast, 22213 and 22309 30th Drive Southeast, and 1629, 1631, 1725, 1916, and 1930 220th Street Southeast	916,446	—	—	916,446	21	19,348	92.6	92.6
Alexandria Center® for Advanced Technologies - Monte Villa Parkway 3301, 3303, 3305, 3307, 3555, and 3755 Monte Villa Parkway	311,030	—	148,890	459,920	6	5,972	96.8	65.4
Bothell	1,227,476	—	148,890	1,376,366	27	25,320	93.7	83.6
Other	77,376	—	—	77,376	2	878	100.0	100.0
Seattle	2,962,995	33,349	148,890	3,145,234	44	\$ 131,377	95.2 %	90.7 %

Refer to "New Class A/A+ development and redevelopment properties: summary of pipeline" section within this Item 2 and the definition of "Mega campus" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

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Property listing (continued)

Market / Submarket / Address	RSF				Number of Properties	Annual Rental Revenue	Occupancy Percentage	
	Operating	Development	Redevelopment	Total			Operating	Operating and Redevelopment
Maryland								
Rockville								
Mega Campus: Alexandria Center® for Life Science – Shady Grove 9601, 9603, 9605, 9704, 9708, 9712, 9714, 9800, 9804, 9808, 9900, and 9950 Medical Center Drive, 14920 and 15010 Broschart Road, 9920 Belward Campus Drive, and 9810 and 9820 Darnestown Road	1,176,744	510,601	—	1,687,345	20	\$ 53,655	96.6 %	96.6 %
1330 Piccard Drive	131,508	—	—	131,508	1	4,197	100.0	100.0
1405 and 1450 ⁽¹⁾ Research Boulevard	114,849	—	—	114,849	2	3,025	73.3	73.3
1500 and 1550 East Gude Drive	91,359	—	—	91,359	2	1,844	100.0	100.0
5 Research Place	63,852	—	—	63,852	1	3,073	100.0	100.0
5 Research Court	51,520	—	—	51,520	1	1,788	100.0	100.0
12301 Parklawn Drive	49,185	—	—	49,185	1	1,598	100.0	100.0
Rockville	1,679,017	510,601	—	2,189,618	28	69,180	95.8	95.8
Gaithersburg								
Alexandria Technology Center® – Gaithersburg I 9, 25, 35, 45, 50, and 55 West Watkins Mill Road and 910, 930, and 940 Clopper Road	619,241	—	—	619,241	9	17,532	93.6	93.6
Alexandria Technology Center® – Gaithersburg II 700, 704, and 708 Quince Orchard Road and 19, 20, 21, and 22 Firstfield Road	486,633	—	—	486,633	7	18,543	100.0	100.0
20400 Century Boulevard	81,006	—	—	81,006	1	3,298	100.0	100.0
401 Professional Drive	63,154	—	—	63,154	1	2,135	100.0	100.0
950 Wind River Lane	50,000	—	—	50,000	1	1,234	100.0	100.0
620 Professional Drive	27,950	—	—	27,950	1	1,207	100.0	100.0
Gaithersburg	1,327,984	—	—	1,327,984	20	43,949	97.0	97.0
Beltsville								
8000/9000/10000 Virginia Manor Road	191,884	—	—	191,884	1	3,021	100.0	100.0
101 West Dickman Street ⁽¹⁾	135,423	—	—	135,423	1	1,503	64.4	64.4
Beltsville	327,307	—	—	327,307	2	4,524	85.3	85.3
Northern Virginia								
14225 Newbrook Drive	248,186	—	—	248,186	1	6,127	100.0	100.0
Maryland	3,582,494	510,601	—	4,093,095	51	\$ 123,780	95.6 %	95.6 %

Refer to "New Class A/A+ development and redevelopment properties: summary of pipeline" section within this Item 2 and the definition of "Mega campus" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

(1) We own a partial interest in this property through a real estate joint venture. Refer to the "Consolidated and unconsolidated real estate joint ventures" 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	Total			Operating	Operating and Redevelopment
Research Triangle								
Mega Campus: Alexandria Center® for Life Science - Durham 6, 8, 10, 12, 14, 40, 42, and 65 Moore Drive, 21, 25, 27, 29, and 31 Alexandria Way, 2400 Ellis Road, and 14 TW Alexander Drive	2,155,252	—	—	2,155,252	15	\$ 52,175	97.5 %	97.5 %
Mega Campus: Alexandria Center® for Sustainable Technologies 104, 108, 110, 112, and 114 TW Alexander Drive and 5 and 7 Triangle Drive	364,493	—	—	364,493	7	14,233	99.9	99.9
Alexandria Center® for AgTech 5 and 9 Laboratory Drive	345,467	—	—	345,467	2	16,541	97.2	97.2
Mega Campus: Alexandria Center® for Advanced Technologies - Research Triangle 6, 8, 10, and 12 Davis Drive	341,626	—	—	341,626	4	16,079	99.4	99.4
Alexandria Technology Center® - Alston 100, 800, and 801 Capitola Drive	155,533	—	—	155,533	3	3,837	90.9	90.9
6040 George Watts Hill Drive	149,585	—	—	149,585	2	7,375	100.0	100.0
Alexandria Innovation Center® - Research Triangle 7010, 7020, and 7030 Kit Creek Road	136,729	—	—	136,729	3	4,093	97.2	97.2
2525 East NC Highway 54	82,996	—	—	82,996	1	3,651	100.0	100.0
601 Keystone Park Drive	77,595	—	—	77,595	1	2,137	100.0	100.0
6101 Quadrangle Drive	31,600	—	—	31,600	1	861	100.0	100.0
Research Triangle	3,840,876	—	—	3,840,876	39	120,982	97.8	97.8
Texas								
Austin								
Mega Campus: Intersection Campus 507 East Howard Lane, 13011 McColleen Pass, 13813 and 13929 Center Lake Drive, and 12535, 12545, 12555, and 12565 Riata Vista Circle	1,525,359	—	—	1,525,359	12	43,031	98.8	98.8
1001 Trinity Street and 1020 Red River Street	198,972	—	—	198,972	2	11,630	100.0	100.0
Austin	1,724,331	—	—	1,724,331	14	54,661	98.9	98.9
Greater Houston								
Alexandria Center® for Advanced Technologies at The Woodlands 8800 Technology Forest Place	120,828	—	73,298	194,126	1	2,930	41.5	25.8
Texas	1,845,159	—	73,298	1,918,457	15	57,591	95.1	91.5
Canada								
	898,740	—	172,936	1,071,676	12	17,222	87.1	73.0
Non-cluster/other markets	347,806	—	—	347,806	10	15,827	78.5	78.5
North America, excluding properties held for sale	40,974,858	3,205,307	1,999,185	46,179,350	404	2,141,263	94.6 %	90.2 %
Properties held for sale	1,049,135	—	—	1,049,135	7	26,907	63.3 %	63.3 %
Total - North America	42,023,993	3,205,307	1,999,185	47,228,485	411	\$ 2,168,170		

Refer to "New Class A/A+ development and redevelopment properties: summary of pipeline" section within this Item 2 and the definition of "Mega campus" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

Leasing activity

During the year ended December 31, 2023, strong demand for our high-quality Class A/A+ properties translated into solid leasing activity and rental rate growth in 2023 for our overall portfolio and our value-creation pipeline.

- Executed a total of 222 leases, with a weighted-average lease term of 11.3 years, for 4.3 million RSF, including 596,533 RSF related to our development and redevelopment projects;
- 76% of our leasing activity during the last twelve months was generated from our existing tenant base;
- Annual leasing activity of 3.0 million RSF for renewed and re-leased spaces; and
- Annual rental rate increases of 29.4% and 15.8% (cash basis) on renewed and re-leased space.

During the year ended December 31, 2023, we granted tenant concessions/free rent averaging 0.6 months per annum with respect to the 4.3 million RSF leased.

Lease structure

Our Same Properties total revenue growth of 4.3% for the year ended December 31, 2023, and our Same Properties net operating income and Same Properties net operating income increases (cash basis) for the year ended December 31, 2023 of 3.4% and 4.6%, respectively, benefited significantly from strong market fundamentals. The limited supply of Class A/A+ space in AAA locations and strong demand from innovative tenants drove rental rate increases for the year ended December 31, 2023 of 29.4% and 15.8% (cash basis) on 3.0 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 69% and Same Properties current-period average occupancy of 94.6% for the year ended December 31, 2023, a decrease of 80 bps for the same-period prior-year average, across our 288 Same Properties aggregating 28.7 million RSF. As of December 31, 2023, approximately 94% of our leases (on an annual rental revenue 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 96% of our leases (on an annual rental revenue basis) contained contractual annual rent escalations approximating 3% that were either fixed or based on a consumer price index or another index, and approximately 93% of our leases (on an annual rental revenue basis) provided for the recapture of certain capital expenditures.

Leasing activity (continued)

The following table summarizes our leasing activity at our properties for the years ended December 31, 2023 and 2022:

	Year Ended December 31,			
	2023		2022	
	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	29.4% ⁽²⁾	15.8% ⁽²⁾	31.0%	22.1%
New rates	\$52.35	\$50.82	\$50.37	\$48.48
Expiring rates	\$40.46	\$43.87	\$38.44	\$39.69
RSF	3,046,386		4,540,325	
Tenant improvements/leasing commissions	\$26.09		\$27.83	
Weighted-average lease term	8.7 years		5.0 years	
Developed/redeveloped/previously vacant space leased ⁽³⁾				
New rates	\$65.66	\$59.74	\$73.46	\$64.04
RSF	1,259,686		3,865,262	
Weighted-average lease term	13.8 years		11.8 years	
<i>Leasing activity summary (totals):</i>				
New rates	\$56.09	\$53.33	\$60.98	\$55.64
RSF	4,306,072		8,405,587	
Weighted-average lease term	11.3 years		8.1 years	
<i>Lease expirations⁽¹⁾</i>				
Expiring rates	\$43.84	\$45.20	\$37.41	\$38.06
RSF	5,027,773		6,572,286	

Leasing activity includes 100% of results for properties in North America in which we have an investment.

- (1) Excludes month-to-month leases aggregating 86,092 RSF and 266,292 RSF as of December 31, 2023 and 2022, respectively. During the year ended December 31, 2023, we granted free rent concessions averaging 0.6 months per annum.
- (2) Includes the re-lease of 99,557 RSF to Cargo Therapeutics at 835 Industrial at a 4.1% decline in the cash rental rate compared with the rate from the former tenant that was less than three years into a 10-year lease. Excluding this lease, the rental rate increase on renewals and re-leasing of space was 32.4% and 17.0% (cash basis) for 2023.
- (3) Refer to the "New Class A/A+ development and redevelopment properties: summary of pipeline" section within this Item 2 for additional information on total project costs.

Summary of contractual lease expirations

The following table summarizes information with respect to the contractual lease expirations at our properties as of December 31, 2023:

Year	RSF	Percentage of Occupied RSF	Annual Rental Revenue (per RSF) ⁽¹⁾	Percentage of Total Annual Rental Revenue
2024 ⁽²⁾	3,443,219	8.8 %	\$ 49.36	7.9 %
2025	3,876,007	9.9 %	\$ 52.08	9.3 %
2026	2,576,109	6.6 %	\$ 52.02	6.2 %
2027	2,720,041	6.9 %	\$ 52.75	6.6 %
2028	4,685,961	11.9 %	\$ 51.92	11.2 %
2029	2,517,755	6.4 %	\$ 52.73	6.1 %
2030	2,549,798	6.5 %	\$ 50.18	5.9 %
2031	3,711,668	9.4 %	\$ 56.14	9.6 %
2032	1,157,219	2.9 %	\$ 59.66	3.2 %
2033	2,780,801	7.1 %	\$ 51.97	6.7 %
Thereafter	9,310,793	23.6 %	\$ 63.13	27.3 %

(1) Represents amounts in effect as of December 31, 2023.

(2) Excludes month-to-month leases aggregating 86,092 RSF as of December 31, 2023.

Summary of contractual lease expirations (continued)

The following tables present information by market with respect to our 2024 and 2025 contractual lease expirations in North America as of December 31, 2023:

2024 Contractual Lease Expirations (in RSF)						
Market	Leased	Negotiating/ Anticipating	Targeted for Future Development/ Redevelopment ⁽¹⁾	Remaining Expiring Leases ⁽²⁾	Total ⁽³⁾	Annual Rental Revenue (per RSF) ⁽⁴⁾
Greater Boston	76,696	12,962	412,946 ⁽⁵⁾	471,370	973,974	\$ 65.16
San Francisco Bay Area	48,238	3,038	191,333	491,345	733,954	62.13
New York City	—	—	—	363,218 ⁽⁶⁾	363,218	57.25
San Diego	—	17,105	580,021 ⁽⁷⁾	184,459	781,585	25.18
Seattle	6,748	18,724	50,552	197,588	273,612	26.33
Maryland	89,831	—	—	41,378	131,209	32.55
Research Triangle	72,078	17,000	—	75,140	164,218	50.44
Texas	—	—	—	—	—	—
Canada	20,107	—	—	—	20,107	26.57
Non-cluster/other markets	—	—	—	1,342	1,342	106.21
Total	313,698	68,829	1,234,852	1,825,840	3,443,219	\$ 49.36
Percentage of expiring leases	9 %	2 %	36 %	53 %	100 %	
2025 Contractual Lease Expirations (in RSF)						
Market	Leased	Negotiating/ Anticipating	Targeted for Future Development/ Redevelopment ⁽¹⁾	Remaining Expiring Leases ⁽²⁾	Total	Annual Rental Revenue (per RSF) ⁽⁴⁾
Greater Boston	15,798	8,500	25,312 ⁽⁵⁾	1,203,988 ⁽⁸⁾	1,253,598	\$ 69.79
San Francisco Bay Area	35,797	—	—	476,712	512,509	66.85
New York City	—	—	—	65,538	65,538	88.23
San Diego	—	32,767	—	355,302	388,069	40.52
Seattle	11,220	—	—	323,344	334,564	30.29
Maryland	—	—	—	198,094	198,094	27.23
Research Triangle	—	—	—	220,439	220,439	50.92
Texas	—	—	198,972	604,382	803,354	36.27
Canada	—	—	—	88,412	88,412	20.44
Non-cluster/other markets	—	—	—	11,430	11,430	80.31
Total	62,815	41,267	224,284	3,547,641	3,876,007	\$ 52.08
Percentage of expiring leases	2 %	1 %	6 %	91 %	100 %	

(1) Represents lease expirations, primarily related to acquired properties, targeted for:

Future redevelopment expected to commence construction in the near term

Future development expected to be demolished following the lease expiration and the commencement of which is subject to tenant demand and overall market conditions

Average expiration date (weighted by expiring annual rental revenue)

	2024	2025
Future redevelopment expected to commence construction in the near term	466,248	151,346
Future development expected to be demolished following the lease expiration and the commencement of which is subject to tenant demand and overall market conditions	768,604	72,938
Average expiration date (weighted by expiring annual rental revenue)	July 22, 2024	January 12, 2025

Refer to "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 details on value-creation square feet currently included in rental properties.

(2) Excluding the expiration described in footnote 6, the largest remaining contractual lease expiration in 2024 is 97,702 RSF in our Mission Bay submarket where we are working to retain the current tenant, and in 2025 is 357,136 RSF in our Austin submarket which we are in early negotiations to renew the existing tenant.

(3) Excludes month-to-month leases aggregating 86,092 RSF as of December 31, 2023.

(4) Represents amounts in effect as of December 31, 2023.

(5) Includes 308,446 RSF and 25,312 RSF in 2024 and 2025, respectively, at 311 Arsenal Street in our Cambridge/Inner Suburbs submarket which is targeted for redevelopment upon expiration of the existing leases.

(6) Includes 349,947 RSF at 219 East 42nd Street that was previously classified as targeted for future development/redevelopment and is now classified as held for sale as of December 31, 2023 and expected to be sold in 2024.

(7) Includes 159,884 RSF at 4161 Campus Point Court in our University Town Center submarket that is targeted for future development into a 492,570 RSF building at 4165 Campus Point Court, which is 51% leased/negotiating and expected to commence construction in the next two years subject to tenant demand and overall market conditions.

(8) Includes 905,127 RSF in our Cambridge/Inner Suburbs submarket with the largest remaining contractual lease expiration aggregating 171,945 RSF at our Alexandria Technology Square® mega campus.

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/A+ properties, and property enhancements identified during the underwriting of certain acquired properties, located in collaborative life science, agtech, and advanced technology mega campuses in AAA innovation clusters. These projects are focused on providing high-quality, generic, and reusable spaces that meet the real estate requirements of a wide range of tenants. Upon completion, each value-creation project is expected to generate increases 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 prepare the property 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, 2023 (dollars in thousands):

		Development and Redevelopment						
		Active and Near-Term Construction			Future Opportunities Subject to Market Conditions and Leasing			
		Operating	Under Construction 61% Leased	Committed Near Term 51% Leased/Negotiating ⁽¹⁾	Priority Anticipated	Future	Subtotal	Total
Square footage								
Operating		40,974,858	—	—	—	—	—	40,974,858
New Class A/A+ development and redevelopment properties		—	5,204,492	492,570	2,710,462	26,754,679	35,162,203	35,162,203
Value-creation square feet currently included in rental properties ⁽²⁾		—	—	(159,884)	(617,594)	(3,111,413)	(3,888,891)	(3,888,891)
Total square footage, excluding properties held for sale		40,974,858	5,204,492	332,686	2,092,868	23,643,266	31,273,312	72,248,170
Properties held for sale		1,049,135	—	—	—	235,000	235,000	1,284,135
Total square footage		42,023,993	5,204,492	332,686	2,092,868	23,878,266	31,508,312	73,532,305
Investments in real estate								
Gross book value as of December 31, 2023 ⁽³⁾		\$ 28,388,009	\$ 3,661,679	\$ 46,257	\$ 702,248	\$ 3,816,125	\$ 8,226,309	\$ 36,614,318

(1) Represents one near-term project expected to commence construction during the next two years after December 31, 2023.

(2) Refer to "Investments in real estate" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional details on value-creation square feet currently included in rental properties.

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

Acquisitions

Our real estate asset acquisitions completed for the year ended December 31, 2023 and projected for the year ending December 31, 2024 consisted of the following (dollars in thousands):

Property	Submarket/Market	Date of Purchase	Number of Properties	Operating Occupancy	Square Footage			Total ⁽²⁾	Purchase Price
					Acquisitions With Development and Redevelopment Opportunities ⁽¹⁾				
					Future Development	Active Development/Redevelopment	Operating With Future Development/Redevelopment		
2023 Acquisitions									
Canada	Canada	1/30/23	1	10%	—	—	247,743	247,743	\$ 100,837
Other	Various	Various	4	100	1,089,349	110,717	185,676	1,385,742	158,139
Total 2023 acquisitions			5	10%	1,089,349	110,717	433,419	1,633,485	258,976
2024 Acquisitions									
Completed through January 29, 2024	Various	Various	—	N/A	300,000	—	—	300,000	\$ 103,250
Pending acquisitions as of January 29, 2024, subject to signed letters of intent or purchase and sale agreements									358,746
									\$ 461,996
2024 guidance range								\$250,000 - \$750,000	

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

(2) Represents total square footage upon completion of development or redevelopment of one or more new Class A/A+ properties. Square footage presented includes RSF of buildings currently in operation with future development or redevelopment opportunities. Refer to the definition of "Investments in real estate" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

Dispositions and sales of partial interests

Our completed dispositions of and sales of partial interests in real estate assets during the year ended December 31, 2023 consisted of the following (dollars in thousands, except for sales price per RSF):

Property	Submarket/Market	Date of Sale	Interest Sold	RSF	Capitalization Rate	Capitalization Rate (Cash Basis)	Sales Price	Sales Price per RSF
<i>Value harvesting dispositions of 100% interest in properties not integral to our mega campus strategy:</i>								
11119 North Torrey Pines Road ⁽¹⁾	Torrey Pines/San Diego	5/4/23	100 %	72,506	4.4 % ⁽¹⁾	4.6 % ⁽¹⁾	\$ 86,000	\$ 1,186
225, 266, and 275 Second Avenue and 780 and 790 Memorial Drive ⁽²⁾	Route 128 and Cambridge/Inner Suburbs/Greater Boston	6/13/23	100 %	428,663	N/A	N/A	365,226	\$ 852
275 Grove Street ⁽³⁾	Route 128/Greater Boston	6/27/23	100 %	509,702	N/A	N/A	109,349	N/A
640 Memorial Drive, 100 Beaver Street, and 11025 and 11035 Roselle Street ⁽⁴⁾	Cambridge and Inner Suburbs and Route 128/Greater Boston and Sorrento Valley/San Diego	12/20/23	100 %	361,102	N/A	N/A	312,244	\$ 865
380 and 420 E Street ⁽⁵⁾	Seaport Innovation District/ Greater Boston	12/20/23	100 %	195,506	N/A	N/A	86,969	\$ 445
Other							81,845	
							1,041,633	
<i>Strategic dispositions and partial interest sales:</i>								
15 Necco Street ⁽⁶⁾	Seaport Innovation District/ Greater Boston	4/11/23	18 % ⁽⁶⁾	345,996	6.6 %	5.4 %	66,108	\$ 1,626
9625 Towne Centre Drive ⁽⁷⁾	University Town Center/ San Diego	6/21/23	20.1 %	163,648	4.2 %	4.5 %	32,261	\$ 981
421 Park Drive ⁽⁸⁾	Fenway/Greater Boston	9/19/23	⁽⁸⁾	⁽⁸⁾	N/A	N/A	174,412	N/A
							272,781	
Total 2023 dispositions and sales of partial interests							\$ 1,314,414	

- (1) We calculated capitalization rates based upon net operating income and net operating income (cash basis) for the three months ended March 31, 2023 annualized. Upon completion of the sale, we recognized a gain on sales of real estate aggregating \$27.6 million.
- (2) Represents five laboratory properties at 225, 266, and 275 Second Avenue aggregating 329,005 RSF and 780 and 790 Memorial Drive aggregating 99,658 RSF. We calculated capitalization rates of 5.0% and 5.2% (cash basis) based upon net operating income and net operating income (cash basis), respectively, for the three months ended June 30, 2023 annualized that includes vacancy available for redevelopment. Upon completion of the sale, we recognized a gain on sales of real estate aggregating \$187.2 million.
- (3) During the three months ended June 30, 2023, we recognized a real estate impairment charge of \$145.4 million to reduce our investment to its current fair value less costs to sell.
- (4) Represents four operating properties that were 46% occupied as of September 30, 2023 consisting of two laboratory properties at 640 Memorial Drive aggregating 242,477 RSF in Cambridgeport, MA and 100 Beaver Street aggregating 82,330 RSF in Waltham, MA, and two non-laboratory properties at 11025 and 11035 Roselle Street aggregating 36,295 RSF in our Sorrento Valley submarket. These non-core assets were not integral to our mega campus strategy and would have required significant capital to stabilize. Upon completion of the sale, we recognized a gain on sales of real estate aggregating \$59.7 million.
- (5) Represents two non-laboratory properties initially acquired as industrial and self-storage space with the intention to demolish the properties upon expiration of the existing in-place leases to entitle and develop a life science campus. During the three months ended December 31, 2023, we decided to not proceed with this project due to the change in macroeconomic environment and a lack of transit options near the properties and recognized an impairment charge of \$94.8 million to reduce our investment to its current fair value less costs to sell.
- (6) Represents a development project delivered in November 2023 aggregating 345,996 RSF, 97% of which is leased to Eli Lilly and Company for the Lilly Institute for Genetic Medicine. In April 2023, an investor acquired a 20% interest in this joint venture, which consisted of an 18% interest sold by us and a 2% interest sold by our existing partner. Upon completion of the sale, our ownership interest in the consolidated real estate joint venture was 72% and our existing and new partners' noncontrolling interests were 8% and 20%, respectively. We retained control over this real estate joint venture and therefore continue to consolidate it. The sales price of the 18% interest sold by us was \$66.1 million, or \$1,626 per RSF, representing capitalization rates of 6.6% and 5.4% (cash basis). At completion of the project, we expect our new joint venture partner to have contributed approximately \$130 million to fund its share of construction and accrete its ownership interest in the joint venture to 37% from 20%.
- (7) An investor acquired a 70.0% interest in this consolidated real estate joint venture, which consisted of a 20.1% interest sold by us and a 49.9% interest held by our previous joint venture partner. Our portion of the sales price was \$32.3 million, or \$981 per RSF, representing capitalization rates of 4.2% and 4.5% (cash basis) based upon net operating income and net operating income (cash basis), respectively, for the three months ended June 30, 2023 annualized. We retained control over this real estate joint venture and therefore continue to consolidate this property. This transaction resulted in consideration in excess of book value of \$15.6 million.
- (8) Represents the disposition of 268,023 RSF in a 660,034 RSF active development project at 421 Park Drive in our Fenway submarket. The proceeds from this transaction will help fund the construction of our remaining 392,011 RSF. The project commenced vertical construction during the three months ended December 31, 2023 and is expected to be substantially completed in 2026. The buyer will fund the remaining costs to construct its 268,023 RSF, and as such, these costs are not included in our projected construction spending. We will develop and operate the completed project and will earn development fees over the next three years.

New Class A/A+ development and redevelopment properties

pipelinev9.jpg



Refer to "Net operating income" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional details and its reconciliation from the most directly comparable financial measures presented in accordance with GAAP.

- (1) Our share of incremental annual net operating income from development and redevelopment projects placed into service primarily commencing from 1Q24 through 4Q27 is \$389 million.
- (2) Represents expected incremental annual net operating income to be placed into service, including partial deliveries for projects that stabilize in future years.
- (3) Includes 1.4 million RSF expected to be stabilized in 2024 and is 93% leased. Refer to the initial and stabilized occupancy years in the "New Class A/A+ development and redevelopment properties: current projects" section within this Item 2 in this annual report on Form 10-K for additional information.

New Class A/A+ development and redevelopment properties: recent deliveries

<div>325 Binney Street</div> <div>Greater Boston/Cambridge</div> <div>462,100 RSF</div> <div>100% Occupancy</div> <div>binney325.jpg</div> <div></div>	<div>140 First Street</div> <div>Greater Boston/Cambridge</div> <div>403,892 RSF</div> <div>100% Occupancy</div> <div>charlespark.jpg</div> <div></div>	<div>99 Coolidge Avenue</div> <div>Greater Boston/Cambridge/Inner Suburbs</div> <div>43,568 RSF</div> <div>100% Occupancy</div> <div>coolidge.jpg</div> <div></div>	
<div>201 Brookline Avenue</div> <div>Greater Boston/Fenway</div> <div>451,967 RSF</div> <div>100% Occupancy</div> <div>brookline.jpg</div> <div></div>	<div>15 Necco Street</div> <div>Greater Boston/Seaport Innovation District</div> <div>345,996 RSF</div> <div>97% Occupancy</div> <div>necco15.jpg</div> <div></div>	<div>751 Gateway Boulevard</div> <div>San Francisco Bay Area/South San Francisco</div> <div>230,592 RSF</div> <div>100% Occupancy</div> <div>gateway751.jpg</div> <div></div>	<div>1150 Eastlake Avenue East</div> <div>Seattle/Lake Union</div> <div>278,282 RSF</div> <div>100% Occupancy</div> <div>eastlake1150.jpg</div> <div></div>

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

Alexandria Center® for Advanced Technologies - Monte Villa Parkway⁽¹⁾ Seattle/Bothell 65,086 RSF 100% Occupancy montevilla3755.jpg 	9808 Medical Center Drive Maryland/Rockville 26,460 RSF 100% Occupancy mcd9808.jpg 	9601 and 9603 Medical Center Drive⁽²⁾ Maryland/Rockville 95,911 RSF 100% Occupancy mcd9601.jpg 	20400 Century Boulevard Maryland/Gaithersburg 81,006 RSF 100% Occupancy centuryblvd20400.jpg 
2400 Ellis Road, 40 Moore Drive, and 14 TW Alexander Drive⁽³⁾ Research Triangle/Research Triangle 603,316 RSF 100% Occupancy ellisroad.jpg 	6040 George Watts Hill Drive, Phase II Research Triangle/Research Triangle 88,038 RSF 100% Occupancy georgewatts6040.jpg 	8800 Technology Forest Place Texas/Greater Houston 50,094 RSF 100% Occupancy Techforest8800.jpg 	

(1) Image represents 3755 Monte Villa Parkway.

(2) Image represents 9601 Medical Center Drive.

(3) Image represents 2400 Ellis Road on the Alexandria Center® for Life Science - Durham mega campus.

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

The following table presents value-creation development and redevelopment of new Class A/A+ properties placed into service during the year ended December 31, 2023 (dollars in thousands):

Highest Incremental Annual Net Operating Income in Company History Generated From 2023 Deliveries Totalled \$265 Million, Including \$145 Million in 4Q23











			RSF Placed in Service								Total Project		Unlevered Yields	
Property/Market/Submarket	4Q23 Delivery Date ⁽¹⁾	Our Ownership Interest	Prior to 1/1/23	1Q23	2Q23	3Q23	4Q23	Total	Occupancy Percentage ⁽²⁾	RSF	Investment	Initial Stabilized	Initial Stabilized (Cash Basis)	
Development projects														
325 Binney Street/Greater Boston/Cambridge	11/17/23	100%	—	—	—	—	462,100	462,100	100%	462,100	\$ 823,000	8.9 %	7.6 %	
99 Coolidge Avenue/Greater Boston/Cambridge/Inner Suburbs	12/13/23	75.0%	—	—	—	—	43,568	43,568	100%	320,809	468,000	7.1	7.0	
201 Brookline Avenue/Greater Boston/Fenway	N/A	99.0%	340,073	107,174	4,720	—	—	451,967	100%	510,116	775,000	7.2	6.5	
15 Necco Street/Greater Boston/Seaport Innovation District	11/17/23	56.7%	—	—	—	—	345,996	345,996	97%	345,996	540,000	6.7	5.6	
751 Gateway Boulevard/San Francisco Bay Area/South San Francisco	N/A	51.0%	—	—	—	230,592	—	230,592	100%	230,592	246,000	7.0	7.5	
1150 Eastlake Avenue East/Seattle/Lake Union	10/28/23	100%	—	—	—	—	278,282	278,282	100%	311,631	443,000	6.6	6.7	
9808 Medical Center Drive/Maryland/Rockville	N/A	100%	—	—	—	26,460	—	26,460	100%	95,061	113,000	5.5	5.5	
6040 George Watts Hill Drive, Phase II/Research Triangle/Research Triangle	11/1/23	100%	—	—	—	—	88,038	88,038	100%	88,038	66,000	8.1	7.1	
Redevelopment projects														
140 First Street/Greater Boston/Cambridge	N/A	100%	—	—	325,346	78,546	—	403,892	100%	408,259	1,248,000	5.6	4.7	
Alexandria Center* for Advanced Technologies - Monte Villa Parkway/Seattle/Bothell	N/A	100%	—	35,847	—	29,239	—	65,086	100%	460,623	229,000	6.3	6.2	
9601 and 9603 Medical Center Drive/Maryland/Rockville	N/A	100%	34,589	13,927	—	47,395	—	95,911	100%	95,911	63,000	8.0	6.8	
20400 Century Boulevard/Maryland/Gaithersburg	N/A	100%	50,738	19,692	10,576	—	—	81,006	100%	81,006	35,000	9.5	9.3	
2400 Ellis Road, 40 Moore Drive, and 14 TW Alexander Drive/Research Triangle/Research Triangle	N/A	100%	326,445	276,871	—	—	—	603,316	100%	603,316	241,000	8.1	6.8	
8800 Technology Forest Place/Texas/Greater Houston	N/A	100%	—	—	46,434	3,660	—	50,094	100%	123,392	112,000	6.3	6.0	
Canada	10/31/23	100%	—	—	—	34,242	10,620	44,862	100%	250,790	104,000	7.0	7.0	
Weighted average/total	11/12/23		751,845	453,511	387,076	450,134	1,228,604	3,271,170		4,387,640	\$ 5,506,000	7.0 %	6.3 %	

Refer to "New Class A/A+ development and redevelopment properties: current projects" within this Item 2 for details on the RSF in service and under construction, if applicable.

(1) Represents the average delivery date for deliveries that occurred during the three months ended December 31, 2023, weighted by annual rental revenue.

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

New Class A/A+ development and redevelopment properties: current projects



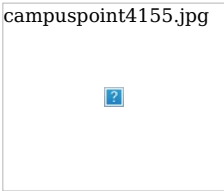



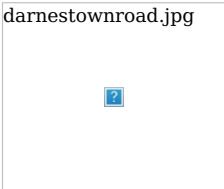
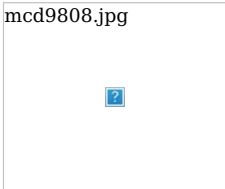

99 Coolidge Avenue Greater Boston/ Cambridge/Inner Suburbs 277,241 RSF 36% Leased coolidge.jpg 	500 North Beacon Street and 4 Kingsbury Avenue⁽¹⁾ Greater Boston/ Cambridge/Inner Suburbs 248,018 RSF 85% Leased arsenalphaseii.jpg 	201 Brookline Avenue Greater Boston/Fenway 58,149 RSF 98% Leased brookline.jpg 	401 Park Drive Greater Boston/Fenway 133,578 RSF 17% Leased parkdrive401v2.jpg 	421 Park Drive Greater Boston/Fenway 392,011 RSF 13% Leased parkdrive421.jpg 
40, 50, and 60 Sylvan Road⁽²⁾ Greater Boston/Route 128 576,924 RSF 29% Leased sylvan50.jpg 	840 Winter Street Greater Boston/Route 128 139,680 RSF 100% Leased winter840.jpg 	1450 Owens Street⁽³⁾ San Francisco Bay Area/ Mission Bay 212,796 RSF —% Leased/Negotiating owens1450.jpg 	651 Gateway Boulevard San Francisco Bay Area/ South San Francisco 300,010 RSF 22% Leased gateway651.jpg 	230 Harriet Tubman Way San Francisco Bay Area/ South San Francisco 285,346 RSF 100% Leased harriettubman.jpg 

(1) Image represents 500 North Beacon Street on the Arsenal on the Charles mega campus.

(2) Image represents 50 Sylvan Road. The Alexandria Center® for Life Science - Waltham mega campus project is expected to capture demand in our Route 128 submarket.

(3) Image represents a single- or multi-tenant project expanding our existing Alexandria Center® for Science and Technology - Mission Bay mega campus, which will be 100% funded by our joint venture partner. We are currently marketing the space for lease and have initial interest from publicly traded biotechnology and institutional tenants.

New Class A/A+ development and redevelopment properties: current projects (continued)

10935, 10945, and 10955 Alexandria Way	4135 Campus Point Court	4155 Campus Point Court	10075 Barnes Canyon Road	1150 Eastlake Avenue East
San Diego/Torrey Pines 334,996 RSF 75% Leased	San Diego/ University Town Center 426,927 RSF 100% Leased	San Diego/ University Town Center 171,102 RSF 100% Leased	San Diego/Sorrento Mesa 254,771 RSF 24% Leased/Negotiating	Seattle/Lake Union 33,349 RSF 100% Leased
alexandriawayOAS.jpg	Campupoint4135.jpg	campuspoint4155.jpg		eastlake1150.jpg
				
Alexandria Center® for Advanced Technologies - Monte Villa Parkway ⁽¹⁾	9810 and 9820 Darnestown Road	9808 Medical Center Drive	8800 Technology Forest Place	
Seattle/Bothell 148,890 RSF 90% Leased	Maryland/Rockville 442,000 RSF 100% Leased	Maryland/Rockville 68,601 RSF 60% Leased	Texas/Greater Houston 73,298 RSF 41% Leased	
montevilla3755.jpg	darnestownroad.jpg	mcd9808.jpg	Techforest8800.jpg	
				

(1) Image represents 3755 Monte Villa Parkway.

New Class A/A+ development and redevelopment properties: current projects (continued)

The following tables set forth a summary of our new Class A/A+ development and redevelopment properties under construction and pre-leased/negotiating near-term projects as of December 31, 2023 (dollars in thousands):

Property/Market/Submarket	Dev/Redev	Square Footage			Percentage		Occupancy ⁽¹⁾	
		In Service	CIP	Total	Leased	Leased/Negotiating	Initial	Stabilized
Under construction								
2024 stabilization								
201 Brookline Avenue/Greater Boston/Fenway	Dev	451,967	58,149	510,116	98 %	98 %	3Q22	2024
840 Winter Street/Greater Boston/Route 128	Redev	28,534	139,680	168,214	100	100	2024	2024
230 Harriet Tubman Way/San Francisco Bay Area/South San Francisco	Dev	—	285,346	285,346	100	100	2024	2024
4155 Campus Point Court/San Diego/University Town Center	Dev	—	171,102	171,102	100	100	2024	2024
1150 Eastlake Avenue East/Seattle/Lake Union	Dev	278,282	33,349	311,631	100	100	4Q23	2024
Alexandria Center® for Advanced Technologies – Monte Villa Parkway/Seattle/Bothell	Redev	311,733	148,890	460,623	90	90	1Q23	2024
9820 Darnestown Road/Maryland/Rockville	Dev	—	250,000	250,000	100	100	2024	2024
9810 Darnestown Road/Maryland/Rockville	Dev	—	192,000	192,000	100	100	2024	2024
9808 Medical Center Drive/Maryland/Rockville	Dev	26,460	68,601	95,061	60	60	3Q23	2024
8800 Technology Forest Place/Texas/Greater Houston	Redev	50,094	73,298	123,392	41	41	2Q23	2024
		1,147,070	1,420,415	2,567,485	93	93		
2025 stabilization								
99 Coolidge Avenue/Greater Boston/Cambridge/Inner Suburbs	Dev	43,568	277,241	320,809	36	36	4Q23	2025
500 North Beacon Street and 4 Kingsbury Avenue/Greater Boston/Cambridge/Inner Suburbs	Dev	—	248,018	248,018	85	85	2024	2025
651 Gateway Boulevard/San Francisco Bay Area/South San Francisco	Redev	—	300,010	300,010	22	22	2024	2025
10075 Barnes Canyon Road/San Diego/Sorrento Mesa	Dev	—	254,771	254,771	12	24	2024	2025
Canada	Redev	77,854	172,936	250,790	73	73	3Q23	2025
		121,422	1,252,976	1,374,398	44	46 ⁽²⁾		
		1,268,492	2,673,391	3,941,883	76	77		
2026 and beyond stabilization								
401 Park Drive/Greater Boston/Fenway	Redev	—	133,578	133,578	17	17	2024	2026
421 Park Drive/Greater Boston/Fenway	Dev	—	392,011	392,011	13	13	2026	2027
40, 50, and 60 Sylvan Road/Greater Boston/Route 128	Redev	—	576,924	576,924	29	29	2025	2027
Other/Greater Boston	Dev	—	453,869	453,869	—	—	2025	2026
1450 Owens Street/San Francisco Bay Area/Mission Bay	Dev	—	212,796	212,796	—	— ⁽³⁾	2025	2026
10935, 10945, and 10955 Alexandria Way/San Diego/Torrey Pines	Dev	—	334,996	334,996	75	75	2025	2026
4135 Campus Point Court/San Diego/University Town Center	Dev	—	426,927	426,927	100	100	2026	2026
		—	2,531,101	2,531,101	36	36 ⁽²⁾		
		1,268,492	5,204,492	6,472,984	61	61		
Near-term project expected to commence construction in the next two years								
4165 Campus Point Court/San Diego/University Town Center	Dev	—	492,570	492,570	—	51		
Total		1,268,492	5,697,062	6,965,554	56 %	60 %		

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

(2) These projects are focused on demand from our existing tenants in our adjacent properties/campuses and will also address demand from other non-Alexandria properties/campuses.

(3) Represents a single- or multi-tenant project expanding our existing mega campus, which will be 100% funded by our joint venture partner. We are currently marketing the space for lease and have initial interest from publicly traded biotechnology and institutional tenants.

New Class A/A+ development and redevelopment properties: current projects (continued)

		At 100%				Unlevered Yields	
Property/Market/Submarket	Our Ownership Interest	In Service	CIP	Cost to Complete	Total at Completion	Initial Stabilized	Initial Stabilized (Cash Basis)
Under construction							
2024 stabilization							
201 Brookline Avenue/Greater Boston/Fenway	99.0 %	\$ 661,831	\$ 80,604	\$ 32,565	\$ 775,000	7.2 %	6.5 %
840 Winter Street/Greater Boston/Route 128	100 %	13,648	130,274	64,078	208,000	7.5 %	6.5 %
230 Harriet Tubman Way/San Francisco Bay Area/South San Francisco	47.1 %	—	237,118	272,882	510,000	7.4 %	6.4 %
4155 Campus Point Court/San Diego/University Town Center	55.0 %	—	89,704	83,296	173,000	7.4 %	6.5 %
1150 Eastlake Avenue East/Seattle/Lake Union	100 %	363,824	33,827	45,349	443,000	6.6 %	6.7 %
Alexandria Center® for Advanced Technologies - Monte Villa Parkway/Seattle/Bothell	100 %	93,238	104,608	31,154	229,000	6.3 %	6.2 %
9820 Darnestown Road/Maryland/Rockville	100 %	—	144,388	32,612	177,000	6.3 %	5.6 %
9810 Darnestown Road/Maryland/Rockville	100 %	—	108,644	24,356	133,000	6.9 %	6.2 %
9808 Medical Center Drive/Maryland/Rockville	100 %	34,825	54,312	23,863	113,000	5.5 %	5.5 %
8800 Technology Forest Place/Texas/Greater Houston	100 %	43,529	56,245	12,226	112,000	6.3 %	6.0 %
		1,210,895	1,039,724				
2025 stabilization ⁽¹⁾							
99 Coolidge Avenue/Greater Boston/Cambridge/Inner Suburbs	75.0 %	48,183	245,314	174,503	468,000	7.1 %	7.0 %
500 North Beacon Street and 4 Kingsbury Avenue/Greater Boston/Cambridge/Inner Suburbs	100 %	—	337,677	89,323	427,000	6.2 %	5.5 %
651 Gateway Boulevard/San Francisco Bay Area/South San Francisco	50.0 %	—	306,273			TBD	
10075 Barnes Canyon Road/San Diego/Sorrento Mesa	50.0 %	—	124,450				
Canada	100 %	29,400	47,974	26,626	104,000	7.0 %	7.0 %
		77,583	1,061,688				
2026 and beyond stabilization ⁽¹⁾							
401 Park Drive/Greater Boston/Fenway	100 %	—	140,156				
421 Park Drive/Greater Boston/Fenway	99.6 %	—	301,730				
40, 50, and 60 Sylvan Road/Greater Boston/Route 128	100 %	—	397,582				
Other/Greater Boston	100 %	—	136,992				
1450 Owens Street/San Francisco Bay Area/Mission Bay	40.6 %	—	268,290				
10935, 10945, and 10955 Alexandria Way/San Diego/Torrey Pines	100 %	—	177,828	325,172	503,000	6.2 %	5.8 %
4135 Campus Point Court/San Diego/University Town Center	55.0 %	—	137,689			TBD	
		—	1,560,267				
		1,288,478	3,661,679				
Near-term project expected to commence construction in the next two years							
4165 Campus Point Court/San Diego/University Town Center	55.0 %	—	46,257			TBD	
Total		\$ 1,288,478	\$ 3,707,936	\$ 3,970,000 ⁽²⁾	\$ 8,960,000 ⁽²⁾		
Our share of investment ⁽³⁾			\$ 2,990,000 ⁽²⁾	\$ 3,090,000 ⁽²⁾	\$ 7,350,000 ⁽²⁾		

(1) We expect to provide total estimated costs and related yields for each project with estimated stabilization in 2025 and beyond over the next several quarters.
(2) Amounts are rounded to the nearest \$10 million and include preliminary estimated amounts for projects listed as TBD.
(3) Represents our share of investment based on our ownership percentages at the completion of development or redevelopment projects.

New Class A/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, 2023 (dollars in thousands):

Market Property/Submarket	Our Ownership Interest	Book Value	Square Footage				
			Development and Redevelopment				Total ⁽¹⁾
			Active and Near-Term Construction		Future Opportunities Subject to Market Conditions and Leasing		
			Under Construction	Committed Near Term	Priority Anticipated	Future	
Greater Boston							
99 Coolidge Avenue/Cambridge/Inner Suburbs	75.0 %	\$ 245,314	277,241	—	—	—	277,241
Mega Campus: The Arsenal on the Charles/Cambridge/Inner Suburbs	100 %	348,919	248,018	—	333,758	34,157	615,933
311 Arsenal Street, 500 North Beacon Street, and 4 Kingsbury Avenue							
Mega Campus: Alexandria Center® for Life Science – Fenway/Fenway	(2)	522,490	583,738	—	—	—	583,738
201 Brookline Avenue and 401 and 421 Park Drive							
Mega Campus: Alexandria Center® for Life Science – Waltham/Route 128	100 %	588,757	716,604	—	—	515,000	1,231,604
40, 50, and 60 Sylvan Road, 35 Gatehouse Drive, and 840 Winter Street							
Mega Campus: Alexandria Center® at Kendall Square/Cambridge	100 %	115,187	—	—	—	216,455	216,455
100 Edwin H. Land Boulevard							
Mega Campus: Alexandria Technology Square®/Cambridge	100 %	7,881	—	—	—	100,000	100,000
Mega Campus: 480 Arsenal Way and 446, 458, 500, and 550 Arsenal Street/Cambridge/Inner Suburbs	100 %	83,175	—	—	—	902,000	902,000
446, 458, 500, and 550 Arsenal Street							
10 Necco Street/Seaport Innovation District	100 %	103,531	—	—	—	175,000	175,000
Mega Campus: One Moderna Way/Route 128	100 %	26,182	—	—	—	1,100,000	1,100,000
215 Presidential Way/Route 128	100 %	6,816	—	—	—	112,000	112,000
Other value-creation projects	(3)	286,099	453,869	—	—	1,323,541	1,777,410
		\$ 2,334,351	2,279,470	—	333,758	4,478,153	7,091,381

Refer to the definition of "Mega campus" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

(1) Represents total square footage upon completion of development or redevelopment of one or more new Class A/A+ properties. Square footage presented includes RSF of buildings currently in operation at properties that also have inherent future development or redevelopment opportunities. Upon expiration of existing in-place leases, we have the intent to demolish or redevelop the existing property. 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.

(2) We have a 99.0% interest in 201 Brookline Avenue aggregating 58,149 RSF, a 100% interest in 401 Park Drive aggregating 133,578 RSF, and a 99.6% interest in 421 Park Drive aggregating 392,011 RSF.

(3) Includes a property in which we own a partial interest through a real estate joint venture. Refer to Note 4 - "Consolidated and unconsolidated real estate joint ventures" to our consolidated financial statements under Item 15 of this annual report on Form 10-K for additional details.

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

Market Property/Submarket	Our Ownership Interest	Book Value	Square Footage					
			Development and Redevelopment			Future Opportunities Subject to Market Conditions and Leasing		
			Active and Near-Term Construction					
			Under Construction	Committed Near Term	Priority Anticipated	Future	Total ⁽¹⁾	
San Francisco Bay Area								
Mega Campus: Alexandria Center® for Science and Technology – Mission Bay/Mission Bay <i>1450 Owens Street</i>	40.6 %	\$ 268,290	212,796	—	—	—	212,796	
Mega Campus: Alexandria Technology Center® – Gateway/South San Francisco <i>651 Gateway Boulevard</i>	50.0 %	332,447	300,010	—	—	291,000	591,010	
Alexandria Center® for Life Science – Millbrae/South San Francisco <i>230 Harriet Tubman Way, 201 and 231 Adrian Road, and 6 and 30 Rollins Road</i>	47.1 %	388,202	285,346	—	198,188	150,213	633,747	
Mega Campus: Alexandria Center® for Advanced Technologies – South San Francisco/South San Francisco <i>211⁽²⁾ and 269 East Grand Avenue</i>	100 %	6,655	—	—	107,250	90,000	197,250	
Mega Campus: Alexandria Center® for Life Science – San Carlos/Greater Stanford <i>960 Industrial Road, 987 and 1075 Commercial Street, and 888 Bransten Road</i>	100 %	423,593	—	—	105,000	1,392,830	1,497,830	
Mega Campus: Alexandria Center® for Advanced Technologies – Tanforan/South San Francisco <i>1122, 1150, and 1178 El Camino Real</i>	100 %	377,159	—	—	—	1,930,000	1,930,000	
3825 and 3875 Fabian Way/Greater Stanford	100 %	147,079	—	—	—	478,000	478,000	
2100, 2200, 2300, and 2400 Geng Road/Greater Stanford	100 %	—	—	—	—	240,000	240,000	
901 California Avenue/Greater Stanford	100 %	16,419	—	—	—	56,924	56,924	
Mega Campus: 88 Bluxome Street/SoMa	100 %	378,835	—	—	—	1,070,925	1,070,925	
Other value-creation projects	100 %	—	—	—	—	25,000	25,000	
		2,338,679	798,152	—	410,438	5,724,892	6,933,482	
New York City								
Mega Campus: Alexandria Center® for Life Science – New York City/New York City	100 %	151,846	—	—	—	550,000 ⁽³⁾	550,000	
		\$ 151,846	—	—	—	550,000	550,000	

Refer to the definition of "Mega campus" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

- (1) Represents total square footage upon completion of development or redevelopment of one or more new Class A/A+ properties. Square footage presented includes RSF of buildings currently in operation at properties that also have inherent future development or redevelopment opportunities. Upon expiration of existing in-place leases, we have the intent to demolish or redevelop the existing property. 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.
- (2) We own a partial interest in this property through a real estate joint venture. Refer to Note 4 - "Consolidated and unconsolidated real estate joint ventures" to our consolidated financial statements under Item 15 of this annual report on Form 10-K for additional details.
- (3) Pursuant to an option agreement, we are currently negotiating a long-term ground lease with the City of New York for the future site of a new building aggregating approximately 550,000 SF.

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

Market Property/Submarket	Our Ownership Interest	Book Value	Square Footage				
			Development and Redevelopment		Future Opportunities Subject to Market Conditions and Leasing		
			Active and Near-Term Construction		Priority Anticipated	Future	Total ⁽¹⁾
			Under Construction	Committed Near Term			
San Diego							
Mega Campus: One Alexandria Square/Torrey Pines 10935, 10945, and 10955 Alexandria Way and 10975 and 10995 Torreyana Road	100 %	\$ 232,897	334,996	—	—	125,280	460,276
Mega Campus: Campus Point by Alexandria/University Town Center 10010 ⁽²⁾ , 10140 ⁽²⁾ , and 10260 Campus Point Drive and 4135, 4155, 4161, 4165, and 4275 ⁽²⁾ Campus Point Court	55.0 %	419,857	598,029	492,570	—	650,000	1,740,599
Mega Campus: SD Tech by Alexandria/Sorrento Mesa 9805 Scranton Road and 10065 and 10075 Barnes Canyon Road	50.0 %	241,448	254,771	—	—	493,845	748,616
11255 and 11355 North Torrey Pines Road/Torrey Pines	100 %	143,262	—	—	309,094	—	309,094
Scripps Science Park by Alexandria/Sorrento Mesa 10048, 10219, 10256, and 10260 Meanley Drive and 10277 Scripps Ranch Boulevard	100 %	114,859	—	—	105,000	493,349	598,349
Costa Verde by Alexandria/University Town Center 8410-8750 Genesee Avenue and 4282 Esplanade Court	100 %	131,264	—	—	—	537,000	537,000
Mega Campus: 5200 Illumina Way/University Town Center	51.0 %	17,461	—	—	—	451,832	451,832
ARE Towne Centre/University Town Center 9363, 9373, and 9393 Towne Centre Drive	100 %	26,503	—	—	—	400,000	400,000
9625 Towne Centre Drive/University Town Center	30.0 %	837	—	—	—	100,000	100,000
Mega Campus: Sequence District by Alexandria/Sorrento Mesa 6260, 6290, 6310, 6340, 6350, and 6450 Sequence Drive	100 %	45,889	—	—	—	1,798,915	1,798,915
Pacific Technology Park/Sorrento Mesa 9444 Waples Street	50.0 %	23,514	—	—	—	149,000	149,000
4025, 4031, 4045, and 4075 Sorrento Valley Boulevard/Sorrento Valley	100 %	39,707	—	—	—	247,000	247,000
Other value-creation projects	100 %	72,465	—	—	—	475,000	475,000
		\$ 1,509,963	1,187,796	492,570	414,094	5,921,221	8,015,681

Refer to the definition of "Mega campus" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

- (1) Represents total square footage upon completion of development or redevelopment of one or more new Class A/A+ properties. Square footage presented includes RSF of buildings currently in operation at properties that also have inherent future development or redevelopment opportunities. Upon expiration of existing in-place leases, we have the intent to demolish or redevelop the existing property and commence 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
- (2) We have a 100% interest in this property.

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

Market Property/Submarket	Our Ownership Interest	Book Value	Square Footage				Total ⁽¹⁾	
			Development and Redevelopment		Future Opportunities Subject to Market Conditions and Leasing			
			Active and Near-Term Construction	Committed Near Term	Priority Anticipated	Future		
Under Construction	Committed Near Term	Priority Anticipated	Future	Total ⁽¹⁾				
Seattle								
Mega Campus: The Eastlake Life Science Campus by Alexandria/Lake Union	100 %	\$ 33,827	33,349	—	—	—	33,349	
1150 Eastlake Avenue East								
Alexandria Center® for Advanced Technologies – Monte Villa Parkway/Bothell	100 %	104,608	148,890	—	50,552	—	199,442	
3301, 3555, and 3755 Monte Villa Parkway								
Mega Campus: Alexandria Center® for Life Science – South Lake Union/Lake Union	(2)	432,644	—	—	1,095,586	188,400	1,283,986	
601 and 701 Dexter Avenue North and 800 Mercer Street								
830 and 1010 4th Avenue South/SoDo	100 %	57,159	—	—	—	597,313	597,313	
Mega Campus: Alexandria Center® for Advanced Technologies – Canyon Park/Bothell	100 %	15,975	—	—	—	230,000	230,000	
21660 20th Avenue Southeast								
Other value-creation projects	100 %	99,744	—	—	—	691,000	691,000	
		743,957	182,239	—	1,146,138	1,706,713	3,035,090	
Maryland								
Mega Campus: Alexandria Center® for Life Science – Shady Grove/Rockville	100 %	327,940	510,601	—	—	296,000	806,601	
9808 Medical Center Drive and 9810, 9820, and 9830 Darnestown Road								
		\$ 327,940	510,601	—	—	296,000	806,601	

Refer to the definition of “Mega campus” in the “Non-GAAP measures and definitions” section under Item 7 in this annual report on Form 10-K for additional information.

- (1) Represents total square footage upon completion of development or redevelopment of one or more new Class A/A+ properties. Square footage presented includes RSF of buildings currently in operation at properties that also have inherent future development or redevelopment opportunities. Upon expiration of existing in-place leases, we have the intent to demolish or redevelop the existing property. 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.
- (2) We have a 100% interest in 601 and 701 Dexter Avenue North aggregating 414,986 SF and a 60% interest in the priority anticipated development project at 800 Mercer Street aggregating 869,000 SF.

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

Market Property/Submarket	Our Ownership Interest	Book Value	Square Footage					Total ⁽¹⁾
			Development and Redevelopment		Future Opportunities Subject to Market Conditions and Leasing			
			Active and Near-Term Construction		Priority Anticipated	Future		
			Under Construction	Committed Near Term				
Research Triangle								
Mega Campus; Alexandria Center® for Advanced Technologies - Research Triangle/Research Triangle 4 and 12 Davis Drive	100 %	\$ 96,835	—	—	180,000	990,000	1,170,000	
Mega Campus; Alexandria Center® for NextGen Medicines/ Research Triangle 3029 East Cornwallis Road	100 %	104,542	—	—	100,000	955,000	1,055,000	
Mega Campus; Alexandria Center® for Life Science - Durham/ Research Triangle 41 Moore Drive	100 %	173,864	—	—	—	2,210,000	2,210,000	
Mega Campus; Alexandria Center® for Sustainable Technologies/ Research Triangle 120 TW Alexander Drive, 2752 East NC Highway 54, and 10 South Triangle Drive/Research Triangle	100 %	52,601	—	—	—	750,000	750,000	
100 Capitola Drive/Research Triangle	100 %	—	—	—	—	65,965	65,965	
Other value-creation projects	100 %	4,185	—	—	—	76,262	76,262	
		432,027	—	—	280,000	5,047,227	5,327,227	
Texas								
Alexandria Center® for Advanced Technologies at The Woodlands/Greater Houston 8800 Technology Forest Place	100 %	75,748	73,298	—	—	116,405	189,703	
1001 Trinity Street and 1020 Red River Street/Austin	100 %	9,327	—	—	126,034	123,976	250,010	
Other value-creation projects	100 %	133,865	—	—	—	1,694,000	1,694,000	
		218,940	73,298	—	126,034	1,934,381	2,133,713	
Canada								
Other value-creation projects	100 %	47,974	172,936	—	—	371,743	544,679	
	100 %	114,995	—	—	—	724,349	724,349	
Total pipeline as of December 31, 2023, excluding properties held for sale		8,220,672 ⁽²⁾	5,204,492	492,570	2,710,462	26,754,679	35,162,203	
Properties held for sale		5,637	—	—	—	235,000	235,000	
Total pipeline as of December 31, 2023		\$ 8,226,309	5,204,492	492,570	2,710,462	26,989,679	35,397,203	

Refer to the definition of "Mega campus" in the "Non-GAAP measures and definitions" section under Item 7 in this annual report on Form 10-K for additional information.

- (1) Total square footage includes 3,888,891 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.
- (2) Total book value includes \$3.7 billion of projects currently under construction that are 61% leased. We also expect to commence construction of one near-term project aggregating \$46.3 million, which is 51% leased/negotiating, in the next two years after December 31, 2023.

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 12, 2024, the last reported sales price per share of our common stock was \$126.25, and there were 622 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 distribution 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. As of December 31, 2023, 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. [RESERVED]

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 within this “Item 7. Management’s discussion and analysis of financial condition and results of operations” 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,” “ARE,” “we,” “us,” and “our” refer to Alexandria Real Estate Equities, Inc. and its consolidated subsidiaries.

Executive summary

Operating results

	Year Ended December 31,	
	2023	2022
Net income attributable to Alexandria's common stockholders - diluted:		
<i>In millions</i>	\$ 92.4	\$ 513.3
<i>Per share</i>	\$ 0.54	\$ 3.18
Funds from operations attributable to Alexandria's common stockholders - diluted, as adjusted:		
<i>In millions</i>	\$ 1,532.3	\$ 1,361.7
<i>Per share</i>	\$ 8.97	\$ 8.42

For additional information, 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 and to the tabular presentation of these items in the "Results of operations" section within this Item 7 in this annual report on Form 10-K.

An operationally excellent, industry-leading REIT with a high-quality, diverse client base to support growing revenues, stable cash flows, and strong margins

Percentage of total annual rental revenue in effect from mega campuses as of December 31, 2023	75 %
Percentage of total annual rental revenue in effect from investment-grade or publicly traded large cap tenants as of December 31, 2023	52 %
Sustained strength in tenant collections:	
Low tenant receivables as of December 31, 2023	\$ 8.2 million
January 2024 tenant rents and receivables collected as of the date of this report	99.4 %
Tenant rents and receivables for the three months ended December 31, 2023 collected as of the date of this report	99.9 %
Occupancy of operating properties in North America as of December 31, 2023	94.6 %
Adjusted EBITDA margin for the three months ended December 31, 2023	69 %
Weighted-average remaining lease term as of December 31, 2023:	
Top 20 tenants	9.6 years
All tenants	7.4 years

Solid annual leasing volume and rental rate increases with continued long lease terms

- Solid leasing volume aggregating 4.3 million RSF for the year ended December 31, 2023.
- Weighted-average lease term of 11.3 years for the year ended December 31, 2023, above our historically long weighted-average lease term of 8.8 years over the last 10 years.
- 76% of our leasing activity during the last twelve months was generated from our existing tenant base.

	2023
Total leasing activity - RSF	4,306,072
Leasing of development and redevelopment space - RSF	596,533
Lease renewals and re-leasing of space:	
RSF (included in total leasing activity above)	3,046,386
Rental rate increase	29.4% ⁽¹⁾
Rental rate increase (cash basis)	15.8% ⁽¹⁾

(1) Includes the re-lease of 99,557 RSF to Cargo Therapeutics at 835 Industrial at a 4.1% decline in the cash rental rate compared with the rate from the former tenant that was less than three years into a 10-year lease. Excluding this lease, the rental rate increase on renewals and re-leasing of space was 32.4% and 17.0% (cash basis) for 2023.

Continued solid net operating income and internal growth

- Total revenues of \$2.9 billion, up 11.5%, for the year ended December 31, 2023, compared to \$2.6 billion for the year ended December 31, 2022.
- Net operating income (cash basis) of \$1.8 billion for the year ended December 31, 2023, up \$185.8 million, or 11.5%, compared to the year ended December 31, 2022.
- Same property net operating income growth of 3.4% and 4.6% (cash basis) for the year ended December 31, 2023, compared to the year ended December 31, 2022.
- 96% of our leases contain contractual annual rent escalations approximating 3%.

Consistent dividend strategy focuses on retaining significant net cash flows from operating activities after dividends for reinvestment

- Common stock dividend declared for the three months ended December 31, 2023 of \$1.27 per common share, aggregating \$4.96 per common share for the year ended December 31, 2023, up 24 cents, or 5%, over the year ended December 31, 2022.
- Dividend yield of 4.0% as of December 31, 2023.
- Dividend payout ratio of 56% for the three months ended December 31, 2023.
- Average annual dividend per-share growth of 6% from 2019 to 2023.
- Significant net cash flows from operating activities after dividends retained for reinvestment aggregating \$1.9 million for the years ended December 31, 2019 through 2023.

Execution of our value harvesting and asset recycling 2023 self-funding strategy

Our 2023 capital plan included \$1.4 billion in funding primarily from dispositions and partial interest sales, of which \$439.0 million was completed during the three months ended December 31, 2023, and focused on the enhancement of our asset base through the following (in millions):

	Completed in 2023
Value harvesting dispositions of 100% interest in properties not integral to our mega campus strategy	\$ 1,042
Strategic dispositions and partial interest sales	273
Proceeds of forward equity sales agreements entered into during 2022 and settled during the three months ended December 31, 2023	104
Total	\$ 1,419

In January 2024, our existing ATM program became inactive upon expiration of the associated shelf registration. We expect to file a new shelf registration and ATM program in the near future.

External growth and investments in real estate

Alexandria's highly leased value-creation pipeline delivered the highest incremental annual net operating income in Company history of \$145 million and \$265 million, commencing during the three months and year ended December 31, 2023, respectively, and drives future incremental annual net operating income aggregating \$495 million

- During the three months ended December 31, 2023, we placed into service development and redevelopment projects aggregating 1.2 million RSF that are 99% leased across multiple submarkets and delivered incremental annual net operating income of \$145 million. Deliveries during the three months ended December 31, 2023 include:
 - Accelerated delivery of 462,100 RSF at 325 Binney Street in our Cambridge submarket, which is 100% leased to Moderna, Inc.;
 - 345,996 RSF at 15 Necco Street in our Seaport Innovation District submarket, which is 97% leased to Eli Lilly and Company;
 - 278,282 RSF at 1150 Eastlake Avenue East, a multi-tenant building, in our Lake Union submarket, which is 100% leased; and
 - 88,038 RSF at 6040 George Watts Hill Drive in our Research Triangle submarket, which is 100% leased to FUJIFILM Diosynth Biotechnologies.
- Annual net operating income (cash basis) is expected to increase by \$114 million upon the burn-off of initial free rent from recently delivered projects. Initial free rent has a weighted-average burn-off period of 10 months.
- 66% of RSF in our value-creation pipeline is within our mega campuses.

<i>(dollars in millions)</i>	Incremental Annual Net Operating Income	RSF	Leased/Negotiating Percentage
Placed into service:			
Nine months ended September 30, 2023	\$ 120	1,290,721	100%
Three months ended December 31, 2023	145	1,228,604	99
Total placed into service in 2023	\$ 265	2,519,325	100%
Expected to be placed into service ⁽¹⁾ :			
Fiscal year 2024	\$ 149 ⁽²⁾	5,697,062	60% ⁽³⁾
Fiscal year 2025	146		
First quarter of 2026 through fourth quarter of 2027	200		
	\$ 495		

(1) Represents expected incremental annual net operating income to be placed into service, including partial deliveries that stabilize in future years.

(2) Includes 1.4 million RSF expected to be stabilized in 2024 and is 93% leased. Refer to the initial and stabilized occupancy years in the "New Class A/A+ development and redevelopment properties: current projects" section under Item 2 in this annual report on Form 10-K for additional information.

(3) 70% of the leased RSF of our value-creation projects was generated from our existing tenant base.

Trends that may affect our future results

In 2023, we identified key market trends and uncertainties that had or may have a negative effect on our performance. Although we have mitigating strategies to minimize the risks posed by these trends and uncertainties, there can be no assurance that these measures will be successful in preventing material impacts on our future results of operations, financial position, and cash flows. Refer to “Item 1A. Risk factors” in this annual report on Form 10-K for discussion of additional risks we face.

- **New competitive supply may exert pressure on our rental rates and adversely affect our operating results.** During and after the COVID-19 pandemic, the shift toward hybrid and remote work arrangements has led certain office and other REITs and real estate companies to repurpose their underutilized office spaces into laboratory facilities. Our success and the success of other laboratory operators have prompted and may continue to prompt new and existing life science developers to commence speculative redevelopment and/or development projects in anticipation of demand for laboratory facilities. These conversion and speculative development projects may result in a substantial increase in life science facility supply in the near future, potentially intensifying competition in the sector and placing downward pressure on future rental and occupancy rates.

Our rental rates for renewed/re-leased space increased by 29.4%, 31.0%, and 37.9% during years ended December 31, 2023, 2022, and 2021, respectively. Our 2024 guidance range for rental rate increases on lease renewals/re-leases of 11.0% to 19.0% reflects lower expectations relative to the past several years. However, to remain competitive, we may need to further reduce our future rental rates below these projections. In addition, we may need to offer more tenant improvement allowances or additional tenant concessions, including free rent, to retain existing tenants or to attract new tenants.

As of December 31, 2023, we anticipate that 5.7 million RSF, primarily expected to be placed into service and stabilized during 2024–2027, will generate \$495 million in incremental annual net operating income primarily commencing during 2024–2027. The realization of the aforementioned risks could hinder our ability to secure tenants for the remaining unleased RSF related to these projects at the expected rates, or at all, potentially leading to a shortfall in or delays in the commencement of the projected incremental annual net operation income.

- **Unfavorable capital markets and overall macroeconomic environment may negatively impact the value of our real estate and non-real estate portfolios, and may limit our ability to raise capital to further our business objectives.**

The effective execution of our development and redevelopment activities is contingent upon our access to the required capital. In 2024, we expect to incur from \$2.2 billion to \$3.3 billion in construction and acquisition spending.

- **Lower property valuations and increased capitalization rates.** A portion of our projected construction and acquisition spending is expected to be funded through dispositions of and sales of partial interests in non-core real estate assets. Real estate investments are generally less liquid than many other investment types, which can present challenges in selling our properties timely or at desirable prices, particularly in an economic climate marked by uncertainties around inflation and interest rates.

Should inflation remain elevated, the Federal Reserve may continue to raise the federal funds rate, which may lead to further increases in interest rates and costs of debt and equity financing. This could prevent prospective buyers of our real estate assets from obtaining required financing on favorable terms, potentially eliminating their participation in the market or forcing them to seek more expensive alternative funding options. Such challenges for buyers could lead to a rise in properties available for sale, and could exert downward pressure on property valuations and elevate capitalization rates, potentially adversely impacting the sales proceeds we expect from our real estate asset sales in 2024.

The aforementioned surplus and pressures on valuations may be further intensified by the entry of new real estate investments in the laboratory space, discussed above. Combined with high interest rates and reduced market liquidity, this may result in a prolonged period of reduced property valuations and increased capitalization rates, potentially necessitating the recognition of additional significant real estate impairments.

The table below presents a trend of increasing capitalization rates associated with the dispositions of and sales of partial interests in our real estate assets in 2021, 2022, and 2023 (dollars in thousands). While the increase in capitalization rates presented in the table can partly be attributed to the quality of non-core assets we sold, capitalization rates in general have increased in recent years, and there is no assurance that this upward trend will stabilize or reverse in the future.

	Total Dispositions	Gains on Sales of Real Estate	Consideration in Excess of Book Value	Real Estate Impairment	Capitalization Rates ⁽¹⁾	Capitalization Rates (cash basis) ⁽¹⁾
2021	\$ 2,630,136	\$ 126,570	\$ 992,299	\$ 52,675	4.6 %	4.2 %
2022	\$ 2,222,296	\$ 537,918	\$ 644,029	\$ 64,969	4.5 %	4.4 %
2023	\$ 1,314,414	\$ 277,037	\$ 7,792	\$ 461,114	6.7 %	5.9 %

(1) Refer to the definition of “Capitalization rates” in the “Non-GAAP measures and definitions” section within this Item 7 in this annual report on Form 10-K for additional information.

- **Increased cost and limited availability of capital.** In 2024, we expect a portion of our construction to be funded through bond issuances ranging from \$600 million to \$1.4 billion. However, should we encounter difficulties in selling our real estate assets at our targeted prices, we may need to increase our reliance on debt financing to fund our construction projects in 2024. If the current high interest rate environment persists or worsens, the debt funding option could become costlier, less accessible, or even unavailable, potentially limiting our ability to complete our development projects on schedule, thereby delaying our expected incremental annual income generation and negatively affecting our business.

The table below reflects a trend of increasing interest rates related to our unsecured senior notes payable issued in 2021, 2022, and 2023 (dollars in thousands). There is no assurance that this trend of increasing debt costs will not continue into the future.

	Unsecured Senior Notes Payable Issued	Interest Rate ⁽¹⁾
2021	\$ 1,750,000	2.58 %
2022	\$ 1,800,000	3.38 %
2023	\$ 1,000,000	5.07 %

(1) Includes amortization of loan fees, amortization of debt premiums (discounts), and other bank fees.

- **Reduction in capitalized interest.** Our strategic focus is on prioritizing the completion of our highly leased projects under construction. Additionally, we invest in our future pipeline with the goals of enhancing value and reducing the timeline to allow for vertical construction. This is in response to our expectation of increased future demand for these projects, and is reflected in our expectation for capitalized interest to range from \$325 million to \$355 million in 2024. Refer to the definition of "Capitalized interest" in the "Non-GAAP measures and definitions" section within Item 7 in this annual report on Form 10-K for additional information.

However, the current challenging macroeconomic environment, including the increased supply of laboratory space, higher costs or unavailability of debt, and challenges in obtaining sufficient proceeds from real estate asset dispositions, as discussed above, could necessitate a reevaluation of our current plans and lead to a temporary suspension of our construction projects. This could result in a decline in our 2024 capitalized interest below our current projections and in an increase in interest expense recognized in our consolidated statements of operations in 2024.

The table below presents our increasing capitalized interest and decreasing interest expense during 2021, 2022, and 2023 (dollars in thousands). However, there can be no assurance that this trend will continue into the future.

	Gross Interest Expense	Capitalized Interest	Interest Expense
2021	\$ 312,806	\$ (170,641)	\$ 142,165
2022	\$ 372,848	\$ (278,645)	\$ 94,203
2023	\$ 438,182	\$ (363,978)	\$ 74,204

- **Volatility in non-real estate investments.** We hold strategic investments in publicly traded companies and privately held entities primarily involved in the life science, agtech, and technology industries. These investments are subject to market and sector-specific risks that can substantially affect their valuation. Like many other industries, the life science industry is susceptible to macroeconomic challenges, such as ongoing economic uncertainty and a tighter capital environment. These factors may lead to increased volatility in the valuation of our non-real estate investments.

In such an unfavorable environment, distributions from our investments — which we may receive as dividends, as liquidation distributions from our investments in limited partnerships, or as a result of mergers and acquisitions that lead to our privately held investees being acquired by other entities — could result in lower realized gains. Moreover, should market conditions worsen, we may face challenges in selling these securities at optimal prices, potentially disrupting our capital strategy.

Unfavorable market conditions could also indicate potential impairment of our investments in privately held entities that do not report NAV per share and lead to the recognition of additional significant non-real estate impairments, lower realized gains, and higher unrealized losses.

The table below reflects the volatility of our non-real estate investments in 2021, 2022, and 2023 (in thousands):

	Realized Gains ⁽¹⁾	Unrealized Gains (Losses)	Total Investment Income (Loss)
2021	\$ 215,845	\$ 43,632	\$ 259,477
2022	\$ 80,435	\$ (412,193)	\$ (331,758)
2023	\$ 6,078	\$ (201,475)	\$ (195,397)

(1) Includes impairment charges aggregating \$74.6 million and \$20.5 million for the years ended December 31, 2023 and 2022, respectively. There were no impairment charges recognized during the year ended December 31, 2021.

The realization of any of the aforementioned risks could have a material adverse impact on our revenues, particularly our income from rentals, net operating income, our results of operations, funds from operations, operating margins, initial stabilized yields (unlevered) on new or existing construction projects, occupancy, EPS, FFO per share, our overall business, and the market value of our common stock.

- **Mitigating factors:**

- ***Mega campus strategy: focus on premier Class A/A+ assets in AAA innovation cluster locations.*** Alexandria has established a high-quality Labspace® asset base predominantly concentrated in markets with high barriers to entry. Despite a recent increase in the availability of laboratory space, Alexandria is expected to continue to benefit from our focus on Class A/A+ assets strategically clustered in life science, agtech, and advanced technology mega campuses in innovation cluster locations in close proximity to top academic medical institutions. This proximity is a key driver of tenant demand. Our campuses are used in two distinct ways: (i) to house the research operations of our tenants, and (ii) to recruit and retain the best talent available from a limited pool, which underscores why the scale, strategic design, and placement our mega campuses provide are critical.

CEOs of life science companies typically anticipate rapid and exponential growth upon their companies' achieving scientific milestones. Our mega campuses are designed for scalability, providing opportunities for our tenants to grow within our mega campuses, including through our future developments and redevelopments aggregating 31.5 million RSF, of which 66% is concentrated within our mega campuses. The strategic location of our mega campuses, which offer both high visibility and a clear path to growth, serves as a powerful motivator for tenants to lease space from us.

Moreover, our tenants recognize that their success is directly linked to their ability to attract and retain personnel to advance their science. Our mega campuses provide a superior set of amenities, services, and access to transit that offer our tenants valuable optionality. The collaborative, vibrant elements of our mega campuses, coupled with world-class amenities, enhance their confidence in using these spaces as effective recruiting tools. In contrast, a significant amount of the competitive supply in the market today consists of isolated, one-off buildings. These facilities may provide operational space, but they fall short in offering the scale and strategic design that our mega campuses deliver.

Consequently, our external growth strategy focuses on creating new and enhancing existing mega campuses, which represent our strongest defense against competitive supply. Over the past three decades, we have established a significant market presence in AAA innovation cluster locations. Our mega campuses provide a comprehensive solution to life science tenants, one that is challenging to replicate due to the significant time and capital required to replicate this model. We believe the focus on our mega campus strategy will continue to position us favorably against potential supply of new competitive laboratory spaces. This strategy is partially responsible for our notable performance metrics listed below, which have been achieved despite the current challenging macroeconomic environment and residual impacts from the COVID-19 pandemic:

- Strong funds from operations per share – diluted, as adjusted for 2023 of \$8.97 and an anticipated 5.6% growth to \$9.47 per share in 2024 at the midpoint of our guidance range.
 - Solid same property net operating income growth of 3.4% and 4.6% (cash basis) for the year ended December 31, 2023 and anticipated same property net operating income growth of 1.5% and 4.0% (cash basis) at the midpoints of the respective guidance ranges for the year ending December 31, 2024.
 - Strong occupancy of 94.6% as of December 31, 2023 and anticipated strong occupancy ranging from 94.6% to 95.6% as of December 31, 2024.
 - Solid rental rate increases of 29.4% and 15.8% (cash basis) for the year ended December 31, 2023 and anticipated rental rate increases of 15.0% and 9.0% (cash basis) at the midpoints of the respective guidance ranges for the year ending December 31, 2024.
 - In 2023, our executed leases aggregated 4.3 million RSF. Although this is lower than the 8.4 million RSF and 9.5 million RSF of leasing activity in 2022 and 2021, respectively, it is important to recognize that the years 2021–2022 represented an exceptional period due to the significant growth in demand fueled by strong capital markets. Excluding these years, the 2023 leasing activity has normalized and was consistent with our historical annual average of 4.2 million RSF executed from 2013 to 2020.
 - The weighted-average lease term for leases executed during 2023 was 11.3 years, exceeding the weighted-average lease term of 8.8 years achieved during 2014–2023.
 - 60% of our projects aggregating 5.7 million RSF that are primarily expected to be placed into service and stabilized during 2024–2027 are either leased or under negotiation;
 - Our projects expected to stabilize in 2024 are 93% pre-leased.
- ***Operational excellence of our team.*** Alexandria provides and demonstrates operational excellence in direct asset management and operations of our Labspace® asset base. This high level of performance is crucial in helping to protect billions of dollars' worth of intensive infrastructure, specialized equipment, and invaluable tenant research and clinical assets. The demanding nature of laboratory-based scientific research requires strict adherence to safety standards set by local, state, and federal regulatory bodies. Key compliance aspects include good manufacturing practice and Clinical

Laboratory Improvement Amendments (CLIA) certifications, adherence to national biosafety level guidelines, proper permitting and handling of hazardous waste generation and chemical storage, maintenance of safety stations, effective management of ultra-low temperature freezers, and careful licensing and management of radioactive materials.

Our team is composed of highly experienced, educated, and professionally credentialed facilities specialists. This expertise is essential in ensuring a secure and efficient environment for groundbreaking scientific research and has been cultivated and maintained over many years.

- **Strength of our brand.** As a recognized leader in the life science and real estate sectors, Alexandria has successfully built a diverse and high-quality tenant base. Over the past 30 years, we have fostered longstanding relationships and strategic partnerships with our tenants, which have enabled us to maintain strong occupancy, leasing, and growth in net operating income and cash flows and to effectively navigate through various economic cycles. Key indicators of our brand strength include:
 - As of December 31, 2023, 76% of our leasing activity during the last twelve months was generated from our existing tenant base;
 - As of December 31, 2023, 92% of our top 20 tenants annual rental revenue is derived from investment-grade or large-cap publicly traded companies, the highest in our 30-year history;
 - Strong occupancy of 94.6% as of December 31, 2023 and anticipated strong occupancy of 95.1% at the midpoint of our guidance range as of December 31, 2024; and
 - Our tenant collections have remained consistently high over the last three years, averaging 99.8% since the beginning of 2021 through December 31, 2023.
- **Life science fundamentals.** We monitor market demand trends, particularly in the life science industry, to optimally align our property offerings with tenant requirements. The life science industry has shown strong long-term growth, fueled by multifaceted sources of funding, including private venture capital, biopharma R&D spend, government funding, and philanthropic support for biomedical innovation. Our focus on high-quality LabSpace® assets in prime locations positions us to effectively capitalize on these ongoing trends:
 - The R&D expenditures by U.S. publicly traded life science companies have shown consistent growth since 2014, nearly doubling in 2023 compared to 2014. 16 of the top 20 pharma R&D spenders (for the year 2022) are Alexandria tenants.
 - The sector's growth is further supported by substantial growth in government funding, with the NIH's budget increasing by 25% in 2023 compared to 2019.
 - Although life science venture funding has declined compared to a peak in 2020-2022, it remains robust. In 2023, funding levels exceeded those achieved in each year from 2013 to 2019.
 - CBRE's "2024 U.S. Life Science Outlook" report, published in January 2024, highlighted that "FDA approvals of novel drugs in 2023 neared the second-highest annual total over the past 25 years." Alexandria tenants were responsible for almost half of novel FDA-approved therapies since 2013.
- **Prudent financial management.** Our strong and flexible balance sheet and prudent balance sheet management are key factors in our ability to navigate economic uncertainties and capitalize on new opportunities. The strength of our financial position is highlighted by several key indicators:
 - Our significant liquidity of \$5.8 billion as of December 31, 2023 provides us the flexibility to address our operational needs and to pursue growth opportunities.
 - We expect to have the ability to self-fund a large portion of our capital requirements through the following sources in 2024:
 - \$450 million in net cash provided by operating activities after dividends, at the midpoint of our guidance range for 2024;
 - \$1.2 billion in capital contributions to fund construction expected from our existing consolidated real estate joint venture partners from January 1, 2024 through 2027, including \$430 million in 2024.
 - \$1.4 billion from dispositions of and sales of partial interests in real estate assets at the midpoint of our guidance range for 2024.
 - As of December 31, 2023, our credit ratings from S&P Global Ratings and Moody's Investors Service were BBB+ and Baa1, respectively, which continued to rank in the top 10% among all publicly traded U.S. REITs.
 - As of December 31, 2023, our fixed-rate debt represents 98.1% of our total debt, which provides predictability in debt servicing costs.
 - Our debt maturity schedule is well laddered, with no debt maturing before April 2025. This provides us with financial flexibility and reduces short-term refinancing risks.
 - As of December 31, 2023, 29% of our debt matures in 2049 or later and only 20% of our debt matures in the next 5 years.
 - As of December 31, 2023, the weighted-average remaining term of our debt is 12.8 years, demonstrating our strategic approach to debt management and focus on maintaining manageable annual debt maturities.
 - Our net debt and preferred stock to Adjusted EBITDA ratio was 5.1x for the three months ended December 31, 2023 annualized, equaling the lowest leverage levels in Company history.

Execution of capital strategy

2023 capital strategy

During 2023, we continued to execute on many of the long-term components of our capital strategy, as described below.

Maintained access to diverse sources of capital strategically important to our long-term capital structure

- Generated significant net cash flows from operating activities.
 - In 2023, we funded \$535.9 million of our equity capital needs with net cash flows from operating activities after dividends.
- Continued strategic value harvesting through real estate dispositions, partial interest sales, and settlements of forward equity contracts.
 - In 2023, sales primarily of real estate assets not integral to our mega campus strategy generated \$1.3 billion of capital for investment into our highly leased development and redevelopment projects and strategic acquisitions. In connection with these transactions, we recorded gains or consideration in excess of book value aggregating \$284.8 million.
 - During the three months ended December 31, 2023, we settled our forward equity sales agreements that were outstanding as of December 31, 2022, by issuing 699 thousand shares of common stock, for which we received net proceeds of \$104.3 million.
 - In January 2024, our existing ATM program became inactive upon expiration of the associated shelf registration. We expect to file a new shelf registration and ATM program in the near future.
- Achieved significant growth in annualized Adjusted EBITDA of \$248.1 million, or 13%, for the three months ended December 31, 2023, compared to the three months ended December 31, 2022, which allowed us to:
 - Take advantage of a favorable capital market environment early in 2023 and opportunistically issue, on a leverage-neutral basis, unsecured senior notes payable aggregating \$1.0 billion with a weighted-average interest rate of 4.95% and a weighted-average maturity of 21.2 years; and
 - Maintain our net debt and preferred stock to Adjusted EBITDA ratio to 5.1x for the three months ended December 31, 2023, annualized.

Strong and flexible balance sheet with significant liquidity, top 10% credit rating ranking among all publicly traded U.S. REITs

- As of December 31, 2023, our credit ratings from S&P Global Ratings and Moody's Investors Service were BBB+ and Baa1, respectively, which continued to rank in the top 10% among all publicly traded U.S. REITs.
- Net debt and preferred stock to Adjusted EBITDA of 5.1x, equaling the lowest leverage levels in Company history, and fixed-charge coverage ratio of 4.5x for the three months ended December 31, 2023, annualized.
- Significant liquidity of \$5.8 billion.
- No debt maturities prior to 2025.
- Only 20% of our total debt matures in the next five years.
- 12.8 years weighted-average remaining term of debt.
- 98.1% of our debt has a fixed rate.
- Total debt and preferred stock to gross assets of 27%.
- \$1.2 billion of expected capital contribution commitments from existing consolidated real estate joint venture partners to fund construction from January 1, 2024 through 2027.

Key capital metrics as of or for the year ended December 31, 2023

- \$33.1 billion in total market capitalization.
- \$21.8 billion in total equity capitalization, which ranks in the top 10% among all publicly traded U.S. REITs.
- Non-real estate investments aggregating \$1.4 billion:
 - Unrealized gains presented in our consolidated balance sheet were \$196.9 million, comprising gross unrealized gains and losses aggregating \$320.4 million and \$123.5 million, respectively.
- Investment loss of \$195.4 million for the year ended December 31, 2023 presented in our consolidated statement of operations consisted of \$201.5 million of unrealized losses and \$6.1 million of realized gains, including \$74.6 million of impairments.

2024 capital strategy

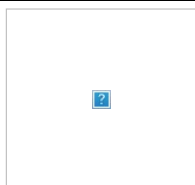
During 2024, we intend to continue to execute our capital strategy to further strengthen our credit profile, which will allow us to further improve our cost of capital and continue our disciplined approach to capital allocation. Consistent with 2023, our capital strategy for 2024 includes the following elements:

- Allocate capital to Class A/A+ properties located in life science, agtech, and advanced technology mega campuses in AAA innovation clusters.
- Maintain prudent access to diverse sources of capital, which include net cash flows from operating activities after dividends, incremental leverage-neutral debt supported by growth in Adjusted EBITDA, strategic value harvesting and asset recycling through real estate disposition and partial interest sales, non-real estate investment sales, sales of equity, joint venture capital, and other sources of capital.
- Continue to improve our credit profile.
- Maintain commitment to long-term capital to fund growth.
- Prudently ladder debt maturities and manage short-term variable-rate debt.
- Prudently manage non-real estate equity investments to support corporate-level investment strategies.
- Maintain a stable and flexible balance sheet with significant liquidity.

The anticipated delivery of significant incremental EBITDA from our development and redevelopment of new Class A/A+ properties is expected to enable us to continue to debt-fund a significant portion of our development and redevelopment projects on a leverage-neutral basis. We expect to continue to maintain access to diverse sources of capital, including unsecured senior notes payable and 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. We intend to supplement our remaining capital needs with net cash flows from operating activities after dividends and proceeds from real estate asset sales, partial interest sales, and equity capital. For further information, refer to "Projected results, Sources of capital," and "Uses of capital" within this Item 7. Our ability to meet our 2024 capital strategy objectives and expectations will depend in part on capital market conditions, real estate market conditions, and other factors beyond our control. Accordingly, there can be no assurance that we will be able to achieve these objectives and expectations. Refer to our discussion of "Forward-looking statements" under Part I and "Item 1A. Risk factors" in this annual report on Form 10-K.

Operating summary

**Historical Same Property
Net Operating Income Growth**



**Historical Rental Rate Growth:
Renewed/Re-Leased Space**



Margins⁽²⁾

Operating	Adjusted EBITDA
71%	69%

**Weighted-Average Lease Term
of Executed Leases**

8.8 Years

**10 Years
(2014-2023)
Net Debt and Preferred Stock
to Adjusted EBITDA⁽⁴⁾**

q423netdebtv3.jpg



Favorable Lease Structure⁽³⁾

Strategic Lease Structure by Owner and Operator of Collaborative Life Science, Agtech, and Advanced Technology Mega Campuses

Increasing cash flows

Percentage of leases containing annual rent escalations **96%**

Stable cash flows

Percentage of triple net leases **94%**

Lower capex burden

Percentage of leases providing for the recapture of capital expenditures **93%**

Fixed-Charge Coverage Ratio⁽⁴⁾

q423fixedchargev5.jpg



Refer to "Same properties" and "Non-GAAP measures and definitions" within this Item 7 for additional details. "Non-GAAP measures and definitions" contains the definition of "Net operating income" and its reconciliation from the most directly comparable financial measures presented in accordance with GAAP.

(1) The 10-year average represents the average for the years ended December 31, 2014 through 2023.

(2) Represents percentages for the three months ended December 31, 2023.

(3) Percentages calculated based on annual rental revenue in effect as of December 31, 2023.

(4) Quarter annualized. Refer to the definitions of "Fixed-charge coverage ratio" and "Net debt and preferred stock to Adjusted EBITDA" in the "Non-GAAP measures and definitions" section within this Item 7 for additional details.

Industry and corporate responsibility leadership: catalyzing and leading the way for positive change to benefit human health and society

- In January 2023, Alexandria became a founding sponsor of the International Institute for Sustainable Laboratories ("I2SL") new Labs2Zero program. As a founding sponsor, we help drive the development of I2SL's new roadmap, which aims to improve the energy and emissions performance of existing and future laboratory buildings.
- In February 2023 in our Research Triangle market, Alexandria earned multiple awards in the *Triangle Business Journal's* 2023 SPACE Awards, including Top Life Science/Laboratory Lease for 7 Triangle Drive on our Alexandria Center® for Sustainable Technologies mega campus and Top Flex Lease for our Alexandria Center® for Life Science – Durham mega campus. The annual SPACE Awards recognize the Research Triangle's top real estate developments and transactions.
- In March 2023, Alexandria was named one of *Newsweek's* Most Trustworthy Companies in America. The Company was one of only six S&P 500 REITs recognized based on three public touchpoints of trust: customer trust, investor trust, and employee trust.
- In March 2023 in our San Diego market, Alexandria was selected for two 2023 CoStar Impact Awards — Commercial Development of the Year for 10055 Barnes Canyon Road on our SD Tech by Alexandria mega campus and Lease of the Year with Bristol Myers Squibb for our development of an innovative research hub for the global pharmaceutical company on our Campus Point by Alexandria mega campus. The CoStar Impact Awards recognize exemplary commercial real estate transactions and projects that have significantly influenced their communities.
- In April 2023 in our Greater Boston market, Alexandria received two 2023 BOMA Mid-Atlantic TOBY (The Outstanding Building of the Year) awards — Corporate Facility for 225 Binney Street on our Alexandria Center® at Kendall Square mega campus and Building Under 100,000 SF for 700 Technology Square on our Alexandria Technology Square® mega campus. The TOBY Award is the commercial real estate industry's highest recognition honoring excellence in commercial management and operations.
- In April 2023 in our Seattle market, Alexandria received the 2023 BOMA Pacific Northwest TOBY Award in the Corporate Facility category for 1165 Eastlake Avenue East on The Eastlake Life Science by Alexandria mega campus.
- In August 2023 in our San Francisco Bay Area market, 685 Gateway Boulevard, an amenities hub designed at the forefront of sustainability, was awarded a 2023 Design Award in the Climate Action category by the American Institute of Architects ("AIA") California. The building, which is designated as Zero Energy Ready and is on track to achieve the International Living Future Institute's (ILFI) Zero Energy certification, was one of two projects recognized at the highest level in the awards program. The AIA California Design Award winners embody design excellence and address climate change.
- In September 2023 in our Greater Boston market, Alexandria received the Cambridge Chamber of Commerce's 2023 Visionary Award for developing 325 Binney Street, designed to be the most sustainable laboratory building in Cambridge and selected by Moderna as its new global headquarters and R&D center. The chamber's annual awards recognize innovators from the business, institutional, and non-profit communities effecting change and making a positive impact on people's lives in Cambridge and beyond.
- In October 2023, Alexandria's sustained performance was reinforced by several achievements in the 2023 GRESB Real Estate Assessment: (i) 4 Star Ratings in the operating asset and development benchmarks, (ii) our seventh consecutive Green Star designation, and (iii) our sixth consecutive "A" disclosure score, with a perfect score of 100 and a #1 ranking for our best-in-class transparency around ESG practices and reporting in 2023. GRESB is one of the leading global ESG benchmarks for real estate and infrastructure investments.
- Alexandria has a longstanding, impactful partnership with the Galien Foundation, the premier global institution dedicated to honoring life science innovations that improve human health through a range of programs, including the annual Galien Forum USA and the Prix Galien USA Awards, which was held on October 26, 2023, in New York City.
 - At the 2023 Galien Forum USA, Alexandria presented a panel, titled "A National Imperative to Combat Mental Illness and Addiction," featuring leading advocates of mental health and addiction recovery, congressmen and veterans Seth Moulton and Michael Waltz and Navy SEAL Foundation CEO Robin King. The Galien Forum USA took place at the Alexandria Center® for Life Science – New York City.
 - Joel S. Marcus, Alexandria's Executive Chairman and Founder, as a member of the Prix Galien USA Awards esteemed jury again this year, honored transformational innovations in life science. He, alongside other influential life science leaders, served on the Prix Galien USA Awards committee responsible for evaluating and recognizing the Best Digital Health Solution; Best Medical Technology; Best Incubators, Accelerators and Equity; and Best Startup.
- Alexandria continues to address some of today's most pressing societal challenges through our impactful social responsibility pillars, with a prioritized focus on mental health and addiction. OneFifteen, a data-driven comprehensive care model for treating people living with addiction, which we pioneered in partnership with Verily, celebrated the fourth anniversary of its campus in Dayton, Ohio in October 2023. Since it opened its doors in 2019, OneFifteen has treated over 7,500 patients at this patient-centered holistic learning health system.
- In November 2023, Alexandria earned several 2023 TOBY Awards from BOMA in Boston, San Diego, and Seattle King County.
 - In our Greater Boston market, 60 Binney Street on our Alexandria Center® at Kendall Square mega campus won in the Laboratory Building category, and Buildings 200 and 1400 on our Alexandria Center® at One Kendall Square mega campus won in the Historical Building and Renovated Building categories, respectively.
 - In our San Diego market, 9880 Campus Point Drive on our Campus Point by Alexandria mega campus, which is home to Alexandria GradLabs®, won a TOBY in the region's first-ever Life Science category.
 - In our Seattle market, 1165 Eastlake Avenue East on The Eastlake Life Science Campus by Alexandria mega campus won a TOBY in the region's first-ever Life Science category.

esghighlightsv2.jpg



- (1) Reflects current score for Alexandria and latest scores available for the FTSE Nareit All REITs Index companies from Bloomberg Professional Services as of December 31, 2023.
(2) Reflects current score for Alexandria and latest scores available for the FTSE Nareit All REITs Index companies on ISS's website as of December 31, 2023.

socialresponsibilityv3.jpg



Climate change

We cannot predict the rate at which climate change will progress. However, the physical effects of climate change may potentially 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. and some of our properties are located in close proximity to shorelines. To the extent that climate change impacts weather patterns, our markets could experience severe weather, including hurricanes, severe winter storms, wildfires, droughts, 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 and resulting increased construction costs, or 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, and by increasing the costs of energy, maintenance, repair of water and/or wind damage, and snow removal at our properties. We continue to evaluate our asset base for potential exposure to the following climate-related risks: sea level rise and increases in heavy rain, flood, drought, extreme heat, and wildfire.

We are monitoring considerations such as shifting market demands and regulation. As of December 31, 2023, 90% of Alexandria's top 20 tenants (by annual rental revenue) have set net-zero carbon and/or carbon neutrality goals. From a policy and regulatory standpoint, the United Nations' annual climate summit, COP28, held in November-December 2023 reaffirmed the goal to limit the global temperature rise to the crucial temperature threshold of 1.5°C. Additionally, numerous states and municipalities have adopted state and local laws and policies on climate change, including climate disclosures and emission reduction targets impacting the building sector. For example, the State of California enacted legislation requiring certain companies to disclose GHG and climate-related financial risk information. Further cities including Boston, Cambridge, New York, and Seattle have passed ordinances that set limits on GHG emissions associated with building operations. Some municipalities, including the Cities of New York and San Francisco, have also implemented legislation to eliminate the use of natural gas in new construction projects. Refer to "We face possible risks and costs associated with the effects of climate change and severe weather" in "Other factors" within "Item 1A. Risk factors" in this annual report on Form 10-K for additional information.

Our approach to assessing and mitigating physical climate-related risk through our climate resilience roadmap, and transition risk through our GHG emissions mitigation strategy, are outlined below.

Climate resilience roadmap

We continue to assess potential physical risks associated with climate change, analyze climate data and property damage losses associated with past weather events, and review the potential for future climate hazards that are acute (increase in heavy rain events, droughts, floods, tropical cyclones, and wildfires) and those that are chronic (sea level rise and rising temperatures). We also consider local climate change vulnerability assessments and resilience planning efforts. Our climate resilience roadmap uses climate models and scenario analyses to identify potential future hazards at the building level. Furthermore, we conduct physical inspections to assess resilience and to determine whether additional mitigation is needed.

In our evaluation of physical risks, Alexandria considers two climate change scenarios for 2030 and 2050: (i) a high-emissions scenario in which GHG emissions continue to increase with time (RCP 8.5); and (ii) an intermediate scenario in which GHG emissions level off by 2050 and decline thereafter (RCP 4.5). RCP 8.5 generally predicts more significant future climate hazard impacts than RCP 4.5.

After conducting an evaluation of the potential hazards out to year 2050, sites modeled to have high exposure to one or more climate hazards will undergo physical site inspections to assess their resilience to current and/or future stresses and to determine whether additional mitigation is needed.

For certain buildings, mitigation may include emergency preparedness, along with nominal capital improvement work. We may find that other buildings require more significant planning and investment to incorporate more complex resilience measures. Resilience measures that may be necessary at some of our properties are described below.

In our operating properties located in areas prone to flooding, we may consider positioning critical building mechanical equipment on rooftops or significantly above the projected potential flood elevations, storing temporary flood barriers on site to be deployed at building entrances prior to a flood event, installing backflow preventers on stormwater/sewer utilities that discharge from the building, and waterproofing the building envelope up to the projected flood elevation.

In our operating properties located in areas prone to wildfire, we may consider implementing landscaping improvements to replace fire-prone materials and selecting fire-resistant vegetation to position at a reasonable distance from buildings.

For our developments and redevelopments of new Class A/A+ properties, we will aim to design for climate resilience. In 2022, Alexandria worked to further develop resilient design guidelines to mitigate potential exposures to future climate conditions identified in existing climate models. In accordance with such guidelines, we will endeavor to design buildings that incorporate materials, systems, and features to manage predicted climate hazards and maintain building operability during and after a climate event. As feasible, we will consider designs that accommodate potential expansion of cooling infrastructure to meet future building needs. In water-scarce areas, we will consider planting drought-resistant vegetation and equipping buildings to capture, treat, and reuse available water from building systems and precipitation events where feasible. In areas prone to wildfire, we will consider incorporating brush management practices into landscape design and including enhanced air filtration systems to support safe and healthy indoor air.

For acquisitions in our portfolio, we continue to use climate modeling as part of our due diligence in assessing potential risk and to inform our financial modeling and transactional decisions.

As a part of Alexandria's risk management program, we maintain all-risk property insurance at the portfolio level, including properties under development, to help mitigate the risk of extreme weather events and potential impact from losses associated with natural catastrophes, such as flood, wildfire, and wind events. We leverage our climate mitigation strategy with property insurance carriers to help reduce our overall cost of risk. However, there can be no assurance that our insurance will cover all our potential losses and that climate change and severe weather will not have a material adverse effect on our properties, operations, or business. For additional information on our risk management strategies related to insurance coverage, refer to "Our insurance may not adequately cover all potential losses" in "Operating factors" within "Item 1A. Risk factors" in this annual report on Form 10-K.

Greenhouse gas emissions mitigation strategy

We are developing a GHG emissions mitigation strategy that is closely aligned with the sustainability goals of many of our innovative tenants. Our strategy will directly focus on reducing emissions from our operations through electrification, energy efficiency, and renewable electricity, and will indirectly focus on reducing emissions associated with construction activities through engaging with our supply chain and by targeting reductions in embodied carbon through procurement, as described below.

We have taken steps to incorporate electrification into some of our development projects, including at 230 Harriet Tubman Way on our Alexandria Center® for Life Science – Millbrae campus in our South San Francisco submarket. We look for opportunities to utilize alternative energy sources. For example, we are using geothermal energy at our 325 Binney Street and 15 Necco Street developments in our Greater Boston region. We also aim to continue to increase our consumption of renewable electricity, including through our new solar power purchase agreement that will take effect in our Greater Boston region in 2024.

We aim to reduce emissions associated with construction activities. These activities may include such strategies as engaging with our supply chain and targeting reductions in embodied carbon through procurement. Emissions within our indirect focus will require significant innovation and cost-effective solutions to develop pathways for substantial emissions reduction.

Board of directors and leadership oversight

The Audit Committee oversees the management of the Company's financial and other systemic risks, including those related to climate change. At a management level, Alexandria's Sustainability Committee, which comprises members of the executive management team and senior decision makers spanning the Company's real estate development, asset management, risk management, and sustainability teams, leads the development and execution of our approach to climate-related risk.

Refer to "Item 1A. Risk factors" in this annual report on Form 10-K for discussion of the risks we face from climate change.

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 this annual report on Form 10-K. We believe that 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 that 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 assets classified as held for sale are related to corporate-level decisions to dispose of real estate. Gains or losses on early extinguishment of debt 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, impairments of real estate and non-real estate investments, and acceleration of stock compensation expense due to the resignations of executive officers 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 decrease 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. Key items included in net income attributable to Alexandria's common stockholders for the years ended December 31, 2023 and 2022 and the related per share amounts were as follows (in millions, except per share amounts):

	Year Ended December 31,			
	2023	2022	2023	2022
	Amount		Per Share - Diluted	
Unrealized losses on non-real estate investments	\$ (201.5)	\$ (412.2)	\$ (1.18)	\$ (2.55)
Gain on sales of real estate	277.0	537.9	1.62	3.33
Impairment of non-real estate investments	(74.6)	(20.5)	(0.44)	(0.13)
Impairment of real estate	(461.1)	(65.0)	(2.70)	(0.40)
Loss on early extinguishment of debt	—	(3.3)	—	(0.02)
Acceleration of stock compensation expense due to executive officer resignations	(20.3)	(7.2)	(0.12)	(0.04)
Total	\$ (480.5)	\$ 29.7	\$ (2.82)	\$ 0.19

Refer to Note 3 - "Investments in real estate" and Note 7 - "Investments" to our consolidated financial statements for additional 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 additional 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 within this Item 7 in this annual report on Form 10-K. The following table presents information regarding our Same Properties as of December 31, 2023 and 2022:

	December 31,	
	2023	2022
Percentage change in net operating income over comparable period from prior year	3.4%	6.6 %
Percentage change in net operating income (cash basis) over comparable period from prior year	4.6%	9.6 %
Operating margin	69%	70%
Number of Same Properties	288	253
RSF	28,691,105	26,121,796
Occupancy – current-period average	94.6%	95.7 %
Occupancy – same-period prior-year average	95.4%	94.7 %

The following table reconciles the number of Same Properties to total properties for the year ended December 31, 2023:

Development – under construction	Properties	Redevelopment – placed into service after January 1, 2022	Properties
201 Brookline Avenue	1	3160 Porter Drive	1
1150 Eastlake Avenue East	1	5505 Morehouse Drive	1
9810 and 9820 Darnestown Road	2	The Arsenal on the Charles	11
99 Coolidge Avenue	1	30-02 48th Avenue	1
500 North Beacon Street and 4 Kingsbury Avenue	2	2400 Ellis Road, 40 Moore Drive, and 14 TW Alexander Drive	3
9808 Medical Center Drive	1	20400 Century Boulevard	1
1450 Owens Street	1	140 First Street	1
230 Harriet Tubman Way	1	9601 and 9603 Medical Center Drive	2
4155 Campus Point Court	1		21
10935, 10945, and 10955 Alexandria Way	3	Acquisitions after January 1, 2022	Properties
10075 Barnes Canyon Road	1	3301, 3303, 3305, and 3307 Hillview Avenue	4
421 Park Drive	1	8505 Costa Verde Boulevard and 4260 Nobel Drive	2
4135 Campus Point Court	1	225 and 235 Presidential Way	2
	17	104 TW Alexander Drive	4
Development – placed into service after January 1, 2022	Properties	One Hampshire Street	1
825 and 835 Industrial Road	2	Intersection Campus	9
9950 Medical Center Drive	1	100 Edwin H. Land Boulevard	1
3115 Merryfield Row	1	10010 and 10140 Campus Point Drive and 4275 Campus Point Court	3
8 and 10 Davis Drive	2	446 and 458 Arsenal Street	2
5 and 9 Laboratory Drive	2	35 Gatehouse Drive	1
10055 Barnes Canyon Road	1	1001 Trinity Street and 1020 Red River Street	2
10102 Hoyt Park Drive	1	Other	10
751 Gateway Boulevard	1		41
15 Necco Street	1	Unconsolidated real estate JVs	4
325 Binney Street	1	Properties held for sale	7
6040 George Watts Hill Drive	1	Total properties excluded from Same Properties	123
	14	Same Properties	288
Redevelopment – under construction	Properties	Total properties in North America as of December 31, 2023	411
840 Winter Street	1		
40, 50, and 60 Sylvan Road	3		
Alexandria Center® for Advanced Technologies – Monte Villa Parkway	6		
651 Gateway Boulevard	1		
401 Park Drive	1		
8800 Technology Forest Place	1		
Canada	4		
Other	2		
	19		

Comparison of results for the year ended December 31, 2023 to the year ended December 31, 2022

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, 2023, compared to the year ended December 31, 2022 (dollars in thousands). We provide a comparison of the results for the year ended December 31, 2022 to the year ended December 31, 2021, including a comparison of the components of net operating income for our Same Properties and Non-Same Properties for the year ended December 31, 2022, compared to the year ended December 31, 2021, in the "Results of operations" section within Item 7 of our annual report on Form 10-K for the year ended December 31, 2022. Refer to the "Non-GAAP measures and definitions" section within 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.

	Year Ended December 31,			
	2023	2022	\$ Change	% Change
Income from rentals:				
Same Properties	\$ 1,495,031	\$ 1,444,782	\$ 50,249	3.5 %
Non-Same Properties	648,940	505,316	143,624	28.4
Rental revenues	2,143,971	1,950,098	193,873	9.9
Same Properties	537,698	504,299	33,399	6.6
Non-Same Properties	160,787	121,643	39,144	32.2
Tenant recoveries	698,485	625,942	72,543	11.6
Income from rentals	2,842,456	2,576,040	266,416	10.3
Same Properties	813	827	(14)	(1.7)
Non-Same Properties	42,430	12,095	30,335	250.8
Other income	43,243	12,922	30,321	234.6
Same Properties	2,033,542	1,949,908	83,634	4.3
Non-Same Properties	852,157	639,054	213,103	33.3
Total revenues	2,885,699	2,588,962	296,737	11.5
Same Properties	623,484	586,323	37,161	6.3
Non-Same Properties	235,696	196,830	38,866	19.7
Rental operations	859,180	783,153	76,027	9.7
Same Properties	1,410,058	1,363,585	46,473	3.4
Non-Same Properties	616,461	442,224	174,237	39.4
Net operating income	\$ 2,026,519	\$ 1,805,809	\$ 220,710	12.2 %
Net operating income - Same Properties	\$ 1,410,058	\$ 1,363,585	\$ 46,473	3.4 %
Straight-line rent revenue	(65,988)	(67,233)	1,245	(1.9)
Amortization of acquired below-market leases	(21,945)	(32,552)	10,607	(32.6)
Net operating income - Same Properties (cash basis)	\$ 1,322,125	\$ 1,263,800	\$ 58,325	4.6 %

Income from rentals

Total income from rentals for the year ended December 31, 2023 increased by \$266.4 million, or 10.3%, to \$2.8 billion, compared to \$2.6 billion for the year ended December 31, 2022, as a result of increase in rental revenues and tenant recoveries, as discussed below.

Rental revenues

Total rental revenues for the year ended December 31, 2023 increased by \$193.9 million, or 9.9%, to \$2.1 billion, compared to \$2.0 billion for the year ended December 31, 2022. The increase was primarily due to an increase in rental revenues from our Non-Same Properties related to 5.7 million RSF of development and redevelopment projects placed into service subsequent to January 1, 2022 and 41 operating properties aggregating 4.2 million RSF acquired subsequent to January 1, 2022.

Rental revenues from our Same Properties for the year ended December 31, 2023 increased by \$50.2 million, or 3.5%, to \$1.5 billion, compared to \$1.4 billion for the year ended December 31, 2022. The increase was primarily due to rental rate increases on lease renewals and re-leasing of space since January 1, 2022.

Tenant recoveries

Tenant recoveries for the year ended December 31, 2023 increased by \$72.5 million, or 11.6%, to \$698.5 million, compared to \$625.9 million for the year ended December 31, 2022. This increase was primarily from our Non-Same Properties related to our development and redevelopment projects placed into service and properties acquired subsequent to January 1, 2022, as discussed above under "Rental revenues."

Same Properties' tenant recoveries for the year ended December 31, 2023 increased by \$33.4 million, or 6.6%, to \$537.7 million, compared to \$504.3 million for the year ended December 31, 2022, primarily due to higher operating expenses during the year ended December 31, 2023, as discussed under "Rental operations" below. As of December 31, 2023, 94% of our leases (on an annual rental revenue 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, 2023 and 2022 was \$43.2 million and \$12.9 million, respectively, which primarily consisted of management fees and interest income earned during each respective period. The increase in other income was primarily due to a \$5.3 million leasing fee related to a joint venture in our Seattle market and an increase in interest income resulting from an increase in average interest rates earned from our money market accounts to over 4.0% during the year ended December 31, 2023, compared to less than 1.2% during the year ended December 31, 2022.

Rental operations

Total rental operating expenses for the year ended December 31, 2023 increased by \$76.0 million, or 9.7%, to \$859.2 million, compared to \$783.2 million for the year ended December 31, 2022. The increase was primarily due to incremental expenses related to our Non-Same Properties, which consisted of development and redevelopment projects placed into service and acquired properties, as discussed above under "Rental revenues."

Same Properties' rental operating expenses increased by \$37.2 million, or 6.3%, to \$623.5 million during the year ended December 31, 2023, compared to \$586.3 million for the year ended December 31, 2022. The increase was primarily the result of increases in (i) repair and maintenance expenses aggregating \$9.3 million, primarily due to higher rates for services; (ii) property taxes aggregating \$8.5 million, primarily due to annual property tax reassessments in our Greater Boston market and tax reassessments related to the formation of recent joint ventures in our San Diego market; (iii) property insurance expenses aggregating \$5.6 million, primarily due to increases in insurance premiums; and (iv) utilities expenses aggregating \$3.7 million, primarily due to increases in rates.

General and administrative expenses

General and administrative expenses for the year ended December 31, 2023 increased by \$22.1 million, or 12.5%, to \$199.4 million, compared to \$177.3 million for the year ended December 31, 2022, primarily as a result of the acceleration of stock-based compensation expense recognized in connection with the resignations of former executive officers Dean A. Shigenaga and John H. Cunningham in 2023. Refer to Note 16 - "Share-based compensation" to our consolidated financial statements for additional information.

Interest expense

Interest expense for the years ended December 31, 2023 and 2022 consisted of the following (dollars in thousands):

Component	Year Ended December 31,		Change
	2023	2022	
Gross interest	\$ 438,182	\$ 372,848	\$ 65,334
Capitalized interest	(363,978)	(278,645)	(85,333)
Interest expense	\$ 74,204	\$ 94,203	\$ (19,999)
Average debt balance outstanding ⁽¹⁾	\$ 11,242,532	\$ 10,374,497	\$ 868,035
Weighted-average annual interest rate ⁽²⁾	3.9 %	3.6 %	0.3 %

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

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

The net change in interest expense during the year ended December 31, 2023, compared to the year ended December 31, 2022, resulted from the following (dollars in thousands):

Component	Interest Rate ⁽¹⁾	Effective Date	Change
Increases in interest incurred due to:			
Issuances of debt:			
\$500 million of unsecured senior notes payable due 2053	5.26 %	February 2023	\$ 22,567
\$500 million of unsecured senior notes payable due 2035	4.88 %	February 2023	20,857
\$1.0 billion of unsecured senior notes payable	3.63 %	February 2022	4,451
\$800 million of unsecured senior notes payable	3.07 %	February 2022	2,977
Increases in construction borrowing and interest rates under secured notes payable	8.38 %		5,736
Rate increases on borrowings under commercial paper program and from unsecured senior line of credit			11,825
Other increase in interest			3,209
Total increases			71,622
Decreases in interest incurred due to:			
Repayment of secured notes payable	3.40 %	April 2022	(1,787)
Lower average outstanding balances under commercial paper program and unsecured senior line of credit			(4,501)
Total decreases			(6,288)
Change in gross interest			65,334
Increase in capitalized interest			(85,333)
Total change in interest expense			\$ (19,999)

(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.

Depreciation and amortization

Depreciation and amortization expense for the year ended December 31, 2023 increased by \$91.3 million, or 9.1%, to \$1.1 billion, compared to \$1.0 billion for the year ended December 31, 2022. The increase was primarily due to additional depreciation from development and redevelopment projects placed into service and properties acquired, as discussed above under "Rental revenues."

Impairment of real estate

During the year ended December 31, 2023, we recognized impairment charges aggregating \$461.1 million classified in impairment of real estate in our consolidated statement of operations, which primarily related to properties in non-strategic locations that are not integral to our mega campus strategy and were sold or were classified as held for sale as of December 31, 2023. For more information, refer to the "Sales of real estate assets and impairment charges" section in Note 3 - "Investments in real estate" to our consolidated financial statements under Item 15 in this annual report on Form 10-K.

During the year ended December 31, 2022, we recognized real estate impairment charges aggregating \$65.0 million primarily related to a \$38.3 million write-off of our entire investment in a future development project in one of our existing submarkets in California. This impairment was recognized upon our decision to no longer proceed with this project as a result of the deteriorated macroeconomic environment that negatively impacted the financial outlook for this project.

Loss on early extinguishment of debt

During the year ended December 31, 2023, no loss on early extinguishment of debt was recognized.

During the year ended December 31, 2022, we recognized a loss on early extinguishment of debt of \$3.3 million, including a prepayment penalty and the write-off of unamortized loan fees, related to the repayment of two secured notes payable.

Investment loss

During the year ended December 31, 2023, we recognized an investment loss aggregating \$195.4 million. This loss comprised unrealized losses and reclassifications of \$201.5 million resulting from a \$111.6 million decrease primarily in the fair value of our investments in privately held entities that report NAV and a \$89.9 million reclassification of unrealized gains recognized in prior periods into realized gains upon the sales of investments during the year ended December 31, 2023. The investment loss also included realized gains of \$6.1 million primarily consisting of \$89.9 million of realized gains on the sales of investments and distributions received, discussed above, partially offset by realized losses of \$9.3 million and impairment charges of \$74.6 million primarily related to non-real estate investments in privately held entities that do not report NAV.

During the year ended December 31, 2022, we recognized an investment loss aggregating \$331.8 million, which consisted of \$80.4 million of realized gains and \$412.2 million of unrealized losses.

For more information about our investments, refer to Note 7 - "Investments" to our consolidated financial statements under Item 15 in this annual report on 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 on Form 10-K.

Gain on sales of real estate

During the year ended December 31, 2023, we recognized \$277.0 million of gains related to the dispositions of 13 properties. The gains were classified in gain on sales of real estate within our consolidated statement of operations for the year ended December 31, 2023.

During the year ended December 31, 2022, we recognized \$537.9 million of gains primarily related to the dispositions of 23 properties. The gains were classified in gain on sales of real estate within our consolidated statement of operations for the year ended December 31, 2022.

For more information about our sales of real estate, refer to the "Sales of real estate assets and impairment charges" section in Note 3 - "Investments in real estate" to our consolidated financial statements under Item 15 in this annual report on Form 10-K.

Other comprehensive income (loss)

Total other comprehensive income for the year ended December 31, 2023 increased by \$18.4 million to aggregate net unrealized gains of \$4.9 million, compared to net unrealized losses of \$13.5 million for the year ended December 31, 2022, primarily in connection with the foreign currency translation related to our operations in Canada.

Summary of capital expenditures

Our construction spending for the year ended December 31, 2023 and projected spending for the year ending December 31, 2024 consisted of the following (in thousands):

	Year Ended December 31, 2023	Projected Midpoint for the Year Ending December 31, 2024
Construction of Class A/A+ properties:		
Active construction projects		
Under construction and committed near-term projects ⁽¹⁾ and four projects expected to commence active construction in 2024	\$ 2,672,376	\$ 1,710,000
Future pipeline pre-construction		
Primarily mega campus expansion pre-construction work (entitlement, design, and site work)	581,535	720,000
Revenue- and non-revenue-enhancing capital expenditures	260,392	250,000
Construction spend (before contributions from noncontrolling interests) ⁽²⁾	3,514,303	2,680,000
Contributions from noncontrolling interests (consolidated real estate joint ventures)	(479,698)	(430,000) ⁽³⁾
Total construction spending	\$ 3,034,605	\$ 2,250,000
2024 Guidance range		\$1,950,000 - \$2,550,000

(1) Includes projects under construction aggregating 5.2 million RSF and one near-term project aggregating 493 thousand RSF expected to commence construction during the next two years after December 31, 2023, which are 60% leased/negotiating and are expected to generate \$495 million in incremental annual net operating income primarily commencing from the first quarter of 2024 through the fourth quarter of 2027.

(2) Includes our contributions in unconsolidated real estate joint ventures related to construction.

(3) Amount represents the portion of contractual funding commitments expected to be received from our existing consolidated real estate joint ventures during the next 12 months.

Projected capital contributions from partners in consolidated real estate joint ventures to fund construction

The following table summarizes projected capital contributions from partners in our existing consolidated joint ventures to fund construction through 2027 (in thousands):

Projected timing	Amount ⁽¹⁾
Fiscal year 2024	\$ 430,000
2025 through 2027	816,000
Total	\$ 1,246,000

(1) Amounts represent reductions to our consolidated construction spending.

Capitalization of interest

Our construction spending includes capitalized interest. The table below provides key categories of interest capitalized during the year ended December 31, 2023:

	Percentage of Total Capitalized Interest
Construction of Class A/A+ properties:	
Active construction projects	
Under construction and committed near-term projects ⁽¹⁾	41 %
Future pipeline pre-construction	
Primarily mega campus expansion pre-construction work (entitlement, design, and site work)	46
Smaller redevelopments and repositioning capital projects	13
	100 %

The table below provides categories of additional operating RSF under our value-creation pipeline as of December 31, 2023, of which 66% of RSF is within our mega campuses:

	Upon Completion of Construction	
	RSF	Potential Growth in Operating RSF
Under construction and committed near-term projects ⁽¹⁾	5,697,062	76%
Future opportunities subject to market conditions and leasing	29,465,141	
Value-creation pipeline: developments and redevelopments	35,162,203	

(1) Includes projects under construction aggregating 5.2 million RSF and one near-term project aggregating 493 thousand RSF expected to commence construction during the next two years after December 31, 2023, which are 60% leased/negotiating and are expected to generate \$495 million in incremental annual net operating income primarily commencing from the first quarter of 2024 through the fourth quarter of 2027.

Projected results

We present updated guidance for EPS attributable to Alexandria's common stockholders – diluted and funds from operations per share attributable to Alexandria's common stockholders – diluted based on our current view of existing market conditions and other assumptions for the year ending December 31, 2024, as set forth in the tables below. The tables below also provide a reconciliation of EPS attributable to Alexandria's common stockholders – diluted, the most directly comparable financial measure presented in accordance with GAAP, to funds from operations per share, a non-GAAP measure, and other key assumptions included in our updated guidance for the year ending December 31, 2024. There can be no assurance that actual amounts will not be materially higher or lower than these expectations. Refer to our discussion of "Forward-looking statements" included in the beginning of Part I in this annual report on Form 10-K.

Projected 2024 Earnings per Share and Funds From Operations per Share Attributable to Alexandria's Common Stockholders - Diluted

Earnings per share ⁽¹⁾	\$3.49 to \$3.69
Depreciation and amortization of real estate assets	5.95
Allocation of unvested restricted stock awards	(0.07)
Funds from operations per share ⁽²⁾	\$9.37 to \$9.57
Midpoint	\$9.47

(1) Excludes unrealized gains or losses on non-real estate investments after December 31, 2023 that are required to be recognized in earnings and are excluded from funds from operations per share, as adjusted.

(2) Refer to the definition of "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 within this Item 7 in this annual report on Form 10-K for additional information.

Key Assumptions⁽¹⁾ (Dollars in millions)

	2024 Guidance	
	Low	High
Occupancy percentage for operating properties in North America as of December 31, 2024	94.6%	95.6%
Lease renewals and re-leasing of space:		
Rental rate increases	11.0%	19.0%
Rental rate increases (cash basis)	5.0%	13.0%
Same property performance:		
Net operating income increases	0.5%	2.5%
Net operating income increases (cash basis)	3.0%	5.0%
Straight-line rent revenue	\$ 169	\$ 184
General and administrative expenses	\$ 181	\$ 191
Capitalization of interest ⁽²⁾	\$ 325	\$ 355
Interest expense	\$ 154	\$ 184
Realized gains on non-real estate investments ⁽³⁾	\$ 95	\$ 125

(1) Our assumptions presented in the table above are subject to a number of variables and uncertainties, including those discussed as "Forward-looking statements" under Part I, "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. 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) We expect 2024 capitalization of interest to decline compared to 2023 due to an overall decline in the basis subject to capitalization, partially offset by an increase in our weighted average interest rate for 2024.

(3) Represents realized gains and losses included in funds from operations per share – diluted, as adjusted, and excludes significant impairments realized on non-real estate investments, if any. Refer to Note 7 – "Investments" to our consolidated financial statements under Item 15 in this annual report on 10-K for additional details.

Key Credit Metric Targets⁽¹⁾

Net debt and preferred stock to Adjusted EBITDA – fourth quarter of 2024 annualized	Less than or equal to 5.1x
Fixed-charge coverage ratio – fourth quarter of 2024 annualized	Greater than or equal to 4.5x

(1) Refer to each metrics's corresponding definition within the "Non-GAAP measures and definitions" section within this Item 7 in this annual report on Form 10-K for additional information.

Consolidated and unconsolidated real estate joint ventures

We present components of balance sheet and operating results information for the noncontrolling interest 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. 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 further discussion.

Consolidated Real Estate Joint Ventures

Property/Market/Submarket	Noncontrolling ⁽¹⁾ Interest Share	Operating RSF at 100%
50 and 60 Binney Street/Greater Boston/Cambridge/Inner Suburbs	66.0 %	532,395
75/125 Binney Street/Greater Boston/Cambridge/Inner Suburbs	60.0 %	388,270
100 and 225 Binney Street and 300 Third Street/Greater Boston/Cambridge/Inner Suburbs	70.0 %	870,106
99 Coolidge Avenue/Greater Boston/Cambridge/Inner Suburbs	25.0 %	43,568 ⁽²⁾
15 Necco Street/Greater Boston/Seaport Innovation District	43.3 %	345,996
Other joint venture/Greater Boston	38.8 %	— ⁽²⁾
Alexandria Center® for Science and Technology – Mission Bay/San Francisco Bay Area/Mission Bay ⁽³⁾	75.0 %	1,003,603
1450 Owens Street/San Francisco Bay Area/Mission Bay	59.4 % ⁽⁴⁾	— ⁽²⁾
601, 611, 651 ⁽²⁾ , 681, 685, and 701 Gateway Boulevard/San Francisco Bay Area/South San Francisco	50.0 %	786,549
751 Gateway Boulevard/San Francisco Bay Area/South San Francisco	49.0 %	230,592
211 ⁽²⁾ and 213 East Grand Avenue/San Francisco Bay Area/South San Francisco	70.0 %	300,930
500 Forbes Boulevard/San Francisco Bay Area/South San Francisco	90.0 %	155,685
Alexandria Center® for Life Science – Millbrae/San Francisco Bay Area/South San Francisco	52.9 %	— ⁽²⁾
3215 Merryfield Row/San Diego/Torrey Pines	70.0 %	170,523
Campus Point by Alexandria/San Diego/University Town Center ⁽⁵⁾	45.0 %	1,342,164
5200 Illumina Way/San Diego/University Town Center	49.0 %	792,687
9625 Towne Centre Drive/San Diego/University Town Center	70.0 %	163,648
SD Tech by Alexandria/San Diego/Sorrento Mesa ⁽⁶⁾	50.0 %	881,930
Pacific Technology Park/San Diego/Sorrento Mesa	50.0 %	544,352
Summers Ridge Science Park/San Diego/Sorrento Mesa ⁽⁷⁾	70.0 %	316,531
1201 and 1208 Eastlake Avenue East and 199 East Blaine Street /Seattle/Lake Union	70.0 %	321,115
400 Dexter Avenue North/Seattle/Lake Union	70.0 %	290,754
800 Mercer Street/Seattle/Lake Union	40.0 %	— ⁽²⁾

Unconsolidated Real Estate Joint Ventures

Property/Market/Submarket	Our Ownership Share ⁽⁸⁾	Operating RSF at 100%
1655 and 1725 Third Street/San Francisco Bay Area/Mission Bay	10.0 %	586,208 ⁽¹⁰⁾
1401/1413 Research Boulevard/Maryland/Rockville	65.0 % ⁽⁹⁾	—
1450 Research Boulevard/Maryland/Rockville	73.2 % ⁽⁹⁾	42,679
101 West Dickman Street/Maryland/Beltsville	57.9 % ⁽⁹⁾	135,423

(1) In addition to the consolidated real estate joint ventures listed, various joint venture partners hold insignificant noncontrolling interests in three other real estate joint ventures in North America.

(2) Represents a property currently under construction or in our value-creation pipeline. Refer to the sections under “New Class A/A+ development and redevelopment properties” under Item 2 in this annual report on Form 10-K for additional details.

(3) Includes 409 and 499 Illinois Street, 1500 and 1700 Owens Street, and 455 Mission Bay Boulevard South.

(4) The noncontrolling interest share of our joint venture partner is anticipated to increase to 75% as our partner contributes construction funding to the project over time.

(5) Includes 10210, 10260, 10290, and 10300 Campus Point Drive and 4110, 4135, 4155, 4161, 4165, 4224, and 4242 Campus Point Court.

(6) Includes 9605, 9645, 9675, 9685, 9725, 9735, 9805, 9808, 9855, and 9868 Scranton Road and 10055, 10065, and 10075 Barnes Canyon Road.

(7) Includes 9965, 9975, 9985, and 9995 Summers Ridge Road.

(8) 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.

(9) Represents a joint venture with a local real estate operator in which our joint venture partner manages the day-to-day activities that significantly affect the economic performance of the joint venture.

(10) Represents a joint venture with a distinguished retail real estate developer for a retail shopping center aggregating 84,837 RSF.

The following table presents key terms related to our unconsolidated real estate joint ventures' secured loans as of December 31, 2023 (dollars in thousands):

Unconsolidated Joint Venture	Maturity Date	Stated Rate	Interest Rate ⁽¹⁾	At 100%		
				Aggregate Commitment	Debt Balance ⁽²⁾	Our Share
1401/1413 Research Boulevard	12/23/24	2.70%	3.31 %	\$ 28,500	\$ 28,331	65.0%
1655 and 1725 Third Street	3/10/25	4.50%	4.57 %	600,000	599,505	10.0%
101 West Dickman Street	11/10/26	SOFR+1.95%	7.38 %	26,750	14,762	57.9%
1450 Research Boulevard	12/10/26	SOFR+1.95%	7.44 %	13,000	8,280	73.2%
				<u>\$ 668,250</u>	<u>\$ 650,878</u>	

(1) Includes interest expense and amortization of loan fees.

(2) Represents outstanding principal, net of unamortized deferred financing costs, as of December 31, 2023.

(3) This loan is subject to a fixed SOFR floor of 0.75%.

The following tables present information related to the operating results and financial positions of our consolidated and unconsolidated real estate joint ventures as of and for the three months and year ended December 31, 2023 (in thousands):

	Noncontrolling Interest Share of Consolidated Real Estate Joint Ventures		Our Share of Unconsolidated Real Estate Joint Ventures	
	December 31, 2023		December 31, 2023	
	Three Months Ended	Year Ended	Three Months Ended	Year Ended
Total revenues	\$ 110,156	\$ 419,078	\$ 3,129	\$ 11,365
Rental operations	(32,622)	(123,896)	(887)	(3,259)
	<u>77,534</u>	<u>295,182</u>	<u>2,242</u>	<u>8,106</u>
General and administrative	(1,803)	(3,244)	(15)	(86)
Interest	(24)	(39)	(899)	(3,451)
Depreciation and amortization of real estate assets	(30,137)	(115,349)	(965)	(3,589)
Fixed returns allocated to redeemable noncontrolling interests ⁽¹⁾	<u>201</u>	<u>805</u>	<u>—</u>	<u>—</u>
	<u>\$ 45,771</u>	<u>\$ 177,355</u>	<u>\$ 363</u>	<u>\$ 980</u>
Straight-line rent and below-market lease revenue	\$ 7,414	\$ 20,402	\$ 427	\$ 1,339
Funds from operations ⁽²⁾	\$ 75,908	\$ 292,704	\$ 1,328	\$ 4,569

(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 Real Estate Equities, Inc.'s common stockholders" in the "Non-GAAP measures and definitions" section within this Item 7 in this annual report on Form 10-K for the definition and its reconciliation from the most directly comparable financial measure presented in accordance with GAAP.

	As of December 31, 2023	
	Noncontrolling Interest Share of Consolidated Real Estate Joint Ventures	Our Share of Unconsolidated Real Estate Joint Ventures
Investments in real estate	\$ 3,937,012	\$ 123,220
Cash, cash equivalents, and restricted cash	149,715	3,552
Other assets	405,012	12,285
Secured notes payable	(29,761)	(92,982)
Other liabilities	(274,910)	(8,295)
Mandatorily redeemable noncontrolling interest	(35,250) ⁽¹⁾	—
Redeemable noncontrolling interests	(16,480)	—
	<u>\$ 4,135,338</u>	<u>\$ 37,780</u>

(1) This amount was redeemed on January 12, 2024. Refer to Note 19 - "Subsequent events," Note 11 - "Accounts payable, accrued expenses, and other liabilities," 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.

During the years ended December 31, 2023 and 2022, our consolidated real estate joint ventures distributed an aggregate of \$244.1 million and \$192.2 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.

Investments

We hold investments in publicly traded companies and privately held entities primarily involved in the life science, agtech, and technology industries. The tables below summarize components of our investment income (loss) and non-real estate investments (in thousands). For additional information, 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, 2023		Year Ended December 31, 2022	
	Three Months Ended	Year Ended	Three Months Ended	Year Ended
Realized (losses) gains	\$ (10,825) ⁽¹⁾	\$ 6,078 ⁽¹⁾	\$ 80,435	\$ 80,435
Unrealized gains (losses)	19,479 ⁽²⁾	(201,475) ⁽²⁾	(412,193) ⁽³⁾	(412,193) ⁽³⁾
Investment income (loss)	\$ 8,654	\$ (195,397)	\$ (331,758)	\$ (331,758)

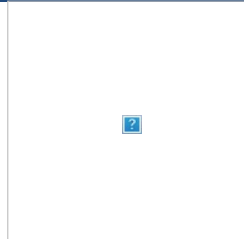
Investments	December 31, 2023				December 31, 2022
	Cost	Unrealized Gains	Unrealized Losses	Carrying Amount	Carrying Amount
Publicly traded companies	\$ 203,467	\$ 50,377	\$ (94,278)	\$ 159,566	\$ 207,139
Entities that report NAV	507,059	192,468	(27,995)	671,532	759,752
Entities that do not report NAV:					
Entities with observable price changes	97,892	77,600	(1,224)	174,268	193,784
Entities without observable price changes	368,654	—	—	368,654	388,940
Investments accounted for under the equity method	N/A	N/A	N/A	75,498	65,459
December 31, 2023	\$ 1,177,072 ⁽⁴⁾	\$ 320,445	\$ (123,497)	\$ 1,449,518	\$ 1,615,074
December 31, 2022	\$ 1,152,613	\$ 506,404	\$ (109,402)	\$ 1,615,074	

Public/Private Mix (Cost)

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Tenant/Non-Tenant Mix (Cost)



- (1) Consists of realized gains of \$12.3 million and \$80.6 million, offset by impairment charges of \$23.1 million and \$74.6 million during the three months and year ended December 31, 2023, respectively.
- (2) Consists of unrealized gains of \$34.3 million primarily resulting from the increase in valuation in publicly traded entities during the three months ended December 31, 2023 and unrealized losses of \$111.6 million primarily resulting from the decrease in the fair value of our investments in privately held entities that report NAV during the year ended December 31, 2023 and \$14.8 million and \$89.9 million of accounting reclassifications of unrealized gains recognized in prior periods into realized gains upon our sales of investments during the three months and year ended December 31, 2023, respectively.
- (3) Consists of unrealized losses of \$274.2 million primarily resulting from the decrease in the fair value of our investments in publicly traded companies and \$138.0 million of accounting reclassifications of unrealized gains recognized in prior periods into realized gains upon our sales of investments during the year ended December 31, 2022.
- (4) Represents 2.8% of gross assets as of December 31, 2023.

Liquidity

Liquidity

\$5.8B

(In millions)

Availability under our unsecured senior line of credit, net of amounts outstanding under our commercial paper program	\$ 4,900
Cash, cash equivalents, and restricted cash	661
Remaining construction loan commitments	76
Investments in publicly traded companies	160
Liquidity as of December 31, 2023	<u>\$ 5,797</u>

Minimal Outstanding Borrowings and Significant Availability on Unsecured Senior Line of Credit

(in millions)

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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, and payment of dividends, through net cash provided by operating activities, periodic asset sales, strategic real estate joint ventures, long-term secured and unsecured indebtedness, borrowings under our unsecured senior line of credit, issuances under our commercial paper program, and issuances of additional debt and/or equity securities.

We also 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.

For additional information on our liquidity requirements related to our contractual obligations and commitments, refer to Note 5 - "Leases" and Note 10 - "Secured and unsecured senior debt" to our consolidated financial statements under Item 15 in this annual report on Form 10-K.

Over the next several years, our balance sheet, capital structure, and liquidity objectives are as follows:

- Retain cash flows from operating activities after payment of dividends and distributions to noncontrolling interests for investment in development and redevelopment projects and/or acquisitions;
- Maintain significant balance sheet liquidity;
- 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, strategic real estate joint ventures, non-real estate investment sales, and common stock;
- Maintain commitment to long-term capital to fund growth;
- Maintain prudent laddering of debt maturities;
- Maintain solid credit metrics;
- Prudently manage variable-rate debt exposure;
- 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 real estate assets; 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, net of amounts outstanding under our commercial paper program; cash, cash equivalents, and restricted cash; availability under our secured construction loan; and investments in publicly traded companies as of December 31, 2023 (in thousands):

Description	Stated Rate	Aggregate Commitments	Outstanding Balance ⁽¹⁾	Remaining Commitments/Liquidity
Availability under our unsecured senior line of credit, net of amounts outstanding under our commercial paper program	SOFR+0.835%	\$ 5,000,000	\$ 99,952	\$ 4,900,000
Cash, cash equivalents, and restricted cash				660,771
Construction loan	SOFR+2.70%	\$ 195,300	\$ 119,043	75,626
Investments in publicly traded companies				159,566
Liquidity as of December 31, 2023				<u>\$ 5,795,963</u>

(1) Represents outstanding principal, net of unamortized deferred financing costs, as of December 31, 2023.

Cash, cash equivalents, and restricted cash

As of December 31, 2023 and 2022, we had \$660.8 million and \$858.0 million, respectively, of cash, cash equivalents, and restricted cash. We expect existing cash, cash equivalents, and restricted cash, net cash provided by operating activities, proceeds from real estate asset sales, sales of partial interests, strategic real estate joint ventures, non-real estate investment sales, borrowings under our unsecured senior line of credit, issuances under our commercial paper program, issuances of unsecured senior notes payable, borrowings under our secured construction loans, 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, 2023 and 2022 (in thousands):

	Year Ended December 31,		Change
	2023	2022	
Net cash provided by operating activities	\$ 1,630,550	\$ 1,294,321	\$ 336,229
Net cash used in investing activities	\$ (2,500,619)	\$ (5,080,458)	\$ 2,579,839
Net cash provided by financing activities	\$ 674,156	\$ 4,229,772	\$ (3,555,616)

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, 2023 increased by \$336.2 million to \$1.6 billion, compared to \$1.3 billion for the year ended December 31, 2022. The increase was primarily attributable to the following since January 1, 2022: (i) cash flows generated from our highly leased development and redevelopment projects recently placed into service, (ii) income-producing acquisitions, and (iii) increases in rental rates on lease renewals and re-leasing of space.

Investing activities

Cash used in investing activities for the years ended December 31, 2023 and 2022 consisted of the following (in thousands):

	Year Ended December 31,		Increase (Decrease)
	2023	2022	
Sources of cash from investing activities:			
Proceeds from sales of real estate	\$ 1,195,743	\$ 994,331	\$ 201,412
Sales of and distributions from non-real estate investments	183,396	198,320	(14,924)
Change in escrow deposits	—	155,968	(155,968)
Return of capital from unconsolidated real estate joint ventures	—	471	(471)
	<u>1,379,139</u>	<u>1,349,090</u>	<u>30,049</u>
Uses of cash for investing activities:			
Purchases of real estate	265,750	2,877,861	(2,612,111)
Additions to real estate	3,418,296	3,307,313	110,983
Change in escrow deposits	5,582	—	5,582
Investments in unconsolidated real estate joint ventures	658	1,442	(784)
Additions to non-real estate investments	189,472	242,932	(53,460)
	<u>3,879,758</u>	<u>6,429,548</u>	<u>(2,549,790)</u>
Net cash used in investing activities	<u>\$ 2,500,619</u>	<u>\$ 5,080,458</u>	<u>\$ (2,579,839)</u>

The decrease in net cash used in investing activities for the year ended December 31, 2023, compared to the year ended December 31, 2022 was primarily due to a decreased use of cash for purchases of real estate, partially offset by increased use of cash for additions to real estate. 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.

Financing activities

Cash flows provided by financing activities for the years ended December 31, 2023 and 2022 consisted of the following (in thousands):

	Year Ended December 31,		Change
	2023	2022	
Borrowings under secured notes payable	\$ 59,957	\$ 49,715	\$ 10,242
Repayments of borrowings under secured notes payable	(30)	(934)	904
Payment for the defeasance of secured notes payable	—	(198,304)	198,304
Proceeds from issuance of unsecured senior notes payable	996,205	1,793,318	(797,113)
Borrowings under unsecured senior line of credit	1,245,000	1,181,000	64,000
Repayments of borrowings under unsecured senior line of credit	(1,245,000)	(1,181,000)	(64,000)
Proceeds from issuances under commercial paper program	9,234,000	14,641,500	(5,407,500)
Repayments of borrowings under commercial paper program	(9,134,000)	(14,911,500)	5,777,500
Payments of loan fees	(16,047)	(35,612)	19,565
Changes related to debt	1,140,085	1,338,183	(198,098)
Contributions from and sales of noncontrolling interests	547,391	1,542,347	(994,956)
Distributions to and purchases of noncontrolling interests	(245,091)	(192,171)	(52,920)
Proceeds from issuance of common stock	103,846	2,346,444	(2,242,598)
Dividends on common stock	(847,483)	(757,742)	(89,741)
Taxes paid related to net settlement of equity awards	(24,592)	(47,289)	22,697
Net cash provided by financing activities	\$ 674,156	\$ 4,229,772	\$ (3,555,616)

Capital resources

We expect that our principal liquidity needs for the year ending December 31, 2024 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 <i>(In millions)</i>	2024 Guidance		
	Range		Midpoint
<i>Sources of capital:</i>			
Incremental debt	\$ 900	\$ 900	\$ 900
Net cash provided by operating activities after dividends	400	500	450
Dispositions and sales of partial interests ⁽¹⁾⁽²⁾	900	1,900	1,400
Total sources of capital	<u>\$ 2,200</u>	<u>\$ 3,300</u>	<u>\$ 2,750</u>
<i>Uses of capital:</i>			
Construction	\$ 1,950	\$ 2,550	\$ 2,250
Acquisitions ⁽³⁾	250	750	500
Total uses of capital	<u>\$ 2,200</u>	<u>\$ 3,300</u>	<u>\$ 2,750</u>
<i>Incremental debt (included above):</i>			
Issuance of unsecured senior notes payable ⁽⁴⁾	\$ 600	\$ 1,400	\$ 1,000
Unsecured senior line of credit, commercial paper program, and other	300	(500)	(100)
Incremental debt	<u>\$ 900</u>	<u>\$ 900</u>	<u>\$ 900</u>

(1) As of the date of this report, we have pending real estate dispositions subject to signed letters of intent or purchase and sale agreements aggregating \$142.4 million.

(2) In January 2024, our existing ATM program became inactive upon expiration of the associated shelf registration. We expect to file a new shelf registration and ATM program in the near future.

(3) Primarily represents strategic acquisitions that expand existing mega campuses or are associated with a new mega campus. We have completed acquisitions aggregating \$103.3 million as of the date of this report.

(4) Our guidance assumes we issue new unsecured senior notes payable in 2025 to fund the repayment of our \$600 million unsecured senior notes payable due on April 30, 2025. Subject to market conditions, we may seek opportunities in 2024 to fund the repayment of our 2025 debt maturity through the issuance of additional unsecured senior notes payable.

The key assumptions behind the sources and uses of capital in the table above include a favorable real estate transaction and capital market environments, 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 as "Forward-looking statements" under Part I; "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. We expect to update our forecast for key sources and uses of capital on a quarterly basis.

Sources of capital

Net cash provided by operating activities after dividends

We expect to retain \$400.0 million to \$500.0 million of net cash flows from operating activities after payment of common stock dividends and distributions to noncontrolling interests for the year ending December 31, 2024. For purposes of this calculation, changes in operating assets and liabilities are excluded as they represent timing differences. For the year ending December 31, 2024, we expect our recently delivered projects, our highly pre-leased value-creation projects expected to be delivered, contributions from Same Properties, and recently acquired income-producing properties to contribute increases in income from rentals, net operating income, and cash flows. We anticipate contractual near-term growth in annual net operating income (cash basis) of \$114 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" subsection of the "Liquidity" section within this Item 7 in this annual report on Form 10-K for a discussion of cash flows provided by operating activities for the year ended December 31, 2023.

Debt

We expect to fund a portion of our capital needs for 2024 from issuances under our commercial paper program, borrowings under our unsecured senior line of credit, and borrowings under our secured construction loans.

As of December 31, 2023, our unsecured senior line of credit has aggregate commitments of \$5.0 billion and bears an interest rate of SOFR plus 0.835%. In addition to the cost of borrowing, the unsecured senior line of credit is subject to an annual facility fee of 0.14% based on the aggregate commitments outstanding. Based upon our ability to achieve certain annual sustainability targets, the interest rate and facility fee rate are also subject to upward or downward adjustments of up to four basis points with respect to the interest rate and up to one basis point with respect to the facility fee rate.

In June 2023, we amended our unsecured senior line of credit to increase the aggregate commitments available for borrowing to \$5.0 billion from \$4.0 billion.

During the three months ended March 31, 2023, we achieved certain annual sustainability targets, as described in our unsecured senior line of credit agreement, which reduced the borrowing rate by four basis points for a one-year period to SOFR plus 0.835%, from SOFR plus 0.875%, and reduced the facility fee by one basis point to 0.14% from 0.15%. As of December 31, 2023, we had no outstanding balance on our unsecured senior line of credit.

In July 2023, we increased the aggregate amount we may issue from time to time under our commercial paper program to \$2.5 billion from \$2.0 billion. Our commercial paper program provides us with the ability to issue up to \$2.5 billion of commercial paper notes with a maturity of generally 30 days or less and with a maximum maturity of 397 days from the date of issuance. Our commercial paper program is backed by our 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 under 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. In the event we are unable to issue commercial paper notes or refinance outstanding commercial paper notes 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. The commercial paper notes sold during the year ended December 31, 2023 were issued at a weighted-average yield to maturity of 5.55%. As of December 31, 2023, we had \$100.0 million of commercial paper notes outstanding.

In February 2023, we opportunistically issued \$1.0 billion of unsecured senior notes payable with a weighted-average interest rate of 4.95% and a weighted-average maturity of 21.2 years. The unsecured senior notes consisted of \$500.0 million of 4.75% unsecured senior notes due 2035 and \$500.0 million of 5.15% unsecured senior notes due 2053.

The following table presents our average debt outstanding and weighted-average interest rates during the year ended December 31, 2023 (dollars in thousands):

	Year Ended December 31, 2023	
	Average Debt Outstanding	Weighted-Average Interest Rate
Long-term fixed-rate debt	\$ 11,044,128	3.62 %
Short-term variable-rate unsecured senior line of credit and commercial paper program debt	293,690	5.77
Blended average interest rate	11,337,818	3.68
Loan fee amortization and annual facility fee related to unsecured senior line of credit	N/A	0.11
Total/weighted average	\$ 11,337,818	3.79 %

Real estate dispositions and sales of partial interests

We expect to continue to focus on the disciplined execution of select sales of real estate. Future sales will provide an important source of capital to fund a portion of pending and recently completed opportunistic acquisitions and our highly leased value-creation development and redevelopment projects, and also provide significant capital for growth. We may also consider additional sales of partial interests in core Class A/A+ properties and/or development projects. For 2024, we expect real estate dispositions and sales of partial interests in real estate assets to range from \$900 million to \$1.9 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.

Refer to Note 3 – “Investments in real estate,” Note 4 – “Consolidated and unconsolidated real estate joint ventures,” and Note 15 – “Stockholders’ equity” to our consolidated financial statements under Item 15 and “Dispositions and sales of partial interests” under Item 2 in this annual report on Form 10-K for additional information on our real estate dispositions and sales of partial interests.

As a REIT, we are generally subject to a 100% tax on the net income from real estate asset sales that the IRS characterizes as “prohibited transactions.” We do not expect our sales will be categorized as prohibited transactions. However, unless we meet certain “safe harbor” requirements, whether a real estate asset sale is a prohibited transaction will be based on the facts and circumstances of the sale. Our real estate asset sales may not always meet such safe harbor requirements. Refer to “Item 1A. Risk factors” in this annual report on Form 10-K for additional information about the “prohibited transaction” tax.

Common equity transactions

During the three months ended December 31, 2023, we settled our forward equity sales agreements that were outstanding as of December 31, 2022, by issuing 699 thousand shares of common stock, for which we received net proceeds of \$104.3 million.

In January 2024, our existing ATM program became inactive upon expiration of the associated shelf registration. We expect to file a new shelf registration and ATM program in the near future.

Other sources

As a well-known seasoned issuer, from time to time, we may issue securities at our discretion based on our needs and market conditions, including, as necessary, to balance our use of incremental debt capital.

Additionally, we, together with joint venture partners, hold interests in real estate joint ventures that we consolidate in our financial statements. These existing joint ventures provide significant equity capital to fund a portion of our future construction spend, and our joint venture partners may also contribute equity into these entities for financing-related activities. From January 1, 2024 through December 31, 2027, we expect to receive capital contributions aggregating \$1.2 billion from existing consolidated real estate joint venture partners to fund construction. During the year ending December 31, 2024, contributions from noncontrolling interests from existing joint venture partners are expected to aggregate \$430.0 million.

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 value-creation pipeline aggregating 5.5 million RSF of Class A/A+ properties undergoing construction and one near-term project expected to commence construction in the next two years, 2.1 million RSF of priority anticipated development and redevelopment projects, and 23.9 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/A+ development and redevelopment properties: current projects" section under Item 2 and "Summary of capital expenditures" subsections of the "Investments in real estate" section within this Item 7 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 in 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, 2023 and 2022 of \$364.0 million and \$278.6 million, respectively, was classified in investments in real estate in our consolidated balance sheets. The increase in capitalized interest was related to the increase in weighted-average interest rate used to capitalize interest to 3.79% for the year ended December 31, 2023 from 3.51% for the year ended December 31, 2022, and a higher weighted-average capitalized cost basis of \$9.5 billion for the year ended December 31, 2023, as compared to \$7.8 billion for the year ended December 31, 2022.

Property taxes, insurance on real estate, and indirect project costs, such as construction, office, legal, and administration 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 costs related to development, redevelopment, pre-construction, and construction projects, aggregating \$108.4 million and \$83.8 million, and property taxes, insurance on real estate and indirect project costs aggregating \$129.1 million and \$97.3 million during the years ended December 31, 2023 and 2022, respectively.

The increase in capitalized costs for the year ended December 31, 2023, compared to the same period in 2022, was primarily due to an increase in our value-creation pipeline projects undergoing construction and pre-construction activities in 2023 over 2022. 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 and indirect project costs related to the 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 \$60.1 million for the year ended December 31, 2023.

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, 2023, we capitalized total initial direct leasing costs of \$75.3 million. 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

As of December 31, 2023, the total purchase price of our pending acquisitions under executed letters of intent or purchase and sale agreements aggregated \$462.0 million. We expect to complete these acquisitions within 12 months.

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, and the "Acquisitions" subsection of the "Investments in real estate" section under Item 2 in this annual report on Form 10-K for information on our acquisitions.

Dividends

During the years ended December 31, 2023 and 2022, we paid common stock dividends of \$847.5 million and \$757.7 million, respectively. The increase of \$89.7 million in dividends paid on our common stock during the year ended December 31, 2023, compared to the year ended December 31, 2022, was primarily due to an increase in the number of common shares outstanding subsequent to January 1, 2022 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 \$4.90 per common share paid during the year ended December 31, 2023 from \$4.66 per common share paid during the year ended December 31, 2022.

Secured notes payable

Secured notes payable as of December 31, 2023 consisted of three notes secured by two properties. Our secured notes payable typically require monthly payments of principal and interest and had a weighted-average interest rate of approximately 8.37%. As of December 31, 2023, the total book value of our investments in real estate securing debt was approximately \$330.9 million. As of December 31, 2023, our secured notes payable, including unamortized discounts and deferred financing costs, comprised approximately \$619 thousand and \$119.0 million of fixed-rate debt and unhedged variable-rate debt, respectively.

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, 2023 were as follows:

Covenant Ratios ⁽¹⁾	Requirement	December 31, 2023
Total Debt to Total Assets	Less than or equal to 60%	28%
Secured Debt to Total Assets	Less than or equal to 40%	0.3%
Consolidated EBITDA ⁽²⁾ to Interest Expense	Greater than or equal to 1.5x	15.3x
Unencumbered Total Asset Value to Unsecured Debt	Greater than or equal to 150%	346%

(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, 2023 were as follows:

Covenant Ratios ⁽¹⁾	Requirement	December 31, 2023
Leverage Ratio	Less than or equal to 60.0%	27.0%
Secured Debt Ratio	Less than or equal to 45.0%	0.2%
Fixed-Charge Coverage Ratio	Greater than or equal to 1.50x	4.13x
Unsecured Interest Coverage Ratio	Greater than or equal to 1.75x	28.55x

(1) All covenant ratio titles utilize terms as defined in the credit agreement.

Estimated interest payments

Estimated interest payments on our fixed-rate debt are calculated based upon contractual interest rates, including interest payment dates and scheduled maturity dates. As of December 31, 2023, 98.1% 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, 2023, included leases for 36 of our properties, which accounted for approximately 9% 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 \$5.7 million as of December 31, 2023, our ground lease obligations have remaining lease terms ranging from approximately 31 to 98 years, including available extension options that we are reasonably certain to exercise.

Operating lease agreements

As of December 31, 2023, the remaining contractual payments under ground and office lease agreements in which we are the lessee aggregated \$820.1 million and \$28.8 million, respectively. 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, 2023, the present value of the remaining contractual payments, aggregating \$848.9 million, under our operating lease agreements, including our extension options that we are reasonably certain to exercise, was \$382.9 million, which was classified in accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets. As of December 31, 2023, the weighted-average remaining lease term of operating leases in which we are the lessee was approximately 41 years, and the weighted-average discount rate was 4.6%. 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 \$516.5 million. We classify the right-of-use asset in other assets in our consolidated balance sheets. 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 for additional information.

Commitments

As of December 31, 2023, remaining aggregate costs under contract for the construction of properties undergoing development, redevelopment, and improvements under the terms of leases approximated \$1.9 billion. In addition, we may be required to incur construction costs associated with future development projects aggregating 643,331 RSF pursuant to an agreement whereby our counterparty may elect to execute future lease agreements on mutually agreeable terms.

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 projects, which would result in the reduction of our commitments. In addition, we have letters of credit and performance obligations aggregating \$29.5 million primarily related to construction projects and an anticipated acquisition.

We are committed to funding approximately \$413.6 million related to our non-real estate investments. These funding commitments are primarily associated with our investments in privately held entities that report NAV and expire at various dates over the next 11 years, with a weighted-average expiration of 8.2 years as of December 31, 2023.

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.

Foreign currency translation gains and losses

The following table presents the change in accumulated other comprehensive loss attributable to Alexandria Real Estate Equities, Inc.'s stockholders during the year ended December 31, 2023 primarily due to the changes in the foreign exchange rates for our real estate investments in Canada (in thousands). We reclassify unrealized foreign currency translation gains and losses into net income as we dispose of these holdings.

	Total
Balance as of December 31, 2022	\$ (20,812)
Other comprehensive income before reclassifications	4,916
Net other comprehensive income	4,916
Balance as of December 31, 2023	\$ (15,896)

Inflation

As of December 31, 2023, approximately 94% of our leases (on an annual rental revenue 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 96% of our leases (on an annual rental revenue 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 under our unsecured senior line of credit and commercial paper program, issuances of unsecured senior notes payable, and borrowings under our secured construction loans, and secured loans held by our unconsolidated real estate joint ventures.

In addition, refer to "Item 1A. Risk factors" in this annual report on Form 10-K for a discussion about risks that inflation directly or indirectly may pose to our business.

Issuer and guarantor subsidiary summarized 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 summarized financial information presents on a combined basis, balance sheet information as of December 31, 2023 and 2022, and results of operations and comprehensive income for the years ended December 31, 2023 and 2022 for the Issuer and the Guarantor Subsidiary. The information presented below excludes eliminations necessary to arrive at the information on a consolidated basis. In presenting the summarized financial statements, the equity method of accounting has been applied to (i) the Issuer's interests in the Guarantor Subsidiary, (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 assets and liabilities have been allocated to the Issuer and the Guarantor Subsidiary generally based on legal entity ownership.

The following tables present combined summarized financial information as of December 31, 2023 and 2022, and for the years ended December 31, 2023 and 2022, for the Issuer and Guarantor Subsidiary. Amounts provided do not represent our total consolidated amounts (in thousands):

	December 31,	
	2023	2022
Assets:		
Cash, cash equivalents, and restricted cash	\$ 210,755	\$ 465,707
Other assets	115,373	107,287
Total assets	\$ 326,128	\$ 572,994
Liabilities:		
Unsecured senior notes payable	\$ 11,096,028	\$ 10,100,717
Unsecured senior line of credit and commercial paper	99,952	—
Other liabilities	504,659	466,369
Total liabilities	\$ 11,700,639	\$ 10,567,086
	Year Ended December 31,	
	2023	2022
Total revenues	\$ 54,230	\$ 33,052
Total expenses	(273,990)	(277,647)
Net loss	(219,760)	(244,595)
Net income attributable to unvested restricted stock awards	(11,195)	(8,392)
Net loss attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ (230,955)	\$ (252,987)

As of December 31, 2023, 396 of our 411 properties were held indirectly by the REIT's wholly owned consolidated subsidiary, Alexandria Real Estate Equities, L.P.

Critical accounting estimates

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, current trends, and various other factors that we believe to be reasonable under the circumstances.

We continually evaluate the estimates, judgments, and assumptions we use to prepare our consolidated financial statements. Changes in estimates, judgments, or assumptions could affect our financial position and our results of operations, which are used by our stockholders, potential investors, industry analysts, and lenders in their evaluation of our performance.

Our critical accounting estimates are defined as accounting estimates or assumptions made in accordance with GAAP, which involve a significant level of estimation uncertainty or subjectivity and have had or are reasonably likely to have a material impact on our financial condition or results of operations. Our significant accounting policies, which utilize these critical accounting estimates, 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. Our critical accounting estimates are described below.

Recognition of real estate acquired

Generally, our acquisitions of real estate or in-substance real estate are accounted for as asset acquisitions and not business combinations 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 requires that the acquisition consideration (including acquisition costs) be 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.

We assess the relative fair values of tangible and intangible assets and liabilities based on:

- (i) Available comparable market information;
- (ii) Estimated replacement costs; or
- (iii) Discounted cash flow analysis/estimated net operating income and capitalization rates.

In certain instances, we may use multiple valuation techniques and estimate fair values based on an average of multiple valuation results. We exercise judgement to determine key assumptions used in each valuation technique. For example, to estimate future cash flows in the discounted cash flow analysis, we are required to use judgment and make a number of assumptions, including those related to projected growth in rental rates and operating expenses, and anticipated trends and market/economic conditions. The use of different assumptions in the discounted cash flow analysis can affect the amount of consideration allocated to the acquired depreciable/amortizable asset, which in turn can impact our net income due to the recognition of the related depreciation/amortization expense in our consolidated statements of operations.

We completed acquisitions of five properties for a total purchase price of \$259.0 million during the year ended December 31, 2023. These transactions were accounted for as asset acquisitions, and the purchase price of each was allocated based on the relative fair values of the assets acquired and liabilities assumed. Refer to the “Investments in real estate” 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 for additional information.

Impairment of long-lived assets

Impairment of real estate assets classified as held for sale

A property is classified as held for sale when all of the accounting criteria for a plan of sale have been met. These criteria are described in the “Investments in real estate” 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. Upon classification as held for sale, we recognize an impairment charge, if necessary, to lower the carrying amount of the real estate asset to its estimated fair value less cost to sell. The determination of fair value can involve significant judgments and assumptions. We develop key assumptions based on the following available factors: (i) contractual sales price, (ii) preliminary non-binding letters of intent, or (iii) other available comparable market information. If this information is not available, we use estimated replacement costs or estimated cash flow projections that utilize estimated discount and capitalization rates. These estimates are subject to uncertainty and therefore require significant judgment by us. We review all assets held for sale each reporting period to determine whether the existing carrying amounts are fully recoverable in comparison to their estimated fair values less costs to sell. Subsequently, as a result of our quarterly assessment, we may recognize an incremental impairment charge for any decrease in the asset’s fair value less cost to sell. Conversely, we may recognize a gain for a subsequent increase in fair value less cost to sell, limited to the cumulative net loss previously recognized.

Impairment of other long-lived assets

For each reporting period, we review current activities and changes in the business conditions of all of our long-lived assets, 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, 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, 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 also adjust depreciation of properties that are expected to be disposed of or redeveloped prior to the end of their useful lives.

The evaluation for impairment and calculation of the carrying amount of a long-lived asset to be held and used involves consideration of factors and calculations that are different than the estimate of fair value of assets classified as held for sale. 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.

Impairment of non-real estate investments

We hold strategic investments in publicly traded companies and privately held entities primarily involved in the life science, agtech, and technology 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 privately held entities that do not report NAV per share require our evaluation for impairment when changes in these entities' conditions may indicate that an impairment exists. We closely monitor these investments 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. We evaluate these investees 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, 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, including the research and development of technology and products that the investee is bringing or attempting to bring to the market, (iv) significant concerns about the investee's ability to continue as a going concern, and/or (v) a decision by investors to cease providing support to reduce their financial commitment to the investee. 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. As of each December 31, 2023, 2022, and 2021, the carrying amounts of our investments in privately held entities that do not report NAV per share accounted for approximately 1% to 2% of our total assets and aggregated \$542.9 million, \$582.7 million, and \$491.3 million, respectively. During the years ended December 31, 2023, 2022, and 2021, we recognized impairment charges aggregating 14%, 4%, and 0%, respectively, of the carrying amounts of our investments in privately held entities that do not report NAV.

Monitoring of tenant credit quality

We monitor, on an ongoing basis, 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 industries in which they conduct business, and (iv) monitoring the timeliness of lease payments. We have a team of employees who, among them, have an extensive educational background or experience in biology, chemistry, industrial biotechnology, agtech, and the life science industry, as well as knowledge in finance. This team is responsible for timely assessment, monitoring, and communication of our tenants' credit quality and any material changes therein. During the years ended December 31, 2023, 2022, and 2021, specific write-offs and increases to our general allowance related to deferred rent balances of tenants recognized in our consolidated statements of operations have not exceeded 0.8% of our income from rentals for each respective year. For additional information, refer to the "Monitoring of tenant credit quality" 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 for additional information.

Non-GAAP measures and definitions

This section contains additional information of certain non-GAAP financial measures including reconciliations to the most directly comparable financial measure calculated and presented in accordance with GAAP 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 acquisition and disposition decisions, financing decisions, capital structure, capital market transactions, variances resulting from the volatility of market conditions outside of our control, or other corporate activities that may not be representative of the operating performance of our properties.

The 2018 White Paper published by the Nareit Board of Governors (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, significant termination fees, acceleration of stock compensation expense due to the resignations of executive officers, 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. We compute the amount that is allocable to our unvested restricted stock awards using the two-class method. Under the two-class method, we allocate net income (after amounts attributable to noncontrolling interests) to common stockholders and to unvested restricted stock awards by applying the respective weighted-average shares outstanding during each quarter-to-date and year-to-date period. This may result in a difference of the summation of the quarter-to-date and year-to-date amounts. 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 three and twelve months ended December 31, 2023 (in thousands):

	Noncontrolling Interest Share of Consolidated Real Estate Joint Ventures		Our Share of Unconsolidated Real Estate Joint Ventures	
	December 31, 2023		December 31, 2023	
	Three Months Ended	Year Ended	Three Months Ended	Year Ended
Net income	\$ 45,771	\$ 177,355	\$ 363	\$ 980
Depreciation and amortization of real estate assets	30,137	115,349	965	3,589
Funds from operations	\$ 75,908	\$ 292,704	\$ 1,328	\$ 4,569

The following tables present a reconciliation of net income 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, 2023, 2022, and 2021. Per share amounts may not add due to rounding.

(In thousands)	Year Ended December 31,		
	2023	2022	2021
Net income attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – basic and diluted	\$ 92,444	\$ 513,268	\$ 563,399
Depreciation and amortization of real estate assets	1,080,529	988,363	804,633
Noncontrolling share of depreciation and amortization from consolidated real estate JVs	(115,349)	(107,591)	(70,880)
Our share of depreciation and amortization from unconsolidated real estate JVs	3,589	3,666	13,734
Gain on sales of real estate	(277,037)	(537,918)	(126,570)
Impairment of real estate – rental properties	450,428 ⁽¹⁾	20,899	25,485
Allocation to unvested restricted stock awards	(5,175)	(1,118)	(6,315)
Funds from operations attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – diluted ⁽²⁾	1,229,429	879,569	1,203,486
Unrealized losses (gains) on non-real estate investments	201,475	412,193	(43,632)
Significant realized gains on non-real estate investments	—	—	(110,119)
Impairment of non-real estate investments	74,550 ⁽³⁾	20,512	—
Impairment of real estate	10,686	44,070	27,190
Loss on early extinguishment of debt	—	3,317	67,253
Acceleration of stock compensation expense due to executive officer resignations	20,295 ⁽⁴⁾	7,185	—
Allocation to unvested restricted stock awards	(4,121)	(5,137)	710
Funds from operations attributable to Alexandria Real Estate Equities, Inc.'s common stockholders – diluted, as adjusted	\$ 1,532,314	\$ 1,361,709	\$ 1,144,888

(1) Refer to the "Sales of real estate assets and impairment charges" section in 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.

(2) Calculated in accordance with standards established by the Nareit Board of Governors.

(3) Related to non-real estate investments in privately held entities that do not report NAV. Refer to Note 7 – "Investments" to our consolidated financial statements under Item 15 in this annual report on 10-K for additional details.

(4) Related to the resignations of two executive officers, Dean A. Shigenaga from his position as President and Chief Financial Officer and John H. Cunningham from his position as Executive Vice President – Regional Market Director – New York City.

(Per share)	Year Ended December 31,		
	2023	2022	2021
Net income per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders - diluted	\$ 0.54	\$ 3.18	\$ 3.82
Depreciation and amortization of real estate assets	5.67	5.47	5.07
Gain on sales of real estate	(1.62)	(3.33)	(0.86)
Impairment of real estate - rental properties	2.64	0.13	0.17
Allocation to unvested restricted stock awards	(0.04)	(0.01)	(0.04)
Funds from operations per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders - diluted	7.19	5.44	8.16
Unrealized losses (gains) on non-real estate investments	1.18	2.55	(0.30)
Significant realized gains on non-real estate investments	—	—	(0.75)
Impairment of non-real estate investments	0.44	0.13	—
Impairment of real estate	0.06	0.27	0.18
Loss on early extinguishment of debt	—	0.02	0.46
Acceleration of stock compensation expense due to executive officer resignations	0.12	0.04	—
Allocation to unvested restricted stock awards	(0.02)	(0.03)	0.01
Funds from operations per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders - diluted, as adjusted	\$ 8.97	\$ 8.42	\$ 7.76
Weighted-average shares of common stock outstanding - diluted ⁽¹⁾	170,909	161,659	147,460

(1) Refer to the definition of "Weighted-average shares of common stock outstanding - diluted" within this Item 7 in this annual report on Form 10-K 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, impairments of real estate, and significant termination fees. Adjusted EBITDA also excludes unrealized gains or losses and significant realized gains or losses 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 total 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 investing and financing decisions related to our real estate and non-real estate investments, our 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, significant impairments and realized gains or losses on non-real estate investments, and significant termination fees allows investors to evaluate performance from period to period on a consistent basis without having to account for differences recognized because of investing and financing decisions related to our real estate and non-real estate investments or other corporate activities that may not be representative of the operating performance of our properties.

In addition, 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 (loss) 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.

In order to calculate the Adjusted EBITDA margin, we divide Adjusted EBITDA by total revenues as presented in our consolidated statements of operations. We believe that this supplemental performance measure provides investors with additional useful information regarding the profitability of our operating activities.

We are not able to forecast fourth quarter net income without unreasonable effort and therefore do not provide a reconciliation for Adjusted EBITDA on a forward-looking basis. This is due to the inherent difficulty of forecasting the timing and/or amount of items that depend on market conditions outside of our control, including the timing of dispositions, capital events, and financing decisions, as well as quarterly components such as gain on sales of real estate, unrealized gains or losses on non-real estate investments, impairment of real estate, and impairment of non-real estate investments. Our attempt to predict these amounts may produce significant but inaccurate estimates, which would be potentially misleading for our investors.

The following table reconciles net income (loss), the most directly comparable financial measure calculated and presented in accordance with GAAP, to Adjusted EBITDA and calculates the Adjusted EBITDA margin for the three months and years ended December 31, 2023 and 2022 (dollars in thousands):

	Three Months Ended December 31,		Year Ended December 31,	
	2023	2022	2023	2022
Net (loss) income	\$ (42,658)	\$ 95,268	\$ 280,994	\$ 670,701
Interest expense	31,967	17,522	74,204	94,203
Income taxes	1,322	2,063	5,887	9,673
Depreciation and amortization	285,246	264,480	1,093,473	1,002,146
Stock compensation expense	34,592	11,586	82,858	57,740
Loss on early extinguishment of debt	—	—	—	3,317
Gain on sales of real estate	(62,227)	—	(277,037)	(537,918)
Unrealized (gains) losses on non-real estate investments	(19,479)	24,117	201,475	412,193
Impairment of real estate	271,890	26,186	461,114	64,969
Impairment of non-real estate investments	23,094	20,512	74,550	20,512
Adjusted EBITDA	\$ 523,747	\$ 461,734	\$ 1,997,518	\$ 1,797,536
Total revenues	\$ 757,216	\$ 670,281	\$ 2,885,699	\$ 2,588,962
Adjusted EBITDA margin	69%	69%	69%	69%

Annual rental revenue

Annual rental revenue represents the annualized fixed base rental obligations, calculated in accordance with GAAP, for leases 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 from 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, 2023, approximately 94% of our leases (on an annual rental revenue 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.

Capitalization rates

Capitalization rates are calculated based on net operating income and net operating income (cash basis) annualized, excluding lease termination fees, on stabilized operating assets for the quarter preceding the date on which the property is sold, or near-term prospective net operating income.

Capitalized interest

We capitalize interest cost as a cost of a project during periods for which activities necessary to develop or redevelop a project for its intended use are ongoing, provided that expenditures for the asset have been made and interest cost has been incurred. Activities necessary to develop or redevelop a project include pre-construction activities such as 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. If we cease activities necessary to prepare a project for its intended use, interest costs related to such project are expensed as incurred.

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 within 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/A+ properties and AAA locations

Class A/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/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/A+ properties, and property enhancements identified during the underwriting of certain acquired properties, located in collaborative life science, agtech, and advanced technology mega campuses in AAA innovation clusters. These projects are generally focused on providing high-quality, generic, and reusable spaces that meet the real estate requirements of a wide range of tenants. Upon completion, each value-creation project is expected to generate increases 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 laboratory facilities. Redevelopment projects consist of the permanent change in use of acquired office, warehouse, or shell space into laboratory, agtech, or advanced technology space. We generally will not commence new development projects for aboveground construction of new Class A/A+ laboratory, agtech, and advanced technology space without first securing significant pre-leasing for such space, except when there is solid market demand for high-quality Class A/A+ properties.

Priority anticipated projects are those most likely to commence future ground-up development or first-time conversion from non-laboratory space to laboratory space prior to our other future projects, pending market conditions and leasing negotiations.

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.

Development, redevelopment, and pre-construction spending also includes the following costs: (i) amounts to bring certain acquired properties up to market standard and/or other costs identified during the acquisition process (generally within two years of acquisition) and (ii) permanent conversion of space for highly flexible, move-in-ready laboratory space to foster the growth of promising early- and growth-stage life science companies.

Revenue-enhancing and repositioning capital expenditures represent spending to reposition or significantly change the use of a property, including through improvement in the asset quality from Class B to Class A/A+.

Non-revenue-enhancing capital expenditures represent costs required to maintain the current revenues of a stabilized property, including the associated costs for renewed and re-leased space.

Dividend payout ratio (common stock)

Dividend payout ratio (common stock) is the ratio of the absolute dollar amount of dividends on our common stock (shares of common stock outstanding on the respective record dates multiplied by the related dividend per share) to funds from operations attributable to Alexandria's common stockholders – diluted, as adjusted.

Dividend yield

Dividend yield for the quarter represents the annualized quarter dividend divided by the closing common stock price at the end of the quarter.

Fixed-charge coverage ratio

Fixed-charge coverage ratio is a non-GAAP financial measure representing the ratio of Adjusted EBITDA to cash interest and fixed charges. We believe that 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 and computes the fixed-charge coverage ratio for the three months and years ended December 31, 2023 and 2022 (dollars in thousands):

	Three Months Ended December 31,		Year Ended December 31,	
	2023	2022	2023	2022
Adjusted EBITDA	\$ 523,747	\$ 461,734	\$ 1,997,518	\$ 1,797,536
Interest expense	\$ 31,967	\$ 17,522	\$ 74,204	\$ 94,203
Capitalized interest	89,115	79,491	363,978	278,645
Amortization of loan fees	(4,059)	(3,975)	(15,486)	(13,549)
Amortization of debt discounts	(309)	(272)	(1,207)	(384)
Cash interest and fixed charges	\$ 116,714	\$ 92,766	\$ 421,489	\$ 358,915
Fixed-charge coverage ratio:				
- period annualized	4.5x	5.0x	4.7x	5.0x
- trailing 12 months	4.7x	5.0x	4.7x	5.0x

We are not able to forecast fourth quarter net income without unreasonable effort and therefore do not provide a reconciliation for fixed-charge coverage ratio on a forward-looking basis. This is due to the inherent difficulty of forecasting the timing and/or amount of items that depend on market conditions outside of our control, including the timing of dispositions, capital events, and financing decisions, as well as quarterly components such as gain on sales of real estate, unrealized gains or losses on non-real estate investments, impairment of real estate, and impairment of non-real estate investments. Our attempt to predict these amounts may produce significant but inaccurate estimates, which would be potentially misleading for our investors.

Gross assets

Gross assets are calculated as total assets plus accumulated depreciation as of December 31, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Total assets	\$ 36,771,402	\$ 35,523,399
Accumulated depreciation	4,985,019	4,354,063
Gross assets	\$ 41,756,421	\$ 39,877,462

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, 2023, as reported by Bloomberg Professional Services. Credit ratings from Moody's Investors Service and S&P Global Ratings reflect credit ratings of the tenant's parent entity, and there can be no assurance that a tenant's parent entity will satisfy the tenant's lease obligation upon such tenant's default. We monitor the credit quality and related material changes of our tenants. Material changes that cause a tenant's market capitalization to decrease 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

The following table presents our value-creation pipeline of new Class A/A+ development and redevelopment projects, excluding properties held for sale, as a percentage of gross assets as of December 31, 2023:

	Percentage of Gross Assets
Under construction projects and near-term project expected to commence construction in the next two years (60% leased/negotiating)	9%
Income-producing/potential cash flows/covered land play ⁽¹⁾	7%
Land	4%

(1) Includes projects with existing buildings that are generating or can generate operating cash flows. Also includes development rights associated with existing operating campuses. These projects aggregated 1.1% of total annual rental revenue as of December 31, 2023 and are included in our industry mix chart as targeted for a future change in use. Refer to "High-quality and diverse client base in AAA locations" section under Item 2 in this annual report on Form 10-K for additional information.

The square footage presented in the table below is classified as operating as of December 31, 2023. These lease expirations or vacant space at recently acquired properties represent future opportunities for which we have the intent, subject to market conditions and leasing, to commence first-time conversion from non-laboratory space to laboratory space, or to commence future ground-up development:

Property/Submarket	Dev/Redev	RSF of Lease Expirations Targeted for Development and Redevelopment			
		2024	2025	Thereafter ⁽¹⁾	Total
Committed near-term project:					
4161 Campus Point Court/University Town Center	Dev	159,884	—	—	159,884
Priority anticipated projects:					
311 Arsenal Street/Cambridge/Inner Suburbs	Redev	308,446	25,312	—	333,758
269 East Grand Avenue/South San Francisco	Redev	107,250	—	—	107,250
3301 Monte Villa Parkway/Bothell	Redev	50,552	—	—	50,552
1020 Red River Street/Austin	Redev	—	126,034	—	126,034
		466,248	151,346	—	617,594
Future projects:					
100 Edwin H. Land Boulevard/Cambridge	Dev	104,500	—	—	104,500
446, 458, 500, and 550 Arsenal Street/Cambridge/Inner Suburbs	Dev	—	—	380,991	380,991
Other/Greater Boston	Redev	—	—	167,549	167,549
1122 and 1150 El Camino Real/South San Francisco	Dev	—	—	375,232	375,232
3875 Fabian Way/Greater Stanford	Dev	—	—	228,000	228,000
2100, 2200, 2300, and 2400 Geng Road/Greater Stanford	Dev	84,083	—	78,501	162,584
960 Industrial Road/Greater Stanford	Dev	—	—	112,590	112,590
10975 and 10995 Torreyana Road/Torrey Pines	Dev	84,829	—	—	84,829
Campus Point by Alexandria/University Town Center	Dev	335,308	—	—	335,308
Sequence District by Alexandria/Sorrento Mesa	Dev/Redev	—	—	684,866	684,866
830 4th Avenue South/SoDo	Dev	—	—	42,380	42,380
Other/Seattle	Dev	—	—	77,376	77,376
100 Capitola Drive/Research Triangle	Dev	—	—	34,527	34,527
1001 Trinity Street/Austin	Dev	—	72,938	—	72,938
Canada	Redev	—	—	247,743	247,743
		608,720	72,938	2,429,755	3,111,413
		1,234,852	224,284	2,429,755	3,888,891

(1) Includes vacant square footage as of December 31, 2023.

Joint venture financial information

We present components of balance sheet and operating results information related to our real estate 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 our real estate 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 that 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 our real estate 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. 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 presented and prepared in accordance with GAAP.

Mega campus

Mega campuses are cluster campuses that consist of approximately 1 million RSF or more, including operating, active development/redevelopment, and land RSF less operating RSF expected to be demolished. The following table reconciles our annual rental revenue and value-creation pipeline RSF as of December 31, 2023 (dollars in thousands):

	Annual Rental Revenue	Value-Creation Pipeline RSF
Mega campus	\$ 1,621,074	20,859,507
Non-mega campus	547,096	10,648,805
Total	<u>\$ 2,168,170</u>	<u>31,508,312</u>
Mega campus as a percentage of total annual rental revenue and of total value-creation pipeline RSF	75 %	66 %

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 and preferred stock to Adjusted EBITDA

Net debt and preferred stock to Adjusted EBITDA is a non-GAAP financial measure that we believe is useful to investors as a supplemental measure of evaluating our balance sheet leverage. Net debt and preferred stock is equal to the sum of total consolidated debt less cash, cash equivalents, and restricted cash, plus preferred stock outstanding as of the end of the period. Refer to the definition of "Adjusted EBITDA and Adjusted EBITDA margin" within this Item 7 in this annual report on Form 10-K for further information on the calculation of Adjusted EBITDA.

We are not able to forecast fourth quarter net income without unreasonable effort and therefore do not provide a reconciliation for net debt and preferred stock to Adjusted EBITDA ratio on a forward-looking basis. This is due to the inherent difficulty of forecasting the timing of dispositions, capital events, and financing decisions, as well as quarterly components such as gain on sales of real estate, unrealized gains or losses on non-real estate investments, impairment of real estate, and impairment of non-real estate investments. Our attempt to predict these amounts may produce significant but inaccurate estimates, which would be potentially misleading for our investors.

The following table reconciles debt to net debt and preferred stock and computes the ratio to Adjusted EBITDA as of December 31, 2023 and 2022 (dollars in thousands):

	December 31,	
	2023	2022
Secured notes payable	\$ 119,662	\$ 59,045
Unsecured senior notes payable	11,096,028	10,100,717
Unsecured senior line of credit and commercial paper	99,952	—
Unamortized deferred financing costs	76,329	74,918
Cash and cash equivalents	(618,190)	(825,193)
Restricted cash	(42,581)	(32,782)
Preferred stock	—	—
Net debt and preferred stock	<u>\$ 10,731,200</u>	<u>\$ 9,376,705</u>
Adjusted EBITDA:		
- quarter annualized	\$ 2,094,988	\$ 1,846,936
- trailing 12 months	\$ 1,997,518	\$ 1,797,536
Net debt and preferred stock to Adjusted EBITDA:		
- quarter annualized	5.1 x	5.1 x
- trailing 12 months	5.4 x	5.2 x

Net operating income, net operating income (cash basis), and operating margin

The following table reconciles net income to net operating income and net operating income (cash basis) and computes operating margin for the years ended December 31, 2023, 2022, and 2021 (dollars in thousands):

	Year Ended December 31,		
	2023	2022	2021
Net income	\$ 280,994	\$ 670,701	\$ 654,282
Equity in earnings of unconsolidated real estate joint ventures	(980)	(645)	(12,255)
General and administrative expenses	199,354	177,278	151,461
Interest expense	74,204	94,203	142,165
Depreciation and amortization	1,093,473	1,002,146	821,061
Impairment of real estate	461,114	64,969	52,675
Loss on early extinguishment of debt	—	3,317	67,253
Gain on sales of real estate	(277,037)	(537,918)	(126,570)
Investment loss (income)	195,397	331,758	(259,477)
Net operating income	<u>2,026,519</u>	<u>1,805,809</u>	<u>1,490,595</u>
Straight-line rent revenue	(133,917)	(118,003)	(115,145)
Amortization of acquired below-market leases	(93,331)	(74,346)	(54,780)
Net operating income (cash basis)	<u>\$ 1,799,271</u>	<u>\$ 1,613,460</u>	<u>\$ 1,320,670</u>
Net operating income (from above)	\$ 2,026,519	\$ 1,805,809	\$ 1,490,595
Total revenues	<u>\$ 2,885,699</u>	<u>\$ 2,588,962</u>	<u>\$ 2,114,150</u>
Operating margin	<u>70%</u>	<u>70%</u>	<u>71%</u>

Net operating income is a non-GAAP financial measure calculated as net income (loss), 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 of 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 gain 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, rent, and 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 within this Item 7 in this annual report on Form 10-K.

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, termination fees, if any, are excluded from the results of same properties. Refer to "Same properties" within 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.

We classify rental revenues and tenant recoveries generated through the leasing of real estate assets within revenues in income from rentals in our consolidated statements of operations. We provide investors with a separate presentation of rental revenues and tenant recoveries in the "Comparison of results for the year ended December 31, 2023 to the year ended December 31, 2022" subsection of the "Results of operations" section within this Item 7 because we believe it promotes investors' understanding of 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, 2023, 2022, and 2021 (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Income from rentals	\$ 2,842,456	\$ 2,576,040	\$ 2,108,249
Rental revenues	(2,143,971)	(1,950,098)	(1,618,592)
Tenant recoveries	\$ 698,485	\$ 625,942	\$ 489,657

Total equity capitalization

Total equity capitalization is equal to the outstanding shares of common stock multiplied by the closing price on the last trading day at the end of each period presented.

Total market capitalization

Total market capitalization is equal to the sum of total equity capitalization and total debt.

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, 2023, 2022, and 2021 (dollars in thousands):

	Year Ended December 31,		
	2023	2022	2021
Unencumbered net operating income	\$ 2,022,177	\$ 1,790,033	\$ 1,444,307
Encumbered net operating income	4,342	15,776	46,288
Total net operating income	\$ 2,026,519	\$ 1,805,809	\$ 1,490,595
Unencumbered net operating income as a percentage of total net operating income	99.8%	99.1%	96.9%

Weighted-average shares of common stock outstanding – diluted

From time to time, we enter into capital market transactions, including forward equity sales agreements (“Forward 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 Agreements under the treasury stock method while the Forward Agreements are outstanding. As of December 31, 2023, we had no Forward Agreements outstanding. Refer to Note 15 – “Stockholders’ equity” to our consolidated financial statements under Item 15 in this annual report on Form 10-K for additional information.

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, 2023, 2022, and 2021 are calculated as follows. Also shown are the weighted-average unvested shares associated with restricted stock awards used in calculating the amounts allocable to unvested stock award holders for each of the respective periods presented below (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Basic shares for earnings per share	170,909	161,659	146,921
Forward Agreements	—	—	539
Diluted shares for earnings per share	170,909	161,659	147,460
Basic shares for funds from operations per share and funds from operations per share, as adjusted	170,909	161,659	146,921
Forward Agreements	—	—	539
Diluted shares for funds from operations per share and funds from operations per share, as adjusted	170,909	161,659	147,460
Weighted-average unvested restricted shares used in the allocations of net income, funds from operations, and funds from operations, as adjusted	2,325	1,723	1,782

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, 2023, we did not have any outstanding interest rate hedge agreements.

Our future earnings and fair values relating to our outstanding debt are primarily dependent upon prevalent market rates of interest. The following tables illustrate the effect of a 1% change in interest rates, assuming a zero percent interest rate floor, on our fixed- and variable-rate debt as of December 31, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Annualized effect on future earnings due to variable-rate debt:		
Rate increase of 1%	\$ (339)	\$ (597)
Rate decrease of 1%	\$ 339	\$ 597
Effect on fair value of total consolidated debt:		
Rate increase of 1%	\$ (742,460)	\$ (668,639)
Rate decrease of 1%	\$ 847,335	\$ 759,638

These amounts are determined by considering the effect of the hypothetical interest rates on our borrowings as of December 31, 2023 and 2022, 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 we hold equity investments in publicly traded companies and privately held entities. All of our investments in actively traded public companies are reflected in our 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, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Equity price risk:		
Fair value increase of 10%	\$ 144,952	\$ 161,507
Fair value decrease of 10%	\$ (144,952)	\$ (161,507)

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 tables illustrate 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, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Effect on potential future earnings due to foreign currency exchange rate:		
Rate increase of 10%	\$ 311	\$ 147
Rate decrease of 10%	\$ (311)	\$ (147)
Effect on the fair value of net investment in foreign subsidiaries due to foreign currency exchange rate:		
Rate increase of 10%	\$ 37,346	\$ 22,523
Rate decrease of 10%	\$ (37,346)	\$ (22,523)

The 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, 2023 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, 2023, we had performed an evaluation, under the supervision of our principal executive officers and principal financial officer 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 principal executive officers and principal financial officer concluded that our disclosure controls and procedures were effective as of December 31, 2023.

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, 2023 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 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, 2023 and 2022. In making its assessment, management has utilized the criteria set forth in the 2013 framework issued by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control - Integrated Framework* (COSO 2013). Management concluded that based on its assessment, the Company's internal control over financial reporting was effective as of December 31, 2023. The effectiveness of our internal control over financial reporting as of December 31, 2023 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 the 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, 2023, 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, 2023, 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, 2023 and 2022, 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, 2023 and the related notes and financial statement schedule listed in the Index at Item 15 and our report dated January 29, 2024, 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
January 29, 2024

ITEM 9B. OTHER INFORMATION**Disclosure of 10b5-1 plans**

None of our officers or directors had any contract, instruction, or written plan for the purchase or sale of our securities that was intended to satisfy the affirmative defense conditions of Rule 10b5-1(c) or any "non-Rule 10b5-1 trading arrangement" in effect at any time during the year ended December 31, 2023.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

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 2024 annual meeting of stockholders to be filed pursuant to Regulation 14A within 120 days after the end of our fiscal year (the "2024 Proxy Statement") under the captions "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 2024 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, 2023:

	Equity Compensation Plan Information		
	Number of securities to be issued upon exercise of outstanding options, warrants, and rights (a)	Weighted-average exercise price of outstanding options, warrants, and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity Compensation Plan Approved by Stockholders — Amended and Restated 1997 Stock Award and Incentive Plan	—	—	2,708,800

The other information required by this Item is incorporated herein by reference from our 2024 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 2024 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 2024 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 (PCAOB ID: 00042)	F-1
Audited Consolidated Financial Statements of Alexandria Real Estate Equities, Inc.:	
Consolidated Balance Sheets as of December 31, 2023 and 2022	F-3
Consolidated Financial Statements for the Years Ended December 31, 2023, 2022, and 2021:	
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-51

(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 of Amendment of the Company, dated May 18, 2022	Form 8-K	May 19, 2022
3.5*	Articles Supplementary, dated June 9, 1999, relating to the 9.50% Series A Cumulative Redeemable Preferred Stock	Form 10-Q	August 13, 1999
3.6*	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
3.7*	Articles Supplementary, dated February 10, 2000, relating to the Series A Junior Participating Preferred Stock	Form 8-K	February 10, 2000
3.8*	Articles Supplementary, dated January 18, 2002, relating to the 9.10% Series B Cumulative Redeemable Preferred Stock	Form 8-A	January 18, 2002
3.9*	Articles Supplementary, dated June 22, 2004, relating to the 8.375% Series C Cumulative Redeemable Preferred Stock	Form 8-A	June 28, 2004
3.10*	Articles Supplementary, dated March 25, 2008, relating to the 7.00% Series D Cumulative Convertible Preferred Stock	Form 8-K	March 25, 2008
3.11*	Articles Supplementary, dated March 12, 2012, relating to the 6.45% Series E Cumulative Redeemable Preferred Stock	Form 8-K	March 14, 2012
3.12*	Articles Supplementary, dated May 10, 2017, relating to Reclassified Preferred Stock	Form 8-K	May 12, 2017
3.13*	Amended and Restated Bylaws of the Company (Amended September 21, 2023)	Form 8-K	September 22, 2023
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. 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
4.4*	Form of 4.500% Senior Notes due 2029 (included in Exhibit 4.3 above)	Form 8-K	July 18, 2014
4.5*	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
4.6*	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
4.7*	Form of 4.30% Senior Notes due 2026 (included in Exhibit 4.6 above)	Form 8-K	November 17, 2015
4.8*	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
4.9*	Form of 3.95% Senior Notes due 2027 (included in Exhibit 4.8 above)	Form 8-K	June 10, 2016
4.10*	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
4.11*	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
4.12*	Form of 3.95% Senior Notes due 2028 (included in Exhibit 4.11 above)	Form 8-K	March 3, 2017
4.13*	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
4.14*	Form of 3.45% Senior Notes due 2025 (included in Exhibit 4.13 above)	Form 8-K	November 20, 2017
4.15*	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
4.16*	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
4.17*	Form of 4.700% Senior Notes due 2030 (included in Exhibit 4.16 above)	Form 8-K	June 21, 2018
4.18*	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
4.19*	Form of 3.800% Senior Notes due 2026 (included in Exhibit 4.18 above)	Form 8-K	March 21, 2019
4.20*	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
4.21*	Form of 4.850% Senior Notes due 2049 (included in Exhibit 4.20 above)	Form 8-K	March 21, 2019
4.22*	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
4.23*	Form of 3.375% Senior Notes due 2031 (included in Exhibit 4.22 above)	Form 8-K	July 15, 2019
4.24*	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
4.25*	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
4.26*	Form of 4.000% Senior Notes due 2050 (included in Exhibit 4.25 above)	Form 8-K	July 15, 2019

Exhibit Number	Exhibit Title	Incorporated by Reference to:	Date Filed
4.27*	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
4.28*	Form of 2.750% Senior Notes due 2029 (included in Exhibit 4.27 above)	Form 8-K	September 12, 2019
4.29*	Supplemental Indenture No. 12, dated as of March 26, 2020, 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 26, 2020
4.30*	Form of 4.900% Senior Notes due 2030 (included in Exhibit 4.29 above)	Form 8-K	March 26, 2020
4.31*	Supplemental Indenture No. 13, dated August 5, 2020, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Trust Bank, as Trustee	Form 8-K	August 5, 2020
4.32*	Form of 1.875% Senior Notes due 2033 (included in Exhibit 4.31 above)	Form 8-K	August 5, 2020
4.33*	Supplemental Indenture No. 14, dated February 18, 2021, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Trust Bank, as Trustee	Form 8-K	February 18, 2021
4.34*	Form of 2.000 % Senior Notes due 2032 (included in Exhibit 4.33 above)	Form 8-K	February 18, 2021
4.35*	Supplemental Indenture No. 15, dated February 18, 2021, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Trust Bank, as Trustee	Form 8-K	February 18, 2021
4.36*	Form of 3.000 % Senior Notes due 2051 (included in Exhibit 4.35 above)	Form 8-K	February 18, 2021
4.37*	Supplemental Indenture No. 16, dated February 16, 2022, among the Company, as Issuer, Alexandria Real Estate Equities, L.P. as Guarantor, and Trust Bank, as Trustee	Form 8-K	February 16, 2022
4.38*	Form of 2.950% Senior Notes due 2034 (included in Exhibit 4.37 above)	Form 8-K	February 16, 2022
4.39*	Supplemental Indenture No. 17, dated February 16, 2022, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Trust Bank, as Trustee	Form 8-K	February 16, 2022
4.40*	Form of 3.550% Senior Notes due 2052 (included in Exhibit 4.39 above)	Form 8-K	February 16, 2022
4.41*	Supplemental Indenture No. 18, dated as of February 16, 2023, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Trust Bank, as Trustee	Form 8-K	February 16, 2023
4.42*	Form of 4.750% Senior Notes due 2035 (included in Exhibit 4.41 above)	Form 8-K	February 16, 2023
4.43*	Supplemental Indenture No. 19, dated as of February 16, 2023, among the Company, as Issuer, Alexandria Real Estate Equities, L.P., as Guarantor, and Trust Bank, as Trustee	Form 8-K	February 16, 2023
4.44*	Form of 5.150% Senior Notes due 2053 (included in Exhibit 4.43 above)	Form 8-K	February 16, 2023
4.45	Description of Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934	N/A	Filed herewith
10.1*	Second Amended and Restated Credit Agreement, dated June 28, 2023, among the Company, as Borrower, Alexandria Real Estate Equities, L.P., as a Guarantor, Citibank, N.A., as Administrative Agent, and the lenders and other parties thereto	Form 10-Q	July 24, 2023
10.2*(1)	Amended and Restated 1997 Stock Award and Incentive Plan of the Company	Form 8-K	May 19, 2022
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

Exhibit Number	Exhibit Title	Incorporated by Reference to:	Date Filed
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
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 Restated 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⁾	Letter Amendment to Amended and Restated Executive Employment Agreement, dated June 8, 2020, by and between the Company and Joel S. Marcus	Form 10-Q	July 27, 2020
10.17 ⁽¹⁾	Letter Amendment to Amended and Restated Executive Employment Agreement, dated August 30, 2023, by and between the Company and Joel S. Marcus	Form 10-Q	October 23, 2023
10.18 ⁽¹⁾	Letter Amendment to Amended and Restated Executive Employment Agreement, dated January 5, 2024, by and between the Company and Joel S. Marcus	N/A	Filed herewith
10.19 ⁽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
10.20 ⁽¹⁾	Letter Amendment to Amended and Restated Executive Employment Agreement, dated January 5, 2024, by and between the Company and Peter Moglia	N/A	Filed herewith
10.21 ⁽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
10.22 ⁽¹⁾	Amended and Restated Executive Employment Agreement between the Company and Marc E. Binda, entered into on August 17, 2023 and effective as of September 15, 2023	Form 10-Q	October 23, 2023
10.23 ⁽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
10.24 ⁽¹⁾	Second Amended and Restated Executive Employment Agreement between the Company and Vincent R. Ciruzzi, Jr., entered into on October 1, 2015 and effective as of October 1, 2015	Form 10-K	February 1, 2021
10.25 ⁽¹⁾	Executive Employment Agreement between the Company and Hunter Kass, entered into on January 1, 2021 and effective as of January 1, 2021	Form 10-K	January 31, 2022
10.26 ⁽¹⁾	Summary of Director Compensation Arrangements	N/A	Filed herewith
10.27 ⁽¹⁾	Anniversary Bonus Plan of the Company	Form 8-K	June 17, 2010

Exhibit Number	Exhibit Title	Incorporated by Reference to:	Date Filed
10.28 ⁽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)	N/A	Filed herewith
21.1	List of Subsidiaries of the Company	N/A	Filed herewith
22.1	List of Guarantor Subsidiaries of the Company	N/A	Filed herewith
23.1	Consent of Ernst & Young LLP	N/A	Filed herewith
31.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	N/A	Filed herewith
31.2	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	N/A	Filed herewith
31.3	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	N/A	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	N/A	Filed herewith
97.1 ⁽¹⁾	Incentive Compensation Recoupment Policy	N/A	Filed herewith
101.1	The following materials from the Company's annual report on Form 10-K for the three months and year ended December 31, 2023, formatted in XBRL (Inline eXtensible Business Reporting Language): (i) Consolidated Balance Sheets as of December 31, 2023 and 2022, (ii) Consolidated Statements of Operations for the years ended December 31, 2023, 2022, and 2021, (iii) Consolidated Statements of Comprehensive Income for the years ended December 31, 2023, 2022, and 2021, (iv) Consolidated Statements of Changes in Stockholders' Equity and Noncontrolling Interests for the years ended December 31, 2023, 2022, and 2021, (v) Consolidated Statements of Cash Flows for the years ended December 31, 2023, 2022, and 2021, (vi) Notes to Consolidated Financial Statements, and (vii) Schedule III — Consolidated Financial Statement Schedule of Real Estate and Accumulated Depreciation of the Company.	N/A	Filed herewith
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)	N/A	Filed herewith

(*) 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.

Dated: January 29, 2024

ALEXANDRIA REAL ESTATE EQUITIES, INC.

By: /s/ Joel S. Marcus

Joel S. Marcus
Executive Chairman
(Principal Executive Officer)

/s/ Peter M. Moglia

Peter M. Moglia
Chief Executive Officer and 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.

Signature	Title	Date
<u>/s/ Joel S. Marcus</u> Joel S. Marcus	Executive Chairman (Principal Executive Officer)	January 29, 2024
<u>/s/ Peter M. Moglia</u> Peter M. Moglia	Chief Executive Officer and Chief Investment Officer (Principal Executive Officer)	January 29, 2024
<u>/s/ Marc E. Binda</u> Marc E. Binda	Chief Financial Officer and Treasurer (Principal Financial Officer)	January 29, 2024
<u>/s/ Andres R. Gavinet</u> Andres R. Gavinet	Chief Accounting Officer (Principal Accounting Officer)	January 29, 2024
<u>/s/ Steven R. Hash</u> Steven R. Hash	Lead Director	January 29, 2024
<u>/s/ James P. Cain</u> James P. Cain	Director	January 29, 2024
<u>/s/ Cynthia L. Feldmann</u> Cynthia L. Feldmann	Director	January 29, 2024
<u>/s/ Maria C. Freire</u> Maria C. Freire	Director	January 29, 2024
<u>/s/ Richard H. Klein</u> Richard H. Klein	Director	January 29, 2024
<u>/s/ Sheila K. McGrath</u> Sheila K. McGrath	Director	January 29, 2024
<u>/s/ Michael A. Woronoff</u> Michael A. Woronoff	Director	January 29, 2024

Report of Independent Registered Public Accounting Firm

To the Stockholders and the 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, 2023 and 2022, 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, 2023, 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, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, 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, 2023, 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 January 29, 2024 expressed an unqualified opinion thereon.

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 the critical audit matter 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 a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of long-lived real estate assets

Description of the Matter As more fully disclosed in Notes 2 and 3 to the consolidated financial statements, the Company monitors its long-lived real estate assets for triggering events or impairment indicators. For long-lived real estate assets classified as held for sale, an impairment charge is recognized if the carrying amount of the asset exceeds its fair value less cost to sell. During the year ended December 31, 2023, the Company recognized impairment charges totaling \$461.1 million, of which \$183.8 million was related to long-lived assets classified as held for sale as of December 31, 2023.

Auditing the Company's valuation of properties classified as held for sale as of December 31, 2023 is subjective due to the judgment used by management to estimate the fair values of the properties.

How we Addressed the Matter in Our Audit Our audit procedures related to the valuation of long-lived real estate assets classified as held for sale included the following procedures, among others:

We tested the design and operating effectiveness of controls over the Company's process for estimating the fair values of long-lived real estate assets classified as held for sale.

We tested the Company's valuation of long-lived real estate assets classified as held for sale by comparing the estimated values to executed agreements with potential buyers, recent comparable sales transactions, and other external market data. Our internal valuation specialists assisted us in identifying the relevant transactions and market data.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1994.

Los Angeles, California
January 29, 2024

Alexandria Real Estate Equities, Inc.
Consolidated Balance Sheets
(In thousands, except share and per share amounts)

	December 31,	
	2023	2022
Assets		
Investments in real estate	\$ 31,633,511	\$ 29,945,440
Investments in unconsolidated real estate joint ventures	37,780	38,435
Cash and cash equivalents	618,190	825,193
Restricted cash	42,581	32,782
Tenant receivables	8,211	7,614
Deferred rent	1,050,319	942,646
Deferred leasing costs	509,398	516,275
Investments	1,449,518	1,615,074
Other assets	1,421,894	1,599,940
Total assets	\$ 36,771,402	\$ 35,523,399
Liabilities, Noncontrolling Interests, and Equity		
Secured notes payable	\$ 119,662	\$ 59,045
Unsecured senior notes payable	11,096,028	10,100,717
Unsecured senior line of credit and commercial paper	99,952	—
Accounts payable, accrued expenses, and other liabilities	2,610,943	2,471,259
Dividends payable	221,824	209,131
Total liabilities	14,148,409	12,840,152
Commitments and contingencies		
Redeemable noncontrolling interests	16,480	9,612
Alexandria Real Estate Equities, Inc.'s stockholders' equity:		
Common stock, \$0.01 par value per share, 400,000,000 shares authorized as of December 31, 2023 and 2022; 171,910,599 and 170,748,395 shares issued and outstanding as of December 31, 2023 and 2022, respectively	1,719	1,707
Additional paid-in capital	18,485,352	18,991,492
Accumulated other comprehensive loss	(15,896)	(20,812)
Alexandria Real Estate Equities, Inc.'s stockholders' equity	18,471,175	18,972,387
Noncontrolling interests	4,135,338	3,701,248
Total equity	22,606,513	22,673,635
Total liabilities, noncontrolling interests, and equity	\$ 36,771,402	\$ 35,523,399

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,		
	2023	2022	2021
Revenues:			
Income from rentals	\$ 2,842,456	\$ 2,576,040	\$ 2,108,249
Other income	43,243	12,922	5,901
Total revenues	2,885,699	2,588,962	2,114,150
Expenses:			
Rental operations	859,180	783,153	623,555
General and administrative	199,354	177,278	151,461
Interest	74,204	94,203	142,165
Depreciation and amortization	1,093,473	1,002,146	821,061
Impairment of real estate	461,114	64,969	52,675
Loss on early extinguishment of debt	—	3,317	67,253
Total expenses	2,687,325	2,125,066	1,858,170
Equity in earnings of unconsolidated real estate joint ventures	980	645	12,255
Investment (loss) income	(195,397)	(331,758)	259,477
Gain on sales of real estate	277,037	537,918	126,570
Net income	280,994	670,701	654,282
Net income attributable to noncontrolling interests	(177,355)	(149,041)	(83,035)
Net income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	103,639	521,660	571,247
Net income attributable to unvested restricted stock awards	(11,195)	(8,392)	(7,848)
Net income attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 92,444	\$ 513,268	\$ 563,399
Net income per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders:			
Basic	\$ 0.54	\$ 3.18	\$ 3.83
Diluted	\$ 0.54	\$ 3.18	\$ 3.82

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,		
	2023	2022	2021
Net income	\$ 280,994	\$ 670,701	\$ 654,282
Other comprehensive income (loss)			
Unrealized gains (losses) on foreign currency translation:			
Unrealized foreign currency translation gains (losses) arising during the period	4,916	(13,518)	(669)
Unrealized gains (losses) on foreign currency translation, net	4,916	(13,518)	(669)
Total other comprehensive income (loss)	4,916	(13,518)	(669)
Comprehensive income	285,910	657,183	653,613
Less: comprehensive income attributable to noncontrolling interests	(177,355)	(149,041)	(83,035)
Comprehensive income attributable to Alexandria Real Estate Equities, Inc.'s stockholders	\$ 108,555	\$ 508,142	\$ 570,578

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							
	Number of Common Shares	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total Equity	Redeemable Noncontrolling Interests
Balance as of December 31, 2020	136,690,329	\$ 1,367	\$ 11,730,970	\$ —	\$ (6,625)	\$ 1,706,724	\$ 13,432,436	\$ 11,342
Net income	—	—	—	571,247	—	82,169	653,416	866
Total other comprehensive loss	—	—	—	—	(669)	—	(669)	—
Contributions from and sales of noncontrolling interests	—	—	989,393	—	—	1,157,668	2,147,061	282
Distributions to and redemption of noncontrolling interests	—	—	—	—	—	(112,465)	(112,465)	(2,878)
Issuance of common stock	20,827,052	208	3,528,889	—	—	—	3,529,097	—
Issuance pursuant to stock plan	709,737	7	97,926	—	—	—	97,933	—
Taxes related to net settlement of equity awards	(183,238)	(2)	(34,336)	—	—	—	(34,338)	—
Dividends declared on common stock (\$4.48 per share)	—	—	—	(688,833)	—	—	(688,833)	—
Reclassification of distributions in excess of earnings	—	—	(117,586)	117,586	—	—	—	—
Balance as of December 31, 2021	158,043,880	1,580	16,195,256	—	(7,294)	2,834,096	19,023,638	9,612
Net income	—	—	—	521,660	—	148,236	669,896	805
Total other comprehensive loss	—	—	—	—	(13,518)	—	(13,518)	—
Contributions from and sales of noncontrolling interests	—	—	649,623	—	—	910,506	1,560,129	—
Distributions to and redemption of noncontrolling interests	—	—	(111)	—	—	(191,590)	(191,701)	(805)
Issuance of common stock	12,250,645	123	2,346,321	—	—	—	2,346,444	—
Issuance pursuant to stock plan	749,101	7	109,217	—	—	—	109,224	—
Taxes related to net settlement of equity awards	(295,231)	(3)	(47,448)	—	—	—	(47,451)	—
Dividends declared on common stock (\$4.72 per share)	—	—	—	(783,026)	—	—	(783,026)	—
Reclassification of distributions in excess of earnings	—	—	(261,366)	261,366	—	—	—	—
Balance as of December 31, 2022	170,748,395	\$ 1,707	\$ 18,991,492	\$ —	\$ (20,812)	\$ 3,701,248	\$ 22,673,635	\$ 9,612

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 (continued)
(Dollars in thousands)

	Alexandria Real Estate Equities, Inc.'s Stockholders' Equity							
	Number of Common Shares	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Loss	Noncontrolling Interests	Total Equity	Redeemable Noncontrolling Interests
Balance as of December 31, 2022	170,748,395	\$ 1,707	\$ 18,991,492	\$ —	\$ (20,812)	\$ 3,701,248	\$ 22,673,635	\$ 9,612
Net income	—	—	—	103,639	—	176,431	280,070	924
Total other comprehensive income	—	—	—	—	4,916	—	4,916	—
Contributions from and sales of noncontrolling interests	—	—	33,896	—	—	508,693	542,589	35,250
Distributions to and redemption of noncontrolling interests	—	—	—	—	—	(243,268)	(243,268)	(37,072)
Transfer of noncontrolling interests	—	—	—	—	—	(7,766)	(7,766)	7,766
Issuance of common stock	699,274	7	103,839	—	—	—	103,846	—
Issuance pursuant to stock plan	798,729	8	156,257	—	—	—	156,265	—
Taxes related to net settlement of equity awards	(335,799)	(3)	(43,595)	—	—	—	(43,598)	—
Dividends declared on common stock (\$4.96 per share)	—	—	—	(860,176)	—	—	(860,176)	—
Reclassification of distributions in excess of earnings	—	—	(756,537)	756,537	—	—	—	—
Balance as of December 31, 2023	171,910,599	\$ 1,719	\$ 18,485,352	\$ —	\$ (15,896)	\$ 4,135,338	\$ 22,606,513	\$ 16,480

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,		
	2023	2022	2021
Operating Activities			
Net income	\$ 280,994	\$ 670,701	\$ 654,282
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation and amortization	1,093,473	1,002,146	821,061
Impairment of real estate	461,114	64,969	52,675
Gain on sales of real estate	(277,037)	(537,918)	(126,570)
Loss on early extinguishment of debt	—	3,317	67,253
Equity in earnings of unconsolidated real estate joint ventures	(980)	(645)	(12,255)
Distributions of earnings from unconsolidated real estate joint ventures	3,257	3,374	20,350
Amortization of loan fees	15,486	13,549	11,441
Amortization of debt discounts (premiums)	1,207	384	(2,041)
Amortization of acquired above- and below-market leases	(93,331)	(74,346)	(54,780)
Deferred rent	(133,917)	(118,003)	(115,145)
Stock compensation expense	82,858	57,740	48,669
Investment loss (income)	195,397	331,758	(259,477)
Changes in operating assets and liabilities:			
Tenant receivables	(102)	(273)	(44)
Deferred leasing costs	(109,339)	(181,322)	(131,560)
Other assets	798	(18,960)	(24,591)
Accounts payable, accrued expenses, and other liabilities	110,672	77,850	60,929
Net cash provided by operating activities	1,630,550	1,294,321	1,010,197
Investing Activities			
Proceeds from sales of real estate	1,195,743	994,331	190,576
Additions to real estate	(3,418,296)	(3,307,313)	(2,089,849)
Purchases of real estate	(265,750)	(2,877,861)	(5,434,652)
Change in escrow deposits	(5,582)	155,968	(161,696)
Sales of interest in unconsolidated real estate joint ventures	—	—	394,952
Acquisitions of interest in unconsolidated real estate joint venture	—	—	(9,048)
Investments in unconsolidated real estate joint ventures	(658)	(1,442)	(13,666)
Return of capital from unconsolidated real estate joint ventures	—	471	—
Additions to non-real estate investments	(189,472)	(242,932)	(408,564)
Sales of and distributions from non-real estate investments	183,396	198,320	424,623
Net cash used in investing activities	\$ (2,500,619)	\$ (5,080,458)	\$ (7,107,324)

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,		
	2023	2022	2021
Financing Activities			
Borrowings under secured notes payable	\$ 59,957	\$ 49,715	\$ 10,005
Repayments of borrowings under secured notes payable	(30)	(934)	(17,979)
Payment for the defeasance of secured note payable	—	(198,304)	—
Proceeds from issuances of unsecured senior notes payable	996,205	1,793,318	1,743,716
Repayments of unsecured senior notes payable	—	—	(650,000)
Borrowings under unsecured senior line of credit	1,245,000	1,181,000	3,521,000
Repayments of borrowings under unsecured senior line of credit	(1,245,000)	(1,181,000)	(3,521,000)
Proceeds from issuance under commercial paper program	9,234,000	14,641,500	30,951,300
Repayments of borrowings under commercial paper program	(9,134,000)	(14,911,500)	(30,781,300)
Premium paid for early extinguishment of debt	—	—	(66,829)
Payments of loan fees	(16,047)	(35,612)	(18,938)
Taxes paid related to net settlement of equity awards	(24,592)	(47,289)	(34,338)
Proceeds from issuance of common stock	103,846	2,346,444	3,529,097
Dividends on common stock	(847,483)	(757,742)	(655,968)
Contributions from and sales of noncontrolling interests	547,391	1,542,347	2,026,486
Distributions to and purchases of noncontrolling interests	(245,091)	(192,171)	(118,891)
Net cash provided by financing activities	674,156	4,229,772	5,916,361
Effect of foreign exchange rate changes on cash, cash equivalents, and restricted cash	(1,291)	(887)	(1,712)
Net (decrease) increase in cash, cash equivalents, and restricted cash	(197,204)	442,748	(182,478)
Cash, cash equivalents, and restricted cash as of the beginning of period	857,975	415,227	597,705
Cash, cash equivalents, and restricted cash as of the end of period	\$ 660,771	\$ 857,975	\$ 415,227
Supplemental Disclosure and Non-Cash Investing and Financing Activities:			
Cash paid during the period for interest, net of interest capitalized	\$ 46,583	\$ 63,193	\$ 139,471
Accrued construction for current-period additions to real estate	\$ 629,351	\$ 561,538	\$ 474,751
Contribution of assets from real estate joint venture partner	\$ 33,250	\$ 19,146	\$ 118,750
Issuance of noncontrolling interest to joint venture partner	\$ (33,250)	\$ (19,146)	\$ (118,750)
Transfer of real estate assets from tenants	\$ 31,310	\$ —	\$ —
Payable for purchase of noncontrolling interest	\$ (35,250)	\$ —	\$ —
Right-of-use asset	\$ —	\$ 21,776	\$ 103,860
Lease liability	\$ —	\$ (21,776)	\$ (103,860)
Consolidation of real estate assets in connection with our acquisition of partner's interest in unconsolidated real estate joint venture	\$ —	\$ —	\$ 19,613
Assumption of secured note payable in connection with acquisition of partner's interest in unconsolidated real estate joint venture	\$ —	\$ —	\$ (14,558)
Deferred purchase price in connection with acquisitions of real estate	\$ —	\$ —	\$ (81,119)
Assignment of secured notes payable in connection with sale of real estate	\$ —	\$ —	\$ 28,200

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® life science REIT, is the pioneer of the life science real estate niche since its founding in 1994. Alexandria is the preeminent and longest-tenured owner, operator, and developer of collaborative life science, agtech, and advanced technology mega campuses in AAA innovation cluster locations, including Greater Boston, the San Francisco Bay Area, New York City, San Diego, Seattle, Maryland, and Research Triangle. Alexandria has a total market capitalization of \$33.1 billion and an asset base in North America of 73.5 million SF as of December 31, 2023. 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.

Any references to our total 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 outside the scope of our independent registered public accounting firm’s procedures.

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 accounting 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.

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 information on specific 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 life science, agtech, and technology tenants. 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 innovation cluster locations, and have similar economic characteristics. Our chief operating decision makers, represented by our Executive Chairman and our Chief Executive Officer and Chief Investment Officer, 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).

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

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.

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 related to acquisitions of real estate or in-substance real estate (such as legal and other 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 noncancelable 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 that 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)

Depreciation and amortization

The values allocated to buildings and building improvements, land improvements, tenant improvements, and equipment are depreciated on a straight-line basis. For buildings and building improvements, we depreciate using the shorter of the respective ground lease terms or their estimated useful lives, not to exceed 40 years. Land improvements are depreciated over their estimated useful lives, not to exceed 20 years. Tenant improvements are depreciated over their respective lease terms or estimated useful lives, and equipment is depreciated over the shorter of the lease term or its estimated useful life. The values of the right-of-use assets are amortized on a straight-line basis over the remaining terms of each related lease. The values of acquired in-place leases and associated favorable intangibles (i.e., acquired above-market leases) are classified in other assets in our 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. For additional details, refer to Note 18 – “Assets classified as held for sale” to our consolidated financial statements.

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 or 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 in the property. If we retain a controlling interest in the property 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 sale of a partial interest of real estate, we recognize a gain or loss as if 100% of the asset were sold.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

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 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 of the asset to its estimated fair value. If an impairment charge is not required to be recognized, the recognition of depreciation or amortization is adjusted prospectively, as necessary, to reduce the carrying amount of the asset 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, which is different from the held and used impairment model. Under the held for sale impairment model, an impairment charge 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 12 properties in Canada. The functional currency for our subsidiaries operating in the U.S. is the U.S. dollar. The local currency of a foreign subsidiary serves as its functional currency. 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 (loss) as a separate component of total equity and are excluded from net income (loss).

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 (loss) are reclassified to net income (loss) when realized upon the sale of our investment or upon the complete or substantially complete liquidation of our investment.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Investments

We hold investments in publicly traded companies and privately held entities primarily involved in the life science, agtech, and technology industries. As a REIT, we generally limit our ownership of each individual entity's voting stock to less than 10%. We evaluate each investment to determine whether we have the ability to exercise significant influence, but not control, over an investee. We evaluate investments in which our ownership is equal to or greater than 20%, but less than or equal to 50%, of an investee's voting stock with a presumption that we have this ability. For our investments in limited partnerships that maintain specific ownership accounts, we presume that such ability exists when our ownership interest exceeds 3% to 5%. In addition to our ownership interest, we consider whether we have a board seat or whether we participate in the investee's policymaking process, among other criteria, to determine if we have the ability to exert significant influence, but not control, over an investee. If we determine that we have such ability, we account for the investment under the equity method, as described below.

Investments accounted for under the equity method

Under the equity method of accounting, we initially recognize our investment at cost and subsequently adjust the carrying amount of the investment for our share of earnings or losses reported by the investee, distributions received, and other-than-temporary impairments. For more information about our investments accounted for under the equity method, refer to Note 7 – "Investments" to our consolidated financial statements.

Investments that do not qualify for the equity method of accounting

For investees over which we determine that we do not have the ability to exercise significant influence or control, we account for each investment depending on whether it is an investment in a (i) publicly traded company, (ii) privately held entity that reports NAV per share, or (iii) privately held entity that does not report NAV per share, as described below.

Investments in publicly traded companies

Our investments in publicly traded companies are classified as investments with readily determinable fair values and are presented at fair value in our consolidated balance sheets, with changes in fair value classified in investment income (loss) in our consolidated statements of operations. The fair values for our investments in publicly traded companies are determined based on sales prices or quotes available on securities exchanges.

Investments in privately held companies

Our investments in privately held entities without readily determinable fair values consist of (i) investments in privately held entities that report NAV per share and (ii) investments in privately held entities that do not report NAV per share. These investments are accounted for as follows:

Investments in privately held entities that report NAV per share

Investments in privately held entities that report NAV per share, such as our privately held investments in limited partnerships, are presented at fair value using NAV as a practical expedient, with changes in fair value classified in investment income (loss) in our consolidated statements of operations. We use NAV per share 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 per share

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 classified in investment income (loss) in our consolidated statements of operations.

An observable price arises from an orderly transaction for an identical or similar investment of the same issuer, which is observed by an investor without expending undue cost and effort. Observable price changes result from, among other things, equity transactions of the same issuer executed during the reporting period, including subsequent equity offerings or other reported equity transactions related to the same issuer. To determine whether these transactions are indicative of an observable price change, we evaluate, among other factors, whether these transactions have similar rights and obligations, including voting rights, distribution preferences, and conversion rights to the investments we hold.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Impairment evaluation of equity method investments and investments in privately held entities that do not report NAV per share

We monitor equity method investments and investments in privately held entities that do not report NAV per share 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, 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, including the research and development of technology and products that the investee is bringing or attempting to bring to the market;
- (iv) significant concerns about the investee's ability to continue as a going concern; and/or
- (v) a decision by investors to cease providing support or reduce their financial commitment to the investee.

If such indicators are present, we are required to estimate the investment's fair value and immediately recognize an impairment charge in an amount equal to the investment's carrying value in excess of its estimated fair value.

Investment income/loss recognition and classification

We recognize both realized and unrealized gains and losses in our consolidated statements of operations, classified in investment income (loss) in our consolidated statements of operations. Unrealized gains and losses represent:

- (i) changes in fair value for investments in publicly traded companies;
- (ii) changes in NAV for investments in privately held entities that report NAV per share;
- (iii) observable price changes for investments in privately held entities that do not report NAV per share; and
- (iv) our share of unrealized gains or losses reported by our equity method investees.

Realized gains and losses on our investments represent the difference between proceeds received upon disposition of investments and their historical or adjusted cost basis. For our equity method investments, realized gains and losses represent our share of realized gains or losses reported by the investee. Impairments are realized losses, which result in an adjusted cost basis, and represent charges to reduce the carrying values of investments in privately held entities that do not report NAV per share and equity method investments, if impairments are deemed other than temporary, to their estimated fair value.

Revenues

The table below provides details of our consolidated total revenues for the years ended December 31, 2023, 2022, and 2021 (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Income from rentals:			
Revenues subject to the lease accounting standard:			
Operating leases	\$ 2,802,567	\$ 2,534,862	\$ 2,081,362
Direct financing and sales-type leases ⁽¹⁾	2,608	3,094	3,489
Revenues subject to the lease accounting standard	2,805,175	2,537,956	2,084,851
Revenues subject to the revenue recognition accounting standard	37,281	38,084	23,398
Income from rentals	2,842,456	2,576,040	2,108,249
Other income	43,243	12,922	5,901
Total revenues	\$ 2,885,699	\$ 2,588,962	\$ 2,114,150

(1) We completed the sale of our real estate assets subject to sales-type leases in May 2022 and have had no sales-type leases since then.

During the years ended December 31, 2023, 2022, and 2021, revenues that were subject to the lease accounting standard aggregated \$2.8 billion or 97.2%, \$2.5 billion or 98.0%, and \$2.1 billion or 98.6% of our total revenues, respectively. Our other income consisted primarily of management fees and interest income earned during each year presented. For a detailed discussion related to our revenue streams, refer to the "Lease accounting" subsection and the "Recognition of revenue arising from contracts with customers" section within this Note 2 to our consolidated financial statements.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Lease accounting

Definition and classification of a lease

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.

We classify our leases as either finance leases or operating leases if we are the lessee, or sales-type, direct financing, or operating leases if we are the lessor. We use the following criteria to determine if a lease is a finance lease (as a lessee) or sales-type or direct financing lease (as a lessor):

- (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 we meet any of the above criteria, we account for the lease as a finance, a sales-type, or a direct financing lease. If we do not meet any of the criteria, we account for the lease as an operating lease.

A lease is accounted for as a sales-type lease if it is considered to transfer control of the underlying asset to the lessee. A lease is accounted for as a direct financing lease if risks and rewards are conveyed without the transfer of control, which is normally indicated by the existence of a residual value guarantee from an unrelated third party other than the lessee.

This classification will determine the method of recognition of the lease:

- For an operating lease, we recognize income from rentals if we are the lessor, or rental operations expense if we are the lessee, over the term of the lease on a straight-line basis.
- For a sales-type lease or a direct financing lease, we recognize the income from rentals, or for a finance lease, we recognize rental operations expense, over the term of the lease using the effective interest method.
- At inception of a sales-type lease or a direct financing lease, if we determine the fair value of the leased property is lower than its carrying amount, we recognize a selling loss immediately at lease commencement. If fair value exceeds the carrying amount of a lease, a gain is recognized at lease commencement on a sales-type lease. For a direct financing lease, a gain is deferred at lease commencement and amortized over the lease term.

Lessor accounting

Costs to execute leases

We capitalize initial direct costs, which represent only incremental costs to execute 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.

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 property taxes, insurance, utilities, repairs and maintenance, and common area expenses.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

If the lease component is the predominant component, we account for all revenues under such lease as a single component in accordance with the 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 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. Furthermore, we may recognize a general allowance at a portfolio level (not the individual level) if we do not expect to collect future lease payments in full.

For each lease for which we determine that collectibility of future lease payments is not probable, we cease the recognition of income from rentals on a straight-line basis and limit the recognition of income to the payments collected from the lessee. We do not resume straight-line recognition of income from rentals for these leases until we determine that the collectibility of future payments related to these leases is probable.

We also record a general allowance related to the deferred rent balances that at the portfolio level (not the individual level) are not expected to be collected in full through the lease term. During the year ended December 31, 2023, we recorded adjustments aggregating \$1.0 million, to increase the general allowance balance. As of December 31, 2023, our general allowance balance aggregated \$21.4 million.

Direct financing and sales-type leases

Income from rentals related to direct financing and sales-type leases 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 lease. This initial net investment is determined by aggregating the present values of the total future lease payments attributable to the lease and the estimated residual value of the property, less any unearned income related to our direct financing lease. Over the lease term, the investment in the lease accretes in value, producing a constant periodic rate of return on the net investment in the lease. Income from these leases is classified in income from rentals in our consolidated statements of operations. Our net investment is reduced over time as lease payments are received.

We evaluate our net investment in direct financing and sales-type leases for impairment under the current expected credit loss accounting standard. For more information, refer to the "Allowance for credit losses" section within this Note 2 to our consolidated financial statements.

As a lessor, we classify a lease with variable lease payments that do not depend on an index or a rate as an operating lease on the commencement date of the lease if both of the following criteria are met:

- (i) The lease would have been classified as a sales-type lease or direct financing lease under the current lease accounting standard; and
- (ii) The sales-type lease or direct financing lease classification would have resulted in a selling loss at lease commencement.

We do not derecognize the underlying asset and do not recognize a loss upon lease commencement but continue to depreciate the underlying asset over its useful life.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

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 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.

Total revenues subject to the revenue recognition accounting standard and classified within income from rentals in our consolidated statements of operations for the years ended December 31, 2023 and 2022 included \$37.3 million and \$38.1 million, respectively, primarily related to short-term parking revenues associated with long-term lease agreements. Short-term parking revenues do not qualify for the single component accounting policy, as 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Allowance for credit losses

We are required to estimate and recognize lifetime expected losses, rather than incurred losses, for most of our financial assets measured at amortized cost and certain other instruments, including trade and other receivables (excluding receivables arising from operating leases), 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 recognition of such expected losses, even if the expected risk of credit loss is remote, typically results in earlier recognition of credit losses. 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 to our consolidated financial statements.

At each reporting date, we reassess our credit loss allowances on the aggregate net investment of our direct financing and sales-type leases and our trade receivables. If necessary, we recognize a credit loss adjustment for our current estimate of expected credit losses, which is classified within rental operations in our consolidated statements of operations. For further details, refer to Note 5 – “Leases” to our consolidated financial statements.

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, China, and other international locations. Our tax returns are subject to routine examination in various jurisdictions for the 2017 through 2022 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. 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 at fair value on the grant date and recognized over the recipient’s required service period.

Forward equity sales agreements

We account for our forward equity sales agreements in accordance with the accounting guidance governing financial instruments and derivatives. Under the accounting guidance, none of our forward equity sales agreements outstanding during the year 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 also 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, 2023, we had no forward equity sales agreements outstanding.

Issuer and guarantor subsidiaries of guaranteed securities

Generally, a parent entity of an issuer that holds guaranteed securities must provide separate subsidiary issuer or guarantor financial statements, unless it qualifies for disclosure exceptions. A parent entity may be eligible for disclosure exceptions if it meets the following criteria:

- (i) The subsidiary issuer or guarantor is a consolidated subsidiary of the parent company, and
- (ii) The subsidiary issues a registered security that is:
 - Issued jointly and severally with the parent company, or
 - Fully and unconditionally guaranteed by the parent company.

A parent entity that meets the above criteria may instead present summarized financial information (“alternative disclosures”) either within the consolidated financial statements or within the “Management’s discussion and analysis of financial condition and results of operations” section in Item 7. We evaluated the criteria and determined that we are eligible for the disclosure exceptions, which allow us to provide alternative disclosures; as such, we present alternative disclosures within the “Management’s discussion and analysis of financial condition and results of operations” section in Item 7.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Loan fees

Fees incurred in obtaining long-term financing are capitalized and classified with the corresponding debt instrument appearing on our consolidated balance sheets. Loan fees related to our unsecured senior line of credit are capitalized and 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.

Distributions from equity method investments

We use the “nature of the distribution” approach to determine the classification within our consolidated statements of cash flows of cash distributions received from equity method investments, including our unconsolidated real estate joint ventures and equity method non-real estate investments. 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.

Restricted cash

We present cash and cash equivalents separately from restricted cash within our consolidated balance sheets. However, 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 consolidated balance sheets and the consolidated statements 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.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Recent accounting pronouncements

On June 30, 2022, the FASB issued an ASU to clarify the guidance on fair value measurement of an equity security that is subject to a contractual sale restriction. Currently, some entities apply a discount to the price of their equity security investments subject to a contractual sale restriction, whereas others do not. This update eliminates the diversity in practice by clarifying that a recognition of a discount related to a contractual sale restriction is not permitted. We hold certain equity investments in publicly held entities that are subject to contractual sale restrictions. We do not recognize such discounts; therefore, the adoption of this accounting standard will have no impact on our consolidated financial statements. This update does not change the application of existing measurement guidance on share-based compensation. Pursuant to the disclosure requirements of this new standard, the footnotes to our consolidated financial statements will include incremental disclosures related to equity securities that are subject to contractual sale restrictions, including (i) the fair value of such equity securities reflected in the balance sheet, (ii) the nature and remaining duration of the corresponding restrictions, and (iii) any circumstances that could cause a lapse in the restrictions. We adopted this accounting standard on January 1, 2024.

On August 23, 2023, the FASB issued an ASU that will require a joint venture, upon formation, to measure its assets and liabilities at fair value in its standalone financial statements. A joint venture will recognize the difference between the fair value of its equity and the fair value of its identifiable assets and liabilities as goodwill (or an equity adjustment, if negative) using the business combination accounting guidance regardless of whether the net assets meet the definition of a business. The new accounting standard is intended to reduce diversity in practice.

This ASU will apply to joint ventures that meet the definition of a corporate joint venture under GAAP, thus limiting its scope to joint ventures not controlled and therefore not consolidated by any joint venture investor. We generally seek to maintain control of our real estate joint ventures and therefore expect this ASU to apply to a limited number, if any, of our unconsolidated real estate joint ventures formed after the adoption of this accounting standard. This standard does not change the accounting of investments by the investors in a joint venture in their individual financial statements, and therefore, its adoption will have no impact on our consolidated financial statements. This accounting standard will become effective for joint ventures with a formation date on or after January 1, 2025, with early adoption permitted. We expect to adopt this ASU on January 1, 2025.

On November 27, 2023, the FASB issued an ASU to require the disclosure of segment expenses if they are (i) significant to the segment, (ii) regularly provided to the chief operating decision maker ("CODM"), and (iii) included in each reported measure of a segment's profit or loss. Public entities will be required to provide this disclosure quarterly. In addition, this ASU requires an annual disclosure of the CODM's title and a description of how the CODM uses the segment's profit/loss measure to assess segment performance and to allocate resources. Pursuant to this ASU, the footnotes to our consolidated financial statements will include incremental disclosures related to our single reportable segment, including the disclosures about our CODM's review of our consolidated net operating income — the profit/loss measure of our single reportable segment — and a reconciliation of consolidated net operating income to our consolidated net income. Compliance with these and certain other disclosure requirements will be required for our annual report on Form 10-K for the year 2024, and for subsequent quarterly and annual reports, with early adoption permitted. We expect to adopt this ASU on January 1, 2025.

3. INVESTMENTS IN REAL ESTATE

Our consolidated investments in real estate, including real estate assets classified as held for sale as described in Note 18 – “Assets classified as held for sale” to our consolidated financial statements, consisted of the following as of December 31, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Rental properties:		
Land (related to rental properties)	\$ 4,385,515	\$ 4,284,731
Buildings and building improvements	20,320,866	18,605,627
Other improvements	3,681,628	2,677,763
Rental properties	28,388,009	25,568,121
Development and redevelopment projects	8,226,309	8,715,335
Gross investments in real estate – North America	36,614,318	34,283,456
Less: accumulated depreciation – North America	(4,980,807)	(4,349,780)
Net investments in real estate – North America	31,633,511	29,933,676
Net investments in real estate – Asia	—	11,764
Investments in real estate	\$ 31,633,511	\$ 29,945,440

Acquisitions

Our real estate asset acquisitions during the year ended December 31, 2023 consisted of the following (dollars in thousands):

Market	Number of Properties	Square Footage			Purchase Price
		Future Development	Active Development/Redevelopment	Operating With Future Development/Redevelopment	
Canada	1	—	—	247,743	\$ 100,837
Other	4	1,089,349	110,717	185,676	158,139
Total	5	1,089,349	110,717	433,419	\$ 258,976 ⁽¹⁾

(1) Represents the aggregate contractual purchase price of our acquisitions, which differs from purchases of real estate in our consolidated statements of cash flows due to the timing of payment, closing costs, and other acquisition adjustments such as prorations of rents and expenses.

Based upon our evaluation of each acquisition, we determined that substantially all of the fair value related to each acquisition was concentrated in a single identifiable asset or a group of similar identifiable assets, or was associated with a land parcel with no operations. Accordingly, each transaction did not meet the definition of a business and therefore 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.

During the year ended December 31, 2023, we acquired five properties for an aggregate purchase price of \$259.0 million. In connection with our acquisitions, we recorded in-place lease assets aggregating \$15.7 million and below-market lease liabilities in which we are the lessor aggregating \$6.0 million. As of December 31, 2023, the weighted-average amortization period remaining on our in-place leases and below-market leases acquired during the year ended December 31, 2023 was 3.3 years and 2.0 years, respectively, and 3.0 years in total.

Acquired below-market leases

The balances of acquired below-market tenant leases existing as of December 31, 2023 and 2022 and related accumulated amortization, classified in accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets as of December 31, 2023 and 2022, were as follows (in thousands):

	December 31,	
	2023	2022
Acquired below-market leases	\$ 696,875	\$ 730,441
Accumulated amortization	(374,835)	(312,785)
	\$ 322,040	\$ 417,656

3. INVESTMENTS IN REAL ESTATE (continued)

For the years ended December 31, 2023, 2022, and 2021, we recognized in rental revenues approximately \$96.9 million, \$78.0 million, and \$57.7 million, respectively, related to the amortization of acquired below-market leases existing as of the end of each respective year.

The weighted-average amortization period of the value of acquired below-market leases existing as of December 31, 2023 was approximately 6.3 years, and the estimated annual amortization of the value of acquired below-market leases as of December 31, 2023 is as follows (in thousands):

Year	Amount
2024	\$ 86,595
2025	38,796
2026	30,526
2027	29,995
2028	18,000
Thereafter	118,128
Total	\$ 322,040

Acquired in-place leases

The balances of acquired in-place leases and related accumulated amortization, classified in other assets in our consolidated balance sheets as of December 31, 2023 and 2022, were as follows (in thousands):

	December 31,	
	2023	2022
Acquired in-place leases	\$ 1,115,259	\$ 1,150,690
Accumulated amortization	(653,646)	(535,052)
	\$ 461,613	\$ 615,638

Amortization for these intangible assets, classified in depreciation and amortization expense in our consolidated statements of operations, was approximately \$160.6 million, \$169.5 million, and \$146.6 million for the years ended December 31, 2023, 2022, and 2021, respectively. The weighted-average amortization period of the value of acquired in-place leases was approximately 8.1 years, and the estimated annual amortization of the value of acquired in-place leases as of December 31, 2023 is as follows (in thousands):

Year	Amount
2024	\$ 107,883
2025	75,610
2026	58,029
2027	48,279
2028	36,171
Thereafter	135,641
Total	\$ 461,613

3. INVESTMENTS IN REAL ESTATE (continued)

Sales of real estate assets and impairment charges

Our completed dispositions of and sales of partial interests in real estate assets during the year ended December 31, 2023 consisted of the following (dollars in thousands):

Property	Submarket/Market	Date of Sale	Interest Sold	RSF	Sales Price	Gain on Sales of Real Estate	Consideration (Below)/Above Book Value ⁽¹⁾
<i>Partial interest sales⁽²⁾:</i>							
15 Necco Street	Seaport Innovation District/Greater Boston	4/11/23	18%	345,996	\$ 66,108	N/A	(7,761)
9625 Towne Centre Drive	University Town Center/San Diego	6/21/23	20.1%	163,648	32,261	N/A	15,553
					98,369		\$ 7,792
<i>Dispositions of real estate:</i>							
11119 North Torrey Pines Road	Torrey Pines/San Diego	5/4/23	100%	72,506	86,000	\$ 27,585	
225, 231, 266, and 275 Second Avenue and 780 and 790 Memorial Drive	Route 128 and Cambridge/Inner Suburbs/Greater Boston	6/13/23	100%	428,663	365,226	187,225	
640 Memorial Drive, 100 Beaver Street, and 11025 and 11035 Roselle Street	Cambridge and Inner Suburbs and Route 128/Greater Boston and Sorrento Valley/San Diego	12/20/23	100%	361,102	312,244	59,653	
380 and 420 E Street	Seaport Innovation District/Greater Boston	12/20/23	100%	195,506	86,969	(3)	
275 Grove Street	Route 128/Greater Boston	6/27/23	100%	509,702	109,349	(3)	
421 Park Drive	Fenway/Greater Boston	9/19/23	(4)	(4)	174,412	—	
Other					81,845	2,574	
					1,216,045	\$ 277,037	
Total 2023 dispositions					\$ 1,314,414		

(1) Related to sales of partial interests in real estate assets for which we retained control and therefore continue to consolidate. We recognized the difference between the consideration received and the book value of partial interests sold in additional paid-in capital, with no gain or loss recognized in earnings.

(2) Refer to the "Sales of partial interests" section in Note 4 - "Consolidated and unconsolidated real estate joint ventures" to our consolidated financial statements for additional information.

(3) Refer to the "Impairment charges" subsection below for information related to impairment charges recognized in connection with this transaction.

(4) Represents the disposition of 268,023 RSF in a 660,034 RSF active development at 421 Park Drive in our Fenway submarket. The proceeds from this transaction will help fund the construction of our remaining 392,011 RSF of the project. The buyer will fund the remaining costs to construct its 268,023 RSF, and as such these costs are not included in our projected construction spending. We will develop and operate the completed project and will earn development fees over the next three years.

(5) Represents the aggregate contractual sales price of our dispositions, which differs from proceeds from sales of real estate and contributions from and sales of noncontrolling interests in our consolidated statements of cash flows under "Investing activities" and "Financing activities," respectively, primarily due to the timing of payment, closing costs, and other sales adjustments such as prorations of rents and expenses.

3. INVESTMENTS IN REAL ESTATE (continued)

Impairment charges

During the year ended December 31, 2023, we recognized impairment charges aggregating \$461.1 million classified in impairment of real estate in our consolidated statement of operations, primarily related to non-laboratory properties that are not integral to our mega campus strategy, including:

- Impairment charge of \$145.4 million recognized to reduce the carrying amount of a three-building office campus aggregating 509,702 RSF at 275 Grove Street in our Route 128 submarket to its estimated fair value less costs to sell, upon meeting the criteria for classification as held for sale. At the time of our acquisition in January 2020, the campus was fully occupied with a weighted-average remaining lease term of 6.1 years. We had intended to convert the campus into laboratory space through redevelopment upon the expiration of the acquired in-place leases. Upon our reevaluation of the project's financial outlook and its alignment with our mega campus strategy, we decided not to proceed with this project. We completed the sale of this campus in June 2023 for a sales price of \$109.3 million, with no gain or loss recognized in earnings.
- Impairment charge of \$94.8 million recognized to reduce the carrying amounts of one industrial property and one self-storage property in our Seaport Innovation District submarket to their respective estimated fair values less costs to sell, upon meeting the criteria for classification as held for sale. We initially acquired these real estate assets with the intention to entitle the site as a life science campus, demolish the properties upon expiration of the acquired in-place leases, and ultimately develop life science properties. Since acquiring these assets, the macroeconomic environment has changed, and upon our reevaluation of the projects' financial outlook and their alignment with our mega campus strategy, we decided not to proceed with these projects. Our decision was also based on the location's current strategic disadvantage for laboratory development within this submarket. We completed the sale of these assets in December 2023 for a sales price of \$87.0 million, with no gain or loss recognized in earnings.
- Impairment charge of \$93.5 million recognized to reduce the carrying amount of an office property aggregating 349,947 RSF in our New York City submarket to its estimated fair value less costs to sell, upon meeting the criteria for classification as held for sale. We initially acquired this real estate asset with the intention to entitle it as a life science property, and, upon expiration of the acquired in-place lease, either demolish the building for development or redevelop the existing building into a life science property. Since acquiring this property, the macroeconomic environment has changed. Upon our reevaluation of the project's financial outlook and its alignment with our mega campus strategy, we decided not to proceed with this project. We expect to complete the sale of this asset in 2024.
- Impairment charge of \$36.1 million recognized to reduce the carrying amount of a development land parcel in our Seaport Innovation District submarket to its estimated fair value less costs to sell, upon meeting the criteria for classification as held for sale. We initially acquired this real estate asset with the intention to entitle it as a life science asset and ultimately develop a life science property. Since acquiring this asset, the macroeconomic environment has changed. Upon our reevaluation of the project's financial outlook and its alignment with our mega campus strategy, we decided not to proceed with this project. We expect to complete the sale of this asset in 2024.
- Impairment charge of \$29.7 million recognized to reduce the carrying amount of one office property aggregating 143,943 RSF in our Bothell submarket to its estimated fair value less costs to sell, upon meeting the criteria for classification as held for sale. This asset was classified as held for sale upon our evaluation of the alignment of this project with our mega campus strategy and our decision to reallocate substantial near-term capital that the repositioning of this asset would have otherwise required toward our other projects with greater value-creation opportunities. We expect to complete the sale of this asset in 2024.
- Impairment charges of \$20.8 million recognized to reduce the carrying amounts of three non-laboratory properties classified as held for sale aggregating 230,704 RSF, located in our Greater Boston and Texas markets, to their respective estimated fair values less costs to sell, upon meeting the criteria for classification as held for sale. These assets were classified as held for sale upon our reevaluation of the projects' financial outlook, their alignment with our mega campus strategy, and our decision to reallocate substantial near-term capital that the development and redevelopment of these assets would have otherwise required toward our other projects with greater value-creation opportunities. We completed the sale of one of these properties in December 2023, with no gain or loss recognized in earnings, and we expect to sell the remaining real estate assets in 2024.
- Impairment charge of \$17.1 million recognized to fully write down the carrying amount of our one remaining property in Asia.

Refer to Note 18 – “Assets classified as held for sale” to our consolidated financial statements for additional information.

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, 2023, our real estate joint ventures held the following properties:

Property	Market	Submarket	Our Ownership Interest ⁽¹⁾
<i>Consolidated real estate joint ventures⁽²⁾:</i>			
50 and 60 Binney Street	Greater Boston	Cambridge/Inner Suburbs	34.0 %
75/125 Binney Street	Greater Boston	Cambridge/Inner Suburbs	40.0 %
100 and 225 Binney Street and 300 Third Street	Greater Boston	Cambridge/Inner Suburbs	30.0 %
99 Coolidge Avenue	Greater Boston	Cambridge/Inner Suburbs	75.0 %
15 Necco Street	Greater Boston	Seaport Innovation District	56.7 %
Other joint venture	Greater Boston	-	61.2 % ⁽⁴⁾
Alexandria Center® for Science and Technology – Mission Bay ⁽³⁾	San Francisco Bay Area	Mission Bay	25.0 %
1450 Owens Street	San Francisco Bay Area	Mission Bay	40.6 % ⁽⁵⁾
601, 611, 651, 681, 685, and 701 Gateway Boulevard	San Francisco Bay Area	South San Francisco	50.0 %
751 Gateway Boulevard	San Francisco Bay Area	South San Francisco	51.0 %
211 and 213 East Grand Avenue	San Francisco Bay Area	South San Francisco	30.0 %
500 Forbes Boulevard	San Francisco Bay Area	South San Francisco	10.0 %
Alexandria Center® for Life Science – Millbrae	San Francisco Bay Area	South San Francisco	47.1 %
3215 Merryfield Row	San Diego	Torrey Pines	30.0 %
Campus Point by Alexandria ⁽⁶⁾	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	30.0 %
SD Tech by Alexandria ⁽⁷⁾	San Diego	Sorrento Mesa	50.0 %
Pacific Technology Park	San Diego	Sorrento Mesa	50.0 %
Summers Ridge Science Park ⁽⁸⁾	San Diego	Sorrento Mesa	30.0 %
1201 and 1208 Eastlake Avenue East and 199 East Blaine Street	Seattle	Lake Union	30.0 %
400 Dexter Avenue North	Seattle	Lake Union	30.0 %
800 Mercer Street	Seattle	Lake Union	60.0 %
<i>Unconsolidated real estate joint ventures⁽²⁾:</i>			
1655 and 1725 Third Street	San Francisco Bay Area	Mission Bay	10.0 %
1401/1413 Research Boulevard	Maryland	Rockville	65.0 % ⁽⁹⁾
1450 Research Boulevard	Maryland	Rockville	73.2 % ⁽⁹⁾
101 West Dickman Street	Maryland	Beltsville	57.9 % ⁽⁹⁾

(1) Refer to the table on the next page that shows the categorization of our joint ventures under the consolidation framework.

(2) In addition to the real estate joint ventures listed, various partners hold insignificant noncontrolling interests in three other consolidated real estate joint ventures in North America and we hold an interest in one other insignificant unconsolidated real estate joint venture in North America.

(3) Includes 409 and 499 Illinois Street, 1500 and 1700 Owens Street, and 455 Mission Bay Boulevard South.

(4) Refer to the discussion below and to Note 11 – “Accounts payable, accrued expenses, and other liabilities” and Note 19 – “Subsequent events” to our consolidated financial statements for additional information.

(5) The noncontrolling interest share of our joint venture partner is anticipated to increase to 75% as our partner contributes construction funding to the project over time.

(6) Includes 10210, 10260, 10290, and 10300 Campus Point Drive and 4110, 4135, 4155, 4161, 4165, 4224, and 4242 Campus Point Court.

(7) Includes 9605, 9645, 9675, 9685, 9725, 9735, 9805, 9808, 9855, and 9868 Scranton Road and 10055, 10065, and 10075 Barnes Canyon Road.

(8) Includes 9965, 9975, 9985, and 9995 Summers Ridge Road.

(9) Represents a joint venture with a local real estate operator in which our joint venture partner manages the day-to-day activities that significantly affect the economic performance of the joint venture.

Our consolidation policy is 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.

4. CONSOLIDATED AND UNCONSOLIDATED REAL ESTATE JOINT VENTURES (continued)

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.

The table below shows the categorization of our real estate joint ventures under the consolidation framework:

Property ⁽¹⁾	Consolidation Model	Voting Interest	Consolidation Analysis	Conclusion
50 and 60 Binney Street 75/125 Binney Street 100 and 225 Binney Street and 300 Third Street 99 Coolidge Avenue 15 Necco Street Other joint venture (Greater Boston) Alexandria Center® for Science and Technology - Mission Bay 1450 Owens Street 601, 611, 651, 681, 685, and 701 Gateway Boulevard 751 Gateway Boulevard 211 and 213 East Grand Avenue 500 Forbes Boulevard Alexandria Center® for Life Science - Millbrae 3215 Merryfield Row Campus Point by Alexandria 5200 Illumina Way 9625 Towne Centre Drive SD Tech by Alexandria Pacific Technology Park Summers Ridge Science Park 1201 and 1208 Eastlake Avenue East and 199 East Blaine Street 400 Dexter Avenue North 800 Mercer Street 1401/1413 Research Boulevard 1450 Research Boulevard 101 West Dickman Street 1655 and 1725 Third Street	VIE model	Not applicable under 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
			<p>We do not control the joint venture and are therefore not the primary beneficiary.</p>	Equity method of accounting
	Voting model	Does not exceed 50%	Our voting interest is 50% or less.	

(1) In addition to the real estate joint ventures listed, various partners hold insignificant noncontrolling interests in three other consolidated real estate joint ventures in North America and we hold an interest in one other insignificant unconsolidated real estate joint venture in North America.

4. CONSOLIDATED AND UNCONSOLIDATED REAL ESTATE JOINT VENTURES (continued)

Sales of partial interests

We evaluated each of our real estate joint ventures described below under the consolidation framework outlined above and further detailed in the “Consolidation” section of Note 2 – “Summary of significant accounting policies” to our consolidated financial statements. Upon completion of each partial interest sale, we continued to consolidate each property. Accordingly, we accounted for these sales of partial interests as equity transactions, with the differences between consideration received and the book value of partial interests sold recognized in additional paid-in capital and no gain or loss recognized in earnings.

Refer to the “Consolidation” section in Note 2 – “Summary of significant accounting policies” to our consolidated financial statements for additional information. For a summary of our completed dispositions of and sales of partial interests in real estate assets during the year ended December 31, 2023, refer to the “Sales of real estate assets and impairment charges” section in Note 3 – “Investments in real estate” to our consolidated financial statements.

15 Necco Street

As of March 31, 2023, our investment in 15 Necco Street, a development project located in our Seaport Innovation District submarket, was held in a consolidated real estate joint venture in which 90% was owned by us and 10% was owned by our existing joint venture partner.

In April 2023, an investor acquired a 20% interest in our 15 Necco Street property, which consisted of an 18% interest sold by us and a 2% interest sold by our existing partner. The sales price of the 18% interest sold by us was \$66.1 million, and the \$7.8 million difference between the consideration received and the book value of our partial interest sold was recognized as an adjustment to additional paid-in capital. Upon completion of the sale, our ownership interest in the consolidated real estate joint venture was 72% and our existing and new partners’ noncontrolling interests were 8% and 20%, respectively. We expect our new joint venture partner to contribute capital to fund construction of the project over time and to accrete its ownership interest in the joint venture to 37% from 20%.

9625 Towne Centre Drive

As of March 31, 2023, our investment in 9625 Towne Centre Drive, aggregating 163,648 RSF located in our University Town Center submarket, was held in a consolidated real estate joint venture in which 50.1% was owned by us and 49.9% was owned by a joint venture partner.

In June 2023, an investor acquired a 70% interest in our 9625 Towne Centre Drive property, which consisted of a 20.1% partial interest sold by us and a 49.9% interest sold by our previous joint venture partner, which it had entirely and solely held. The consideration paid was based on an agreed-upon value of \$160.5 million for the entire property. Our portion of the sales price for the 20.1% partial interest sold by us was \$32.3 million, and the \$15.6 million of consideration received in excess of the book value of our partial interest sold was recognized as an adjustment to additional paid-in capital. Upon completion of the sale, our ownership in the joint venture is 30%.

Other joint venture

During the three months ended March 31, 2023, we acquired two properties and entitlements aggregating 515,000 RSF with development opportunities in our Greater Boston market for a purchase price aggregating \$58.9 million. Upon completion of these acquisitions, we formed a real estate joint venture with a local real estate operator that acquired a 38.8% interest in this joint venture in exchange for the contribution of additional entitlements and other pre-construction assets for a total contribution of \$37.6 million, including a non-cash contribution aggregating \$33.3 million. The entitlements contributed by our partner increased the joint venture’s aggregate development opportunities to 715,000 RSF. Our partner had the option to require us to redeem \$35.3 million of its ownership interest at its contributed value, which our partner exercised in December 2023. We completed the redemption in January 2024.

4. CONSOLIDATED AND UNCONSOLIDATED REAL ESTATE JOINT VENTURES (continued)

Consolidated VIEs' balance sheet information

We, together with joint venture partners, hold interests in real estate joint ventures that we consolidate in our financial statements. These existing joint ventures provide significant equity capital to fund a portion of our future construction spend, and our joint venture partners may also contribute equity into these entities for financing-related activities.

The table below aggregates the balance sheet information of our consolidated VIEs as of December 31, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Investments in real estate	\$ 8,032,315	\$ 6,771,842
Cash and cash equivalents	306,475	246,931
Other assets	728,390	684,487
Total assets	\$ 9,067,180	\$ 7,703,260
Secured notes payable	\$ 119,042	\$ 58,396
Other liabilities	608,665	430,615
Mandatorily redeemable noncontrolling interest	35,250 ⁽¹⁾	—
Total liabilities	762,957	489,011
Redeemable noncontrolling interests	6,868	—
Alexandria Real Estate Equities, Inc.'s share of equity	4,162,017	3,513,001
Noncontrolling interests' share of equity	4,135,338	3,701,248
Total liabilities and equity	\$ 9,067,180	\$ 7,703,260

(1) Related to the acquisition of our partner's partial noncontrolling interest in one of our real estate joint ventures, which was paid in full on January 12, 2024. Refer to Note 19 - "Subsequent events" and Note 11 - "Accounts payable, accrued expenses, and other liabilities" to our consolidated financial statements for additional information.

In determining whether to aggregate the balance sheet information of 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. None of our consolidated VIEs' 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, and our maximum exposure to our consolidated VIEs is limited to our variable interests in each VIE, except for our 99 Coolidge Avenue real estate joint venture in which the VIE's secured construction loan is guaranteed by us. For additional information, refer to Note 10 - "Secured and unsecured senior debt" to our consolidated financial statements.

4. CONSOLIDATED AND UNCONSOLIDATED REAL ESTATE JOINT VENTURES (continued)

Unconsolidated real estate joint ventures

Our maximum exposure to our unconsolidated VIEs is limited to our investment in each VIE, except for our 1450 Research Boulevard and 101 West Dickman Street unconsolidated real estate joint ventures in which we guarantee up to \$6.7 million of the outstanding balance related to each VIE's secured loan. Our investments in unconsolidated real estate joint ventures, accounted for under the equity method and presented in our consolidated balance sheets, consisted of the following as of December 31, 2023 and 2022 (in thousands):

Property	December 31,			
	2023		2022	
1655 and 1725 Third Street	\$	11,718	\$	12,996
1450 Research Boulevard		6,041		5,625
101 West Dickman Street		9,290		8,678
Other		10,731		11,136
	\$	37,780	\$	38,435

The following table presents key terms related to our unconsolidated real estate joint ventures' secured loans as of December 31, 2023 (dollars in thousands):

Unconsolidated Joint Venture	Maturity Date	Stated Rate	Interest Rate ⁽¹⁾	At 100%		
				Aggregate Commitment	Debt Balance ⁽²⁾	Our Share
1401/1413 Research Boulevard	12/23/24	2.70%	3.31%	\$ 28,500	\$ 28,331	65.0%
1655 and 1725 Third Street	3/10/25	4.50%	4.57%	600,000	599,505	10.0%
101 West Dickman Street	11/10/26	SOFR + 1.95%	7.38%	26,750	14,762	57.9%
1450 Research Boulevard	12/10/26	SOFR + 1.95%	7.44%	13,000	8,280	73.2%
				\$ 668,250	\$ 650,878	

(1) Includes interest expense and amortization of loan fees.

(2) Represents outstanding principal, net of unamortized deferred financing costs, as of December 31, 2023.

(3) This loan is subject to a fixed SOFR floor of 0.75%.

5. LEASES

Refer to the “Lease accounting” section in Note 2 – “Summary of significant accounting policies” to our consolidated financial statements for information about lease accounting standards that set principles for the recognition, measurement, presentation, and disclosure of leases for both parties to a lease agreement (i.e., lessees and lessors).

Leases in which we are the lessor

As of December 31, 2023, we had 411 properties aggregating 42.0 million operating RSF located in key clusters, including Greater Boston, the San Francisco Bay Area, New York City, San Diego, Seattle, Maryland, and Research Triangle. We focus on developing Class A/A+ properties in AAA innovation cluster locations, which we consider to be highly desirable for tenancy by life science, agtech, and technology 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, 2023, all leases in which we are the lessor were classified as operating leases, with the exception of one direct financing lease. Our leases are described below.

Operating leases

As of December 31, 2023, our 411 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 68.9 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, 2023 are outlined in the table below (in thousands):

Year	Amount
2024	\$ 1,862,795
2025	1,868,217
2026	1,817,938
2027	1,738,305
2028	1,607,062
Thereafter	10,201,534
Total	\$ 19,095,851

Refer to Note 3 – “Investments in real estate” to our consolidated financial statements for additional information about our owned real estate assets, which are the underlying assets under our operating leases.

Direct financing lease

As of December 31, 2023, we had one direct financing lease agreement, with a net investment balance of \$40.1 million, for a parking structure with a remaining lease term of 68.9 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 aggregate net investment in our direct financing lease as of December 31, 2023 and 2022 are summarized in the table below (in thousands):

	December 31,	
	2023	2022
Gross investment in direct financing lease	\$ 253,324	\$ 255,186
Less: unearned income on direct financing lease	(210,388)	(212,995)
Less: allowance for credit losses	(2,839)	(2,839)
Net investment in direct financing lease	\$ 40,097	\$ 39,352

As of December 31, 2023, our estimated credit loss related to our direct financing lease was \$2.8 million. No adjustment to the estimated credit loss balance was required during the year ended December 31, 2023. For further details, refer to the “Allowance for credit losses” section in Note 2 – “Summary of significant accounting policies” to our consolidated financial statements.

5. LEASES (continued)

Future lease payments to be received under the terms of our direct financing lease as of December 31, 2023 are outlined in the table below (in thousands):

Year	Total
2024	\$ 1,919
2025	1,976
2026	2,036
2027	2,097
2028	2,160
Thereafter	243,136
Total	\$ 253,324

Income from rentals

Our income from rentals includes revenue related to agreements for the rental of our real estate, which primarily includes revenues subject to the lease accounting standard and the revenue recognition accounting standard as shown below (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Income from rentals:			
Revenues subject to the lease accounting standard:			
Operating leases	\$ 2,802,567	\$ 2,534,862	\$ 2,081,362
Direct financing and sales-type leases ⁽¹⁾	2,608	3,094	3,489
Revenues subject to the lease accounting standard	2,805,175	2,537,956	2,084,851
Revenues subject to the revenue recognition accounting standard	37,281	38,084	23,398
Income from rentals	\$ 2,842,456	\$ 2,576,040	\$ 2,108,249

(1) We completed the sale of our real estate assets subject to sales-type leases in May 2022 and have had no sales-type leases since then.

Our revenues that are subject to the revenue recognition accounting standard and are classified in income from rentals consist primarily of short-term parking revenues that are not considered lease revenues under the 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, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Deferred leasing costs	\$ 1,035,339	\$ 996,116
Accumulated amortization	(525,941)	(479,841)
Deferred leasing costs, net	\$ 509,398	\$ 516,275

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 invest primarily 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, and (iii) carefully selecting our tenants and monitoring their credit quality throughout their respective lease terms.

5. LEASES (continued)

Leases in which we are the lessee

Operating lease agreements

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.

We recognize a right-of-use asset, which is classified within other assets in our consolidated balance sheets, and a related liability, which is classified within accounts payable, accrued expenses, and other liabilities in our consolidated balance sheets, to account for our future obligations under ground and office lease arrangements in which we are the lessee. Refer to the "Lessee accounting" subsection of the "Lease accounting" section in Note 2 - "Summary of significant accounting policies" to our consolidated financial statements.

As of December 31, 2023, the present value of the remaining contractual payments aggregating \$848.9 million under our operating lease agreements, including our extension options that we are reasonably certain to exercise, was \$382.9 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 \$516.5 million. As of December 31, 2023, the weighted-average remaining lease term of operating leases in which we are the lessee was approximately 41 years, and the weighted-average discount rate was 4.6%. 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, 2023, included leases for 36 of our properties, which accounted for approximately 9% 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 \$5.7 million as of December 31, 2023, our ground lease obligations have remaining lease terms ranging from approximately 31 to 98 years, including extension options that we are reasonably certain to exercise.

The reconciliation of future lease payments under noncancelable operating leases in which we are the lessee, to the operating lease liability reflected in our consolidated balance sheet as of December 31, 2023 is presented in the table below (in thousands):

Year	Total
2024	\$ 22,611
2025	22,671
2026	22,865
2027	21,944
2028	21,614
Thereafter	737,194
Total future payments under our operating leases in which we are the lessee	848,899
Effect of discounting	(466,016)
Operating lease liability	<u>\$ 382,883</u>

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 13 years, exclusive of extension options. For the years ended December 31, 2023, 2022, and 2021, our costs for operating leases in which we are the lessee were as follows (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Gross operating lease costs	\$ 39,879	\$ 36,527	\$ 28,598
Capitalized lease costs	(5,544)	(3,661)	(3,167)
Expenses for operating leases in which we are the lessee	<u>\$ 34,335</u>	<u>\$ 32,866</u>	<u>\$ 25,431</u>

For the years ended December 31, 2023, 2022, and 2021, amounts paid and classified as operating activities in our consolidated statements of cash flows for leases in which we are the lessee were \$32.2 million, \$55.2 million, and \$24.7 million, respectively. The decrease in 2023 from 2022 primarily relates to a \$26.3 million payment made during the three months ended March 31, 2022 in connection with the execution of ground lease extensions at two properties in our Greater Stanford submarket.

6. CASH, CASH EQUIVALENTS, AND RESTRICTED CASH

Cash, cash equivalents, and restricted cash consisted of the following as of December 31, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Cash and cash equivalents	\$ 618,190	\$ 825,193
Restricted cash:		
Funds held in escrow for real estate acquisitions	37,434	30,112
Other	5,147	2,670
	<u>42,581</u>	<u>32,782</u>
Total	<u>\$ 660,771</u>	<u>\$ 857,975</u>

7. INVESTMENTS

We hold investments in publicly traded companies and privately held entities primarily involved in the life science, agtech, and technology industries. As a REIT, we generally limit our ownership of each individual entity's voting stock to less than 10%. We evaluate each investment to determine whether we have the ability to exercise significant influence, but not control, over an investee. We evaluate investments in which our ownership is equal to or greater than 20%, but less than or equal to 50%, of an investee's voting stock with a presumption that we have this ability. For our investments in limited partnerships that maintain specific ownership accounts, we presume that such ability exists when our ownership interest exceeds 3% to 5%. In addition to our ownership interest, we consider whether we have a board seat or whether we participate in the investee's policymaking process, among other criteria, to determine if we have the ability to exert significant influence, but not control, over an investee. If we determine that we have such ability, we account for the investment under the equity method, as described below.

Investments accounted for under the equity method

Under the equity method of accounting, we initially recognize our investment at cost and subsequently adjust the carrying amount of the investment for our share of earnings or losses reported by the investee, distributions received, and other-than-temporary impairments.

As of December 31, 2023, we had nine investments in limited partnerships aggregating \$75.5 million that maintain specific ownership accounts for each investor, which were accounted for under the equity method. Our ownership interest in each of these nine investments was greater than 5%.

Investments that do not qualify for the equity method of accounting

For investees over which we determine that we do not have the ability to exercise significant influence or control, we account for each investment depending on whether it is an investment in a (i) publicly traded company, (ii) privately held entity that reports NAV per share, or (iii) privately held entity that does not report NAV per share, as described below.

Investments in publicly traded companies

Our investments in publicly traded companies are classified as investments with readily determinable fair values and are presented at fair value in our consolidated balance sheets, with changes in fair value classified in investment income (loss) in our consolidated statements of operations. The fair values for our investments in publicly traded companies are determined based on sales prices or quotes available on securities exchanges.

Investments in privately held companies

Our investments in privately held entities without readily determinable fair values consist of (i) investments in privately held entities that report NAV per share and (ii) investments in privately held entities that do not report NAV per share. These investments are accounted for as follows:

Investments in privately held entities that report NAV per share

Investments in privately held entities that report NAV per share, such as our privately held investments in limited partnerships, are presented at fair value using NAV as a practical expedient, with changes in fair value classified in investment income (loss) in our consolidated statements of operations. We use NAV per share 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.

7. INVESTMENTS (continued)

Investments in privately held entities that do not report NAV per share

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 classified in investment income (loss) in our consolidated statements of operations.

An observable price arises from an orderly transaction for an identical or similar investment of the same issuer, which is observed by an investor without expending undue cost and effort. Observable price changes result from, among other things, equity transactions of the same issuer executed during the reporting period, including subsequent equity offerings or other reported equity transactions related to the same issuer. To determine whether these transactions are indicative of an observable price change, we evaluate, among other factors, whether these transactions have similar rights and obligations, including voting rights, distribution preferences, and conversion rights to the investments we hold.

Impairment evaluation of equity method investments and investments in privately held entities that do not report NAV per share

We monitor equity method investments and investments in privately held entities that do not report NAV per share 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, 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, including the research and development of technology and products that the investee is bringing or attempting to bring to the market;
- (iv) significant concerns about the investee's ability to continue as a going concern; and/or
- (v) a decision by investors to cease providing support or reduce their financial commitment to the investee.

If such indicators are present, we are required to estimate the investment's fair value and immediately recognize an impairment charge in an amount equal to the investment's carrying value in excess of its estimated fair value.

Investment income/loss recognition and classification

We recognize both realized and unrealized gains and losses in our consolidated statements of operations, classified in investment income (loss) in our consolidated statements of operations. Unrealized gains and losses represent:

- (i) changes in fair value for investments in publicly traded companies;
- (ii) changes in NAV for investments in privately held entities that report NAV per share;
- (iii) observable price changes for investments in privately held entities that do not report NAV per share; and
- (iv) our share of unrealized gains or losses reported by our equity method investees.

Realized gains and losses on our investments represent the difference between proceeds received upon disposition of investments and their historical or adjusted cost basis. For our equity method investments, realized gains and losses represent our share of realized gains or losses reported by the investee. Impairments are realized losses, which result in an adjusted cost basis, and represent charges to reduce the carrying values of investments in privately held entities that do not report NAV per share and equity method investments, if impairments are deemed other than temporary, to their estimated fair value.

Funding commitments to investments in privately held entities that report NAV

We are committed to funding approximately \$382.2 million for our investments in privately held entities that report NAV. Our funding commitments expire at various dates over the next 11 years, with a weighted-average expiration of 8.2 years as of December 31, 2023. These investments are not redeemable by us, but we may receive distributions from these investments throughout their terms. 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 5.4 years as of December 31, 2023.

7. INVESTMENTS (continued)

The following tables summarize our investments as of December 31, 2023 and 2022 (in thousands):

	December 31, 2023			
	Cost	Unrealized Gains	Unrealized Losses	Carrying Amount
Publicly traded companies	\$ 203,467	\$ 50,377	\$ (94,278)	\$ 159,566
Entities that report NAV	507,059	192,468	(27,995)	671,532
Entities that do not report NAV:				
Entities with observable price changes	97,892	77,600	(1,224)	174,268
Entities without observable price changes	368,654	—	—	368,654
Investments accounted for under the equity method	N/A	N/A	N/A	75,498
Total investments	\$ 1,177,072	\$ 320,445	\$ (123,497)	\$ 1,449,518

	December 31, 2022			
	Cost	Unrealized Gains	Unrealized Losses	Carrying Amount
Publicly traded companies	\$ 210,986	\$ 96,271	\$ (100,118)	\$ 207,139
Entities that report NAV	452,391	315,071	(7,710)	759,752
Entities that do not report NAV:				
Entities with observable price changes	100,296	95,062	(1,574)	193,784
Entities without observable price changes	388,940	—	—	388,940
Investments accounted for under the equity method	N/A	N/A	N/A	65,459
Total investments	\$ 1,152,613	\$ 506,404	\$ (109,402)	\$ 1,615,074

Cumulative gains and losses (realized and unrealized) on investments in privately held entities that do not report NAV still held as of December 31, 2023 aggregated to a loss of \$50.2 million, which consisted of upward adjustments aggregating \$77.6 million, downward adjustments aggregating \$1.2 million, and impairments aggregating \$126.5 million.

Our investment (loss) income for the years ended December 31, 2023, 2022, and 2021 consisted of the following (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Realized gains	\$ 6,078 ⁽¹⁾	\$ 80,435	\$ 215,845
Unrealized (losses) gains	(201,475)	(412,193)	43,632
Investment (loss) income	\$ (195,397)	\$ (331,758)	\$ 259,477

(1) Consists of realized gains of \$80.6 million, offset by impairment charges of \$74.6 million during the year ended December 31, 2023.

During the year ended December 31, 2023, gains and losses on investments in privately held entities that do not report NAV still held as of December 31, 2023 aggregated to a loss of \$77.7 million, which consisted of upward adjustments aggregating \$16.8 million and downward adjustments and impairments aggregating \$94.6 million.

During the year ended December 31, 2022, gains and losses on investments in privately held entities that do not report NAV still held as of December 31, 2022 aggregated to a loss of \$18.3 million, which consisted of upward adjustments aggregating \$26.3 million and downward adjustments and impairments aggregating \$44.6 million.

During the year ended December 31, 2021, gains and losses on investments in privately held entities that do not report NAV still held as of December 31, 2021 aggregated to a loss of \$33.3 million, which consisted of upward adjustments aggregating \$32.7 million and downward adjustments and impairments aggregating \$66.0 million.

Unrealized gains or losses related to investments still held (excluding investments accounted for under the equity method) as of December 31, 2023, 2022, and 2021 aggregated to losses of \$58.8 million and \$276.5 million and gains of \$109.4 million, respectively.

Our investment loss of \$195.4 million for the year ended December 31, 2023 also included \$4.4 million of equity in losses of our equity method investments.

Refer to the "Investments" section in Note 2 – "Summary of significant accounting policies" to our consolidated financial statements for additional information.

8. OTHER ASSETS

The following table summarizes the components of other assets as of December 31, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Acquired in-place leases	\$ 461,613	\$ 615,638
Deferred compensation plan	40,365	33,534
Deferred financing costs – unsecured senior line of credit	30,897	31,747
Deposits	25,863	20,805
Furniture, fixtures, and equipment	26,560	23,186
Net investment in direct financing lease	40,097	39,352
Notes receivable	15,841	19,875
Operating lease right-of-use assets	516,452	558,255
Other assets	88,453	80,724
Prepaid expenses	30,969	28,294
Property, plant, and equipment	144,784	148,530
Total	\$ 1,421,894	\$ 1,599,940

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.

Assets and liabilities measured at fair value on a recurring basis

The following table sets forth the assets that we measure at fair value on a recurring basis by level in the fair value hierarchy (in thousands). There were no liabilities measured at fair value on a recurring basis as of December 31, 2023 and 2022. In addition, there were no transfers of assets measured at fair value on a recurring basis to or from Level 3 in the fair value hierarchy during the year ended December 31, 2023.

Description	Total	Fair Value Measurement Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Investments in publicly traded companies:				
As of December 31, 2023	\$ 159,566	\$ 159,566	\$ —	\$ —
As of December 31, 2022	\$ 207,139	\$ 207,139	\$ —	\$ —

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 investment income in our consolidated financial statements. We also hold investments in privately held entities, which consist of (i) investments that report NAV, and (ii) investments that do not report NAV, as further described below.

9. FAIR VALUE MEASUREMENTS (continued)

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, 2023 and 2022, the carrying values of investments in privately held entities that report NAV aggregated \$671.5 million and \$759.8 million, respectively. These investments are excluded from the fair value hierarchy above as required by the fair value accounting 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.

Assets and liabilities measured at fair value on a nonrecurring basis

The following table sets forth the assets measured at fair value on a nonrecurring basis by level within the fair value hierarchy as of December 31, 2023 and 2022 (in thousands).

Description	Carrying Amount	Fair Value Measurement Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Real estate assets held for sale with carrying values adjusted to fair value less costs to sell				
As of December 31, 2023	\$ 133,885 ⁽¹⁾	\$ —	\$ —	\$ 133,885 ⁽²⁾
As of December 31, 2022	\$ 116,061 ⁽¹⁾	\$ —	\$ —	\$ 116,061 ⁽²⁾
Investments in privately held entities that do not report NAV				
As of December 31, 2023	\$ 188,689	\$ —	\$ 174,268 ⁽³⁾	\$ 14,421 ⁽⁴⁾
As of December 31, 2022	\$ 212,262	\$ —	\$ 193,784 ⁽³⁾	\$ 18,478 ⁽⁴⁾

(1) These amounts are included in the total balances of our net assets classified as held for sale aggregating \$191.4 million and \$116.1 million as of December 31, 2023 and 2022, respectively, disclosed in Note 18 - "Assets classified as held for sale," and represent assets held for sale as of December 31, 2023 and 2022, respectively, for which impairments were recognized. Refer to Note 3 - "Investments in real estate" and Note 18 - "Assets classified as held for sale" to our consolidated financial statements for additional information.

(2) Represent aggregate carrying amounts of assets held for sale after adjustments to their respective fair values less costs to sell based on executed purchase and sale agreements, letters of intent, or valuations provided by third party real estate brokers.

(3) These amounts represent the total carrying amounts of our equity investments in privately held entities with observable price changes, which are included in the investments balances of \$1.4 billion and \$1.6 billion, in our consolidated balance sheets as of December 31, 2023 and 2022, respectively, disclosed in Note 7 - "Investments" to our consolidated financial statements.

(4) These amounts are included in the investments in privately held entities without observable price changes balances aggregating \$368.7 million and \$388.9 million as of December 31, 2023 and 2022, respectively, disclosed in Note 7 - "Investments" to our consolidated financial statements. The aforementioned balances represent the carrying amounts of investments in privately held entities that do not report NAV for which impairments have been recognized in accordance with the measurement alternative guidance described in the "Investments" section in Note 2 - "Summary of significant accounting policies" to our consolidated financial statements.

Real estate assets classified as held for sale measured at fair value less cost to sell

Our real estate assets classified held for sale and measured at fair value less costs to sell are presented in the table above. These properties are subsets of our total real estate assets classified as held for sale as of December 31, 2023 and 2022, respectively. The fair values for these real estate assets were estimated based on negotiated sales prices or valuations provided by third-party real estate brokers. Refer to the "Investments in real estate" section within Note 2 - "Summary of significant accounting policies" and Note 18 - "Assets classified as held for sale" to our consolidated financial statements for additional information.

Investments in privately held entities that do not report NAV

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. These investments are adjusted 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 charge in an amount equal to the investment's carrying value in excess of its estimated fair value.

9. FAIR VALUE MEASUREMENTS (continued)

The estimates of fair value typically incorporate valuation techniques that include an income approach reflecting a discounted cash flow analysis, and a market approach that includes a comparative analysis of acquisition multiples and pricing multiples generated by market participants. In certain instances, we may use multiple valuation techniques for a particular investment and estimate its fair value based on an average of multiple valuation results.

Refer to Note 7 – “Investments” to our consolidated financial statements for additional information.

Assets and liabilities not measured at fair value in the statement of financial position but for which the fair value is disclosed

The fair values of our secured notes payable and unsecured senior notes payable, and the amounts outstanding on our unsecured senior line of credit and commercial paper program, 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, 2023 and 2022, the book and estimated fair values of our secured notes payable and unsecured senior notes payable and the amounts outstanding under our unsecured senior line of credit and commercial paper program, including the level within the fair value hierarchy for which the estimates were derived, were as follows (in thousands):

		December 31, 2023				
		Fair Value Hierarchy				
	Book Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Estimated Fair Value	
Liabilities:						
Secured notes payable	\$ 119,662	\$ —	\$ 118,660	\$ —	\$ 118,660	
Unsecured senior notes payable	\$ 11,096,028	\$ —	\$ 9,708,930	\$ —	\$ 9,708,930	
Unsecured senior line of credit	\$ —	\$ —	\$ —	\$ —	\$ —	
Commercial paper program	\$ 99,952	\$ —	\$ 99,915	\$ —	\$ 99,915	
		December 31, 2022				
		Fair Value Hierarchy				
	Book Value	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Estimated Fair Value	
Liabilities:						
Secured notes payable	\$ 59,045	\$ —	\$ 58,811	\$ —	\$ 58,811	
Unsecured senior notes payable	\$ 10,100,717	\$ —	\$ 8,539,015	\$ —	\$ 8,539,015	
Unsecured senior line of credit	\$ —	\$ —	\$ —	\$ —	\$ —	
Commercial paper program	\$ —	\$ —	\$ —	\$ —	\$ —	

The carrying values of cash and cash equivalents, restricted cash, tenant receivables, deposits, notes receivable, accounts payable, accrued expenses, and other short-term liabilities approximate their fair value.

10. SECURED AND UNSECURED SENIOR DEBT

The following table summarizes our outstanding indebtedness and respective principal payments as of December 31, 2023 (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
				2024	2025	2026	2027	2028	Thereafter			
Secured notes payable												
Greater Boston ⁽³⁾	SOFR+2.70 %	8.38 %	11/19/26	\$ —	\$ —	\$ 119,674	\$ —	\$ —	\$ —	\$ 119,674	\$ (631)	\$ 119,043
San Francisco Bay Area	6.50 %	6.50	7/1/36	32	34	36	38	41	438	619	—	619
Secured debt weighted-average interest rate/subtotal		8.37		32	34	119,710	38	41	438	120,293	(631)	119,662
Unsecured senior line of credit and commercial paper program ⁽⁴⁾	(4)	5.76 (4)	1/22/28 (4)	(4)	—	—	—	100,000	— (4)	100,000	(48)	99,952
Unsecured senior notes payable	3.45 %	3.62	4/30/25	—	600,000	—	—	—	—	600,000	(1,181)	598,819
Unsecured senior notes payable	4.30 %	4.50	1/15/26	—	—	300,000	—	—	—	300,000	(1,022)	298,978
Unsecured senior notes payable	3.80 %	3.96	4/15/26	—	—	350,000	—	—	—	350,000	(1,143)	348,857
Unsecured senior notes payable	3.95 %	4.13	1/15/27	—	—	—	350,000	—	—	350,000	(1,574)	348,426
Unsecured senior notes payable	3.95 %	4.07	1/15/28	—	—	—	—	425,000	—	425,000	(1,733)	423,267
Unsecured senior notes payable	4.50 %	4.60	7/30/29	—	—	—	—	—	300,000	300,000	(1,248)	298,752
Unsecured senior notes payable	2.75 %	2.87	12/15/29	—	—	—	—	—	400,000	400,000	(2,473)	397,527
Unsecured senior notes payable	4.70 %	4.81	7/1/30	—	—	—	—	—	450,000	450,000	(2,425)	447,575
Unsecured senior notes payable	4.90 %	5.05	12/15/30	—	—	—	—	—	700,000	700,000	(5,511)	694,489
Unsecured senior notes payable	3.375 %	3.48	8/15/31	—	—	—	—	—	750,000	750,000	(4,990)	745,010
Unsecured senior notes payable	2.00 %	2.12	5/18/32	—	—	—	—	—	900,000	900,000	(7,887)	892,113
Unsecured senior notes payable	1.875 %	1.97	2/1/33	—	—	—	—	—	1,000,000	1,000,000	(7,976)	992,024
Unsecured senior notes payable	2.95 %	3.07	3/15/34	—	—	—	—	—	800,000	800,000	(7,989)	792,011
Unsecured senior notes payable	4.75 %	4.88	4/15/35	—	—	—	—	—	500,000	500,000	(5,411)	494,589
Unsecured senior notes payable	4.85 %	4.93	4/15/49	—	—	—	—	—	300,000	300,000	(2,987)	297,013
Unsecured senior notes payable	4.00 %	3.91	2/1/50	—	—	—	—	—	700,000	700,000	10,111	710,111
Unsecured senior notes payable	3.00 %	3.08	5/18/51	—	—	—	—	—	850,000	850,000	(11,608)	838,392
Unsecured senior notes payable	3.55 %	3.63	3/15/52	—	—	—	—	—	1,000,000	1,000,000	(14,112)	985,888
Unsecured senior notes payable	5.15 %	5.26	4/15/53	—	—	—	—	—	500,000	500,000	(7,813)	492,187
Unsecured debt weighted-average interest rate/subtotal		3.67		—	600,000	650,000	350,000	525,000	9,150,000	11,275,000	(79,020)	11,195,980
Weighted-average interest rate/total		3.72 %		\$ 32	\$ 600,034	\$ 769,710	\$ 350,038	\$ 525,041	\$ 9,150,438	\$ 11,395,293	\$ (79,651)	\$ 11,315,642

(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) Represents a secured construction loan held by our consolidated real estate joint venture at 99 Coolidge Avenue, of which we own a 75.0% interest. As of December 31, 2023, this joint venture has \$75.6 million available under existing lender commitments. The interest rate shall be reduced from SOFR+2.70% to SOFR+2.10% over time upon the completion of certain leasing, construction, and financial covenant milestones.

(4) Refer to "\$5.0 billion unsecured senior line of credit" and "\$2.5 billion commercial paper program" on the following page.

10. SECURED AND UNSECURED SENIOR DEBT (continued)

The following table summarizes our secured and unsecured senior debt and amounts outstanding under our unsecured senior line of credit and commercial paper program as of December 31, 2023 (dollars in thousands):

	Fixed-Rate Debt	Variable-Rate Debt	Total	Percentage	Weighted-Average	
					Interest Rate ⁽¹⁾	Remaining Term (in years)
Secured notes payable	\$ 619	\$ 119,043	\$ 119,662	1.1 %	8.37 %	2.9
Unsecured senior notes payable	11,096,028	—	11,096,028	98.0	3.65	13.0
Unsecured senior line of credit and commercial paper program	—	99,952	99,952 ⁽²⁾	0.9	5.76 ⁽²⁾	4.1 ⁽³⁾
Total/weighted average	\$ 11,096,647	\$ 218,995	\$ 11,315,642	100.0 %	3.72 %	12.8 ⁽³⁾
Percentage of total debt	98.1 %	1.9 %	100 %			

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

(2) As of December 31, 2023, we had no outstanding balance on our unsecured senior line of credit and \$100.0 million of commercial paper notes outstanding.

(3) We calculate the weighted-average remaining term of our commercial paper notes by using the maturity date of our unsecured senior line of credit. Using the maturity date of our outstanding commercial paper notes, the consolidated weighted-average maturity of our debt is 12.7 years. The commercial paper notes sold during the year ended December 31, 2023 were issued at a weighted-average yield to maturity of 5.55% and had a weighted-average maturity term of 11 days.

Unsecured senior notes payable

In February 2023, we opportunistically issued \$1.0 billion of unsecured senior notes payable with a weighted-average interest rate of 4.95% and a weighted-average maturity of 21.2 years. The unsecured senior notes consisted of \$500.0 million of 4.75% unsecured senior notes due 2035 and \$500.0 million of 5.15% unsecured senior notes due 2053.

\$5.0 billion unsecured senior line of credit

In June 2023, we amended our unsecured senior line of credit to increase the aggregate commitments available for borrowing to \$5.0 billion from \$4.0 billion. As of December 31, 2023, we had no outstanding balance on our unsecured line of credit.

Based upon our ability to achieve certain sustainability targets, as described in our unsecured senior line of credit agreement, the interest rate and facility fee rate are subject to adjustments of up to four and one basis points, respectively. Upon meeting certain annual sustainability targets, our borrowing rate for a one-year period was reduced by four basis points to SOFR plus 0.835%, from SOFR plus 0.875%, and the facility fee was reduced by one basis point to 0.14% from 0.15% during the year ended December 31, 2023.

\$2.5 billion commercial paper program

In July 2023, we increased the aggregate amount we may issue from time to time under our commercial paper program to \$2.5 billion from \$2.0 billion.

Our commercial paper program provides us with the ability to issue up to \$2.5 billion of commercial paper notes that bear interest at short-term fixed rates with a maturity of generally 30 days or less and a maximum maturity of 397 days from the date of issuance. Our commercial paper program is backed by our 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 notes issued under our commercial paper program. We use the net proceeds from the issuances of the notes 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. The commercial paper notes sold during the year ended December 31, 2023 were issued at a weighted-average yield to maturity of 5.55% and had a weighted-average maturity term of 11 days. As of December 31, 2023, we had \$100.0 million of commercial paper notes outstanding.

Interest expense

The following table summarizes interest expense for the years ended December 31, 2023, 2022, and 2021 (in thousands):

	Year Ended December 31,		
	2023	2022	2021
Interest incurred	\$ 438,182	\$ 372,848	\$ 312,806
Capitalized interest	(363,978)	(278,645)	(170,641)
Interest expense	\$ 74,204	\$ 94,203	\$ 142,165

11. 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, 2023 and 2022 (in thousands):

	December 31,	
	2023	2022
Accounts payable and accrued expenses	\$ 524,439	\$ 389,741
Accrued construction	606,333	624,440
Acquired below-market leases	322,040	417,656
Conditional asset retirement obligations	53,083	52,723
Deferred rent liabilities	15,183	18,321
Operating lease liability	382,883	406,700
Unearned rent and tenant security deposits	548,529	449,622
Other liabilities	158,453 ⁽¹⁾	112,056
Total	\$ 2,610,943	\$ 2,471,259

(1) Balance as of December 31, 2023 includes a \$35.3 million liability related to the acquisition of our partner's partial noncontrolling interest in one of our real estate joint ventures, which was paid in full in January 2024. Refer to Note 19 - "Subsequent events" for additional information.

As of December 31, 2023 and 2022, our conditional asset retirement obligations liability primarily consisted of the soil and groundwater remediation liabilities associated with certain of our properties. Some of our properties may contain asbestos or may be subjected to other hazardous or toxic substances, which, under certain conditions, requires remediation. We engage independent environmental consultants to conduct Phase I or similar environmental assessments at our properties. This type of assessment generally includes a site inspection, interviews, and a public records review; asbestos, lead-based paint, and mold surveys; subsurface sampling; and other testing. 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. In addition, environmental laws and regulations subject our tenants, and potentially us, to liability that may result from our tenants' routine handling of hazardous substances and wastes as part of their operations at our properties. These assessments and investigations of our properties have not to date revealed any additional environmental liability we believe would have a material adverse effect on our business and financial statements or that would require additional disclosures or recognition in our consolidated financial statements.

12. EARNINGS PER SHARE

From time to time, we enter into forward equity sales agreements, which are discussed in Note 15 - "Stockholders' equity" to our consolidated financial statements. We consider 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.

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 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) 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 reconciles the numerators and denominators of the basic and diluted EPS computations for the years ended December 31, 2023, 2022, and 2021 (in thousands, except per share amounts):

	Year Ended December 31,		
	2023	2022	2021
Net income	\$ 280,994	\$ 670,701	\$ 654,282
Net income attributable to noncontrolling interests	(177,355)	(149,041)	(83,035)
Net income attributable to unvested restricted stock awards	(11,195)	(8,392)	(7,848)
Numerator for basic and diluted EPS - net income attributable to Alexandria Real Estate Equities, Inc.'s common stockholders	\$ 92,444	\$ 513,268	\$ 563,399
Denominator for basic EPS - weighted-average shares of common stock outstanding	170,909	161,659	146,921
Dilutive effect of forward equity sales agreements	—	—	539
Denominator for diluted EPS - weighted-average shares of common stock outstanding	170,909	161,659	147,460
Net income per share attributable to Alexandria Real Estate Equities, Inc.'s common stockholders:			
Basic	\$ 0.54	\$ 3.18	\$ 3.83
Diluted	\$ 0.54	\$ 3.18	\$ 3.82

13. INCOME TAXES

We have elected to be taxed as a REIT, under 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 stockholders 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 2022 and 2021 and, as a result, did not incur federal income tax in those years on such income. For the year ended December 31, 2023, we expect to distribute all of our REIT taxable income and, as a result, do not expect to incur federal income tax. We expect to finalize our 2023 REIT taxable income when we file our 2023 federal income tax return in 2024.

The income tax treatment of distributions and dividends declared on our common stock for the years ended December 31, 2023, 2022, and 2021 was as follows (unaudited):

	Year Ended December 31,		
	2023	2022	2021
Ordinary income	87.8 %	57.4 %	46.3 %
Return of capital	—	—	—
Capital gains at 25%	0.2	8.1	3.8
Capital gains at 20%	12.0	34.5	49.9
Total	100.0 %	100.0 %	100.0 %
Dividends declared	\$ 4.96	\$ 4.72	\$ 4.48

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% 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 2023 is based upon management's estimate. Our federal tax return for 2023 is due on or before October 15, 2024, 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.

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, 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, 2023, 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, 2023, 2022, and 2021.

13. INCOME TAXES (continued)

The following reconciles net income (determined in accordance with GAAP) to taxable income as filed with the IRS for the years ended December 31, 2022 and 2021 (in thousands and unaudited):

	Year Ended December 31,	
	2022	2021
Net income	\$ 670,701	\$ 654,282
Net income attributable to noncontrolling interests	(149,041)	(83,035)
Book/tax differences:		
Rental revenue recognition	(6,824)	(23,306)
Depreciation and amortization	225,319	153,382
Share-based compensation	45,656	34,265
Interest expense	(104,519)	(79,907)
Sales of property	(330,820)	(100,449)
Impairments	26,322	23,130
Non-real estate investments loss	369,021	42,908
Other	10,653	33,446
Taxable income before dividend deduction	756,468	654,716
Dividend deduction necessary to eliminate taxable income ⁽¹⁾	(756,468)	(654,716)
Estimated income subject to federal income tax	\$ —	\$ —

(1) Total common stock dividend distributions paid were approximately \$757.7 million and \$656.0 million during the years ended December 31, 2022 and 2021, respectively.

14. COMMITMENTS AND CONTINGENCIES

Employee retirement savings plan

We have a retirement savings plan pursuant to Section 401(k) of 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 \$8.6 million, \$8.7 million, and \$5.0 million for the years ended December 31, 2023, 2022, and 2021, 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 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.

Our rental revenue is generated by a diverse array of many tenants. As of December 31, 2023, we had over 1,000 leases. The inability of any single tenant to make its lease payments is unlikely to have a severe or financially disruptive effect on our operations. As of December 31, 2023, our three largest tenants accounted for 5.7%, 4.3%, and 3.1% of our aggregate annual rental revenue individually, or 13.1% in the aggregate.

Commitments

As of December 31, 2023, remaining aggregate costs under contract for the construction of properties undergoing development, redevelopment, and improvements under the terms of leases approximated \$1.9 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 \$29.5 million primarily related to deposits for acquisitions in our Greater Boston and San Francisco Bay Area markets.

We are committed to funding approximately \$413.6 million related to our non-real estate investments. These funding commitments are primarily associated with our investments in privately held entities that report NAV, which expire at various dates over the next 11 years, with a weighted-average expiration of 8.2 years as of December 31, 2023.

15. STOCKHOLDERS' EQUITY

Common equity transactions

During the three months ended December 31, 2023, we settled our forward equity sales agreements that were outstanding as of December 31, 2022, by issuing 699 thousand shares of common stock, for which we received net proceeds of \$104.3 million.

Accumulated other comprehensive loss

The change in accumulated other comprehensive loss attributable to Alexandria Real Estate Equities, Inc.'s stockholders during the year ended December 31, 2023 was entirely due to net unrealized gains of \$4.9 million on foreign currency translation related to our operations primarily in Canada.

Common stock, preferred stock, and excess stock authorizations

Our charter authorizes the issuance of 400.0 million shares of common stock, of which 171.9 million shares were issued and outstanding as of December 31, 2023. 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, 2023. 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, 2023.

16. SHARE-BASED COMPENSATION

Stock award and incentive plan

For the purpose of attracting and retaining the highest-quality personnel, providing for additional incentives, and promoting the success of our Company, we generally issue share-based compensation in the form of restricted stock, pursuant to our stock award and incentive plan. We have not granted any options since 2002. Each restricted share issued reduced our 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, 2023, there were 2,708,800 shares reserved for the granting of future stock-based awards under our stock award and incentive plan.

In addition, our stock award and incentive 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 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. Certain restricted share awards are also subject to an additional one-year holding period after vesting. The unearned portion of time-based share awards is amortized as share-based 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 or market conditions. Failure to satisfy the threshold performance conditions will result in the forfeiture of shares and in a reversal of previously recognized share-based compensation expense. Failure to satisfy the market condition results in the forfeiture of shares but does not result in a reversal of previously recognized share-based compensation expense, provided that the requisite service has been rendered. Forfeiture of time-based, performance-based, or market-based awards due to the failure to meet the service requirement results in the 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, 2023, 2022, and 2021 (dollars in thousands, except per share information):

	Number of Share Awards	Weighted-Average Grant Date Fair Value Per Share
Outstanding at December 31, 2020	1,825,280	\$ 132.95
Granted	740,920	\$ 174.32
Vested	(709,737)	\$ 131.54
Forfeited	(33,003)	\$ 99.55
Outstanding at December 31, 2021	1,823,460	\$ 150.89
Granted	1,032,731	\$ 141.58
Vested	(749,101)	\$ 146.25
Forfeited	(19,569)	\$ 160.83
Outstanding at December 31, 2022	2,087,521	\$ 149.96
Granted	1,522,058	\$ 108.22
Vested	(798,729)	\$ 149.41
Forfeited	(56,689)	\$ 104.65
Outstanding at December 31, 2023	2,754,161	\$ 127.34

	Year Ended December 31,		
	2023	2022	2021
Total grant date fair value of stock awards vested	\$ 119,335	\$ 109,557	\$ 93,359
Total gross compensation recognized for stock awards	\$ 139,675	\$ 104,424	\$ 94,748
Capitalized stock compensation	\$ 56,817	\$ 46,684	\$ 46,079

Certain restricted stock awards granted during 2023, 2022, and 2021 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 2023, 2022, and 2021, respectively: (i) expected term of 3.0 years, 2.8 years, and 3.0 years (equal to the remaining performance measurement period at the grant date), (ii) volatility of 32.0%, 30.0%, and 29.0% (approximating a blended average of implied and historical volatilities), (iii) dividend yield of 2.8%, 2.5%, and 2.8%, and (iv) risk-free rate of 4.22%, 2.47%, and 0.23%.

As of December 31, 2023, there was \$260.4 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 22 months.

16. SHARE-BASED COMPENSATION (continued)

Departure of executive officers

Effective on September 15, 2023 and December 29, 2023, respectively, Dean A. Shigenaga resigned from his roles as President and Chief Financial Officer and John H. Cunningham resigned from his role as Executive Vice President – Regional Market Director – New York City. Mr. Shigenaga continued to assist the Company as a full-time employee through December 31, 2023.

Mr. Shigenaga's and Mr. Cunningham's unvested stock awards will continue to vest pursuant to the original terms effective on each respective grant date. In accordance with the applicable share-based compensation accounting standards, we accelerated the recognition of unamortized compensation expense of approximately \$15.6 million and \$4.6 million for Mr. Shigenaga and Mr. Cunningham, respectively, through the end of 2023, corresponding with the conclusion of their substantive service periods. This expense was classified in general and administrative expenses in our consolidated statement of operations for the year ended December 31, 2023.

17. NONCONTROLLING INTERESTS

Noncontrolling interests represent the third-party interests in certain entities in which we have a controlling interest. As of December 31, 2023, these entities owned 68 properties, which 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, 2023 and 2022, we distributed \$244.1 million and \$192.2 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.

Refer to Note 4 – “Consolidated and unconsolidated real estate joint ventures” to our consolidated financial statements for additional information.

18. ASSETS CLASSIFIED AS HELD FOR SALE

As of December 31, 2023, we had seven properties and one land parcel aggregating 1.0 million RSF that were classified as held for sale in our consolidated financial statements. For additional information on the sales of real estate assets that were previously classified as held for sale, refer to the “Sales of real estate assets and impairment charges” section in Note 3 – “Investments in real estate” to our consolidated financial statements.

The disposal of properties classified as held for sale does not represent a strategic shift that has (or will have) a major effect on our operations or financials results and therefore does not meet the criteria for classification as a discontinued operation. We cease depreciation of our properties upon their classification as held for sale. Refer to the “Real estate sales” subsection of the “Investments in real estate” section in Note 2 – “Summary of significant accounting policies” for additional information.

The following is a summary of net assets as of December 31, 2023 and 2022 for our real estate investments that were classified as held for sale as of each respective date (in thousands):

	December 31,	
	2023	2022
Total assets	\$ 194,223	\$ 117,197
Total liabilities	(4,750)	(2,034)
Total accumulated other comprehensive income	1,960	898
Net assets classified as held for sale	\$ 191,433	\$ 116,061

19. SUBSEQUENT EVENTS

In January 2024, we completed one acquisition with 300,000 SF of future value-creation opportunities for an aggregate purchase price of \$68.0 million in our Greater Boston market.

In January 2024, pursuant to the exercise of a put option by our partner in a consolidated real estate joint venture located in our Greater Boston market, we redeemed our partner's partial ownership interest in the consolidated real estate joint venture for \$35.3 million. Refer to Note 4 - "Consolidated and unconsolidated real estate joint ventures" for additional information.

SCHEDULE III

Alexandria Real Estate Equities, Inc. and Subsidiaries
Schedule III
Consolidated Financial Statement Schedule of Real Estate and Accumulated Depreciation
December 31, 2023
(Dollars in thousands)

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		Land	Buildings & Improvements					
Alexandria Center® at Kendall Square	Greater Boston	\$ —	\$ 600,178	\$ 926,555	\$ 1,947,990	\$ 600,178	\$ 2,874,545	\$ 3,474,723	\$ (503,555)	\$ 2,971,168	1981 - 2023	2005 - 2022
Alexandria Center® at One Kendall Square	Greater Boston	—	405,164	576,213	1,104,541	405,164	1,680,754	2,085,918	(223,051)	1,862,867	1985 - 2023	2016 - 2022
Alexandria Technology Square®	Greater Boston	—	—	619,658	294,655	—	914,313	914,313	(365,871)	548,442	2001 - 2012	2006
The Arsenal on the Charles	Greater Boston	—	191,797	354,611	651,853	191,797	1,006,464	1,198,261	(75,217)	1,123,044	2000 - 2022	2019 - 2021
480 Arsenal Way and 446, 458, 500, and 550 Arsenal Street	Greater Boston	—	121,533	24,464	133,339	121,533	157,803	279,336	(70,773)	208,563	1962 - 2009	2000 - 2022
99 Coolidge Avenue	Greater Boston	119,042	43,125	—	248,830	43,125	248,830	291,955	(6)	291,949	N/A	2020
Alexandria Center® for Life Science - Fenway	Greater Boston	—	912,016	617,552	534,106	912,016	1,151,658	2,063,674	(58,969)	2,004,705	2019 - 2022	2021
5, 10, and 15 Necco Street	Greater Boston	—	277,554	55,897	356,438	277,554	412,335	689,889	(7,416)	682,473	2019	2019
One Moderna Way	Greater Boston	—	67,329	301,000	54,546	67,329	355,546	422,875	(32,696)	390,179	1999 - 2015	2018 - 2021
Alexandria Center® for Life Science - Waltham	Greater Boston	—	141,629	513,901	242,869	141,629	756,770	898,399	(21,848)	876,551	1999 - 2010	2020 - 2022
19, 215, 225, and 235 Presidential Way	Greater Boston	—	32,136	118,391	27,603	32,136	145,994	178,130	(32,179)	145,951	1999 - 2001	2005 - 2022
Other	Greater Boston	—	171,265	208,319	70,844	171,265	279,163	450,428	(4,744)	445,684	Various	Various
Alexandria Center® for Science and Technology - Mission Bay	San Francisco	—	213,014	218,556	668,907	213,014	887,463	1,100,477	(233,274)	867,203	2007 - 2014	2004 - 2017
Alexandria Technology Center® - Gateway	San Francisco	—	193,004	364,078	702,904	193,004	1,066,982	1,259,986	(171,828)	1,088,158	1984 - 2023	2002 - 2020
Alexandria Center® for Life Science - Millbrae	San Francisco	—	69,989	—	311,759	69,989	311,759	381,748	—	381,748	N/A	2021 - 2022
Alexandria Center® for Advanced Technologies - South San Francisco	San Francisco	—	59,199	—	546,295	59,199	546,295	605,494	(135,948)	469,546	2008 - 2019	2004 - 2005
Alexandria Center® for Advanced Technologies - Tanforan	San Francisco	—	330,154	51,145	51,161	330,154	102,306	432,460	(11,051)	421,409	1971 - 2007	2021 - 2022
Alexandria Center® for Life Science - South San Francisco	San Francisco	—	32,245	1,287	480,347	32,245	481,634	513,879	(139,392)	374,487	2012 - 2022	2002 - 2017
500 Forbes Boulevard	San Francisco	—	35,596	69,091	22,148	35,596	91,239	126,835	(35,880)	90,955	2001	2007
Alexandria Center® for Life Science - San Carlos	San Francisco	—	433,634	28,323	717,671	433,634	745,994	1,179,628	(86,306)	1,093,322	1970 - 2022	2017 - 2021
3825 and 3875 Fabian Way	San Francisco	—	194,424	54,519	14,737	194,424	69,256	263,680	(11,583)	252,097	1969 - 2014	2019
Alexandria Stanford Life Science District	San Francisco	—	—	599,401	115,138	—	714,539	714,539	(62,305)	652,234	2002 - 2022	2003 - 2022

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		Land	Buildings & Improvements	Total ⁽¹⁾				
3412, 3420, 3440, 3450, and 3460 Hillview Avenue	San Francisco	\$ —	\$ —	\$ 304,318	\$ 88,966	\$ —	\$ 393,284	\$ 393,284	\$ (19,647)	\$ 373,637	1978 - 2018	2020 - 2021
2100, 2200, 2300, and 2400 Geng Road	San Francisco	—	72,859	53,309	35,856	72,859	89,165	162,024	(19,554)	142,470	1984 - 2019	2018
2475 and 2625/2627/2631 Hanover Street and 1450 Page Mill Road	San Francisco	—	—	187,472	12,988	—	200,460	200,460	(33,645)	166,815	2000 - 2017	1999 - 2021
2425 Garcia Avenue/2400/2450 Bayshore Parkway	San Francisco	619	1,512	21,323	26,281	1,512	47,604	49,116	(27,833)	21,283	2008	1999
3350 West Bayshore Road	San Francisco	—	4,800	6,693	45,079	4,800	51,772	56,572	(13,221)	43,351	1982	2005
901 California Avenue	San Francisco	—	—	—	16,419	—	16,419	16,419	—	16,419	N/A	2021
88 Bluxome Street	San Francisco	—	148,551	21,514	208,770	148,551	230,284	378,835	(23,098)	355,737	N/A	2017
Alexandria Center [®] for Life Science - New York City	New York City	—	—	—	1,102,566	—	1,102,566	1,102,566	(294,190)	808,376	2010 - 2016	2006
Alexandria Center [®] for Life Science - Long Island City	New York City	—	22,746	53,093	158,719	22,746	211,812	234,558	(7,486)	227,072	2022	2018
One Alexandria Square	San Diego	—	139,608	161,293	673,079	139,608	834,372	973,980	(236,264)	737,716	1995 - 2022	1994 - 2021
One Alexandria North	San Diego	—	103,937	1,354	37,971	103,937	39,325	143,262	(1,359)	141,903	1980 - 1990	2020
ARE Torrey Ridge	San Diego	—	22,124	152,840	85,391	22,124	238,231	260,355	(71,018)	189,337	2004 - 2021	2016
ARE Nautilus	San Diego	—	6,684	27,600	134,110	6,684	161,710	168,394	(70,628)	97,766	2009 - 2012	1994 - 1997
Campus Point by Alexandria	San Diego	—	200,556	396,739	703,166	200,556	1,099,905	1,300,461	(218,886)	1,081,575	1988 - 2019	2010 - 2022
5200 Illumina Way	San Diego	—	39,051	96,606	200,141	39,051	296,747	335,798	(81,880)	253,918	2004 - 2017	2010
ARE Esplanade	San Diego	—	9,682	29,991	117,777	9,682	147,768	157,450	(54,787)	102,663	1989 - 2016	1998 - 2011
ARE Towne Centre	San Diego	—	853	5,101	60,536	853	65,637	66,490	(48,747)	17,743	2000 - 2010	1999
9625 Towne Centre Drive	San Diego	—	7,686	14,586	65,762	7,686	80,348	88,034	(22,945)	65,089	2018	2014
Costa Verde by Alexandria	San Diego	—	124,070	—	26,487	124,070	26,487	150,557	(476)	150,081	1988 - 1989	2022
SD Tech by Alexandria	San Diego	—	81,428	254,069	438,643	81,428	692,712	774,140	(47,000)	727,140	1988 - 2022	2013 - 2020
Sequence District by Alexandria	San Diego	—	163,610	281,389	30,101	163,610	311,490	475,100	(19,262)	455,838	1997 - 2000	2020 - 2021
Pacific Technology Park	San Diego	—	96,796	66,660	27,088	96,796	93,748	190,544	(5,903)	184,641	1989 - 1991	2021
Summers Ridge Science Park	San Diego	—	21,154	102,046	4,782	21,154	106,828	127,982	(16,796)	111,186	2005	2018
Scripps Science Park by Alexandria	San Diego	—	79,451	59,343	98,047	79,451	157,390	236,841	(4,557)	232,284	2001 - 2022	2021 - 2022
ARE Portola	San Diego	—	6,991	25,153	41,147	6,991	66,300	73,291	(24,464)	48,827	2005 - 2012	2007
5810/5820 Nancy Ridge Drive	San Diego	—	3,492	18,285	33,468	3,492	51,753	55,245	(16,763)	38,482	2021	2004
9877 Waples Street	San Diego	—	5,092	11,908	13,289	5,092	25,197	30,289	(4,101)	26,188	2020	2020
5871 Oberlin Drive	San Diego	—	1,349	8,016	20,511	1,349	28,527	29,876	(5,174)	24,702	2021	2010
3911, 3931, 3985, 4025, 4031, 4045, and 4075 Sorrento Valley Boulevard	San Diego	—	18,177	42,723	38,176	18,177	80,899	99,076	(42,904)	56,172	2007 - 2015	2010 - 2019
11045 and 11055 Roselle Street	San Diego	—	1,386	4,288	33,803	1,386	38,091	39,477	(10,414)	29,063	2008 - 2014	2000 - 2013
Other	San Diego	—	104,737	70,212	65,226	104,737	135,438	240,175	(15,492)	224,683	Various	Various

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		Land	Buildings & Improvements	Total ⁽¹⁾				
The Eastlake Life Science Campus by Alexandria	Seattle	—	\$ 47,230	\$ 83,012	\$ 1,017,765	\$ 47,230	\$ 1,100,777	\$ 1,148,007	\$ (235,838)	\$ 912,169	1997 - 2023	2002 - 2022
Alexandria Center® for Life Science - South Lake Union	Seattle	—	229,607	1,128	425,392	229,607	426,520	656,127	(51,917)	604,210	1984 - 2017	2007 - 2022
219 Terry Avenue North	Seattle	—	1,819	2,302	20,898	1,819	23,200	25,019	(9,827)	15,192	2012	2007
830 and 1010 4th Avenue South	Seattle	—	52,700	12,062	15,016	52,700	27,078	79,778	(1,073)	78,705	1995	2020
3000/3018 Western Avenue	Seattle	—	1,432	7,497	24,890	1,432	32,387	33,819	(28,629)	5,190	2000	1998
410 West Harrison Street and 410 Elliott Avenue West	Seattle	—	3,857	1,989	20,434	3,857	22,423	26,280	(10,200)	16,080	2006 - 2008	2004
Alexandria Center® for Advanced Technologies - Canyon Park	Seattle	—	117,302	182,213	26,146	117,302	208,359	325,661	(13,803)	311,858	1985 - 2007	2021 - 2022
Alexandria Center® for Advanced Technologies - Monte Villa Parkway	Seattle	—	52,464	64,753	80,630	52,464	145,383	197,847	(2,772)	195,075	1994 - 2023	2020
Other	Seattle	—	78,900	931	24,453	78,900	25,384	104,284	(942)	103,342	Various	Various
Alexandria Center® for Life Science - Shady Grove	Maryland	—	85,365	253,567	653,805	85,365	907,372	992,737	(148,111)	844,626	1998 - 2023	2004 - 2021
1330 Piccard Drive	Maryland	—	2,800	11,533	37,915	2,800	49,448	52,248	(25,154)	27,094	2005	1997
1405 Research Boulevard	Maryland	—	899	21,946	15,818	899	37,764	38,663	(19,356)	19,307	2006	1997
1500 and 1550 East Gude Drive	Maryland	—	1,523	7,731	10,709	1,523	18,440	19,963	(11,916)	8,047	1995 - 2003	1997
5 Research Place	Maryland	—	1,466	5,708	31,235	1,466	36,943	38,409	(19,450)	18,959	2010	2001
5 Research Court	Maryland	—	1,647	13,258	24,110	1,647	37,368	39,015	(18,805)	20,210	2007	2004
12301 Parklawn Drive	Maryland	—	1,476	7,267	1,734	1,476	9,001	10,477	(4,096)	6,381	2007	2004
Alexandria Technology Center® - Gaithersburg I	Maryland	—	20,980	121,952	56,847	20,980	178,799	199,779	(60,439)	139,340	1992 - 2019	1997 - 2019
Alexandria Technology Center® - Gaithersburg II	Maryland	—	17,134	67,825	108,021	17,134	175,846	192,980	(47,157)	145,823	2000 - 2021	1997 - 2020
20400 Century Boulevard	Maryland	—	3,641	4,759	26,397	3,641	31,156	34,797	(3,667)	31,130	2023	2021
401 Professional Drive	Maryland	—	1,129	6,941	11,666	1,129	18,607	19,736	(10,023)	9,713	2007	1996
950 Wind River Lane	Maryland	—	2,400	10,620	1,591	2,400	12,211	14,611	(4,473)	10,138	2009	2010
620 Professional Drive	Maryland	—	784	4,705	8,268	784	12,973	13,757	(8,531)	5,226	2012	2005
8000/9000/10000 Virginia Manor Road	Maryland	—	—	13,679	11,706	—	25,385	25,385	(13,423)	11,962	2003	1998
14225 Newbrook Drive	Maryland	—	4,800	27,639	22,773	4,800	50,412	55,212	(23,219)	31,993	2006	1997
Alexandria Center® for Life Science - Durham	Research Triangle	—	190,236	471,263	252,275	190,236	723,538	913,774	(52,766)	861,008	1985 - 2023	2020 - 2022
Alexandria Center® for Advanced Technologies - Research Triangle	Research Triangle	—	27,784	16,958	256,806	27,784	273,764	301,548	(25,537)	276,011	2007 - 2022	2012 - 2021
Alexandria Center® for AgTech	Research Triangle	—	2,801	6,756	208,994	2,801	215,750	218,551	(25,683)	192,868	2018 - 2022	2017 - 2018
Alexandria Center® for Sustainable Technologies	Research Triangle	—	54,908	18,849	123,255	54,908	142,104	197,012	(51,203)	145,809	1966 - 2022	1998 - 2022

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		Land	Buildings & Improvements	Total ⁽¹⁾				
Alexandria Technology Center* - Alston	Research Triangle	\$ —	\$ 1,430	\$ 17,482	\$ 34,099	\$ 1,430	\$ 51,581	\$ 53,011	\$ (28,919)	\$ 24,092	1985 - 2009	1998
6040 George Watts Hill Drive	Research Triangle	—	—	—	88,166	—	88,166	88,166	(6,806)	81,360	2015 - 2023	2014 - 2022
Alexandria Innovation Center* - Research Triangle	Research Triangle	—	1,065	21,218	31,979	1,065	53,197	54,262	(25,398)	28,864	2005 - 2008	2000
2525 East NC Highway 54	Research Triangle	—	713	12,827	20,750	713	33,577	34,290	(17,078)	17,212	1995	2004
601 Keystone Park Drive	Research Triangle	—	785	11,546	15,846	785	27,392	28,177	(8,861)	19,316	2009	2006
6101 Quadrangle Drive	Research Triangle	—	951	3,982	12,261	951	16,243	17,194	(5,064)	12,130	2012	2008
Alexandria Center* for NextGen Medicines	Research Triangle	—	94,184	—	10,358	94,184	10,358	104,542	—	104,542	N/A	2021
Intersection Campus	Texas	—	159,310	440,295	39,352	159,310	479,647	638,957	(23,934)	615,023	2000 - 2019	2021 - 2022
1001 Trinity Street and 1020 Red River Street	Texas	—	66,451	61,732	1,333	66,451	63,065	129,516	(1,942)	127,574	1987 - 1990	2022
Alexandria Center* for Advanced Technologies at The Woodlands	Texas	—	2,116	9,784	122,047	2,116	131,831	133,947	(669)	133,278	2002 - 2023	2020
Other	Texas	—	110,867	219	22,793	110,867	23,012	133,879	(122)	133,757	Various	Various
Canada	Canada	—	77,005	167,405	97,403	77,005	264,808	341,813	(34,320)	307,493	1989 - 2023	2005 - 2023
Various	Various	—	340,160	229,903	173,747	340,160	403,650	743,810	(157,298)	586,512	Various	Various
North America		119,661	7,875,488	10,606,121	18,132,709	7,875,488	28,738,830	36,614,318	(4,980,807)	31,633,511		
Asia		—	—	—	4,212	—	4,212	4,212	(4,212)	—	2015	2008
		<u>\$ 119,661</u>	<u>\$ 7,875,488</u>	<u>\$ 10,606,121</u>	<u>\$ 18,136,921</u>	<u>\$ 7,875,488</u>	<u>\$ 28,743,042</u>	<u>\$ 36,618,530</u>	<u>\$ (4,985,019)</u>	<u>\$ 31,633,511</u>		

SCHEDULE III (continued)

Alexandria Real Estate Equities, Inc.
Consolidated Financial Statement Schedule of Rental Properties and Accumulated Depreciation
December 31, 2023
(Dollars in thousands)

- (1) As of December 31, 2023, the total cost of our real estate assets aggregated \$36.6 billion, which exceeded the cost of real estate for federal income tax purposes aggregating \$36.1 billion by approximately \$483.2 million.
- (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, 2023
(In thousands)

A summary of activity of consolidated investments in real estate and accumulated depreciation is as follows:

	December 31,		
Real Estate	2023	2022	2021
Balance at beginning of period	\$ 34,299,503	\$ 28,751,910	\$ 21,274,810
Acquisitions (including real estate, land, and joint venture consolidation)	296,694	2,722,214	5,405,569
Additions to real estate	3,107,612	3,388,478	2,267,848
Deductions (including dispositions and direct financing leases)	(1,085,279)	(563,099)	(196,317)
Balance at end of period	\$ 36,618,530	\$ 34,299,503	\$ 28,751,910

	December 31,		
Accumulated Depreciation	2023	2022	2021
Balance at beginning of period	\$ 4,354,063	\$ 3,771,241	\$ 3,182,438
Depreciation expense on properties	841,893	751,584	607,927
Sale of properties	(210,937)	(168,762)	(19,124)
Balance at end of period	\$ 4,985,019	\$ 4,354,063	\$ 3,771,241