Commercial Real Estate Development FALL 2019

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IDEAS | ISSUES | TRENDS

Alexandria Real Estate Equities, Inc.

Developer of the Year *56*

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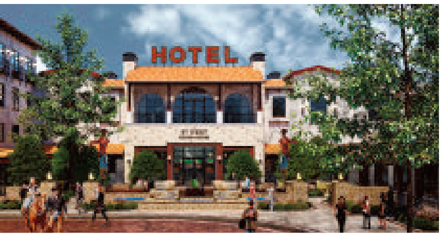
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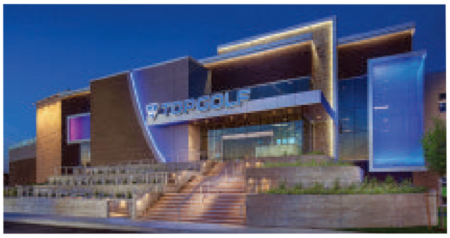

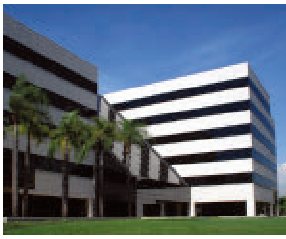


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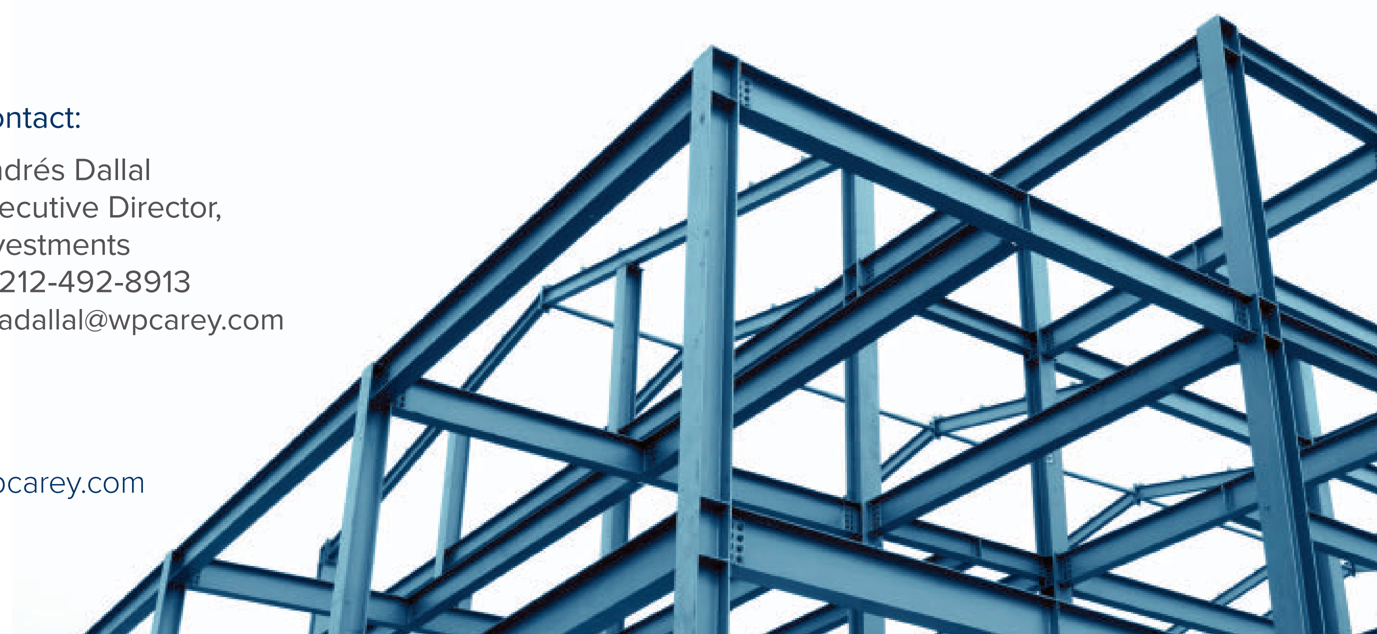

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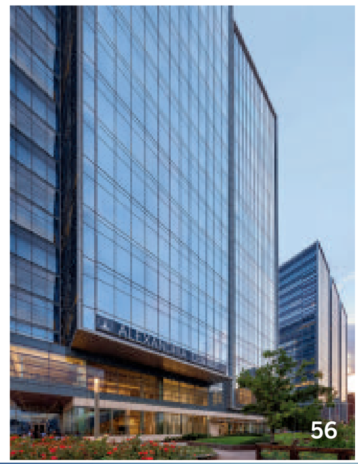

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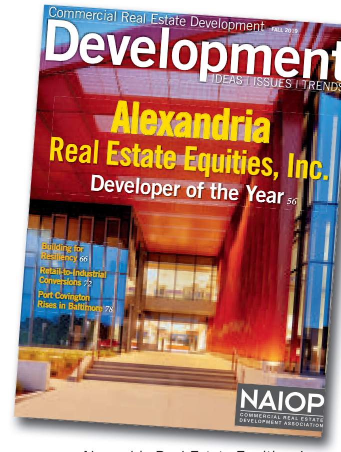

Alexandria Real Estate Equities, Inc.

The Spectrum IV building in Torrey Pines, California, is part of the portfolio of Alexandria Real Estate Equities, Inc. It is a research and development space for Vertex Pharmaceuticals.

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A Note From the Editor

Connections, Resiliency, Giving Back: Community Within CRE


Jennifer LeFurgy

In July, the U.S. marked what has been the longest economic expansion since such records began in 1854. Although this 10-year stretch was not as strong as previous runs, commercial real estate experienced tremendous gains, especially within the industrial and multifamily sectors.

But as we know, what goes up must come down.

We have all read and heard prognostications, some divergent, on the future of the economy. It seems many of the old rules of thumb no longer apply. However, there are certain principles that commercial real estate practitioners have come to know, particularly those who have ridden the economic up and downs during their careers: the power of lasting connections, the importance of giving back and the ability to adapt to adversity. Nurturing these principles provides ballast during downturns and cultivates resiliency, professionally and personally.

Several of the articles in this issue touch on these ideas. NAIOP's Developer of the Year, Alexandria Real Estate Equities, Inc., places importance on giving back to the communities it is part of; author **Camille Galdes** explores how developers are constructing buildings to withstand severe weather and other environmental shocks; and NAIOP's diversity scholarship lends a hand to those who have traditionally been underrepresented in the industry. All of these stories reinforce the industry's commitment to communities and individuals.

I especially encourage you to read NAIOP Chairman **Greg Fuller**'s letter this month. It is a poignant reminder of what endures: friendship, resiliency and helping others.

Stay informed,
Jennifer LeFurgy, Ph.D.
Editor-in-Chief

NAIOP's Developer of the Year is Alexandria Real Estate Equities, Inc., an investment-grade-rated S&P 500 REIT headquartered in Pasadena, California, that focuses on cultivating collaborative life science, technology and agtech campuses. (Page 56)

Future NAIOP Events

- **CRE.Converge 2019,** October 14-16, Los Angeles
- **2020 Chapter Leadership and Legislative Retreat,** February 3-5, 2020, Washington, D.C.
- **I.CON Spring 2020: The Industrial Conference**, April 2-3, 2020, Huntington Beach, California
- **2020 National Forums Symposium**, April 29-May 1, 2020, Boston

The Port Covington development in Baltimore will include up to 18 million square feet of new, mixed-use development, along with 40 acres of parks and green space. (Page 78)

Retail-to-warehouse conversions, in which shuttered shopping centers and malls are converted into logistics facilities, are starting to crop up all over the country. (Page 72)

Developing properties with resiliency in mind can keep occupants — and investments — safe, but it can also boost the bottom line in surprising ways. (Page 66)

The growth in cannabis-related businesses presents many legal, financial and regulatory challenges for the commercial real estate industry. (Page 16)

Most Popular From Summer 2019

1. **"Commercial Real Estate and the Big-Data Deluge"** (www.naiop.org/19bigdatadeluge, page 56)
2. **"An Ohio Suburb's Strategy to Win Business Investments"** (www.naiop.org/19newalbany, page 64)
3. **"Two Summerlin: An Office Building with a Unique Exterior Skin"** (www.naiop.org/19twosummerlin, page 72)
4. **"Tee-Commerce: Acing the Golf Course Conversion"** (www.naiop.org/19teecommerce, page 10)
5. **"Parking Perplexities: Developers Face New, Growing Challenges"** (www.naiop.org/19sharedparking, page 50)

The U.S. Interstate Highway System could require more than $70 billion a year for the next 20 years to make much-needed repairs. (Page 50)

Opportunity Zones have generated a lot of interest in the commercial real estate industry, but it's important to remember that the 1031 exchanges are still a key investment vehicle. (Page 18)

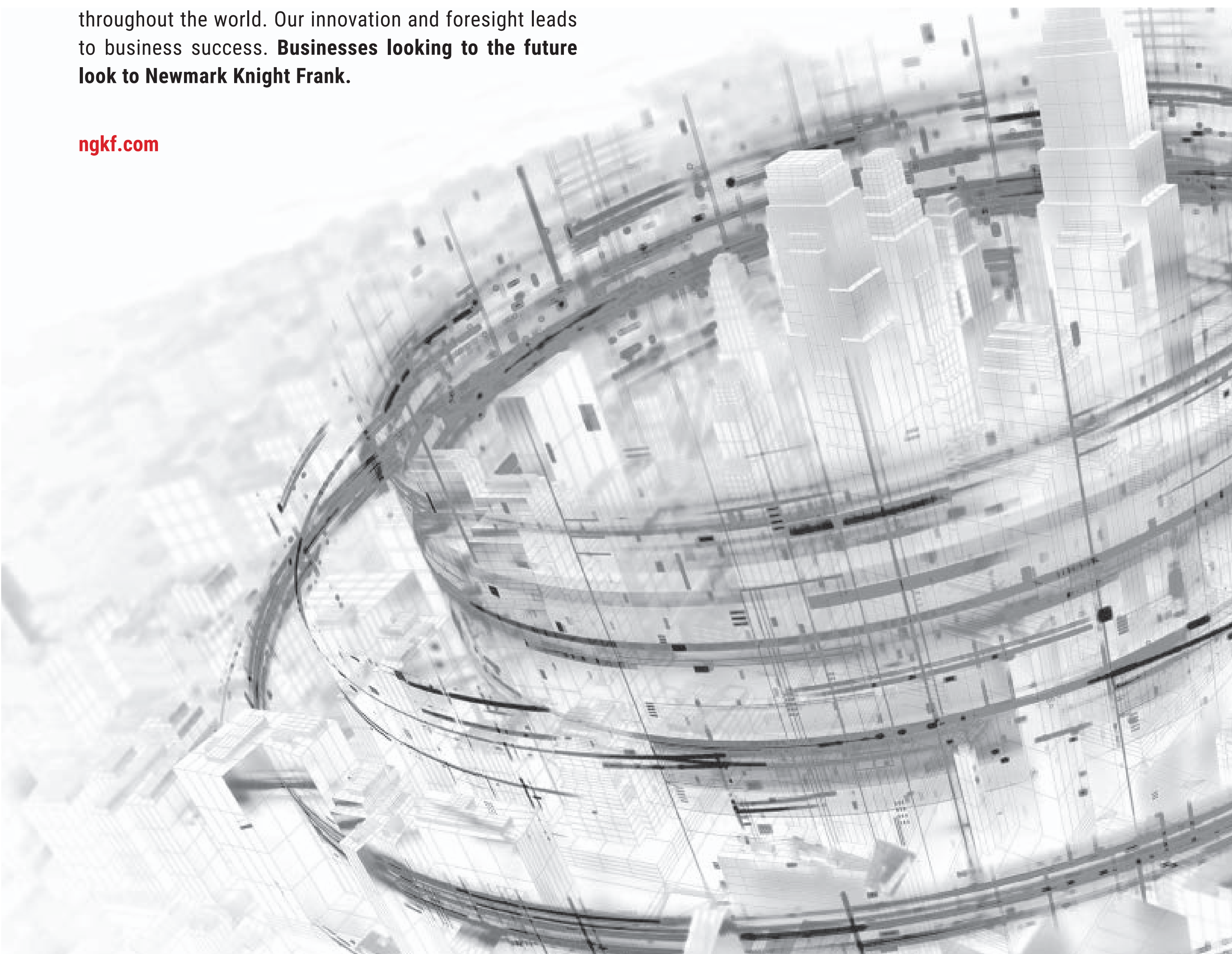
Coworking's skyrocketing growth, which has averaged 23% a year since 2010, doesn't appear to be slowing down anytime soon. See the numbers behind the trend. (Page 10)

Mezzanine financing in real estate has evolved since it was first introduced in the early 1990s. It can offer a lot of advantages compared to more traditional financing options. (Page 40)

A tax initiative on the ballot in California in 2020 could significantly increase commercial real estate property assessments there — and other states could follow suit. (Page 88)

The 2019 NAIOP Diversity Student Scholarship winners include a former police chief. (Page 96)

A new report from the NAIOP Research Foundation explores innovative partnerships that are aimed at improving training and recruitment in the construction and logistics trades in the U.S. (Page 84) ■



Coworking Flexes its Muscles

Shared office space appears to be the fastest-growing trend in commercial real estate.

By Trey Barrineau

The rapid growth in coworking, which has forced commercial real estate companies to rethink how they plan and deploy office space, doesn't appear to be slowing down anytime soon.

A recent JLL report, "Coworking's Unstoppable Market Growth," finds that flexible office space, which includes coworking, has been growing at an average annual rate of 23% since 2010. During the past 24 months, growth in flexible office space claimed 29.4% of total U.S. office absorption — about 18.1 million square feet.

"No segment of the market has demonstrated more overall growth than the coworking industry," the JLL report states. "Given the massive amount of venture capital that's being poured into the sector, this aggressive growth rate shows no signs of slowing."

In 2018, coworking grew by approximately 20% around the world, according to the 2019 Global Coworking Survey from Deskmag, a publication that focuses on coworking. By the end of 2019, about 2.2 million people could be working in more than 22,000 coworking spaces worldwide, the survey finds. By comparison, there were just 8,900 such spaces globally in 2015.

Coworking appears to be growing even more rapidly in major American cities. A December 2018 Yardi Matrix study of 20 U.S. metros found that 43.5 million square feet of office space was being rented as shared space. By comparison, the first Yardi Matrix study, which took place in the fourth quarter of 2017, identified 26.9 million square feet of shared space in those same metros. That's an increase of 61.7% in just 12 months.

Globally, coworking locations had an average of 185 members per site in 2019, according to Deskmag's survey. That's up from 159 in 2018. At the same time, the average size of a coworking space has shrunk, from 15,760 square feet in 2018 to 11,450 square feet in 2019, the survey found.

While major metro areas represent the bulk of coworking's growth, smaller regions are also getting in on the act.

The Global Coworking Growth Study 2019 by Coworking Resources shows that less populous states such as Vermont, Montana and Colorado have shown strong growth. In Vermont, 12.1 coworking spaces per 1 million people

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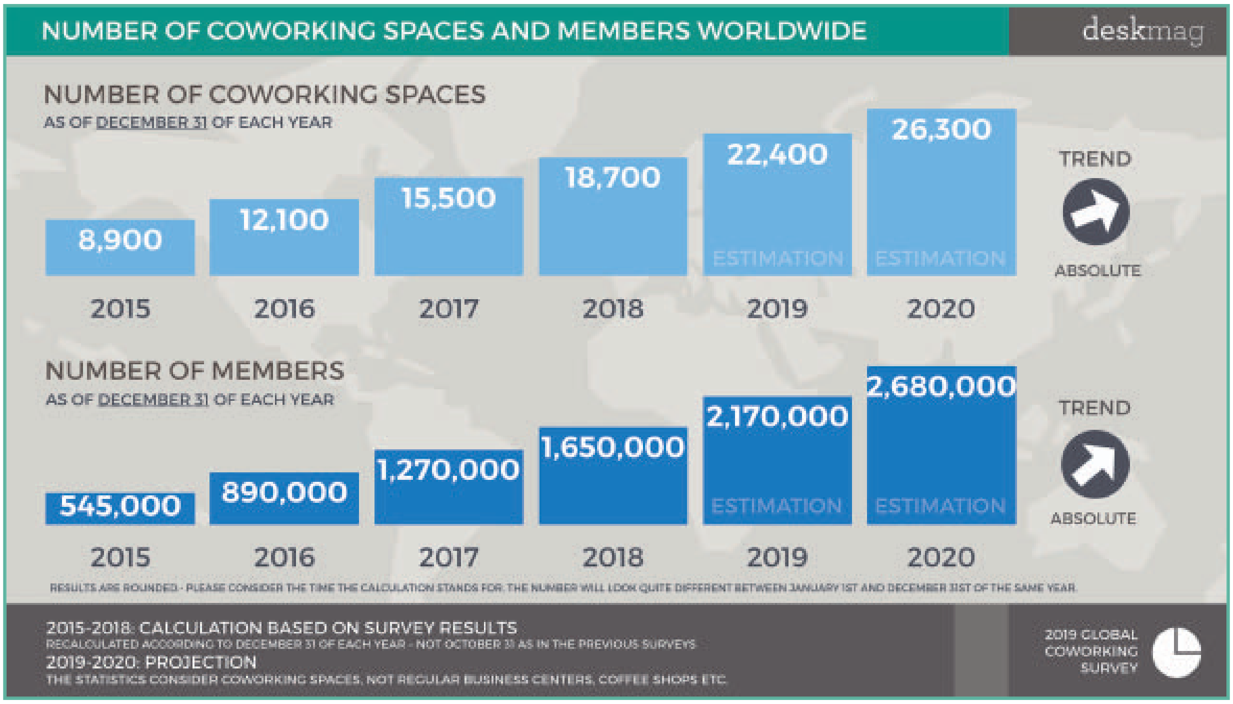
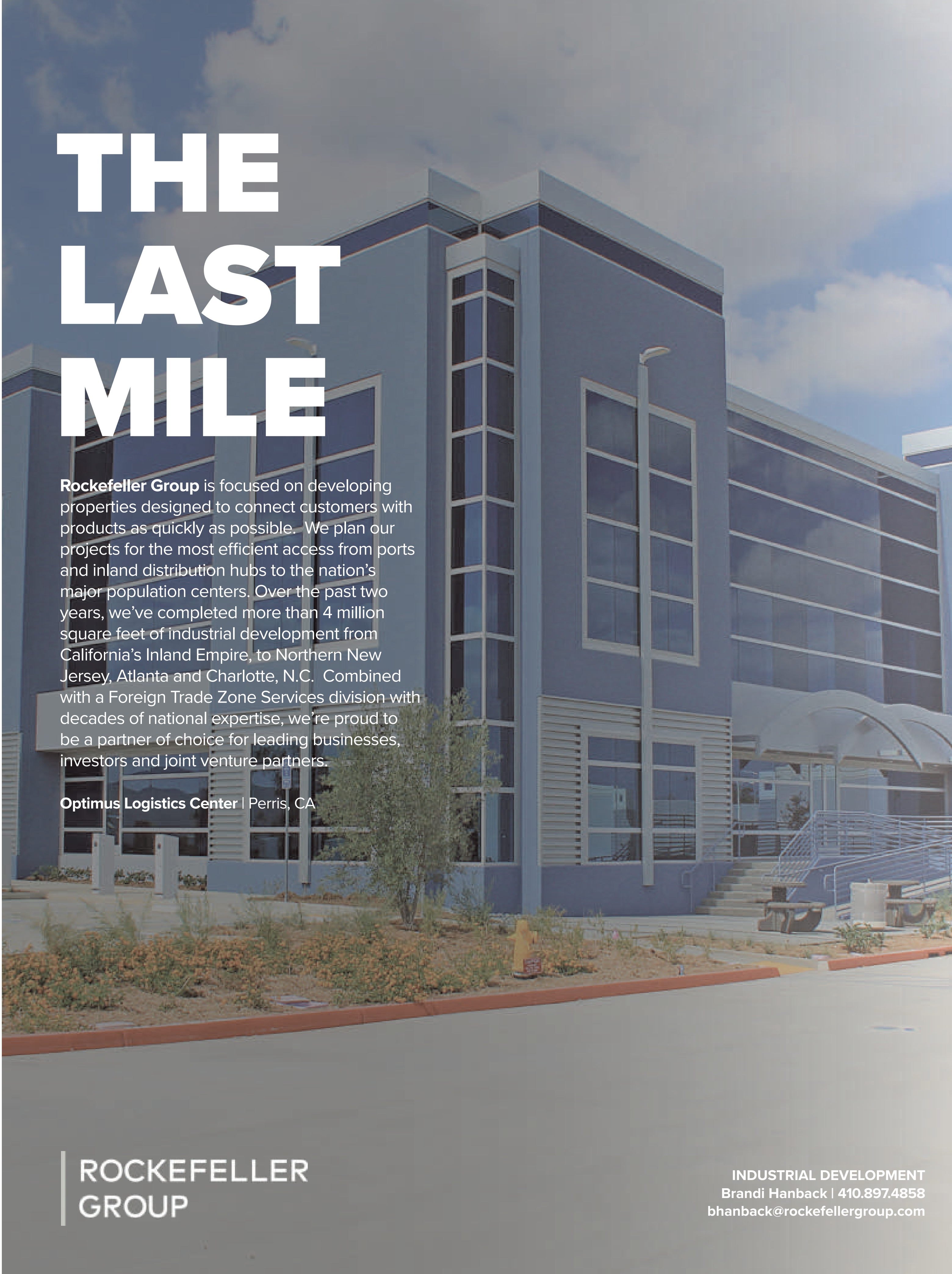


Source: Deskmag 2019 Global Coworking Survey



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open each year. In Montana, that figure is 8.5, and it's 8 in Colorado.

"These states have all experienced recent booms in small businesses and have received an influx of tech start-ups moving from other states where taxes and operating costs are more expensive," the report states.

Why It's Booming

There are many reasons for coworking's rapid growth, but by far the biggest is the flexibility it presents to tenants.

"For smaller entrepreneurial businesses, it allows them to occupy a Class A environment for basically the same 'occupancy cost' (not rental rate) as a Class B to B- space," said **Daniel Levison**, principal at SharedSpace, a coworking provider in Atlanta. "For larger corporations starting to utilize coworking, it also provides part of the answer that all CEOs are having to ask themselves today — how do we keep and attract top talent, especially if they are under 35."

In 2018, coworking grew by approximately 20% around the world, according to the 2019 Global Coworking Survey from Deskmag, a publication that focuses on coworking. By the end of 2019, about 2.2 million people could be working in more than 22,000 coworking spaces worldwide, the survey finds. By comparison, there were just 8,900 such spaces globally in 2015.

That flexibility also appeals to CRE professionals, although there are major differences compared to working with traditional office space.

"For a broker, coworking can actually make more money," Levison said. "Almost every coworking company pays around a 10% brokerage fee. The problem is it's an annuity, not a cash-out."

For owners and landlords, Levison said the shorter leases in coworking spaces can also be challenging.

"You provide a lot more services compared to a traditional tenant," he said. "But if tenants/members don't like something, they can make knee-jerk emotional decisions and leave. With longer leasing terms, if a tenant gets upset for whatever reason, you have time to make it right."

However, there can also be a significant financial payoff.

"For a developer or an asset owner, if they've got safe, traditional leases locked in making $70 per square foot in a Class A building in Manhattan, they could make $300 per square foot if they go into coworking," said **Bart Leslie**, a business and management

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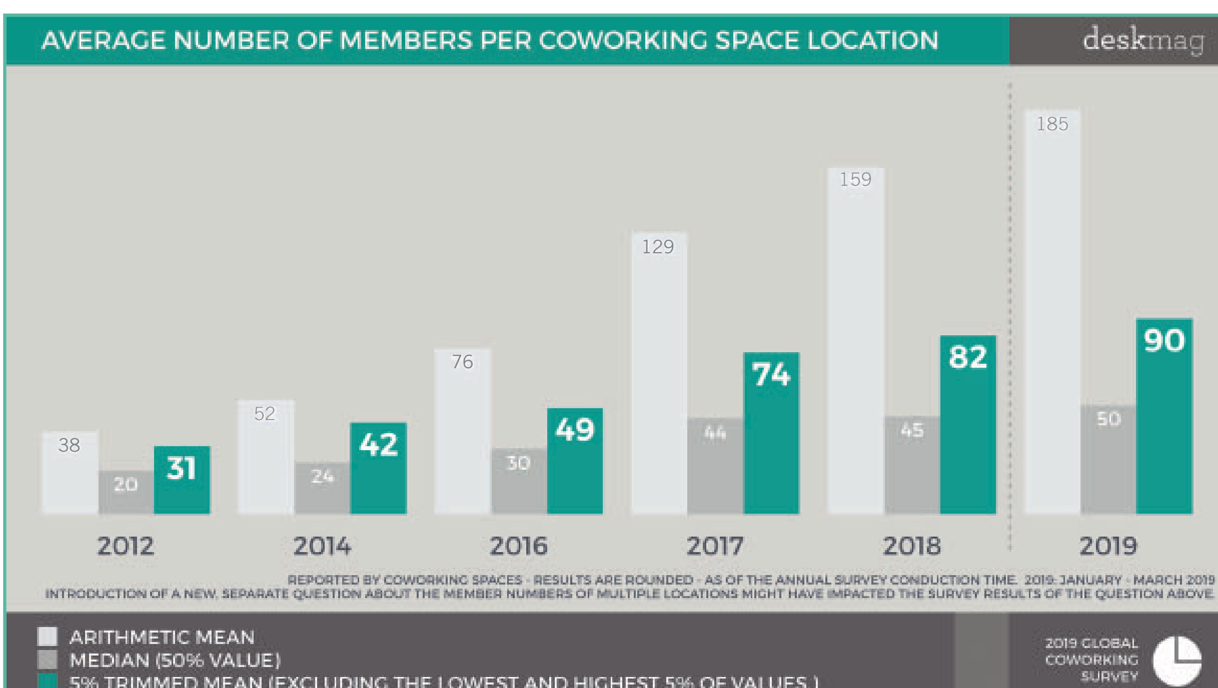

Source: Deskmag 2019 Global Coworking Survey

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consultant who was quoted in a March 2019 Yardi Kube e-book, "Converting Vacant Space to Shared Space."

Levison said another huge benefit of coworking from an owner/landlord perspective is that it allows a current tenant to expand and contract without having to consider relocating. That makes buildings "stickier."

"It also can allow you to grow some coworking members into traditional-term tenants," he said. "Or it can help you place a tenant who might want to move into your building, but the space they want requires retrofits for their needs. You can offer to provide them temporary space in a coworking environment while the work is being completed."

"For smaller entrepreneurial businesses, it allows them to occupy a Class A environment for basically the same 'occupancy cost' (not rental rate) as a Class B to B- space. For larger corporations starting to utilize coworking, it also provides part of the answer that all CEOs are having to ask themselves today — how do we keep and attract top talent, especially if they are under 35."

— Daniel Levison, principal at SharedSpace, a coworking provider in Atlanta

The WeWork Phenomenon

While there are hundreds of companies delivering coworking spaces, WeWork is the biggest. The company has more than 700 locations in 124 cities around the world representing 45 million square feet of space, and it is now the largest office tenant in New York, London and Washington, D.C.

The company is known for its amenities (high-speed internet, unique common areas, complimentary coffee and beer), but the cost savings it offers to small businesses might be the real secret of its appeal.

In April 2019, the company produced its first-ever Global Impact Report in collaboration with HR&A Advisors, Inc., an economic development and public-policy consulting firm. According to its research, a company of four can save an average of $24,000 a year on occupancy costs using WeWork.

In August, WeWork released its IPO prospectus, raising anticipation for what could be the biggest initial public offering since Uber in May. The documents show that the company considers coworking to be a global market opportunity worth $1.6 trillion.

WeWork is currently valued at about $47 billion, according to the Financial Times (FT), but it is also a big money loser. According to FT, the company lost $700 million in the first quarter of 2019, even though it projects 2020 revenues of $3 billion. However, WeWork executives told the New York Times in March that those losses "were a sign of the company's giant ambitions."

"We're looking at building this business out, not just maximizing profitability over the next one to two years," **Michael Gross**, the company's vice chairman, told the newspaper. ■

Trey Barrineau is the managing editor of Development magazine.

A Brief History of Coworking

Coworking, which the NAIOP Research Foundation defines as "workspace offered for lease for short- to long-term periods in a communal setting," evolved from the "hackerspaces" of the 1990s. These were community-oriented places where people with common interests in digital technology could get together and collaborate on projects. But before that, Regus pioneered the concept of flexible shared space in 1989 after company founder **Mark Dixon** observed how a lack of dedicated office space for business travelers in Belgium forced them to work from coffee shops or hotel lobbies.

In 1999, 42 West 24 opened in Manhattan. It offered desks for individuals and companies, but it didn't have many of the amenities that are common in today's coworking spaces.

In 2005, computer programmer **Brad Neuberg** opened the first official coworking space inside a women's community center in San Francisco after initially testing the concept in a Regus center, according to a 2012 report by Deskmag. The informal gathering space had just a few desks, and its amenities were limited to community meals and free Wi-Fi. A year later, he opened the Hat Factory, which is generally acknowledged as the first true coworking space.

In 2008 and 2009, coworking enthusiasts gathered informally at the South by Southwest technology conference in Austin, Texas. That led to the first Global Coworking Unconference Conference in 2010. That same year, WeWork opened its first space in the SoHo section of Manhattan, and the trend has grown rapidly since then. ■

Despite a Cannabis Boom, Real Estate and Banking Challenges Remain

Conflicting local and federal laws, along with NIMBYism, could be slowing investment in marijuana-related facilities.

By Jonathan Havens and Anamika Roy, Saul Ewing Arnstein & Lehr LLP

At last count, 33 states have authorized cannabis for medical use, with 11 also permitting recreational use. Recent public opinion surveys suggest historically high support for continued and expanded cannabis access.

For example, a March 2019 Quinnipiac University poll found that American voters believe, almost two to one, that "the use of [all] marijuana should be made legal in the U.S." Support for medical access comes in even higher, at more than 18 to one, if a doctor recommends it.

While the public's attitude toward medical and adult-use cannabis appears to be evolving, the opinions of many municipal governments haven't changed much. They continue to restrict cannabis businesses in their communities through zoning ordinances, moratoriums and other measures.

Getty Images

Marijuana plants growing inside a cannabis business in Oregon. Eleven states and the District of Columbia have legalized the recreational use of marijuana.

A Tough Regulatory Framework

As outlined in the Boston Globe last year, at least 189 of 351 municipalities in Massachusetts prohibited marijuana retail outlets or dispensaries, as well as most cultivation facilities and other cannabis businesses. While close to 100 or so of these licensing moratoriums expired at the end of 2018, more than 80 indefinite bans remain in place throughout the Bay State. Although 54% of Massachusetts voters approved the 2016 ballot question authorizing certain cannabis activities, "proponents of marijuana have fared poorly in local votes on proposed bans and moratoriums: All but a handful have passed," according to the Boston Globe report.

Cannabis businesses in Massachusetts have also had to deal with unhappy neighbors. In 2017, the owner of several commercial property holding companies in Cambridge filed a federal lawsuit against a dispensary in the area, accusing the retailer of conspiring to sell marijuana in violation of federal law. The plaintiff sought $27 million in damages, citing reduced property values. Similar lawsuits have been filed against cannabis businesses in other states.

Even in places where cannabis businesses are welcome and allowed to operate, they can face many real-estate-related challenges. These include a lack of commercial lending options, difficulty locating a willing landlord, and trouble finding existing facilities that can be outfitted to comply with strict state laws and regulations.

Despite changing attitudes, the fact remains that cannabis — with the exception of hemp, which is cannabis with a delta-9 tetrahydrocannabinol (THC) concentration of not more than

Consumer-Driven Trends: The Cannabis Market

A session during I.CON West 2019 in Long Beach, California, dealt with the regulatory challenges and considerations for investment in cannabis-related businesses.

NAIOP members can access a recording of that conversation here:

learn.naiop.org/p/19cannabis

0.3% on a dry weight basis — is illegal on the federal level. Most banks will not loan money to businesses or individuals seeking to purchase or lease real estate that will be used for growing, processing or dispensing cannabis, even if it is intended for medical use.

Federal Developments

On February 14, 2014, the Financial Crimes Enforcement Network (FinCEN) of the U.S. Department of the Treasury issued guidance to clarify Bank Secrecy Act (BSA) expectations for financial institutions seeking to provide services to marijuana-related businesses (MRBs). The FinCEN guidance aims to clear up "how financial institutions can provide services to marijuana-related businesses consistent with their BSA obligations." There are currently 493 banks and 140 credit unions in the U.S. that are providing banking services to MRBs.

To ease some of the cannabis industry's banking-related challenges, Rep. **Ed Perlmutter**, D-Colo., recently introduced the Secure And Fair Enforcement Banking Act of 2019 (the SAFE Act). The legislation, which would increase public safety by ensuring that legitimate cannabis-related businesses and service providers have access to financial services to reduce the amount of cash they have on hand, passed out of the House Committee on Financial Services in March 2019.

The bill would provide a safe harbor for depository institutions that provide financial services to cannabis-related legitimate businesses or service providers; offer certain protections for ancillary businesses that work with cannabis-related legitimate businesses; and offer

New & Noteworthy

1.7 million sq. ft.

CT Realty and its affiliates are developing two large-scale **distribution buildings** totaling 1,747,074 square feet at **Palmetto Logistics Park**, a 358-acre distribution facility in **Atlanta**. Palmetto Logistics Park is located next to the CSX-Fairburn Intermodal Terminal and is near Interstate 85, a major north-south highway in the region. The project is also 16 miles from Hartsfield-Jackson Atlanta International Airport. Vertical construction is underway on the second building at the project, a 1,041,600-square-foot facility that is slated for completion in early 2020. In addition, preliminary site work has begun on Building 3, a 705,474-square-foot building that will be delivered in the second quarter of 2020.

1 million sq. ft.

Hines has finished a $16 million repositioning and renovation at **Huntington Center**, a 1 million-square-foot, 37-story **office tower** in downtown **Columbus, Ohio**. Originally designed by Skidmore, Owings & Merrill and developed by Hines in 1984, the building's common areas have been transformed and feature new amenities including a two-story, 2,400-square-foot green living wall that is covered in 8,500 lush plants of 14 varieties and contains 350 gallons of water. The 36th floor has been converted into an amenity space dubbed The Horizon. The 4,000-square-foot lounge creates a lively environment for interaction and is available exclusively to tenants. Outside of The Horizon is a rooftop terrace.

1 million sq. ft.

Trammell Crow Company has purchased a 90-acre site in the Valley View Business Park in **Jessup, Pennsylvania**, from the Scranton Lackawanna Industrial Building Company (SLIBCO) to build the **Valley View Trade Center**, a new 1 million-square-foot speculative **distribution facility**. (SLIBCO is the industrial development affiliate of the Greater Scranton Chamber of Commerce.) The building is scheduled to open in the third quarter of 2019. It will feature 40-foot clear heights, 190-foot-deep truck court with opposing trailer storage, ESFR fire protection, 311 trailer parking spots, 277 car parking spots and 159 dock positions that can be expanded to 209.

protections for federal reserve banks and depository institutions that provide financial services to cannabis-related legitimate businesses or service providers, or that further invest any income derived from such services.

State-Level Actions

Some states are also attempting to open up the financial services market to cannabis businesses within their borders. For example, the California State Senate passed a bill in May 2019 that would allow private banks and credit unions to apply for a "limited-purpose state charter so they can provide depository services to licensed cannabis businesses."

Additionally, some local regulations for operating cannabis businesses are starting to change.

In Anne Arundel County, Maryland, which has traditionally had some of the strictest zoning laws for cannabis businesses in the state, the County Council adopted a measure in April 2019 to loosen some of its restrictions. Specifically, the county reduced the distance requirement between dispensaries and residential units, and modified the signage requirements with which cannabis businesses must comply. The legislation also allows dispensaries to qualify as special exceptions within certain zoned areas and ask for variances.

Missouri voters authorized marijuana for medical use last November. According to a report in the Kansas City Business Journal, that city's planning department announced that it "isn't going to recommend implementation of special-use permits for zoning medical cannabis businesses, choosing instead to rely on existing code." Kansas City's planning department says it will propose some zoning ordinance amendments, which would require city council approval, to clarify how cannabis companies should be treated from a zoning perspective.

Despite the easing of some zoning restrictions, cannabis businesses can often face many significant systemic challenges, particularly companies that have locations throughout a state. The wide variability in approaches to zoning suggests that businesses should adopt a locality-by-locality strategy.

Additionally, prospective cannabis licensees generally have to select business locations when they first apply for such licenses — in other words, before these companies, or the localities, have a sound understanding of what siting restrictions might exist for such businesses. ■

Where Is It Legal?

A total of 22 states have approved marijuana for medical use. Additionally, the District of Columbia and 11 states also allow recreational use of cannabis.

States and jurisdictions where marijuana is legal for recreational use: Alaska, California, Colorado, Illinois, Maine, Massachusetts, Michigan, Nevada, Oregon, Vermont, Washington, the District of Columbia.

States where marijuana is legal for medical use: Arizona, Arkansas, Connecticut, Delaware, Florida, Hawaii, Louisiana, Maryland, Minnesota, Missouri, Montana, New Hampshire, New Jersey, New Mexico, New York, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, Utah, West Virginia. ■

Jonathan Havens is a partner at Saul Ewing Arnstein & Lehr LLP in Baltimore and Washington, D.C. **Anamika Roy** is a summer associate at Saul Ewing Arnstein & Lehr LLP in Baltimore.

Compare and Contrast: 1031 Exchanges and Opportunity Zones

Both options can be good investment vehicles for commercial real estate.

■ By Bruce Johnson, Capstan Tax Strategies

Until recently, taxpayers who wanted to defer recognition of capital gains when selling real estate had one option — the 1031 exchange. However, the Tax Cuts and Jobs Act of 2017 (TCJA) introduced the Qualified Opportunity Zone, a new option that has many investors and developers intrigued. Both of these vehicles defer capital gains tax, increase buying power and encourage reinvestment, but as the saying goes, the devil is in the details. The thoughtful investor will learn all the nuances before determining which strategy might be most suitable.

The 1031

Consider a taxpayer who owns a property that has greatly appreciated in value. The taxpayer would like to sell, but fears the sizeable associated capital gains tax. For almost 100 years, the 1031 exchange has been a viable solution: the taxpayer may sell the property in question — the relinquished property — and fully reinvest the proceeds into a replacement property, in the process deferring capital gains tax on the sale. While a suitable replacement property is being located, a qualified intermediary holds on to the proceeds from the relinquished property.

1031 exchanges are essentially "swaps" of "like-kind" real property. Under the new rules instituted in the TCJA, real estate sales are the only permissible starting point, and both the principal and the capital gains portions of the sale must be reinvested in the replacement property in order to defer the entire gain. The properties must be held for investment purposes or be a trade/business — an exchange can't involve land being developed or properties purchased for resale, for example. There is no geographic restriction on 1031 property, and the exchange may even take place between related parties. Furthermore, the investor is under no obligation to improve the replacement property in any way.

Qualified Opportunity Zone Investments

Enacted by the TCJA, Qualified Opportunity Zones (QOZs) are 8,700-plus federally designated Census tracts in low-income communities nationwide. Interested investors may defer capital gains tax by reinvesting capital gains into a Qualified Opportunity Fund (QOF), which is used to acquire property and/or businesses located in an approved QOZ.

The gains to be reinvested may stem from the sale of real estate (similar to a 1031), or from the sale of other appreciated assets (stocks, bonds, etc.). However, a sale to a related party is not a permissible source of gain. In another contrast, only capital gains from the sale have to be reinvested into the QOF. A taxpayer certainly may invest the principal or other monies, but only the capital gains portion will be eligible for the tax advantages. Investments in QOFs must be in cash, and there is no "middleman" required.

In one sense, QOFs have a little more flexibility than 1031 exchanges — as noted earlier, the QOF can invest not only in real estate but also in operating businesses with personal property, in company stock, in capital resources

New & Noteworthy

800,000 sq. ft.

Red Development has wrapped up **The Union Dallas**, an 800,000-square-foot **mixed-use development** located at Field Street and Cedar Springs Road in **Dallas**. Situated at the confluence of five city streets, The Union includes a 417,000-square-foot, 22-story Class-AA office tower, a 309-unit high-rise apartment building on 23 floors, 87,000 square feet of retail, a signature, outdoor central plaza that features open space with large trees in a park-like setting, and 10 levels of above- and below-grade parking. The Union will be part of an area that already includes Klyde Warren Park, American Airlines Center, the Perot Museum of Nature and Science, The Ritz-Carlton and a growing set of residences, restaurants, retail attractions and more.

240,000+ sq. ft.

Centennial American Properties is developing **Camperdown**, a large **mixed-use property** in **Greenville, South Carolina**. The development will feature 239,978 square feet of commercial and retail space in two office towers, including one that will stand 17 stories tall, as well as a hotel with 197 rooms and an apartment building with 217 units. Above one of the towers will be 18 luxury condo units that will range from 2,726 square feet to 5,452 square feet. The four-acre site includes a large, 1.5-acre plaza in the center. Camperdown is expected to open in mid-2020.

205,000 sq. ft.

KDC, a developer of corporate build-to-suit campus projects for major companies such as State Farm and Toyota, completed construction on the expansion of **Credit Suisse's** new sustainable, **smart working facility** in **Research Triangle Park** in **North Carolina**. The 205,000-square-foot, four-story building is located on a 62-acre site designed for collaboration and recreation. The expansion uses reclaimed water, solar power, and energy-saving lighting and mechanical systems. It will house 1,200 new jobs in areas such as IT, finance and other corporate roles.

like factory equipment, etc. In this sense, QOZ investments may have more potential for diversification, and they may become useful resources for start-up operations in need of capital. QOZ investments are also attractive to the passive investor. Since these pooled funds are diversified and professionally managed, the individual investor doesn't have to be concerned with property selection, restrictive timelines, etc.

On the other hand, contributing to a pooled fund of this nature means that underlying assets are illiquid — extracting oneself from a QOZ investment may be more challenging than simply cashing out of a straightforward 1031 exchange.

QOZs have two major limitations — the QOZs are finite in number and geographically limited. Rapidly gentrifying areas are going fast — with potential for overinvestment — while rural QOZs may lack investors and languish. Additionally, substantial improvement of the investment in the QOZ is required if the original use of the property didn't commence with the QOF. This generally limits investments to new construction/redevelopment projects, another restriction on the potential investor.

Timing is Everything

Both incentives run on tight timeframes, and 180 days is the magic number.

In the case of a 1031 exchange, the clock starts ticking at the time the relinquished property is sold. The taxpayer has 45 days to identify a replacement property and 180 days to close on it. Note that the 45-day identification period is a subset of the total 180 days. In short, all proceeds from the original sale of the relinquished property must be reinvested within 180 days. Similarly, a taxpayer must reinvest his funds in a QOF within 180 days of the sale of the original assets.

What if there is a differential amount in the equity or debt of the relinquished assets and the replacement assets? If excess funds remain after a 1031 exchange, there will be a taxable gain. This isn't an issue with a QOZ investment, as the investor is not required to reinvest all the proceeds of the assets sold. The taxpayer can tailor the exact amount reinvested to equal the exact amount of capital gains realized in the past 180 days, thus preventing any inequity and subsequent taxable gains.

Capital Gains Tax Deferral

A key attribute of the 1031 exchange is that it isn't time-bound. Investors may (and very frequently do) roll funds from the sale of one replacement property right into the purchase of another replacement property, and so on. This cycle of exchanges (and associated tax deferrals) can happen indefinitely — and in fact is ideal. Many investors consider this when planning for the future.

If an investor passes away before the investment is sold, the heirs inherit the property with a step-up in basis equal to the fair market value of the property at that time. The heirs may pay no capital gains tax whatsoever. The value of this strategy has begotten the morbid but wise expression "defer, defer, die," and it has made the 1031 exchange attractive to the thoughtful, long-term investor for some time.

QOZ investments, however, have a hard deadline. Capital gains tax can be deferred until the investment is sold, or at the latest, December 31, 2026. Rollovers are not an option.

Capital Gains Tax Reduction

1031 exchanges defer capital gains tax, but can't reduce them. This is where QOZ investments really excel. If a QOZ investment is held for five years, the taxpayer will enjoy a 10% reduction in capital gains tax liability. If the investment is held for seven years, the tax burden on the original gain invested will be reduced by another 5%, for a total of a 15% capital gains tax reduction. However, that aforementioned deadline of December 31, 2026 means the clock is ticking. If a taxpayer wishes to meet the seven-year mark, the QOZ investment must be made by the end of 2019.

New & Noteworthy

182,000 sq. ft.

Mortenson, in partnership with **Urban Development Partners**, will develop and build Arizona's first cross-laminated timber (CLT) **office building**, **The Beam on Farmer** in **Tempe**. The five-story office building will total 182,000 square feet. The Beam on Farmer will combine solid timber, concrete, steel and glass, giving it a natural wood aesthetic with a modern yet vintage vibe. The building will feature sustainable and flexible office floor plans amid a unique environment, with 15-foot exposed wood ceilings, and glulam wood beams and columns. Transwestern Commercial Services (TCS) will provide leasing services for the Class-A building.

Photo by RSP Architects

173,373 sq. ft.

The Bergeron Properties & Investment Corp. has opened the **Bergeron Distribution Center**, a 173,373-square-foot **industrial facility** on 9.1 acres of land within the Bergeron Park of Commerce and Industry, a 300-acre industrial park and development site in **Pembroke Pines, Florida**. It features 32-foot clear height ceilings, onsite trailer storage, 52-foot column spacing, an ESFR fire suppression system and Class A amenities. Phase 2 of the Bergeron Distribution Center was scheduled to break ground in August 2019. The 185,000-square-foot site will feature onsite tractor trailer storage and an additional four acres of bulk outdoor storage.

149,916 sq. ft.

Lincoln Property Company recently delivered the renovated **Katella Office Campus** in **Los Alamitos, California**. The **office property** encompasses two buildings totaling 149,916 square feet, and it is located on the border of Orange County and Los Angeles. Ware Malcomb designed the new exterior architecture for both buildings using new aluminum composite metal panels and glazing. Site improvements to the front entries also included upgrading the concrete paving and adding drought-tolerant landscaping. In addition, the firm provided site upgrades to the shared break patios behind the buildings, including new paving, landscaping and added seating. New exterior paint on both buildings completed the renovation.

When it comes to capital gains tax reduction, the advantage appears to lie with QOZ investments, but many clients won't hold the investment long enough to enjoy the full benefits.

Capital Gains Tax Upon Sale

It's finally time to dispose of the selected investment. If the investor is still living at the time the final property is liquidated, all capital gains associated with a 1031 exchange will be taxed. However, the aforementioned "defer, defer, die" principle eliminates capital gains tax for the heirs of a taxpayer who dies before liquidating the investment.

QOZ investments cannot boast the same. Heirs are fully responsible for capital gains taxes accrued, which will be due in 2026. However, if the QOZ investment is held for a full 10 years, the basis of the QOZ is stepped up to full market value at the time of the sale, entirely eliminating capital gain on any appreciation. This is a permanent tax exemption, and the taxpayer is not required to pay any federal capital gains tax when the QOZ investment is eventually sold.

When in Doubt, Seek Assistance

Both incentives have their merits and limitations, and both may be powerful investment tools when used properly. In fact, wise investors might find utility in both opportunities at different points in their career. Thoughtful investors will consult with both legal and tax professionals to select the best incentive for their current situation. They may even couple the selection with other tax strategies like cost segregation to further enhance cash flow.

One thing is certain in the world of commercial real estate today: great opportunities exist, but with them come greater complexities. ■

Bruce A. Johnson, CRE, is a co-founder and partner at Capstan Tax Strategies.

Raise the Roof, Boost the Value

Increasing clear heights in industrial properties can make older buildings suitable for modern logistics uses.

■ By Mason Harris, Rooflifters

Cubic space. It's a measurement that is increasingly more descriptive of the usefulness and value of today's commercial and industrial properties. With the rising costs of real estate and new construction, many building owners are looking at existing properties with a renewed vision on value. That value is often found in the amount of clear height within a building.

Although located in highly desirable locations, existing buildings often fail to meet the specifications of potential buyers or tenants. One of the most common prohibitive factors found among commercial and industrial properties in today's maturing market is a low clear height.

Simply stated, industrial and commercial property demands have outgrown the structures that are often found within a city's urban centers. There are millions of square feet of commercial space in every major city in North America that are becoming non-competitive, even though they are located near highways, airports and urban centers.

The square footage of these buildings generally suits the needs of users. But the bulk of these properties suffer the same undesirable problem — low clear height.

Taking it Higher

However, these buildings can become a great investment opportunity by simply raising the existing roof.

By modernizing the height of these undervalued properties, owners and users have been able to create value. Raising the roof allows the rejuvenation of buildings that have often sat vacant for extended periods of time. It also allows tenants, whose business growth is exceeding their current facility, to maintain their operations without relocating.

The Aurora Foods building in Toronto, Canada, just after the roof was raised from 18 feet to 40 feet. This more than doubled the cubic space of the 100,000-square-foot facility.

With few limitations, roof lifting can be applied to virtually any type and size of roof structure. In many cases, vertical expansion results in doubling or tripling the amount of usable cubic footage in a facility, while keeping the entire existing roof and most of the services intact.

Relocating, building an adjoining space, constructing a new building and other traditional expansion methods are generally more costly. The typical shell-only hard cost of industrial buildings is now coming in around $100 per square foot, though it varies around the country. This does not include soft costs related to civil engineering, planning, etc., that come with new construction.

Expanding upward offers several key incentives and advantages over outward expansion:

- Limited construction and material costs.
- No new land is required.
- Permitting process is much simpler.
- Efficiency and speed of roof lifting reduces downtime.
- Existing roof and attached ceiling systems remain intact and raise with the roof.

Move or Rebuild?

As a company grows, so does the need for space. To remain competitive and grow its business, California-based Experior Laboratories required more room.

The company, which provides independent testing services to component and system manufacturers for a wide range of industries, was about to outgrow its existing facility. Moving the entire business or operating at two locations were not feasible options. Experior Laboratories considered an adjacent building, but at 16 feet clear, it couldn't accommodate cranes or the testing of larger equipment.

After consulting with Rooflifters, purchasing that building and raising the existing roof to 35 feet clear became the most viable solution. By lifting the facility's entire existing roof, Experior was able to convert a building with an ideal location into what it needed.

Why was roof lifting the solution for a business like Experior Laboratories? The option to move to a suitable facility certainly exists, as does demolishing the current facility and building a larger one. But those options can have major drawbacks.

First, real estate and construction prices are on the rise in urban areas all over North America. Second, the cost of moving a business can negatively impact a workforce and logistics.

New & Noteworthy

110,000 sq. ft.

Front Street Capital has begun construction of **Project Slugger**, a new nine-story, 110,000-square-foot **office tower** that will be located in the outfield of First National Bank Field, the home of the Greensboro Grasshoppers minor league baseball team in downtown **Greensboro, North Carolina**. The building will be designed in brick and glass to complement the existing architecture of the ballpark while incorporating modern enhancements and materials. There will be restaurant space on the ground level. The project is expected to be completed by the summer of 2020.

93,467 sq. ft.

Steelwave recently completed a project in **Hayward, California**, comprised of a new single-story, 93,467-square-foot **industrial building** situated on a 5.86-acre site. The unique shape of the infill parcel required special site engineering and a design that maximizes the building footprint while providing for the necessary parking. The building shares common access with an existing Costco store. All four sides of the building have an aesthetically pleasing architectural design, as well as public landscaping, trails and lighting throughout the site development.

72,000 sq. ft.

Rendina Healthcare Real Estate recently opened a 72,000-square-foot **medical office building** (MOB) that is attached to the new **North Alabama Medical Center** (NAMC) in **Florence, Alabama**. The facility offers complementary services to those provided in the new medical center. NAMC lab and imaging functions are also available in the new MOB, along with obstetrics, gynecology and cardiology physician offices. NAMC and North Alabama Bone & Joint Clinic (NAB&J) are the anchor tenants. ■

Do you have a new and noteworthy project in the planning, design or construction stage that you'd like to share with fellow real estate professionals? Send a brief description and high-resolution rendering to developmentmagazine@naiop.org.

Additionally, moving can require the total suspension of business operations. In this case, laboratory testing equipment would have to be completely disassembled and then reassembled in the new facility.

Rebuilding on the current footprint would require either the complete suspension of business operations or multiple moves. Constructing a new facility would also include a wide range of development and construction costs as well as a number of government regulations, zoning restrictions and taxes to navigate — many of which did not exist when the building was originally built.

Maintaining the existing facility and expanding it outward might seem like an option as well. However, in many instances, this simply is not feasible. If the facility is in a densely populated area, there might not be enough space to expand outward.

Even when there is room on the property to expand outward, the capacity for trucks to have access to the facility could be either significantly limited or even eliminated.

Undervalued Buildings

Allowing a growing industrial business to remain in its current location is not the only reason real estate professionals and business owners are increasing clear heights. It is also an extremely efficient way to enhance a building's value or attract tenants.

Aurora Foods, a Toronto-based food distribution company with more than 4,000 products, needed to expand its business. When it decided to acquire a larger facility, location was a critical factor.

However, Toronto's competitive real estate market made it difficult for Aurora to find a suitable facility in the right spot that checked every box. The company eventually found a vacant 100,000-square-foot furniture manufacturing building in the middle of the city that was below market value. It was available at such an attractive price because of the low ceiling height and the limited number of loading docks.

Simply stated, industrial and commercial property demands have outgrown the structures that are often found within a city's urban centers. There are millions of square feet of commercial space in every major city in North America that are becoming non-competitive, even though they are located near highways, airports and urban centers.

After consulting with Rooflifters and working out the costs, Aurora purchased the building. Knowing that the location was ideal, the company decided to modify a section of the building to create 10 new state-of-the-art loading doors and docks.

It then raised the entire existing roof from 18 to 40 feet, creating Aurora's new Toronto distribution facility and retail center without sacrificing location.

Potential and Marketability

The Seyon Group, based in Boston, seeks out functionally obsolete industrial properties with the intent to capitalize on undervalued assets.

Knowing the region's tenants and their desire for cubic space and higher clear heights, it identified a 200,000-square-foot former can manufacturing facility with only 16 feet of clear height. The building simply wasn't suitable for today's demands.

Seyon reached out to Rooflifters, and together they prepared a cost analysis and timeline to increase the building's clear height from 16 to 32 feet and modernize the structure. Once purchased, Seyon demolished the interior spaces and put into place a schedule to raise the roof and retrofit the building. The project is expected to be completed 20 weeks from the time it started.

Seyon was able to fully lease the property before starting construction.

Demand for Volume

According to Rooflifters President **Marty Shiff**, real estate has become so expensive that it's rarely feasible to purchase a building, knock it down and rebuild it in the same place.

"With changes to distribution, logistics and consumer demands, many buildings in key locations that have low clear height are being re-evaluated," he said.

In today's real estate market, what good is an industrial building without volume? There are efficiencies when considering a typical 100,000-square-foot building with a clear height of 18 feet compared to that same building once the roof has been raised to 32-foot clear height. Without changing the footprint of the original structure, lifting the existing roof provides more than a 75% increase in usable space.

As businesses become increasingly innovative, it only makes sense that they pursue increasingly innovative solutions. It's the reason industry professionals are looking upward rather than outward when it comes to the need for cubic space. ■

Mason Harris is the vice president of operations for Rooflifters.

One Merriweather: Under the Boardwalk

A stormwater-management project shows how practical solutions to the problem of runoff can be aesthetically pleasing, too.

By Brian Reetz and Anna Dennis, Design Collective

A new commercial development offers insights into how stormwater-management strategies and design solutions can engage people and allow them to experience the landscape in a new way.

The One Merriweather office building and parking structure are the first major components of a new $68 million development directly adjacent to the popular Merriweather Post Pavilion event venue in Columbia, Maryland, near Washington, D.C. Combined with the adjacent office building, Two Merriweather, it features 322,000 square feet of total new office space, as well as 25,000 square feet of new retail and restaurant space.

A new shared parking structure serves One and Two Merriweather office tenants during the day and Merriweather Post Pavilion concertgoers at night and on weekends. That opened the door to an opportunity — create a uniquely distinctive experience for tenants and a positive first impression for event-goers.

While ADA access to the north building was possible from the parking structure, with the expansion of the new development to the south, developers wanted to address accessible circulation over a 16-foot grade change, as well as a technical solution for stormwater management requirements. In addition to accessibility, project stakeholders were looking to incorporate active and passive uses on the site, all in a single coherent design.

With the project's proximity to Symphony Woods, a 36-acre park that features trails and large mature trees, developers identified a strategy:

Design Collective

The developers of the One Merriweather office building in Columbia, Maryland, enhanced the overall walkability of the neighborhood with an innovative, multifunctional boardwalk that is integrated with the surrounding landscape.

enhance the overall walkability of the neighborhood with a multifunctional boardwalk amid a lushly planted landscape that also serves as an integrated stormwater solution.

Stormwater Management System and Construction

Stormwater management can be a critical consideration early in the design phase because it impacts or informs the architecture and affects how the landscape needs to be planned to support it.

For Merriweather One and Two, the design team worked closely with civil engineers from GLW of Burtonsville, Maryland, to address stormwater needs on a site that had been a forest. They balanced the technical requirements of stormwater conveyance and retention with the aesthetics of the site design by using bioretention in multiple tiers, pervious pavement and other techniques.

The biggest challenge to effective stormwater management on a budget is a cohesive design that meets the technical needs in an aesthetic yet functional way. Stormwater management is best executed by integrating multiple trades, such as landscape architecture and civil and geotechnical engineering.

A construction plan that protects and preserves the landscape is a good approach. During construction, landscape architects and civil engineers should be on site to supervise the work.

The comprehensive stormwater solution at One Merriweather fits into the context of its distinctive location and enhances the pedestrian experience. Large trees help scale down the architecture of the office buildings and make pedestrians feel comfortable without blocking views or overplanting.

All this infrastructure is integrated into the landscape in an aesthetically intriguing manner. The placement of trees and selection of plants creates a place that is more naturalistic, complementing Symphony Woods while simultaneously addressing stormwater management.

Appropriate plant materials can accommodate various microconditions including slopes, sun/shade and periods of inundation. At the same time, the local jurisdictions as well as the regional climate influenced the planting palette.

The selected plant species can tolerate water inundation as well as drought. Native tree species such as sweetbay magnolia, black gum and river birch provide a deciduous canopy, and American hollies provide evergreen coverage. Six native shrub species are part of the development. These include clethra, which has fragrant flowers in summer, and winterberry, which provides winter interest with bright red berries. More than 20 species of perennials and grasses fill the understory spaces. They have staggered bloom times, which provides a dynamic visual experience throughout the seasons.

Stormwater management is best executed by integrating multiple trades, such as landscape architecture and civil and geotechnical engineering. A construction plan that protects and preserves the landscape is a good approach. During construction, landscape architects and civil engineers should be on site to supervise the work.

Soil quality is key for the landscape architecture team, because compacted soil will not provide adequate infiltration. The design incorporates overflows for stormwater so that water can move through the system when each tier reaches maximum capacity.

The design also includes pervious pavers used in pedestrian plazas, complementing a comprehensive stormwater strategy and a low-impact development.

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On the Boardwalk

The accessible, elevated boardwalk at One Merriweather is 350 linear feet. It traverses the landscape in a crisscross pattern that appears to hover above the landscaped area while also providing places for people to gather. There are multiple levels and areas along the boardwalk designed to provide a variety of distinct gathering spaces for tenants and pedestrians. This creates opportunities for people working in the nearby offices to use the spaces in a meaningful way — to take a call, have a quiet lunch or a small, informal meeting.

Below the boardwalk, plant material is strategically placed where the boardwalk is highest and the structure is most exposed, helping conceal the underside of the boardwalk structure. To achieve the appearance of a floating path, the selection of appropriate plants accommodates micro conditions, such as slopes and inundation, contributing to a low-impact development.

The design originally included composite decking with a mostly transparent metal rail and cable system. This would give the illusion of a floating boardwalk. However, to meet the budget for the project, the team used pressure-treated lumber and heavier rails. A wooden bottom rail allows users to rest their feet without stepping on the cables and conceals a linear LED light system that illuminates the walkable surface while keeping the light source hidden from view.

Technical constraints and the natural aesthetic of Symphony Woods also influenced the selection of structural materials. Marine-grade timbers serve as the structural system for the boardwalk, minimizing the footprint below. These timbers are typically found on docks along the ocean because of their resistance to water and durability once installed in wet conditions.

Landscape architecture doesn't just impact stormwater quality. It also influences the overall appearance of the project, as well as more practical considerations, such as maintenance costs related to gardening, replacement of bioretention media, and plant material that would endure through time and seasonal change.

The structural engineer chose this construction approach because of its limited impact to the stormwater systems below, as well as for its cost-effectiveness and inconspicuousness. The construction process was unconventional, with a large machine driving 60-foot-tall timbers. A surprising hurdle was finding contractors with the required expertise who were willing to do a single project that wasn't on the coast.

It's More Than Landscaping

Landscape architecture doesn't just impact stormwater quality. It also influences the overall appearance of the project, as well as more practical considerations, such as maintenance costs related to gardening, replacement of bioretention media, and plant material that would endure through time and seasonal change.

The Merriweather project achieves this goal in a way that is cost-effective and manageable, which ultimately makes the result more sustainable for the owner. It also contributes to an educational-aesthetic narrative for visitors to follow, which imbues the space with meaning. ■

Brian Reetz is a principal with Baltimore-based Design Collective, Inc., and **Anna Dennis** is an associate.

How to Reposition a Building to Meet Changing Expectations

Whether it's replacing worn materials or an intensive intervention, architectural updates can enhance the value of a property.

■ By David Yuan, Robert Mankin and Chris Beza

As buildings age, they often need to be updated to attract and retain tenants. The scope of a renewal can vary widely from building to building, but keeping a few important factors in mind can position a building for continued success for years to come.

Why Renewal Is Necessary

As recently as five years ago, a "tech" building meant something very different from a financial or legal services building. Tech companies often provided a host of amenities that encouraged interaction, including informal meeting areas, maker spaces, restaurants and retail. But now the distinction between financial and tech buildings is going away — traditional business services like law and accounting firms expect the amenities long associated with tech companies.

The current workforce is also more inclined to work anywhere, whether from their desk or an impromptu break-out space or even a coffee shop. At the same time, WeWork and other coworking companies rose up to absorb excess office space, giving people an experience very different from a corporate office.

Moreover, renewal can be an effective strategy during an economic downturn as a low-cost, high-impact alternative to building from the ground up.


© NBBJ/Sean Airhart

The recent renewal of Two Union Square in Seattle created public spaces that serve many of the same functions as a tech workplace but with a look and feel that is true to the building's brand and position in the market.

The Scope of Renewal

There are several reasons why a building owner would want to renew a property. Most obviously, a building may need upgrades if it is having difficulty attracting or retaining tenants. On the other hand, some owners may undertake a renewal proactively if a building is well-leased but is beginning to look dated and tired, if the property will soon compete with new Class A buildings under construction nearby, or if tenant mixes are changing. Other renewals occur when a building is sold and the new owner wants to bring it in line with their own brand vision.

Each renewal varies, but most can be categorized according to degree of intensity:

Light touch. Some renewals occur as materials and finishes wear out and need to be replaced. The interior may gradually change as materials are swapped out, but typically the level of intervention is small. The lobby and arcade of 85 Broad in Lower Manhattan provide a good example of this. New finishes, wayfinding, reception desks and public art impart a more contemporary feeling to a building that was otherwise largely untouched since it was first built in the 1980s.

Rebrand. A rebrand is a more ambitious renewal aimed at changing the perception of a building. This might include changes to part of the facade, the amenities and retailers, the elevator cabs, and the lobby and how it interacts with the greater urban environment. These tend to happen when a landlord first acquires a new property, but they may also be initiated by a long-term owner. Tishman Speyer, for example, added a new outdoor landscape and entrance pavilion to 407 North Maple in Beverly Hills so workers could take advantage of the indoor-outdoor work lifestyle made possible by the mild Southern California climate.

Intensive intervention. Many historic buildings are significantly out of date and require extensive upgrades. For example, an older structure might need new mechanical systems or windows or even a new facade to meet more stringent energy codes. Insufficient vertical transportation could require relocation. Life safety measures such as flood protection or seismic retrofits might need to be built. Entire floors could be added. The renewal of Seattle's Maritime Building implemented all of these strategies; in response, interactive game developer Big Fish leased the entire building before construction was completed.

Factors for Success

For a successful renewal project, keep these important factors in mind:

The building's established brand. Every building has an existing position in the marketplace, and the most successful renewals build on that position. A contemporary intervention in a classic midcentury building, for instance, might feel foreign to that building's character. The renewal of 177 Huntington, an **I. M. Pei**-designed landmark in Boston, focused on activating the lobby with new furnishings, finishes and a cafe, rather than alterations to the building's bold architectural character.

The building's existing condition. In addition to structural or mechanical upgrades, renewing an older building may require the remediation of hazardous materials like asbestos, lead or PCBs. Sometimes the cost of renewing a building to meet the needs of the market exceeds the cost of demolition and new construction. In that case, it makes more sense to start over. At the same time, older buildings often have historic texture or cultural importance that many tenants value and are worth preserving.

A company's business model and brand. For core real estate investments intended to provide a steady income stream, it would not make sense to invest in a major overhaul. Value-add or opportunistic investments, however, acquire a building for the express purpose of making a significant investment and increasing its value. Also, keep in mind a company's brand vision for the look and feel of a renewal project — are the properties edgy and creative, or subtle and sophisticated? This also extends to corporate workplaces. How can a renewed building better connect employees to the company's brand and mission?

Desired tenants. Although nearly every tenant expects more amenities, the exact mix and appearance of amenities that appeal to potential tenants may vary. For instance, the recent renewal of Two Union Square in Seattle created public spaces that perform many of the same functions as a tech workplace — with areas for interaction and gathering — but with a look and feel that is true to the building's brand and position in the market. As a result, the space appeals to a variety of tenants, from brokerage firms like JLL to tech firms like Apple.

Existing tenants. It's difficult to renovate a building while it's occupied, so it's essential to align tenants' expectations regarding the extent and duration of any disruptions. Communication is key. Many owners will deliver presentations to tenants nearing the end of their leases to show why the renovation makes it worthwhile to stay. Some tenants at 1201 Third Avenue in Seattle, for instance, initially disapproved of the contemporary aesthetic of the renewed lobby until they understood the benefits of a more open building with new amenities.

The urban context. The ground floor, and even some of the floors above, can function as a hub for the surrounding neighborhood. Is a property near a hotel, a convention center, an entertainment district or other offices? Think about how it can contribute to the life of those surrounding uses, perhaps in its retail mix, food and beverage, coworking space or a public plaza where people can congregate.

Programming. Some landlords are hiring coordinators who program amenity areas with events, whether for tenants only or the public at large. "Experience design" and environmental graphics — encompassing murals and public art, music, virtual reality and augmented reality, and more — can also attract tenants and visitors. Think about how a space can change throughout the day, month or year, and provide reasons for people to visit again and again with special events, pop-ups or interactive spaces.

Amenities for All

Every building type has seen a push for greater density, whether in the size and number of units in a residential high-rise, or the employee headcount in an office space, or even retail store footprints. And as the amount of dedicated space per person decreases, people will increasingly need "second places" in which to live and work.

As a result, amenities are getting more elaborate: residential buildings offer gyms, roof decks, retail, coworking and more; workplaces include a wider variety of break-out spaces for heads-down work or group collaboration; retail adopts an increasingly experience-based showroom model, with less in-store space devoted to stock and more attention paid to the digital brand and website.

For architects, what's exciting about this shift is that physical space, increasingly, is considered an asset and not overhead. Improved space can help employees work smarter, more creatively and more healthily. The most successful renewals will be those that enable people to meet the changing expectations for work and life. ■

David Yuan and **Robert Mankin** are partners at NBBJ and **Chris Beza** is a senior associate at NBBJ, a global architecture firm.

CEO on Leadership:
Tony Panzica, CEO, Panzica Construction Company

The leader of this Cleveland-based construction firm offers his perspectives on the industry and on transitioning his company to the next generation of leadership.

By Ron Derven


Tony Panzica

"Looking out in the future, a new issue on the horizon is tariffs. We are doing estimates for projects that may not start for a year from now, and we are concerned about getting accurate pricing for our clients. It is not just steel and aluminum — it is products that are specified and made in countries where these tariff issues exist."
— Tony Panzica, CEO, Panzica Construction Company

Panzica Construction Company was founded as a small commercial carpentry firm in 1956 by CEO **Tony Panzica**'s father. Tony joined his father in 1976; in the mid-1980s, he purchased the company. Panzica Construction Company has grown over the years and now ranks as one of the top construction management and design-build firms in northeast Ohio.

Development: *What is your primary role as CEO?*

Tony Panzica: I focus on the strategic vision for the company and relationship-building with clients. I spend time with my colleagues at the company focusing on client needs and communication, but I generally do not get involved in day-to-day operations.

Development: *What qualities do you look for when hiring senior staff?*

Panzica: Obviously, we want as little turnover as possible because it's disruptive to our operations, culture and to our fellow employees. When we hire a new person, we look for someone who has the qualifications for the job and who fits into our culture. We operate like a family.

Development: *How do you, as a leader, resolve the inevitable conflicts that arise in a company?*

Panzica: When conflicts occur, we deal with them head on. We meet with the parties having the issue, whether they are individuals or other companies. It's important to us to understand what the issues are and how they affect the people involved. We look for a win-win in terms of a resolution, so that each party feels they've been heard and that we come to a mutually agreed-upon solution.

Development: *What are some of the things you have discovered you are not very good at — personally or professionally?*

Panzica: As a company, we are in a continual-improvement mode and meet weekly to discuss how we can improve our processes and performance. Personally, having worked here for 44 years, I discovered long ago that I am a big-picture person, not a detail person. As Panzica Construction grew into a larger company, I was able to hire great people who excel in managing those details. We like to position people to excel in areas that utilize their strengths.

Development: *When one of your employees makes a mistake, how is it addressed internally?*

Panzica: We discuss it with him or her first in a very open and straightforward manner. If it affects other people, then we address it as a group and decide on the best remedy for the situation. Our goal is to learn from our mistakes and use them as opportunities to improve our processes in the future.

Development: *What was one of the biggest mistakes your company made, and how did you find yourself making it?*

Panzica: If something happens on the construction side of the business and a project is not exactly to plan, we

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REAL ADVANTAGE
THROUGH
REAL ESTATE.

"I discovered long ago that I am a big-picture person, not a detail person. As Panzica Construction grew into a larger company, I was able to hire great people who excel in managing those details. We like to position people to excel in areas that utilize their strengths."

— Tony Panzica, CEO, Panzica Construction Company

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address it and rectify the issue. We want all of our clients to be happy and satisfied with our work. Clients are the lifeblood of our business and as we continue to grow, we need to make sure that we always have very satisfied clients.

Development: *How is your company preparing to weather the inevitable downturns in our industry?*

Panzica: We have work scheduled out for a few years — but we are always looking ahead to the next project. We keep a close handle on what projects we have, how long they will take, what resources we need to use [superintendents, project managers, assistant project managers, etc.]. We balance our people and projects so that the work gets done with the proper quality and timeliness we are expected to deliver to every client. We pride ourselves on our level of customer service and are rewarded with repeat business from a great number of our clients.

Development: *What is your outlook for the commercial real estate industry over the next three to five years?*

Panzica: There is a general feeling in the industry that the workload will start slowing down. Last year was an extremely busy year for us, and we had a labor shortage in our area. That has balanced out now, and we are getting the workforce that we need for our projects.

Looking out in the future, a new issue on the horizon is tariffs. We are doing estimates for projects that may not start for a year from now, and we are concerned about getting accurate pricing for our clients. It is not just steel and aluminum — it is products that are specified and made in countries where these tariff issues exist. We are looking at all options: Do we have to buy a product that comes from that country? Could we source that product locally? Can we buy within America?

Development: *What advice would you give someone entering the commercial real estate industry today?*

Panzica: Whatever type of work you do in the real estate sphere — embrace it and learn from your experiences. Do your best every day to grow personally and professionally, and you will live a happier and more fruitful life. The happiest people I know in my industry are the ones who are willing to learn from others and continue to evolve.

Development: *How do you de-stress?*

Panzica: Currently, I am working to hand over the reins of the business to my two sons; the third generation in the business and the many other wonderful business "family members" that we employ. As Mark and Dave have taken over the operational aspects of Panzica, I spend much of the winter in Naples, where we are expanding our footprint and looking for new opportunities in the South Florida building market. In addition to developing new business there, I enjoy playing golf, traveling, and participating in arts and culture. ■

Ron Derven is a contributing editor for Development magazine.

'Furniture as a Service' Brings Flexibility and Creativity to Office Spaces

High-growth companies that are rapidly adding staff could be major beneficiaries.

By Joey Kline, JLL

In the competitive world of commercial real estate, leasing agents are constantly looking for ways to stand out from the competition. They're asking themselves, "how do I generate the results my client needs? How do I increase traffic to the space? How can I give the listing the 'wow' factor that will garner the attention of potential tenants?"

As office markets undergo rapid transformations, "furniture as a service" is one tool that could help answer those questions.

The Sierra Wireless sublease space in Atlanta used a furniture-as-a-service solution to fill its vacant 10,000-square-foot office.

The Background

Many U.S. commercial real estate markets are doing well right now; however, there can be challenges when it comes to marrying the right tenant with the right office space. Even more challenging is the reality of historically low vacancy rates, which can result in multiple prospective tenants for the best Class A suites in town.

Additionally, in the past decade, the way employees work has changed dramatically. Landlords now must create more flexible work environments for multiple generations.

Companies experiencing high growth, such as tech startups, need flexibility above everything else. These businesses are past the incubator phase, and they are looking to settle into their own space and add staff as needed.

Tenant brokers are helping clients identify the best use of space based on how their employees function in the workplace. Do a lot of their employees travel for work? Is there collaboration among employees? Do employees desire more private workspaces? All these questions need to be taken into consideration when selecting and creating an optimal work environment.

Do a lot of their employees travel for work? Is there collaboration among employees? Do employees desire more private workspaces? All these questions need to be taken into consideration when selecting and creating an optimal work environment.

Where FaaS Comes In

In the midst of a changing office market, landlords need to be responsive when it comes to attracting potential tenants.

Sierra Wireless, a multinational wireless communications equipment designer and manufacturer headquartered in British Columbia, recently worked with JLL to create buzz around its vacant Atlanta sublease. The 10,000-square-foot space was a result of the company's acquisition of Numerex, a provider of enterprise solutions related to the internet of things (IoT). In order to quickly lease the space and free up capital, JLL recommended that Sierra Wireless apply the fast and flexible furniture as a service (FaaS) concept to its vacant space.

Originated by CORT to support the evolving commercial real estate industry, FaaS is similar to other subscrip-

The FaaS model allows for a great deal of flexibility in the workplace. Users can tap into a big furniture inventory that's available on demand, design a strategic workplace solution, change things as needed and return the product on their terms.

tion services currently on the market, providing furniture on demand for rapidly growing companies.

"Our decision to apply FaaS to our vacant space was based on creating a hip, plug-and-play space centered on flexibility and access," said **Treena Nelson**, the senior facilities manager with Sierra Wireless. "It's not necessarily about the cost savings, but the reduced time investment. At the end of the sublease, I don't have to worry about selling or storing the furniture, and that's a big plus for me."

To appeal to a variety of workplace customers, a few different looks were installed throughout the space. When the new subtenant moves in, they can choose to change out the furniture to align with their goals and needs or return the products if they have their own furniture. The benefit of the FaaS approach is it's virtually risk-free and focuses on access over ownership.

The FaaS model allows for a great deal of flexibility in the workplace. Users can tap into a big furniture inventory that's available on demand, design a strategic workplace solution, change things as needed and return the product on their terms.

Similar to a space as a service (SaaS) model, the experience is about access, not ownership. Think of FaaS as furniture in the cloud; it's there when you need it and gone when you don't.

This approach offers several different options and pricing models depending on selections. Using a fairly standard 12-month subscription, the cost is around $6-$10 per square foot.

There are many factors driving costs. These include preferred or required density of the space, power options and furniture selection. Also popular is the option to invest costs into the operating expenses rather than the capital expenses.

Preparing for What's Next

Sublease spaces in general are changing because there is now more interest than ever before in short-term flexible office spaces.

A recent study, "JLL Trends – Flex Space," suggests that there will continue to be significant shifts in how office space is used in the near future. Currently, flex space inventory accounts for less than 5% of U.S. office stock. That number could skyrocket to approximately 30% of the market by 2030.

As the commercial real estate landscape shifts, there will be natural changes in how services and products such as furniture are used. For example, when a firm leases a space for two or three years, the discussion about purchasing assets changes. It may make more sense to rent than to buy. If a company is project-based and the team makeup shifts from project to project, maintaining a flexible workspace might be best served by furniture that's changeable.

In the start-up community, many companies work to conserve their capital and instead invest in growth. This segment will certainly push commercial real estate to provide a greater number of flexible options. Or in a case such as Sierra Wireless and its sublease office, the ability to outfit for flexibility and lease the space more quickly can be the key motivation.

As the workplace continues to evolve, expect an increase in sublease spaces available with FaaS options taking the place of dusty suites crammed with leftover furniture. Commercial real estate professionals who buy in to this trend early may be more agile in times of disruption. ■

Joey Kline is a vice president at JLL, specializing in office brokerage and tenant representation.

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The Mezzanine/Structured Finance Market is Here to Stay

This popular investment tool that arose in the 1990s can offer notable advantages over other financing practices.

By Tom McCahill, EverWest

Real estate mezzanine financing was first implemented in the early 1990s to augment the commercial mortgage-backed securities (CMBS) markets. Since that time, it has continued to evolve and grow, and today it is a staple of commercial real estate finance.

Mezzanine financing provides supplemental proceeds and can take many forms, but it is generally collateralized by the equity interests of the entity owning the real property.

While mezzanine financing had been widely used in corporate finance for decades, its emergence as a significant component of real estate finance is a more recent evolution. As senior lenders found themselves subject to bankruptcy cramdowns from permitting secured secondary debt, the market shifted to mezzanine financing, which is classified as unsecured debt since there isn't a secondary lien on real property. As mezzanine loan collateral is technically secured by a pledge of the owners' or borrowers' interest as opposed to a secured real estate lien recorded by a deed of trust, the format eliminates the senior lender's bankruptcy exposure.

While mezzanine financing had been widely used in corporate finance for decades, its emergence as a significant component of real estate finance is a more recent evolution. As senior lenders found themselves subject to bankruptcy cramdowns from permitting secured secondary debt, the market shifted to mezzanine financing, which is classified as unsecured debt since there isn't a secondary lien on real property.

Initially, many mezzanine lenders were unfamiliar with the Uniform Commercial Code foreclosure process, but with experience from the 2008-2009 financial meltdown, they have come to appreciate the relative simplicity and established legal procedures for mezzanine enforcement. In many states, it is faster and more efficient than judicial foreclosures on senior loans.

Real estate capital markets evolved since the financial crisis through the addition of financial regulations. Other forms of secondary financing arose to meet senior lender and rating agency policies. What once would have been categorized as mezzanine financing has morphed into a wide array of structured finance practices.

The Mezzanine Advantage

From the borrower/sponsor perspective, mezzanine financing provides additional capital proceeds beyond a senior lender's loan, typically at rates cheaper than equity costs. Consequently, these augmented loan proceeds require less project equity. That allows the sponsor to substitute expensive equity for more cost-effective mezzanine capital, which lessens the need for equity capital partners.

Furthermore, if the sponsor can maintain the controlling interest in the equity, there's more operational and decision-making freedom, particularly on major decisions like refinance or sale that can be encumbered by equity partnerships.

Mezzanine finance is a viable alternative to equity for property acquisitions, refinance and development. It's generally viewed as cheaper and more flexible than equity, but given its cost and priority repayment position, it can also negatively impact equity returns if unforeseen delays in executing the business plan defer the income necessary to service higher debt proceeds. Consequently, sponsors who are confident in their ability to successfully execute their business plans often prefer mezzanine, while more wary sponsors prefer the safety net of equity.

Increasingly, sponsors are tapping equity in existing assets that have increased in value via various structured finance options, which enables them to access imbued equity tax free and replace it with lower-priced mezzanine financing. This strategy frees capital for other endeavors.

Senior Lender Perspective

Not surprisingly, senior lenders have varying attitudes toward mezzanine loans. Banks in particular can be opposed to anything that might adversely influence their borrowers and collateral.

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However, more banks are realizing that both mezzanine loans and preferred equity are necessities given their generally more conservative underwriting guidelines, which limit construction loan proceeds. The increased regulatory environment, implementation of high-volatility commercial real estate (HVCRE) requirements, as well as portfolio management considerations, have combined to constrain construction loan proceeds generally to 55%-65% loan to cost (LTC). While these constraints vary among construction lenders, more developers want to provide resource guaranties, which has also resulted in lower construction loan proceeds. Consequently, the need for capital to bridge the gap has significantly increased.

Most banks, however, remain cautious about secondary financing, especially if it has loan characteristics and might impact their HVCRE calculus. Their preference is usually for supplementary capital to be invested as preferred equity. These agreements typically would not include any security interest in the ownership interests nor capability of enforcement, which could impair their borrower. Subordinate investors generally prefer collateral interest via a pledge of ownership, as well as the right to assume the senior construction loan in a default.

CMBS Lenders

CMBS lenders are generally the most mezzanine-friendly lenders and have well-established guidelines governing participants' rights and remedies via standardized intercreditor agreements and rating agency guidelines. Since CMBS loans are designed to have different classes of lenders/bond holders, it's not surprising that this vehicle can permit numerous additional classes of investors.

Smart borrowers will demand future flexibility to bring in additional capital providers, particularly for longer-term loans. This allows them to tap into and replace equity as the underlying property increases in value.

Foreign Providers

Foreign investors are among the fastest-growing providers of mezzanine capital. Many of them see mezzanine investment as a defensive play given the nature of the subordinate equity. They are attracted by both the strong risk-adjusted returns as well as favorable tax treatment under the Foreign Investment in Real Property Tax Act of 1980 (FIRPTA), whereby interest payments aren't taxed as equity dividends. The resulting higher effective yields, which they see as insulated by the sponsors' subordinated equity, are highly attractive to foreign capital.

Asian investors, particularly from South Korea and Japan, have become active participants in the U.S. mezzanine market.

Debt Funds

The rapid expansion of the debt fund market has added an additional source of subordinate capital designed to exploit the void provided by the more conservative bank lending environment.

Debt fund capital is generally positioned to provide a "one-stop" shop for borrowers looking for a single lender to provide higher loan proceeds beyond typical bank insurance company underwriting. As opposed to a borrower targeting maximum loan debt, funds typically have the capacity to take down the entire loan themselves.

This alternative can be cheaper, and it lessens the arduous closing process necessitated by multiple lenders needing to agree on intercreditor terms. However, despite a more efficient

Smart borrowers will demand future flexibility to bring in additional capital providers, particularly for longer-term loans. This allows them to tap into and replace equity as the underlying property increases in value over time.

closing, ongoing loan administration and servicing can get more complicated should the debt fund sell positions and/or finance its position post-closing.

Final Analysis

The continued growth and acceptance of both mezzanine and preferred equity capital has expanded sponsor financing alternatives with additional flexibility for borrowers. Overall, this has given sponsors more choice, proceeds and flexibility in their project capitalization. However, as the choices and participants expand, so do the complexities and unknowns; particularly as many of the capital providers are new to this approach and might not have lending experience or operational capabilities.

As more lenders with more complex capital structures flood the market, it's important that borrowers actually know and understand who they're doing business with as well as the breadth of their experience and capabilities. While each real estate asset has a business plan and environment, the flexibility offered through structured finance can be a viable alternative for sponsor's capitalization plans. ■

Tom McCahill is executive vice president of structured finance for EverWest Real Estate Investors in Denver.


AIA Contract Documents
Real projects start with the industry standard
Before the project broke ground, Earl Swensson Associates, made sure The Gaillard Center, a world-class multipurpose theater, was protected with AIA contracts.
AIA Contract Documents used: A133-Owner/CMc-Cost Plus Fee w/ GMP, A201-General Conditions, B103-Owner/Architect-Complex Project, C401-Architect/Consultant, E201-Digital Data Protocol Exhibit.
Learn more about The Gaillard Center project at aiacontracts.org/devmag-gaillard
AIA Document B103
Standard Form of Agreement Between Owner
Project
AGREEMENT made as of the day of
in the year
(In words, indicate day, month and year.)
BETWEEN the Architect's client identified as the Owner:
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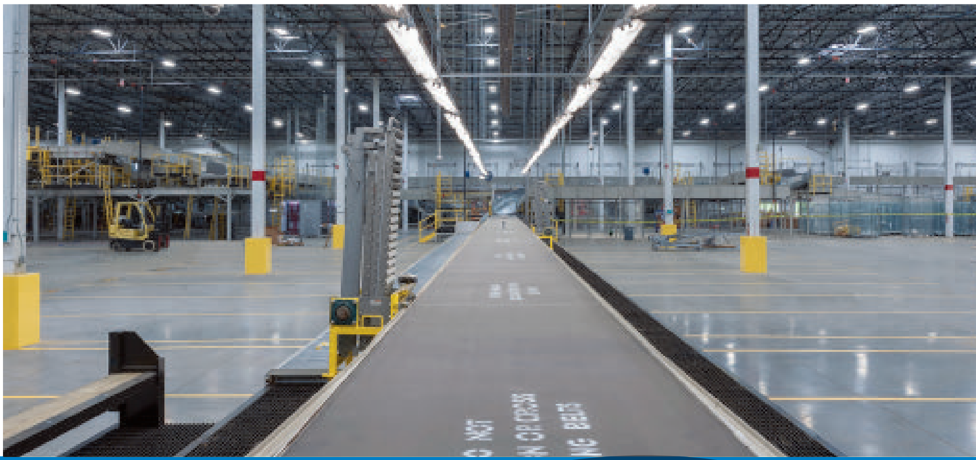


Co|Lab: A Hands-On Showcase of Innovative Construction

HITT Contracting's new facility is a laboratory for the study of cutting-edge, sustainable building products and technologies.

By Trey Barrineau

The construction industry has an innovation problem.

According to recent research from McKinsey, the segment invests less than 1% of its revenue into research and development. As a result, construction labor productivity only increased an average of 1% a year during the past two decades. By comparison, productivity in areas such as manufacturing, retail and agriculture has grown exponentially during the same period.

To help address that gap, HITT Contracting Inc., a national construction company, recently opened Co|Lab, an 8,600-square-foot research facility near its headquarters in Falls Church, Virginia, that will serve as a laboratory for new construction technologies and materials.

Photo by John Cole, Courtesy of HITT Contracting

HITT Contracting's Co|Lab in Falls Church, Virginia, is an 8,600-square-foot research facility for new construction technologies and materials.

"There is no doubt that our industry and commercial real estate are ripe for disruption," said **Kim Roy**, the CEO of HITT Contracting. "We want to have education and research be key components of this new facility."

The initial research projects at Co|Lab include new technology to prevent water intrusion, methods for biocontainment in health care and a material study on a technique that "grows" bricks over 72 hours using microorganisms and calcium carbonate.

"There are some products here that have never been used before," said Roy.

While the facility will host a revolving selection of cutting-edge construction technologies, the Co|Lab structure itself stands as a showcase of innovative, sustainable building products and practices.

"We focused on energy, carbon and healthy materials in the construction of Co|Lab," said **Katie Rothenberg**, HITT's vice president of sustainability and innovation. She set the project's sustainability goals and led the design and construction efforts. "We look forward to working with partners to identify opportunities to minimize the environmental impacts of the built environment by testing materials, approaches and technology."

An Experiment in Sustainable Construction

The Co|Lab site was initially going to be a basketball court for HITT employees, but that changed when the company saw a chance to build a cutting-edge research facility focused on construction sciences.

"It gave us an opportunity to use the building as an experiment and test things before we engage in research and development with our customers," said Roy. "We as a company are committed to sustainable construction practices, so building our own building was an opportunity to showcase that commitment."

Co|Lab is the first cross-laminated timber (CLT) building in Virginia. CLT is a mass timber product in which several boards are stacked in alternating directions and bonded with structural adhesives. Mass timber products such as CLT can be as strong as concrete or steel, but they're 40% to 60% lighter — and their carbon footprints can be 60% to 75% smaller.

William McDonough + Partners, the architects of Co|Lab, designed prefabricated CLT panels and beams that were transported to the jobsite, moved into place and secured with a just-in-time sequencing method that

"There is no doubt that our industry and commercial real estate are ripe for disruption. We want to have education and research be key components of this new facility. There are some products here that have never been used before."

— Kim Roy, CEO, HITT Contracting

uses only mechanical fasteners. This reduces the number of tasks that must be performed onsite. The technique also allows for disassembly so that the mass timber elements can be reused or recycled.

While that was an efficient process for raising the building, it required extensive pre-construction planning, said **Eric Ross**, a director with William McDonough + Partners.

"One of the biggest challenges of working with CLT is making sure you get everything right," he said. "It is wood, and it's all manufactured. If you get something wrong in the shop-drawing process, you can't always fix that in the field, so there was a lot of emphasis put on the modeling of the building. We're talking intense shop drawing review and field verification."

It was also demanding for the workers who performed the installation.

"We found a subcontractor that did old-school timber barn raisings, so there was some familiarity there, but it was still a new product for them," Ross said. "There was a learning curve."

The building has many other sustainable features in addition to CLT. These include a rooftop photovoltaic solar array that can provide 118 percent of anticipated energy use; an ultra-efficient mechanical, electrical and plumbing (MEP) design with a variant refrigerant flow (VRF) system to cool the space, radiant heat flooring and large fans to circulate air; LED lights throughout; a high-performance concrete facade; and low-flow plumbing fixtures.

Those energy-efficient features helped Co|Lab earn LEED v4 Platinum certification from the U.S. Green Building Council (USGBC). The building is also seeking Petal Certification from the International Living Future Institute (ILFI) by satisfying the requirements for the Materials, Place, and Beauty petals. Finally, because ColLab is expected to generate more energy than it consumes, it should receive Zero Energy Certification from ILFI once a year's worth of performance data has been analyzed.

Challenges and Potential Rewards

While HITT is proud of ColLab's sustainable features, company officials also acknowledge the challenges of building to these strict standards.

"We had so many," said Roy. "Jurisdictionally, Fairfax County had some questions about the project in the early stages, but I'd say the biggest was anytime you do the first of something, it can take twice as long. With new rating systems, new approaches and the infusion of technology, it just takes a little bit longer the first time."

"We focused on energy, carbon and healthy materials in the construction of ColLab. We look forward to working with partners to identify opportunities to minimize the environmental impacts of the built environment by testing materials, approaches and technology."

— Katie Rothenberg, vice president of sustainability and innovation, HITT Contracting

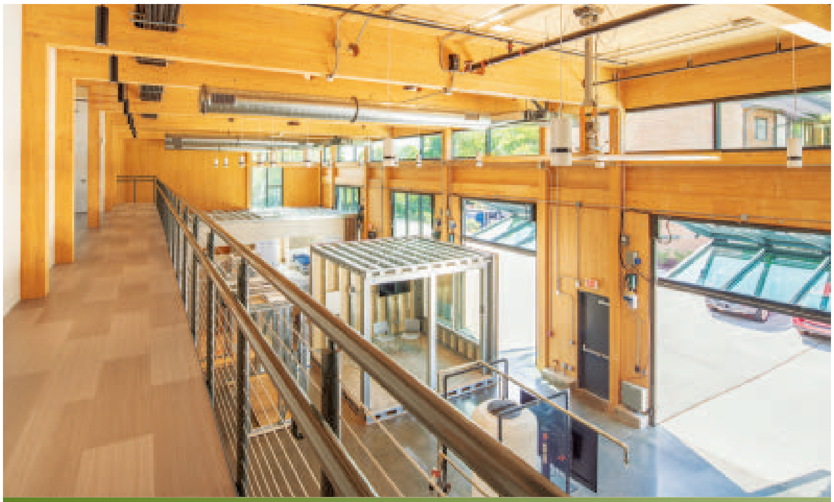


Photo by John Cole, Courtesy of HITT Contracting

ColLab, which was designed by architectural firm William McDonough + Partners, is the first cross-laminated timber structure in Virginia. The building's interior includes space to test construction products and technologies.

According to Rothenberg, ColLab cost roughly $1,000 per square foot to build given the first-of-its-kind nature of the facility. Additionally, the small size left no opportunities to leverage economies of scale for labor or materials.

"We knew we were making an investment," she said. "Our building had to show our commitment to innovation and new ideas, so budget was not the primary driver."

As part of meeting the Petal Certification requirements, HITT pushed for material ingredient transparency to ensure that building products used in ColLab did not include items on ILFI's Red List. According to ILFI, these are chemicals that pollute the environment, accumulate in the food chain or harm people.

"The Red List was probably the most interesting from a training perspective," said **Drew Mucci**, HITT's co-president. "It was important to get our trade partners and subcontractors to understand that where you would normally use sweeping compound or WD-40, you can't use that on a project like this. It opens people's eyes to situations that occur every day that are impacting worker health and the environment, and that forces you to figure out a different way. Once you figure it out, you can employ those solutions in bits and pieces."

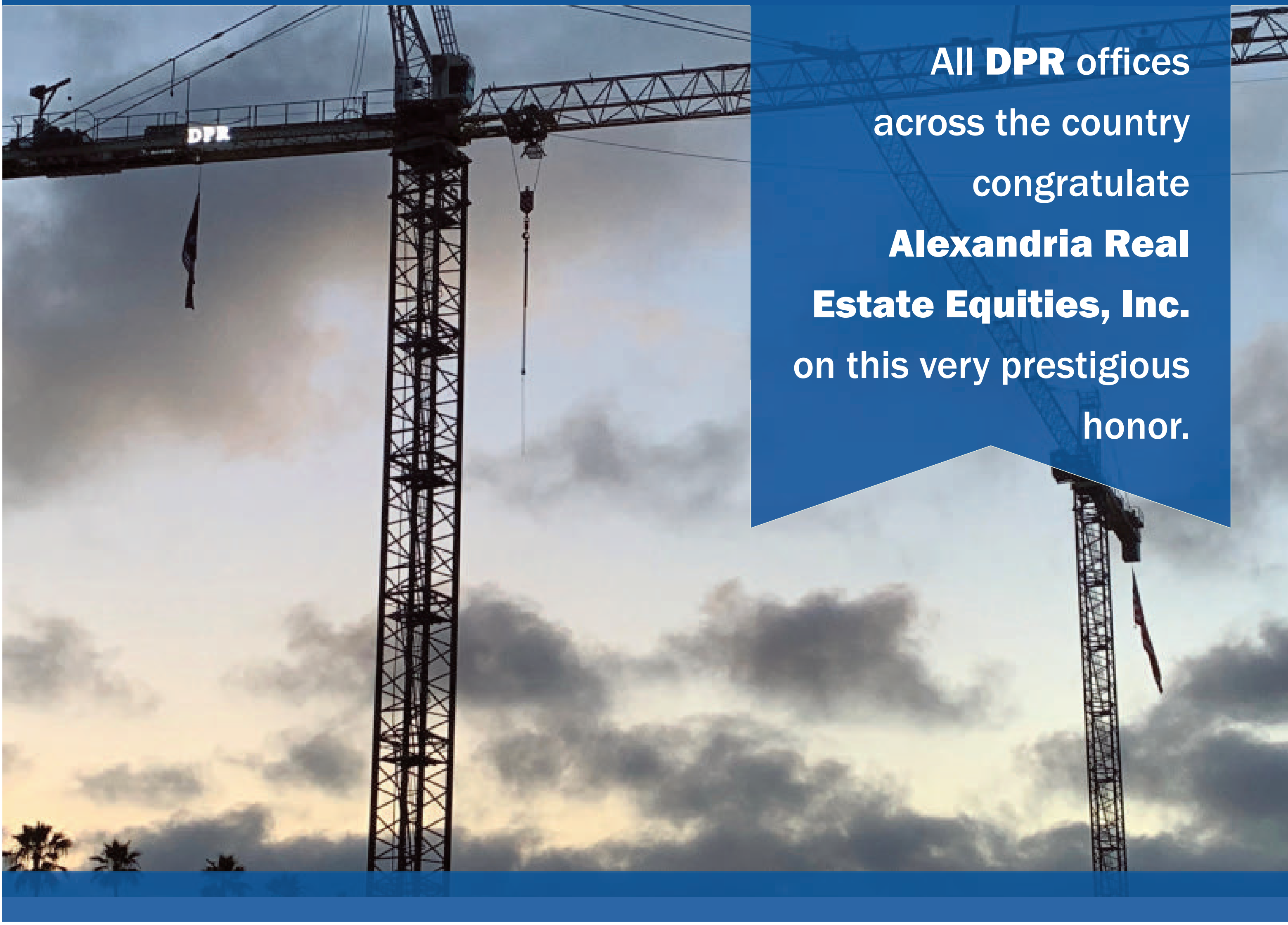
Rothenberg said that while the process of building ColLab was often demanding, she thinks the efforts will pay off down the road.

"Working through these challenges will prove incredibly valuable in future mass timber projects," she said. "And while the building itself is impressive, the real story will lie in the research and testing work that is done inside and outside ColLab in the months and years to come."

Mucci also emphasized the learn-as-you-go aspects of the ColLab project.

"What's really going to be cool is what's going to happen in the future," he said. "Part of our goal with ColLab was to go all in and commit to using cutting-edge strategies to then be validated through green building certifications. This experience helps us to understand the intricacies of our changing landscape, which can be used to inform our projects and clients into the future." ■

Trey Barrineau is the managing editor of Development magazine.



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Can We Fix the Interstate Highway System?

A new study says tolls and gas taxes are possible funding solutions to pay for much-needed repairs to this critical piece of transportation infrastructure.

By Robert Dunphy

The U.S. Interstate Highway System has transformed American society, allowing travelers to go coast to coast without stopping at a traffic light and facilitating the long-distance movement of goods.

The Interstate Highway System represents only 1% of U.S. public road miles but carries 25% of all vehicle miles traveled, and 50% of the miles traveled by trucks. Americans have become so dependent on interstates that it's easy to forget they are a relatively recent phenomenon, first developed in the 1950s. However, most of the system has reached the end of its design life and requires extensive reconstruction. Beyond that, the physical location of some highways is out of date, as regions of the country that have grown in recent decades aren't served by these vital roadways.

Getty Images

A new study finds that repairing and upgrading the nation's interstate highways during the next 20 years could cost between $45 billion to $70 billion annually.

A Deteriorating Asset

A recent congressionally mandated study from the National Academy of Sciences' Transportation Research Board, "Renewing the National Commitment to the Interstate Highway System," identifies several of the biggest challenges facing the system and suggests financing options. The study found that deterioration of interstate pavement now requires much more than enhanced maintenance — in many areas, it needs reconstruction down to the foundation.

The committee, a 13-member group with representatives from academia, industry, transportation agencies and non-profits, promotes a new plan to renew the interstate highway system over and above ongoing maintenance and repair. The 649-page report calls for a "rightsizing program" to expand the system to include newly emerging regions of the country. Other challenges identified include improving safety as traffic volumes increase and adapting to changing vehicle technologies.

The report notes that current state and federal spending on interstates has been about $25 billion annually. To renew interstates over the next 20 years will require $45 billion to $70 billion annually, although this does not include funding to update the interstate's 15,000 interchanges or designs to protect against damage caused by severe weather.

User-Based Funding Mechanisms

The big question is how to pay for such an enormous investment.

The study recommends a substantial increase in the federal fuel tax. Calculations suggest a 60% increase in gas and diesel fuel taxes, which would allow a 90% federal/state match for the proposed new program.

However, there might not be much political appetite for higher gas taxes. For example, according to an October 2018 report from NPR, the last increase in the federal gas tax was in 1993, to 18.4 cents per gallon for unleaded and 23.4 cents for diesel, and it was not indexed for inflation. The combined impact of rising construction costs and improved fuel efficiency has resulted in a two-thirds decline in the purchasing power of the gas tax since that time. Most states have raised their own gas taxes

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in the past five years, in some cases substantially, but federal action might be essential to pay for maintenance to the highway system.

Are Toll Roads the Way to Go?

To assist states in raising their match, the study recommends that Congress lift the ban on tolls for interstate highways (a ban that actually applies to all roads built with federal aid, and dates back to 1916). Tolls can be a revenue source as well as a potential powerful pricing tool to help reduce traffic in peak hours. The study suggests it could make sense to consider a lower matching ratio for adding capacity to existing facilities and building new connections to regions that were not included in the original interstate system.

Capacity needed for increased congestion signals a market for tolled facilities, and pricing could reduce traffic. Similarly, connections to emerging regions could have good potential for tolls, especially to accelerate construction. A higher matching share for reconstruction and remediation could incentivize maintenance over new construction.

Areas where demand supports tolls could have a lower match ratio for federal funds, possibly 50/50, giving the states more skin in the game, encouraging more effective routes and reducing federal expenses. Tolling would also allow more thoughtful consideration of potential new development in a corridor, rather than allowing traffic from unexpected growth to swamp highway additions.

The study found that deterioration of interstate pavement now requires much more than enhanced maintenance — in many areas, it needs reconstruction down to the foundation.

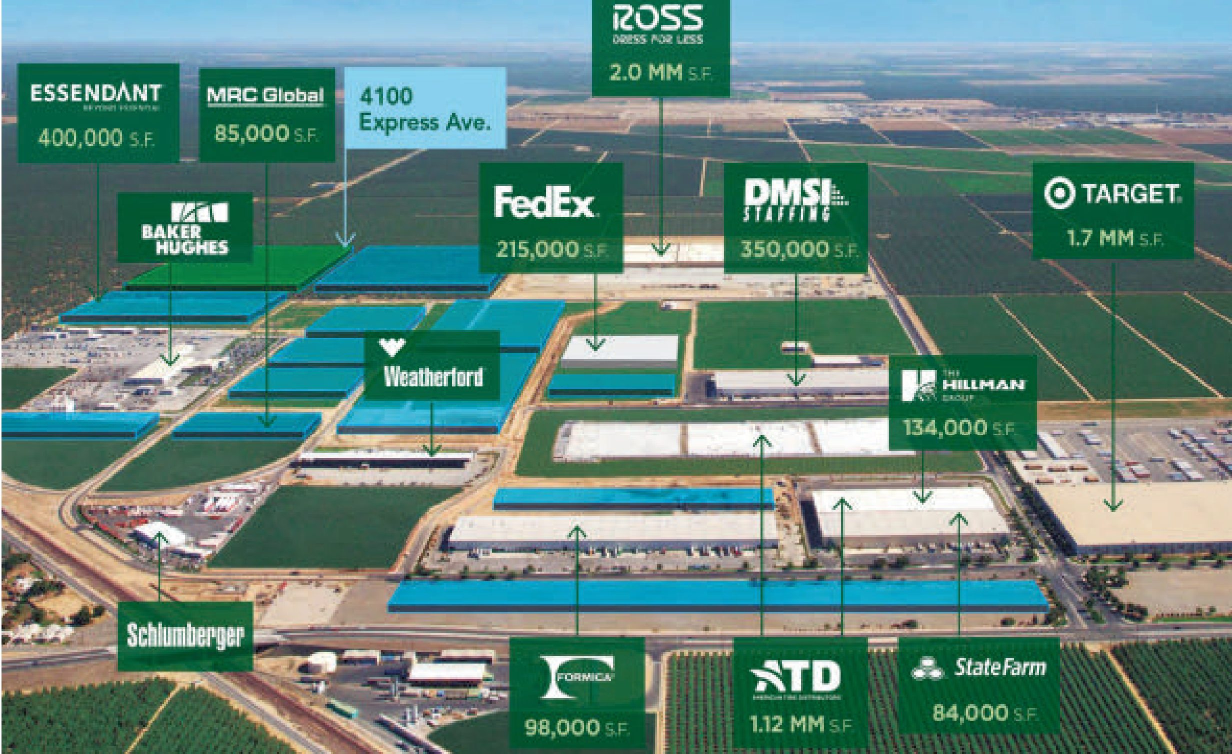
The adoption of fully automated self-driving vehicles offers an additional opportunity for financing on a per-mile basis rather than per gallon. Pay as you go has wide acceptance among consumers for ride-hailing services such as Uber and Lyft (including peak hour surcharges), unified transit passes serving different operators and a variety of on-street parking apps.

However, that might not be the case in the public sector — note the recent French "yellow vest" protests over increased truck fuel taxes and the Oregon Senate's Republican-led walkout over a carbon tax.

Either approach, an inflation-adjusted increase in the federal gas tax or dynamic pricing, would meet the goal of creating a reliable funding source. Considering the long record of failures in gas tax increases, it may be time for a different approach to preserve the benefits of the nation's interstate highways.

Reliable funding is essential to ensure convenience and efficiency for future travelers, the broader economy and the commercial real estate industry, for whom preserving access is part of the value of existing and future developments. ■

Robert Dunphy is a transportation consultant, an Emeritus Fellow of the Transportation Research Board, and an Adjunct Professor in Georgetown University's Real Estate Program in the School of Continuing Studies.



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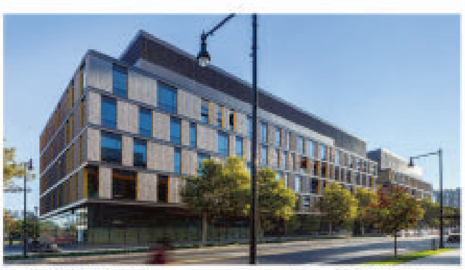


Alexandria Real Estate Equities, Inc.

People, Passion, Purpose

This innovative REIT has found success by focusing on the life science, technology and agtech industries while giving back to communities.

The Alexandria Center for Life Science – New York City is the city's first and only commercial life science campus. It's been designed and amenitized to support innovative life science companies at all stages of development.

All images courtesy of Alexandria Real Estate Equities, Inc.

On May 22, 2017, the Alexandria Real Estate Equities leadership team rang the opening bell at the New York Stock Exchange (NYSE) in honor of the company's 20th anniversary on the exchange.

By Ron Derven

Approximately 10,000 diseases plague the human race, but only 500 are currently addressable through medical treatment. While no one knows when the next big breakthrough will come, it's possible that the companies leading the way are leasing space from Alexandria Real Estate Equities, Inc., in its major innovation clusters around the U.S.

Joel S. Marcus, executive chairman, and **Jerry M. Sudarsky**, a chemical engineer who passed away in 2009, launched the company in 1994 in Pasadena, California, as an urban office REIT. They saw an unmet need for a new type of real estate firm focused on the life science industry. Anticipating its legacy in the business, they named the company after Alexandria, Egypt, which was the center of science and discovery in the ancient world.

The firm has grown into an investment-grade-rated S&P 500 REIT with a market cap of $22.2 billion as of June 30, 2019. It owns more than 34 million square feet of lab and office space across more than 250 buildings in innovation clusters in triple-A locations, including Cambridge, Massachusetts; New York City; San Francisco; San Diego; Seattle; Montgomery County, Maryland; and the Research Triangle near Raleigh, North Carolina. Over the past 10 years, Alexandria has an impressive historical occupancy rate of 96% across its operating portfolio. And the company has a full pipeline of work — about 8 million square feet of highly pre-leased space to build — extending out to 2022.

Alexandria has also focused on green development and environmental issues for decades. It was one of the first developers in the world to receive certification under the U.S. Green Building Council (USGBC) LEED Core and Shell pilot program for its 681 Gateway Boulevard property in South San

Francisco, which opened in 2007. (USGBC defines the pilot program as "a set of performance criteria for certifying the sustainable design and construction of speculative developments and core and shell buildings.") Today, Alexandria's portfolio includes more than 65 projects that are pursuing or have achieved LEED certification.

The company is also committed to creating a positive impact on the health, safety and well-being of its tenants, stockholders, employees, communities and the broader world. Alexandria was recognized as the Industry Leading Company in the 2018 Fitwel Best in Building Health and earned the No. 1 global ranking in the 2018 GRESB Health & Well-Being Module.

The firm's comprehensive philanthropy and volunteer program, Operation CARE, is critical to its corporate responsibility initiatives.

Alexandria team members prepare meals for Project Angel Food, a non-profit organization that prepares and delivers 12,000 healthy meals each week to feed people impacted by serious illnesses.

510 Townsend Street, a 295,000-square-foot development project for Stripe, Inc., a technology company that builds economic infrastructure for the internet, is located in the Mission Bay/SoMa submarket of San Francisco. The project achieved LEED Platinum certification in 2018.

Alexandria works with Project Angel Food, a non-profit that delivers healthy meals to people with serious illnesses; CS4ALL, a groundbreaking education initiative in New York City that support STEM education in public schools; the Navy SEAL Foundation, which reflects Alexandria's commitment to supporting the military; and The Honor Foundation, a transition institution for Navy SEALs and the U.S. Special Operations community for which the company built a headquarters in San Diego.

"The company has been strategic in its growth by locating in markets where the key building blocks for innovation thrive, and its utilization of technology for both the physical development of the building and for the advantage of the tenants within is impressive," said **Jean Kane**, 2019 chair of the Developer of the Year selection committee and the CEO of Colliers International Minneapolis-St. Paul. "Alexandria's commitment to its employees and to the communities where it does business is evident."

"We are enormously proud to win the NAIOP Developer of the Year Award," said Marcus. "This national honor carries a high level of prestige. We are pleased and humbled to receive it as an important recognition of the critical work we do in pursuit of our lofty mission to advance human health. We have a long history of providing our tenants with world-class infrastructure featuring creative amenities and top-tier services to enable them to discover and develop scientific and technological breakthroughs that benefit humankind."

The Beginning

Before starting Alexandria, Marcus was a partner in a law firm and a certified public accountant specializing in corporate finance, capital markets, venture capital, and mergers and acquisitions. In 1993,

“The company has been strategic in its growth by locating in markets where the key building blocks for innovation thrive, and its utilization of technology for both the physical development of the building and for the advantage of the tenants within is impressive. Alexandria’s commitment to its employees and to the communities where it does business is evident.”

— Jean Kane, 2019 chair, NAIOP’s Developer of the Year selection committee

the partners of Jacobs Engineering Group approached Marcus to devise a business and financial plan for a new real estate company. Marcus assembled the plan and presented it to the partners, who were so impressed with his work that they asked him to head the new company. At 47 with three young children and a flourishing career, Marcus turned them down. But they persisted and, after about nine months, Marcus agreed to start the new firm.

“I resigned my law partnership and went to work on the company,” he said. “We started on January 5, 1994, in basement ghost offices at Jacobs Engineering. We raised $19 million in Series A capital — $5 million from Jacobs Engineering and the rest from friends and family.”

Marcus set two initial goals for Alexandria: break even in 18 months and go public soon after. Alexandria used the initial capital to buy four buildings, breaking even in the targeted 18 months. Alexandria raised an additional $100 million in capital, and it had an asset base of 15 buildings and a staff of 12 when the company went public in May 1997.

The company’s idea to develop lab and office space for the life science industry was a prescient, mission-driven strategy as anyone will acknowledge today, but investors 25 years ago were skeptical. Some told Marcus that his concept was shortsighted and unprofitable. They said he would have to spend additional money to install expensive lab equipment and then, when the lease expired, he would have to rip it all out to accommodate new tenants. Besides, a major lender had already passed on the idea, believing that the chemical and biological materials in the labs were unsafe and potentially explosive.

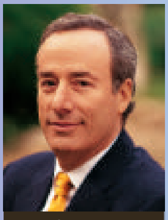
“None of these things turned out to be true,” said Marcus. “The biotech industry was growing rapidly, and biotech companies needed capital and infrastructure. Leveraging our team’s collective real estate and biotech experience, we were able to provide these companies with mission-critical space and allow them to focus on their science. We created a niche in 1994 that today is one of the hottest products on the market.”

Cluster Development

Creating the niche was the company’s first big idea, but that was just the beginning. In the early 2000s, Marcus became inspired by Harvard professor **Michael Porter**’s theory on cluster development. Alexandria switched from developing individual assets to a cluster campus strategy in highly attractive urban locations. These areas offer strong business ecosystems and world-class academic institutions that produce future generations of innovators.

‘Be Humble’ to Succeed

Alexandria founder Joel S. Marcus was asked to share the best career advice he has received.


Joel S. Marcus

“The best advice I have ever received is always to be humble,” he said. “Think about ways you can and will improve. At the business level, always get the right people on the bus, and get them in the right seat. We try always to have the right people in the right seats, but when we don’t, we act quickly to correct the situation.”

What about advice for a young person entering the commercial real estate industry?

“Be flexible in whatever you are doing,” stressed Marcus. “If a good idea presents itself, consider making a change. Don’t stay in a job because that is where you started off. At Alexandria, for example, we don’t have an organizational chart. We want people to grow and look at things that they have a passion for. We also say be good at the macro and micro: do the big deals but also make the coffee.”

According to Porter, quoted on the Alexandria website: "Clusters are geographic concentrations of interconnected companies and institutions in a particular field. Clusters affect competition in three broad ways: by increasing the productivity of companies based in the area; by driving the direction and pace of innovation, which underpins future productivity growth; and by stimulating the formation of new businesses, which expands and strengthens the cluster itself."

In 2004, Alexandria began to shift from acquiring single assets to focusing on urban cluster campuses. The company purchased commercial real estate parcels around major universities in markets on the East and West coasts where it was already developing projects. That year, Alexandria bought the commercial land surrounding the Mission Bay campus of the University of California, San Francisco (UCSF). Today, because of the extraordinary demand for research space, Alexandria's buildings there have close to a 0% vacancy rate.

Marcus believed that New York City had one of the best clinical and research bases in the world. In 2005, after a highly competitive proposal process, Alexandria was selected by the City of New York to transform a contaminated laundry site into the city's first commercial life science campus. Located along the East River, the Alexandria Center for Life Science – New York City consists of two towers and a future development site, which will bring the campus to more than 1 million square feet when completed.

In 2006, MIT sold its 14-acre Tech Square site in Cambridge, Massachusetts, to Alexandria. The company then began to accumulate parcels along the Binney Street corridor in Cambridge. Alexandria has developed 2 million square feet of office and lab space in this market to date.

The 50 and 60 Binney Street facilities are part of the Alexandria Center at Kendall Square, a more than 2 million-square-foot life science and technology campus along the Binney Street corridor in the Cambridge submarket of Greater Boston. This project achieved LEED Gold certifications.

Alexandria's Differentiated Strategy

Alexandria's strategy has paid off as the company has grown over the years. Some early investors failed to comprehend that the company would thrive in a market with extremely high barriers to entry for other developers, high barriers to exit for tenants and dramatically limited Class A space availability.

In 2018, constrained supply and high demand resulted in Alexandria's highest rental rate increases in 10 years and its second-highest annual leasing period. In 2019, the company anticipates delivery of more than 2 million square feet of space, which is highly pre-leased to life science, technology and agriculture technology companies that range from the enterprise to the start-up level. Among the most prominent projects is 399 Binney Street at the Alexandria Center at One Kendall Square in Cambridge, home to three therapeutics companies. The company will deliver two developments in South San Francisco, including another building for Verily, an Alphabet company (the parent of Google).

Alexandria is also expanding its footprint in New York City. The firm has initiated the development of its third tower at the Alexandria Center for Life Science in the heart of Manhattan's East Side Medical Corridor, and it will open a building in Long Island City. The company also acquired Pfizer's headquarters at 219 East 42nd Street in Manhattan, which offers long-term redevelopment options.

In addition to serving major life science companies in its clusters, it also helps nurture start-ups and early-stage companies with promising ideas. Alexandria has developed proprietary offerings to support the growth of these companies.

> "**Clusters are geographic concentrations of interconnected companies and institutions in a particular field.** Clusters affect competition in three broad ways: by increasing the productivity of companies based in the area; by driving the direction and pace of innovation, which underpins future productivity growth; and by stimulating the formation of new businesses, which expands and strengthens the cluster itself."
>
> *— Michael Porter, Harvard professor and author*

Alexandria has expertise in designing, developing and operating state-of-the-art laboratory space to support the discovery of breakthrough medicines with the potential to improve patient lives.

Alexandria Science Hotel offers flexible, built-out space for early- and growth-stage companies. For example, Alnylam Pharmaceuticals began with several thousand square feet of space. Today, it occupies hundreds of thousands of square feet in Alexandria's Binney Street corridor.

Alexandria LaunchLabs helps meet seed-stage life science companies' need for affordable, turnkey space. Alexandria embarked on this incubator platform in 2017 at the Alexandria Center for Life Science in New York City. With an additional location now in Cambridge at One Kendall Square and another slated to open in Seattle, Alexandria LaunchLabs provides seed- and early-stage companies with everything they need to be successful: move-in-ready office and lab space, support resources, shared equipment and services, creative amenities and access to capital through the Alexandria Seed Capital platform.

Venture Capital Funding

To stay on the leading edge of innovation in the life science industry, Marcus created Alexandria's venture capital arm in 1996. After purchasing the first four buildings in its portfolio, there was some of the original $19 million left over, so Marcus formed Alexandria Venture Investments to fund start-ups in the life science industry.

The company's venture activity is an integral component of its differentiated and multifaceted business strategy. It provides Alexandria with invaluable strategic insights and extensive knowledge of cutting-edge science, which strengthens relationships across the life science industry and enables the company to recruit and retain the highest-quality tenant base.

Alexandria Venture Investments has a diverse portfolio today. It ranges from seed capital fundraising rounds for life science companies to IPOs that are carefully vetted by the firm's Science & Technology team. This has earned Alexandria the distinction as the most active biopharma investor based on new deal volume in 2017-2018, according to Silicon Valley Bank, and the No. 1 venture capital investor in the health care sector by U.S.-based deal volume, according to Forbes magazine.

Thought Leadership Platform

The Alexandria Summit is a program the company launched to drive discussions and collaborations shaping the future of health care. Since its start in 2011, Alexandria has invited a diverse group of stakeholders from the biopharma, technology, agribusiness, medical, academic, investment, philanthropy, patient advocacy and government communities to address the most critical challenges to advancing human health.

Speakers and panelists have included former FDA Commissioner **Scott Gottlieb**, former Senator **Tom Daschle**, D-S.D., and **David Sheff**, author of "Clean: Overcoming Addiction and Ending America's Greatest Tragedy" and "Beautiful Boy: A Father's Journey Through His Son's Addiction."

Focus on Employees

When asked about the biggest contributing factor to the company's success, Marcus said its people. For example, during the Great Recession, when banks stopped lending money for real estate development, Alexandria did not lay off any employees because Marcus said the team would have been impossible to re-create after the recession ended. Instead, the company took other steps to save money.

Marcus attributes the talent of his team to the diverse workforce the company has recruited. For an industry that has long been male-dominated, Alexandria is committed to promoting women leaders and to creating an inclusive environment that values all people for their talents and contributions.

"The company really does value different ideas, and it's important to hear everyone's ideas," said Marcus.

Alexandria team members celebrate at the finish line after running the 2018 New York City Marathon to support critical oncology research at Memorial Sloan Kettering Cancer Center.

Community Support

Since its founding, Alexandria has been committed to improving the health and vitality of the communities where its employees and tenants live and work. Through corporate philanthropy, fundraising and volunteerism, Alexandria provides vital support to nonprofits doing meaningful work.

Alexandria's philanthropic activities focus on contributing to local organizations that enrich the communities in which Alexandria operates; providing support to leading-edge nonprofit organizations conducting groundbreaking medical research; promoting STEM education that cultivates the next generation of leaders and thinkers; and backing military support services that ensure the health and safety of the brave individuals who defend our nation.

In 2018, Alexandria employees raised more than $225,000 by running the New York City Marathon to support critical oncology research at Memorial Sloan Kettering Cancer Center. Alexandria's staff also contributed more than 2,600 hours of volunteer service to support the work of about 250 innovative nonprofit organizations in the U.S.

One of Alexandria's most significant efforts to date is a project with Verily to pioneer a fully integrated opioid addiction recovery campus in Dayton, Ohio. Alexandria is leading the design and development of the campus, which will provide a full continuum of care for people suffering from opioid addiction while helping to revitalize community.

> “We created a niche in 1994 that **today is one of the hottest products on the market.**”
>
> *— Joel S. Marcus, executive chairman and founder, Alexandria Real Estate Equities, Inc.*

Alexandria’s Daniel Ryan participates as a speaker at a NAIOP Developing Leaders Mentorship Program. As part of his fireside chat with Brian Starck, executive director of Cushman & Wakefield, Ryan discussed his career and provided insights to future leaders in the real estate industry.

“We went to Dayton because it had one of the highest overdose death rates in 2017 of any county in the U.S.,” said **Daniel Ryan**, co-chief investment officer and regional market director of San Diego. “Unfortunately, it is a major distribution center for drugs. Opioid addiction is the health care crisis of our time, and we could not just sit by. Alexandria and Verily renovated an old building, and they are adding an outpatient clinic and apartments for those in recovery. The goal is to guide patients through everything from detox, counseling and recovery to family reunification and job placement to help them rejoin the community. We hope that it will be a model for the rest of the country.”

The Next Five Years

Looking back to the formation of Alexandria in 1994, Marcus’ foresight was remarkable. What does he see for the next few years in the business?

“There will continue to be a focus on the irreplaceable clusters of innovation on our coasts,” he said. “But given the expense of things and affordability of living on the coasts and a need for more knowledge workers, we will also see a rise of many new secondary markets in life science, like Austin, Nashville and Denver.” ■

Ron Derven is a contributing editor to Development magazine.

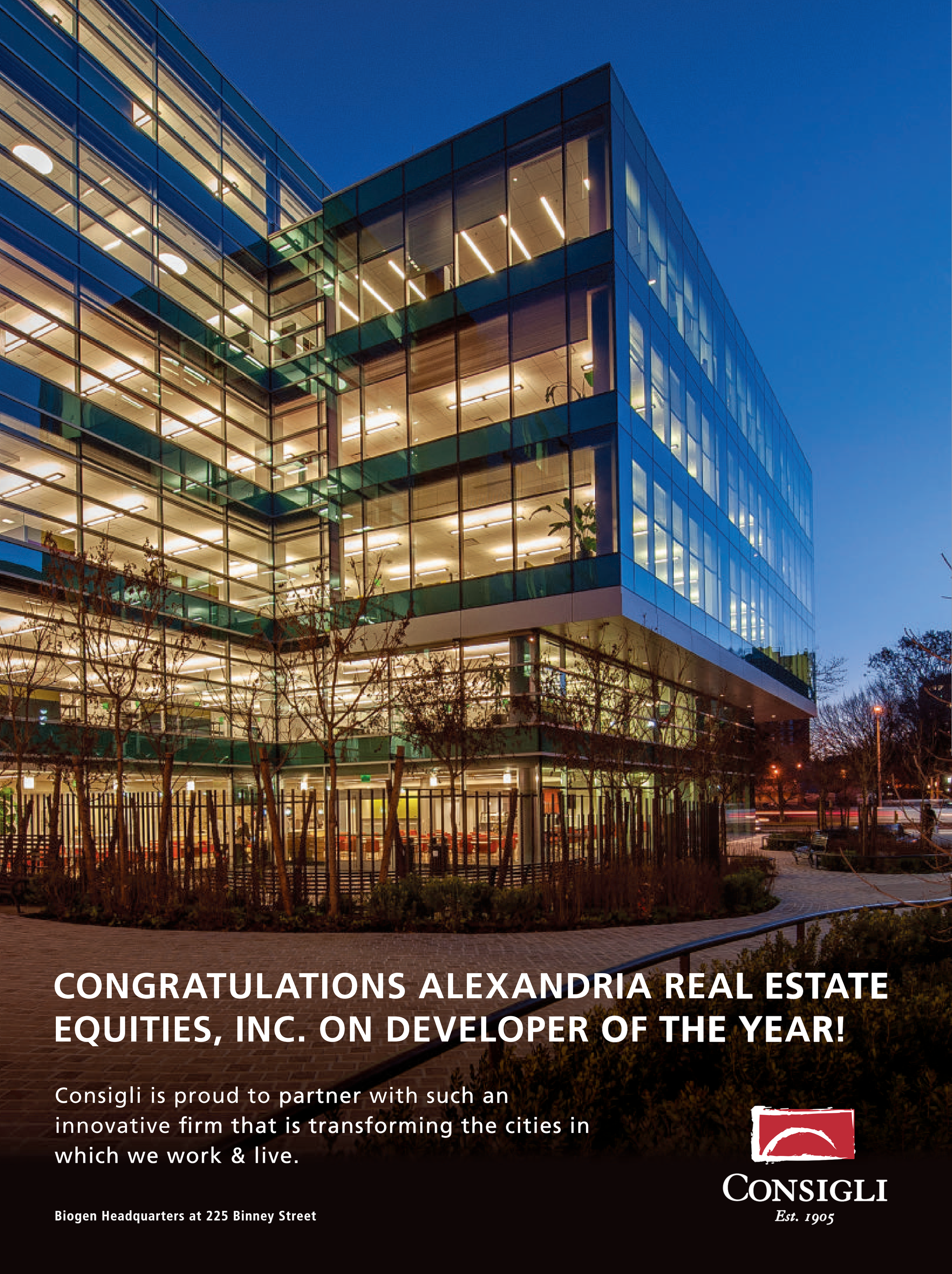
Strong Support of the Industry Through NAIOP

Alexandria has long been an active participant in NAIOP, engaging in numerous sponsorship and professional development opportunities as a Corporate Member. NAIOP Massachusetts recognized Alexandria as a 2019 Gold Gavel Member and honored the company in 2015 with the chapter’s Distinguished Real Estate Award for “achievements in real estate, charitable activities and community betterment.”

Here are two Alexandria employees who are active members of NAIOP:

Thomas J. Andrews, co-president and regional market director of Greater Boston, serves on NAIOP Massachusetts’ board of directors and was recently appointed NAIOP Massachusetts’ 2019 Volunteer Leadership Slate Secretary.

Daniel J. Ryan, co-chief investment officer and regional market director of San Diego, participates in his local chapter’s mentorship program and NAIOP’s Forums. ■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Building for Resiliency Ensures Physical — and Financial — Security

By Camille Galdes

The real estate development and investment communities have relied on traditional variables to estimate the value of assets across time. However, there is growing interest in broadening the analysis beyond the building and evaluating the broader setting. By analyzing the risks embedded in the locations of real estate assets, investors can gain more insight into how they will perform over time.

As "big data" expands exponentially, there is more information available to help developers and investors estimate how the social and environmental context of their real estate might affect financial performance. Because it is an industry so rooted in place, real estate companies are increasingly using the metric of resiliency to differentiate their products. A proliferation of tools, metrics and standards allow developers and investors alike to consider how well buildings, as well as the surrounding communities, withstand various shocks and stressors.

What Does it Mean to Be Resilient?

"Resiliency" is a broad term that refers to the overall well-being of a place, typically an urban area. The Rockefeller Foundation defines urban resiliency as "the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and thrive no matter what kinds of chronic stresses and acute shocks they experience." Acute shocks are usually unexpected environmental hazards such as extreme weather, while chronic stresses include issues such as poor educational quality or housing affordability.

"There are lots of places facing risks that are not environmental," said **Sarene Marshall**, a resiliency and sustainability expert at the Inter-American Development Bank. "San Francisco's long-term issue is the housing crisis. That's what will make it difficult for the community to bounce back after a shock."

In the wake of Hurricane Wilma, **Alan Ojeda**, founder and CEO of Rilea Group, decided that Miami's building codes were not resilient enough. Per the code, only the first 30 feet of a building needed to use large-missile impact-resistant glass to withstand strong winds and

It's not just about constructing properties that can survive disasters; a holistic approach to the built environment also adds value.

NBAF Design Partnership

The National Bio-Agra Defense Facility (NBAF) in Manhattan, Kansas, is designed to withstand F5 tornadoes, the strongest storms on the Fujita scale. These tornadoes generate "incredible damage" from wind speeds that can range from 261 to 318 miles per hour.

flying debris. However, Ojeda had seen how 2005's Hurricane Wilma destroyed windows of downtown buildings much higher than the first 30 feet.

For his Class A office tower, 1450 Brickell Avenue, located in Miami's financial district, Ojeda installed glass twice as strong as that specified to withstand a Category 5 hurricane. Although the special glass can cost around $100 per square foot, according to a July 2017 article in The New Tropic, it more than paid for itself when tenants like J.P. Morgan Chase & Company and American Express found its resiliency attractive and quickly leased up the building. Business continuity is important to companies that have interests around the world, and they liked having the assurance that the building would withstand another extreme weather event like Wilma.

Measuring Environmental Risks

While there are different ways for investors to measure the resiliency of real estate assets, environmental hazards are the most straightforward since the physical damage they can cause is so measurable. Flooding is particularly destructive to the built environment, and recent catastrophic weather events have drawn a lot of attention to the issue.

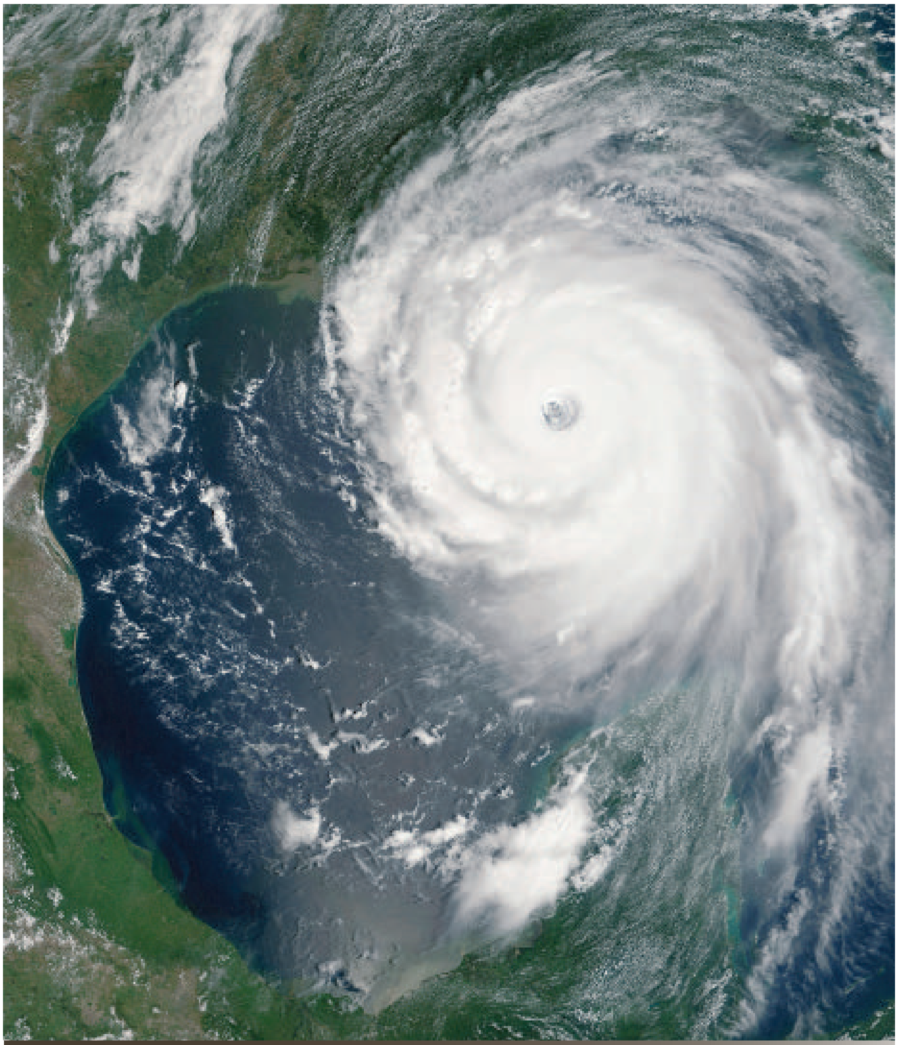
Many resiliency programs date to 2005's Hurricane Katrina, which produced flooding that inundated New Orleans, killed more than 1,800 people along the Gulf Coast and caused more than $100 billion in property damage. Even more programs proliferated after Hurricane Sandy in 2012. While it made landfall as a somewhat weak storm based on wind speed, its extended rainfall and storm surge wreaked havoc across the Northeast, killing more than 100 people and causing at least $62 billion in damages.

From 2015 to 2017, Houston experienced serial flooding events that put the hazard front and center again. The Memorial Day storm of 2015 and the so-called "Tax Day Flood" of 2016 dumped excessive rain on the area, followed by Hurricane Harvey in 2017, a storm of historic proportions that produced more than 39 inches of rain, killed 88 people and caused $125 billion in damage.

What astonished experts about these storms was the extent of damage in areas outside of the 100- and 500-year flood plains. Researchers at Delft University of Technology in the Netherlands and Rice University in Texas say that Harvey caused 18 deaths within the flood plains in Harris County and 19 beyond them. According to the Houston Chronicle, more than a third of homes damaged during the Memorial Day floods and 55% of those damaged during the Tax Day floods were outside the 500-year flood plain.

More independent consultancies began to evaluate risks from extreme weather using sophisticated computer modeling and climate data. For example, in October 2018, Four Twenty Seven released a data product in conjunction with real estate technology company GeoPhy showing that 35% of REITs properties around the world are currently exposed to climate hazards such as inland flooding and hurricanes.

High-quality environmental data is now available from the U.S. National Oceanic and Atmospheric Administration (NOAA). For example, the Digital Coast website uses tide gauge data to model flood inundation in coastal areas, and its visualization tools can show the flooding that could take place across the built environment given a high tide up to 10 feet above average. Digital Coast also supplies data sets such as economic information and satellite imagery.



Getty Images/Stocktrek Images

Hurricane Katrina approaches the U.S. Gulf Coast in this satellite image from August 2005. The storm killed more than 1,800 people and caused more than $100 billion in property damage.

Resilience as the New Standard

In recent years, industry associations have developed a suite of resiliency certifications and standards.

Arup's Advanced Technology and Research team developed Resilience Based Earthquake Design (REDi) in 2013 to evaluate how well buildings withstand earthquakes and floods. A collaborative group of researchers developed the RELi design standards in 2014 to evaluate how well buildings adapt and recover from disasters. The U.S. Green Building Council's LEED program created resilience credits in 2015 as part of its certification process, and the United States Resiliency Council (USRC) started rating buildings' ability to withstand seismic events in 2015.

The Alliance for National and Community Resilience (ANCR) in 2018 took a community-level perspective when it developed its Building Benchmark Tool. The tool looks at how well a community's interconnected systems, like the electrical grid and food distribution, withstand environmental hazards. ANCR is currently working on a Community Resilience Benchmark Tool, a rating system for communities themselves.

The proliferation of resiliency standards, although varied and focused on different types of hazards, are providing policymakers and private industry with a roadmap for becoming resilient. To avoid the catastrophic losses seen in New Orleans and Houston, cities across the U.S. are incorporating resilience measures into their master planning and building codes.

Boston is studying its vulnerabilities to flooding in the near and long-term and establishing new design standards to protect against them. The Climate Ready Boston initiative projects that the city will experience 40 inches of chronic sea level rise by 2070 as well as more frequent acute flooding in the near term. To protect itself, Boston is designing flood barriers along Boston Harbor and is recommending commercial buildings comply with many voluntary resilience standards.

As of March 2019, New York City is requiring that new construction in certain areas follow resilience guidelines designed to extend the useful life of buildings and to protect critical functions during extreme weather events. The guidelines state that buildings must be designed to withstand gradual sea level rise, extreme precipitation and extreme heat. In particular, the critical systems of a building must be protected from high temperatures and rising water.

Buildings considered fully critical are held to the highest standards, especially regarding what is called "freeboard," the space above a water line. In the case of a flooded floor of a building, freeboard is the headspace that remains. The flood elevation level required for critical facilities, which takes into account gradual sea level rise, is 24 inches and for non-critical buildings is 12 inches.

More than 80% of New Orleans was covered in floodwaters after Hurricane Katrina made landfall in August 2005. Water levels ranged from one foot to more than 10 feet.

The Rockefeller Foundation defines urban resiliency as **"the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and thrive no matter what kinds of chronic stresses and acute shocks they experience."**

Leaders in Resiliency

The idea of building for resilience is new to mainstream developers and builders, but those who build critical facilities, which are properties that provide urgent services or maintain highly sensitive materials, were designing buildings to withstand all types of hazards before it became a widespread concern.

More recently, developers focused on high-performance buildings have also discovered ways to reduce exposure to hazards and improve business continuity in addition to new ratings systems and citywide resilience plans.

McCarthy Building Companies, a national company headquartered in St. Louis, specializes in energy plants, hospitals, complex labs and other buildings that process hazardous materials.

Ryan Molen, vice president at McCarthy, said the company has always had to build beyond the code requirements and equip buildings to withstand many kinds of emergencies.

"We have constructed approximately 25% of all laboratories in the U.S. with the highest biosafety level ratings, BSL-4, which are equipped to contain infectious diseases such as smallpox and Ebola," he said. "Resilience is always a top priority throughout the design, development and construction process."

Given the critical nature of McCarthy's projects and, in many cases, the serious public health consequences of building failure, they always prepare for the worst.

Among the key hazards that critical buildings need to withstand are tornadoes and earthquakes. McCarthy is currently completing the $800 million BSL-4 National Bio-Agra Defense Facility (NBAF) in Manhattan, Kansas.

"For lab facilities, no matter what happens regarding climactic events, they must be able to withstand it," Molen said.

The NBAF lab is designed to withstand the strongest tornadoes on the Fujita scale, which specifically measures building destruction rather than wind speed or other physical traits of the storm. Tornadoes that rank F5 on the Fujita scale generate "incredible damage" from wind speeds that can range from 261 to 318 miles per hour.

McCarthy also retrofitted the Robert A. Young federal building in St. Louis, an historic, 20-story-tall, 1-million-square-foot building that is owned by the U.S. General Services Administration and occupied by more than 35 government offices. The building sits only 100 miles from the New Madrid seismic fault line. While this area hasn't seen a major earthquake in more than 200 years, if one were to strike today, it could create "the highest economic losses due to a natural disaster in the United States," according to a 2008 report by the Federal Emergency Management Agency. The building must be able to withstand a strong earthquake so that occupants can get out of it safely during and after a seismic event.

Hurricane Harvey, which hit the Houston area in 2017, produced more than 39 inches of rain. The flooding killed 88 people and caused $125 billion in damage.

A tenet of resiliency is the ability for a building and its users to recover quickly from a shock. In practice, that means critical functions need to continue despite disturbances to the power grid or other inputs.

At an energy plant McCarthy built in St. Louis for a VA hospital, the construction team considered how the building would function during a long power outage. The plant has backup generators and boilers capable of supporting building functions for an extended period of time.

"Our typical plant would have generators that would be capable of operating on natural gas or diesel fuel, since a natural disaster could shut off electricity or natural gas," he said. "They would have on-site fuel storage for use during a catastrophic event, emergency circuitry that goes to a designated emergency panel connected to the generator, etc."

For every building being designed for these high hazard standards, Molen said McCarthy takes a look at historical averages and all available data regarding the strength and frequency of weather events in the area.

"Design decisions will be based on what the data shows," he said. "You look at historical averages and consider the 'extreme cases,' which informs the design team of the worst expected case."

Asked whether there is growing interest in building for resilience among mainstream developers, he said he is seeing a trend of owners evaluating total cost rather than first costs of a building.

"While these considerations obviously add costs to the project, owners are increasingly asking us to evaluate total cost from the beginning because they see resiliency as an investment," Molen said. "Retrofitting later is much more expensive than doing it from the start."

High-Performance Design

There are many principles from high-performance building design that can be applied to resilience as well. High-performance buildings seek to be water-efficient, low-carbon, to maximize daylight and to provide an overall healthy experience to users.

In many ways, pursuing these goals has the added effect of improving resiliency. **Brenden McEneaney**, principal at Integral Group, an engineering consulting firm that designs high-performance buildings and communities, said independence from the grid and redundancies in critical systems are two ways to prepare for emergency scenarios. Integral Group focuses on the campus scale and how a community of buildings can support one another — a model that could easily be extended to the city level.

"Different systems optimize at different scales," he said. "Electricity might be best addressed at the buildings scale; thermal energy at the district scale; and stormwater management at the city scale. You can maximize these returns, but only if you plan early and think big."

Resilience risks also change with scale. For example, an office building can be the most resilient in the world, but if schools and roads are closed, then employees will not come to work. Perhaps this is why cities are creating their own resiliency standards; buildings can only go so far on their own without resilient infrastructure to plug into, and savings can be captured when a whole community improves its resiliency together.

McEneaney said a key tenet of high-performance design is making building elements serve multiple purposes.

"A big part of our work is passive design," he said. "We think about where we can take advantage of other resources on the site, such as mining heat from sewer water and fire protection systems. Single-purpose

The proliferation of resiliency standards, although varied and focused on different types of hazards, are providing policymakers and private industry with a roadmap for becoming resilient. To avoid the catastrophic losses seen in New Orleans and Houston, cities across the U.S. are incorporating resilience measures into their master planning and building codes.

infrastructure isn't good enough anymore. Investing in a great envelope keeps a building habitable whether or not the power is on."

Infrastructure with multiple purposes not only creates redundancy and ensures operational continuity in a disaster, but it can even build more value streams into your property.

"Your parks can be your stormwater infiltration and also provide amenity space, retail opportunities, shade — all things that make your building active in the so-called '18-hour' city that is busy day and night," McEneaney said.

Insurance: The Original Risk Evaluators

The insurance industry has the potential to be a significant influence on the market for resilient real estate.

Some U.S. insurance companies such as Verisk are already creating insurance products designed for a building's specific location and environmental risks.

An industry-wide effort is also possible. For example, the Insurance Council of Australia developed a Building Resilience Rating Tool (BRRT) to evaluate the risk that natural disasters pose to buildings. If homeowners receive a high resilience score or follow guidelines to improve their resilience, they may receive lower premiums.

Reinsurance, known as the "insurance for insurance companies," is becoming more popular as a way for American insurers to work in risk-prone areas and avoid catastrophic losses associated with disasters. According to the Motley Fool financial website, reinsurance "protects insurance companies from financial ruin, thereby protecting the companies' customers from uncovered losses."

Tenants may need to have additional business-continuity insurance. For example, a storm may not damage a building, but flooding that affects the surrounding infrastructure could prevent customers from being able to access it.

Insurers and investors alike could decide to leave high-risk areas altogether, while others find sophisticated ways to price in risk. Some may choose riskier assets in hopes of larger gains, although many funds heavily invested in real estate, such as public pensions, tend to be risk-averse.

But building with resilience in mind may be the most direct way to receive the proper insurance protection. When Ojeda fortified 1450 Brickell Avenue with strong, highly wind-resistant glass, he received lower insurance bids. The glass also lowered energy costs, making the building less expensive to operate. It serves as an example of passive design, which McEneaney said is a key element of resilient building. Planning for the future may increase upfront costs, but it can improve a building's performance in many ways.

Resilience is Here to Stay

Real estate has always been affected by the context it is in, both physical and social. However, increasingly powerful computer modeling and a growing collection of environmental and social data are empowering city managers, real estate developers and investors alike to estimate the likelihood that shocks and stressors will damage a city. The power of this data to differentiate real estate portfolios will only increase as geospatial modeling and big data become more ubiquitous.

Stakeholders may take different approaches to hazard risks, depending on their risk tolerance as well as the ability of the market to price them in. What is certain is that resilience is an increasing imperative, and developers will need to use data and creative design to keep their buildings not only competitive but safe. ■

Camille Galdes is an urban policy writer and researcher in the Washington, D.C., area.

Retail-to-Warehouse Conversions Gain Momentum

Getty Images

As communities across the country struggle to find new uses for shuttered shopping malls, real estate professionals are starting to convert them into industrial facilities.

When other efforts to **resuscitate a dying shopping mall fail**, converting **the facility to a warehouse or** last-mile distribution **center is an option to consider.**

By Ron Derven

While the media focuses on retail store closings and the demise of brick-and-mortar locations, smart developers and mall owners at top-tier properties are working to replace bankrupt anchors and those oh-so-yesterday mall concepts with restaurants, experiential venues and, yes, new retailers.

For other malls, however, replacing failed anchors and shuttered stores has been more difficult. According to **Ray Hartjen**, director of marketing for RetailNext, a retail analytics firm in San Jose, California, brands that wanted to expand into new markets in the 1970s and 1980s had three main choices: create a catalog, build a call center or open a new store. Most chose to open stores, which in turn spurred the development of new shopping centers and malls. Some of those malls were built in areas of the country that today do not have enough foot traffic to survive as originally config-

Randall Park Mall: From Retail Hub to Distribution Center

In June, Chris Semarjian, owner of Industrial Commercial Properties LLC (ICP) and an experienced redeveloper of underutilized commercial space, shared insights into retail conversions during NAIOP's I.CON West 2019 in Long Beach, California.

This Amazon distribution facility near Cleveland was built on the site of the Randall Park Mall, which closed in 2009.

Semarjian discussed his company's experience repositioning the Randall Park Mall near Cleveland, which would eventually become an Amazon distribution center. Built in 1976, it was the largest mall in the U.S. (1.8 million square feet on 100 acres). Despite being a community icon, the mall was already in decline by 1996 and further deteriorated during the 2000s. It closed in 2009.

ICP recognized the mall's potential for uses such as a call center or light industrial. However, several large anchor tenants owned their stores, complicating the acquisition process. In early 2014, ICP began buying the large tenant spaces with the goal of repurposing them. The community supported ICP's efforts, believing the mall conversion would bring jobs back to the community.

Later that year, a third-party broker approached ICP, indicating that Amazon was interested in purchasing the site. The e-commerce giant thought the mall, located next to a highway, would be an ideal location for a distribution center. ICP negotiated a deal that they would demolish the mall while retaining ownership of several adjacent out parcels. The property was rezoned within four months, and construction of the $180 million, 900,000-square-foot facility was completed within a year.

Semarjian offered several takeaways from his experiences:

- Shopping centers can be ideal locations for distribution and warehouse facilities because they are usually located near highways, have infrastructure in place, offer ample parking and are close to population centers.
- Leasing and ownership arrangements can complicate the acquisition of multitenanted retail properties. Finding a property with one owner is ideal, but rare.
- More than ever, location is crucial. A project may be struggling, but if it is in an advantageous (or soon-to-be-advantageous) location, it can be profitably repositioned.
- Work with the community. Many municipalities are eager to turn around vacant and underperforming retail properties. They will expedite processes to implement projects spurring economic benefits.
- Let the end-user or tenant get the incentives from the community. ICP did not receive economic incentives during the project. Amazon, as the purveyor of jobs, got them.
- Rely on third parties. While acquiring and demolishing Randall Park Mall, ICP brought in experts who helped them in areas they did not specialize in such as property management and civil engineering.
- Be proactive when seeking properties. A good strategy is to be ahead of the curve and not to wait for a property to be offered. If a property is struggling, learn more about it and talk with stakeholders. ■

By **Jennifer LeFurgy**, Ph.D., Editor-in-Chief, Development magazine

ured. These malls now need to be repurposed, perhaps as educational institutions, medical facilities, offices and/or housing. Others need to be closed.

One solution for underperforming malls is converting them into warehouses and distribution centers to fill the demand for last-mile delivery from e-commerce players and surviving brick-and-mortar retailers.

Retail-to-Warehouse Conversions

According to January 2019 CBRE research, there are at least 23 retail-to-industrial projects that have commenced since 2016. These projects are turning roughly 7 million square feet of aging retail space into 10 million square feet of new warehouse/industrial space, either by converting existing structures or by demolishing and replacing them with new buildings.

"When we started this study, we didn't anticipate that we would find

Getty Images

While there is a lot of talk in the media about a "retail apocalypse" caused by the rise of e-commerce, the fact is that 85% to 90% of sales are still taking place in physical retail stores, said Stephen D. Lebovitz, CEO of CBL Properties in Chattanooga, Tennessee.

so many projects," said **Matthew Walaszek,** a CBRE senior research analyst specializing in industrial and logistics. "Compared to the overall warehouse/industrial inventory, which is 14 billion square feet of space in the U.S., these conversions are a mere drop in the bucket. This retail-to-industrial activity, however, is definitely a niche market that is healthy and growing."

Walaszek said he sees more mall-to-warehouse conversions coming.

"The U.S. is over-retailed compared to other countries," he said. "In the U.S., there is about 23 square feet per capita of retail space compared to 17 square feet per capita in Canada and 4.6 square feet per capita for the U.K."

He said that on the demand side, the fundamentals are there for the conversion of functionally obsolete shopping centers to a more productive use.

"Our research shows that big-box stores make the most sense for a warehouse conversion," said Walaszek. "For example, take a Sam's Club. The building features allow for easy application to a warehouse. The developer only needs to make small changes to the interior and of course add racks, shelving, pallets and the proper technology. A shopping center is more complex to convert with the segmented interiors, multiple floors and other features such as escalators and inadequate docking. Shopping centers make more sense as a teardown and rebuild."

Across the country, clients are asking for space closer to customers.

"Clients are interested in infill locations," said **Tray Anderson**, logistics and industrial services lead, Americas for Cushman & Wakefield. "They are interested in improving their services to customers."

> "Malls are typically sitting on Class A real estate for their regions — in many cases defining and anchoring the retail around it. If all of that retail has fallen or moved elsewhere, then **conversion [to a warehouse] might make the most sense, especially if it's situated right off major national highways."**
>
> *— Bil Ingraham, senior vice president, business development, Centennial*

What is a Good Candidate for a Warehouse Conversion?

Not every dead or dying mall is ripe for conversion to a warehouse. **Bil Ingraham**, senior vice president for business development with Centennial in Dallas, which owns 7.3 million square feet of retail space at seven properties across six states, said it is prudent to consider retail-to-warehouse uses if there is a strong demand for warehouses in the area and if the financials for such a conversion are stronger than for other uses.

"Malls are typically sitting on Class A real estate — in many cases defining and anchoring the retail around them," he said. "If all of that retail has closed or moved elsewhere, then conversion [to a warehouse] might make the most sense, especially if it's situated right off major national highways."

"A mall for conversion to a warehouse needs to be located in a land-constrained market like suburban Philadelphia," said **Curtis D. Spencer**, president of IMS Worldwide, Inc., in Webster, Texas, who is an expert in logistics and industrial development. "If my local mall in suburban Houston were to become obsolete, developers would never be interested in converting it to warehouse space. They would sim-

Retail-to-Industrial Conversions

Here are 23 retail-to-industrial conversion projects tracked in "Trading Places: Retail Properties Converted to Industrial Use," a January 2019 report by CBRE:

Atlanta: Shannon Mall/Union City Mall was demolished and warehouses/film studios built on the site. The project converts 764,882 square feet of retail space into 987,840 square feet of industrial space.

Baltimore: Perryville Outlet Center was closed and demolished; a warehouse is proposed for the site. The project transforms 117,904 square feet of retail space into 356,250 square feet of industrial space.

Chicago: A closed Sam's Club will be converted into an e-commerce fulfilment center for the retailer, and a demolished outlet center will have a warehouse built on site. These two projects turn 429,000 square feet of retail space into 818,000 square feet of industrial space.

Cincinnati: A former Showcase Cinema was demolished, and three warehouses are proposed for the former cinema land and surrounding vacant land. The project converts 55,000 square feet of retail space into 1.6 million square feet of industrial space.

Cleveland: The Randall Park Mall and the Euclid Square Mall were demolished and Amazon distribution centers were built on the sites. These two projects transform 2.5 million square feet of retail space into 3 million square feet of industrial space.

Columbus, Ohio: A manufacturing facility will replace a former local chain grocery store. The project converts 145,000 square feet of retail space into 145,000 square feet of industrial space.

Dallas/Fort Worth: The former Six Flags Mall was demolished and twin 600,000-square-foot buildings for GM parts distribution were built on the site. The project turns 350,000 square feet of retail space into 1.6 million square feet of industrial space.

Denver: A former entertainment center was completely stripped to be converted into an industrial facility for Ferguson. This will convert 102,000 square feet of retail space into 102,000 square feet of industrial space.

Detroit: Summit Place Mall will be demolished and industrial space is planned for the site. The project will convert 1.4 million square feet of retail space into 50,000 square feet of industrial space.

Houston: A former Walmart is being repurposed into a mixed-use facility that includes flex space, and a closed grocery store is being converted into an e-commerce fulfillment center. These two projects transform 257,200 square feet of retail space into 128,000 square feet of industrial space.

I-78/I-81 Corridor, Pennsylvania: The Schuylkill Mall in Frackville, Pennsylvania, was demolished and two warehouses are being constructed on the site. The project turns 800,000 square feet of retail space into 1.244 million square feet of industrial space.

Kansas City: A former Walmart was repurposed into a warehouse/distribution center. The project converted 135,515 square feet of retail space into 135,515 square feet of industrial space.

Memphis: A closed Sam's Club became an e-commerce fulfilment center for the retailer. The project converts 135,000 square feet of retail space into 135,000 square feet of industrial space.

Milwaukee: A former Toys R Us is now used as a manufacturing center; a former Target was converted to partial cold storage; and a closed Sam's Club changed into a distribution center. These three projects converted 429,329 square feet of retail space into 390,860 square feet of industrial space.

Salt Lake City: A former retail space was backfilled by light manufacturing, and a former retail space will be demolished for warehousing. These two projects turn 223,685 square feet of retail space into 132,587 square feet of industrial space.

Tampa: A closed Sam's Club was converted into an e-commerce fulfilment center for the retailer. The project transforms 126,126 square feet of retail space into 126,126 square feet of industrial space.

Toledo: A former Andersons retail store closed and will become a warehouse for the company. The project will convert 200,136 square feet of retail space into 200,136 square feet of industrial space. ■

Source: CBRE

ply walk across the street and buy vacant land for $5 a foot and start fresh. An obsolete mall in suburban Philadelphia, however, would likely have all of the infrastructure in place for a last-mile delivery facility — adequate parking for trucks, a ceiling probably 25 feet high and perhaps air conditioning."

Getting Over Municipal Hurdles

As challenging as it might be to find the right mall for conversion, once that property is located, the next major issue might be to convince town and zoning officials — and local voters — that the project will benefit the community.

"The real sticking point is convincing local government that the local mall is indeed a zombie that needs action," said Spencer. "If that mall can be converted to last-mile delivery — all or in part — huge benefits will flow to the city. The reality is that this type of conversion will actually cut traffic in the area,

'A Retail Apocalypse'?

According to Ray Hartjen, director of marketing at RetailNext, a retail analytics firm headquartered in San Jose, California, retail is being reconfigured in the U.S., and it will get smaller before it gets bigger again — if it ever does.

"The so-called retail apocalypse makes for a great headline, but it is not accurate," he said. "Retail is strong and continues to grow. Today, it is over a $5 trillion business."

While retail may not be looking at an "apocalypse," the industry is facing challenges: Coresight Research, a company that tracks news about store closures, openings and bankruptcies, noted that as of late June 2019, the number of store closures had already exceeded the total recorded for all of 2018. So far this year, U.S. retailers announced 6,986 store closures and 2,985 store openings. This compares to 5,864 closures and 3,251 openings in 2018. By year's end, Coresight predicts that 12,000 U.S. stores will close.

"There's a lot of hype, there's a narrative and then there's the facts," said **Stephen D. Lebovitz**, CEO of CBL Properties in Chattanooga, Tennessee, which owns 113 retail properties with 70.6 million square feet of space in 26 states. "Retailer bankruptcies are not a new thing. There's a long list of retailers over the years that have gone out of business. There's also a list of retailers that have come up and are thriving to replace those. Retail is always changing. There are changing customer preferences and changing fashion — that drives the success or the failure of certain retailers. A lot of people say that online is replacing brick and mortar today. It's true online is a big presence, but 85% to 90% of sales are taking place in physical retail stores. Our properties are super busy and 90% leased — that's the reality."

Despite that, a serious retail issue for CBL Properties is the loss of 40 anchors with the closing of Sears and Bon-Ton stores.

"The closings for us represent a once-in-a-generation opportunity," said Lebovitz. "Until these closings, we haven't had the space to accommodate the dining, entertainment, hotel and medical uses that we have wanted to add to our properties." ■

it will reduce air pollution, and it will bring in sales tax revenue if it is a last-mile retail operation."

Perceived negatives that it will turn into a trucking hub are unfounded, according to Spencer. If there had been a Sears, Target and JC Penney at the mall when it was operational, there was a lot of truck traffic at night. In the new mall-to-warehouse conversion, there would be similar amounts of night truck traffic and less traffic in the day because fewer vans would be making multiple last-mile deliveries, compared with consumers in automobiles coming to shop at the mall.

The Hybrid Mall

There are also efforts underway to create a "hybrid" mall that incorporates retail and warehouse into one facility.

Two JLL executives, **Matthew R. Powers**, CCIM, executive vice president, retail & e-commerce distribution, and **Larry Kilduff**, CRRP, CRX, CDP, retail advisory services, are searching for sites to employ a new concept called shopping fulfillment centers or simply SFCs. These were created by **Shlomo Chopp**, managing partner, Case Equity Partners in New York, who has three patents pending for various components of the concept.

Chopp calls his concept ShopFulfill, and it seeks to eliminate the greatest money-losing aspects of brick-and-mortar retail and e-commerce. For brick-and-mortar retailers, one of the biggest costs is physical space. For e-commerce companies, it is the free next-day or two-day delivery of merchandise and the huge number of items such as clothes that are returned because digital shoppers can't try on the products.

"ShopFulfill seeks to keep the best of brick-and-mortar retailing and e-commerce by offering shoppers an opportunity to touch and feel the merchandise, as well as huge product selection and fast delivery," said Chopp.

ShopFulfill's first iteration will be as a backfill of vacant mall anchors. It will be geared to digital companies seeking physical locations along with reduced costs of fulfillment. There would be showrooms in the front, where retailers could display their merchandise, and integrated warehousing and fulfillment in the back. With an app built on technology that blurs the lines between shopping at home and in-store, customers could shop for products from either location. The goods could then be delivered, picked up or walked out from the ShopFulfill space, according to Chopp.

"Shoppers can touch and feel the items to their heart's content to ensure they like it before they buy," explained Chopp. "Anything the shopper does not want to buy is returned to the warehouse by robotics. The key is providing shoppers with optionality and flexibility that results in e-commerce no longer standing as a competitor to brick and mortar, but each enabling the other." ■

Ron Derven is a contributing editor for Development magazine.

Port Covington: Building for Baltimore's

An artist's rendering shows the first phase of the Port Covington development in Baltimore. It's one of the largest urban revitalization projects currently ongoing in the U.S.

Future

A new waterfront development seeks to honor the city's heritage while spurring innovation.

By Danielle Bennings, Weller Development

Urban development has the potential to change the landscape of cities; when done with forethought, it can stimulate economic and cultural growth for surrounding communities as well. Along a 235-acre swath of land in South Baltimore, Weller Development Company has started doing just that with an approach that could provide a glimpse into the future of urban planning, design and community building.

As one of the largest urban revitalization projects underway in the U.S., Port Covington is approved, by right, to include up to 18 million square feet of new, mixed-use development. Its scope, which also includes 40 acres of parks and green space, will create economic opportunity for residents throughout the region.

The Port Covington development team, led by Weller Development Company in partnership with Plank Industries and Goldman Sachs Urban Investment Group (UIG), began work in June 2016. Since then, the team has overcome obstacles and achieved successes. In September 2016, Baltimore City authorized $660 million in tax increment financing (TIF) for public infrastructure improvements across the development site — critically important to the viability of the project. Later that year, the development team reached another milestone when it received approval of matter-of-right zoning, allowing for unlimited height and density, as well as an extensive list of allowable uses.

A 'Double Bottom-Line' Approach

Real estate development projects — especially of the scale and scope of Port Covington — present an opportunity to elevate the surrounding neighborhoods and, in this case, improve the lives of Baltimore City residents in general. By design, in the case of Port Covington, when

The Rye Street Market at Baltimore's Port Covington development is shown in this artist's rendering.

the project does well, so does the community — directly and proportionally. To accomplish this, the developers of Port Covington entered into a citywide Community Benefits Agreement and Memorandum of Understanding, including more than $100 million in commitments, making it the largest citywide benefits package negotiated in Baltimore's history.

Among other items, the $100 million commitment includes $39 million in direct benefits to the six communities surrounding Port Covington; $55 million in other direct citywide benefits including workforce development initiatives, education programs, college scholarships, recreation facilities and youth summer jobs; and $6.5 million in incremental costs for prevailing wages. Approximately $20 million of these benefits are projected to be paid out in the first five years following TIF authorization, and several million will be paid immediately following authorization and long before any profits are realized.

The Port Covington Impact Team, which is comprised of full-time employees who hold a variety of responsibilities across the community, ensures that the transformational nature of the Port Covington development reaches far beyond its physical boundaries. Their focus is to uplift the six communities surrounding the project and to uphold the commitments of the Community Benefits Agreement through workforce development and supplier diversity initiatives.

In September 2017, Port Covington gained national attention when the Goldman Sachs UIG pledged an equity investment of $233 million — its largest single investment to date. This helped propel the $5.5 billion project forward.

With its industrial heritage as a railroad terminal, the site has been vastly underutilized for decades. In recent years, tenants have included industrial users, plus The Baltimore Sun printing facility and corporate headquarters for Under Armour, the Baltimore Yacht Basin marina and Nick's Fish House restaurant. Through 2018, the Port Covington development team brought to life the neighborhood's first newly constructed properties, completing the Sagamore Spirit Distillery, City Garage, Rye Street Tavern and the seasonal outdoor venue South Point.

In May 2019, the team broke ground on approximately 3 million square feet of waterfront development, including apartments, offices, hospitality, retail, restaurants, and public parks and piers.

As the development moves ahead, a look into the design of existing buildings already completed reveals an approach to development that combines forward-looking innovation with Baltimore's history.

"When you look at how people are building today, facades are becoming identical across development sites on mid-rise developments, and then when you get to high-rise segments, it's all just big glass boxes that could be anywhere. **Baltimore is a city where, if you look at our skylines, our buildings are all differentiated and unique. That's the same design mentality that we brought to Port Covington."**

— Marc Weller, Weller Development Founding Partner

The Sagamore Spirit Distillery will face the courtyard of the planned Rye Street Market at Baltimore's Port Covington development.

Multimodal Connections

Port Covington's waterfront location is one of its greatest assets. Situated on the Middle Branch of the Patapsco River less than two miles south of Baltimore's Inner Harbor, the 235-acre site provides opportunity for more than 2.5 miles of restored waterfront. The neighborhood is highly accessible, with public transit onsite and light rail and regional MARC train access within a mile.

With direct ramps on and off Interstate 95, the planned enhancements under the I-95 Access Improvement Project, and several street connections to the neighborhoods to the north and south, it is one of the few sites in the mid-Atlantic region with this level of vehicular access. The development plan includes additions to make the site even more connected through multimodal improvements including bike, water taxi, extension of the free Charm City Circulator bus route, and a contemplated light rail spur.

Keeping it Green: Protecting the Environment

With this transformative development underway, it might be easy to forget that Port Covington was once an industrial site. As part of its effort to effectively redevelop the area while minimizing environmental impact, the Port Covington Development Team undertook numerous efforts to protect the natural ecosystem.

Many of the properties that comprise Port Covington are considered brownfields, so the development team worked closely with environmental experts to remediate the property responsibly. After enrolling in the Maryland Department of the Environment (MDE) Voluntary Cleanup Program (VCP), the developers began the remediation process in 2016. Generally, this entailed installation of an MDE-approved cap. There were two cap designs within the VCP — soft and hard. The soft option is comprised of filter fabric and minimum depths of clean soil covering, while the hard cap is generally asphalt or concrete.

Next, the team focused on preserving the 2.5 miles of waterfront to make the shoreline an appealing habitat for both future residents and wildlife by not using concrete and steel, which can have adverse effects on aquatic plants, small-bodied fish, shellfish and birds. Reducing runoff and stabilizing the shoreline using plantings created a natural waterfront experience in a growing urban neighborhood.

In 2018, the Port Covington Development Team was awarded the Parks & People Foundation's Sally Michel Award for its commitment to provide more than 40 acres of publicly accessible green space across the entirety of the Port Covington peninsula.

Port Covington is also working collaboratively with the Parks & People Foundation, South Baltimore Gateway Partnership, South Baltimore Seven (SB7) Communities and the City of Baltimore to implement an

Project Summary

- **Port Covington** is a 235-acre redevelopment project located on Baltimore City's waterfront.
- At completion, the project will include up to 18 million square feet of new, mixed-use development; 2.5 miles of restored waterfront; and 40 acres of parks and green space.
- Port Covington is adjacent to I-95, the East Coast's most traveled highway.

Project Location	Baltimore
Project Name	Port Covington
Type of Site	Urban
Development Type	Ground Up/New Development
Transportation Modes	Car, Transit, Pedestrian
Mix of Uses	Office, Retail/Restaurant, Recreational, Residential, Common Space
Parking	Structured, Surface
Site Dimensions	365 Total Acreage
Development Team	
Developer	Weller Development Company
Project Architect	Elkus Manfredi
General Contractor	Whiting Turner (roads and infrastructure)
Leasing Agents	JLL
Financial Partners	
Co-owner	Plank Industries, Goldman Sachs Urban Investment Group
Timeline	
Land Acquisition	2013 - 2015
Submitted Initial Plans	2016
Phase I Completed	2021-2022

11-mile waterfront improvement plan along the Middle Branch of the Patapsco River. Measures being examined include biologically engineered shoreline improvements, installation of a trash wheel, and the creation of a "waterfront district" with the goal of improving water quality, reinvigorating aquatic life, and improving the health and wellness of the surrounding communities.

Inspired by Baltimore's History

Two of the first buildings to open at Port Covington were the Sagamore Spirit Distillery and Rye Street Tavern. Both were designed with Baltimore's history as an industrial city firmly in mind.

"When you look at how people are building today, facades are becoming identical across development sites on mid-rise developments, and then when you get to high-rise segments, it's all just big glass boxes that could be anywhere," said Weller Development Founding Partner **Marc Weller.** "Baltimore is a city where, if you look at our skylines, our buildings are all differentiated and unique. That's the same design mentality that we brought to Port Covington."

Sagamore Spirit Distillery, which includes a 22,000-square-foot distillery, a 27,000-square-foot processing center and the 13,800-square-foot Rye Street Tavern restaurant, was constructed using materials meant to honor Baltimore's rich, diverse industrial heritage.

The properties, inspired by older buildings in downtown Baltimore, have exposed steel beams. Inside Rye Street Tavern, designers created an aesthetic grounded in Maryland's whiskey heritage. The private dining lofts mimic the stave-and-hoop construction found in American white oak barrels. Behind the restaurant's bar area, black wood is intended to look like the charred inside of whiskey barrels used to age rye whiskey. On the second floor, two pieces of the original Star-Spangled Banner — the flag that flew over Fort McHenry when the national anthem was written during the War of 1812 — are on display.

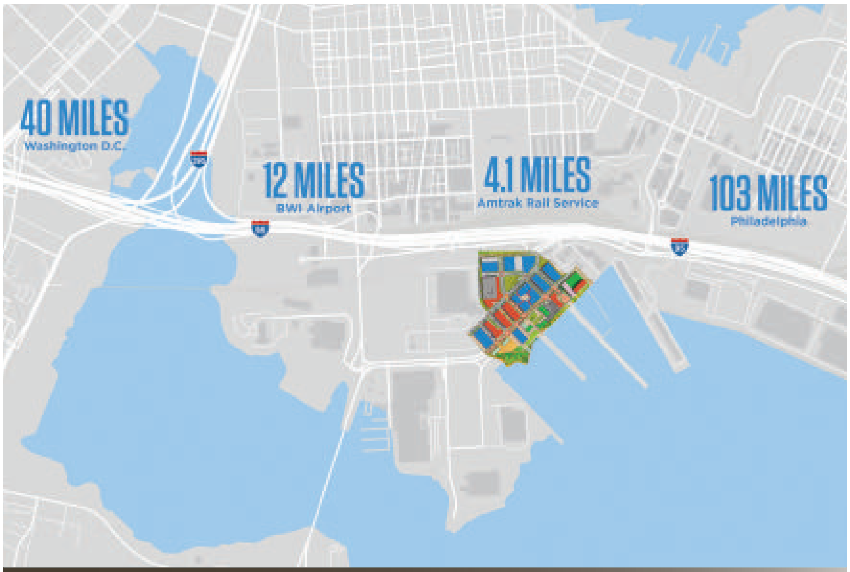
"Baltimore has a lot of character, so the buildings we're completing embody that through their architectural legibility," said Weller. "And it really speaks to the gritty nature of Baltimore's history that the local community is so proud of."

Mixed Uses and Densities

The Port Covington Development Team has more than eight properties that are slated to be completed during the next three years. Rye Street Market is scheduled to deliver in fall 2021 and will feature four buildings totaling 275,000 square feet. It will have retail inspired by Baltimore's legacy of neighborhood markets on the ground floor, plus 185,000 square feet of loft-style offices and a 15,000-square-foot rooftop event space overlooking the water.

Following shortly thereafter are mar-

Real estate development projects — especially of the scale and scope of Port Covington — present an opportunity to elevate the surrounding neighborhoods and, in this case, **improve the lives of Baltimore City residents in general.**



The Port Covington development will be located in South Baltimore on the Middle Branch of the Patapsco River less than two miles south of Baltimore's Inner Harbor.

ket-rate and affordable apartments, hospitality, ground-floor shops and restaurants, and public spaces throughout the neighborhood and along the waterfront. The development team will program public spaces in Port Covington with free events throughout the year.

"We didn't want to create the densest development plan that we possibly could," said Weller. "We have a lot of acreage, and therefore we don't need to maximize every individual parcel of land."

The Port Covington master plan was a deliberate move to establish low-scale development by the water, and then gradually increase the height and density of buildings toward the north side of the development near I-95.

"Experiencing that environment is going to feel really good as a patron and as a pedestrian," said Weller. "We feel that's something that sets us apart, and it's something that urban planners really appreciate. Creating a sense of scale from a naturalized environment is not something that always happens along waterfronts, and it can create a feeling that you're cut off from the rest of the land by these massive, dense buildings."

Building for the Future

The Port Covington team aims to create a community that can become a hub for innovation and connectivity.

The office leasing team is targeting cybersecurity and life sciences tenants, capitalizing on Maryland's highly specialized workforce. Maryland employs three times as many cyber engineers as the rest of the nation combined, and it also has the largest population of employed cyber-related professionals. The state is also home to educational institutions that graduate data scientists and engineers at high rates, creating a deep talent pool of cyber professionals.

Some large office tenants and several small businesses are located inside City Garage in space totaling 393,956 square feet. An additional 470,000 square feet of office space is planned in the current development phase.

There are plans to implement state-of-the-art technologies including a secure, redundant, private fiber optic loop to provide fully encrypted gigabit-speed internet connectivity and site-wide public Wi-Fi service, which has been a big selling point for prospective tenants. Three firms — DataTribe, AllegisCyber, and Evergreen Advisors — recently announced plans to move to Rye Street Market, citing the neighborhood's fiber network and location as deciding factors. Port Covington aims to lure new businesses to Baltimore City to add jobs and boost the local economy.

While a portion of Port Covington is an Opportunity Zone, the designation has not affected development plans. However, it has brought attention to the project from investors.

"It is our intent to be on the leading edge of best practices of every area of development," Weller said. "We want to create the city of the future. In order to do that, you have to anticipate the future — you can't just plan on what's accepted knowledge today." ■

Danielle Bennings is the director of strategic communications for Weller Development.

Finding Solutions to the Workforce Skills Gap in Construction and Logistics

Developers are partnering with educators and local communities to launch new training and recruitment programs.

By Shawn Moura, Ph.D., NAIOP

A new report published by the NAIOP Research Foundation titled "Addressing the Workforce Skills Gap in Construction and CRE-related Trades" explores innovative partnerships among developers, educational institutions and local communities to improve training and recruitment in the construction and logistics trades.

Researcher **Barry Stern**, Ph.D., a consultant specializing in workforce development and industry-education partnerships and a former deputy assistant secretary at the U.S. Department of Education, reviewed recent literature and interviewed industry experts, employers, educators and community leaders to examine a range of different workforce development strategies.

Respondents agreed that a shortage of qualified workers poses significant challenges for the construction and logistics industries. Recent trends suggest that employers cannot rely on the status quo to produce enough qualified workers to meet future demand. However, the report reveals that multisector partnerships can go a long way toward expanding the pipeline of prospective workers who are qualified to begin a career in construction or logistics.

Excerpts from the Executive Summary

Recent economic growth has been a boon to developers, owners and investors across the commercial real estate industry, but has also made it more difficult for contractors and warehouse operators to recruit and retain qualified workers. While low unemployment has made recruitment and retention more challenging for employers in most industries, recent trends have contributed to more pronounced workforce shortages in construction and logistics than in other sectors. The construction industry has struggled to recover the workers it lost during the 2008-9 recession. This can partly be explained by declining secondary school resources devoted to vocational education and relatively limited millennial interest in construction trades. The logistics industry faces a similarly limited pipeline for new workers while demand for employees in warehouse and distribution centers is growing.

This report draws from interviews and secondary sources to explore five partnerships for workforce development in the construction and logistics industries. An analysis of these partnerships reveals several important findings that merit the attention of warehouse owners and operators as well as developers across the real estate industry:

Contractors will increasingly need to adopt new technologies to improve worker productivity. Adoption of labor-saving technologies like 3-D printing and robotics can help substitute for scarce labor. Other technologies, like augmented and virtual reality and wearables, can improve the site design process and boost worker safety. In addition to mitigating the workforce shortage, a commitment to increasing worker productivity through technology adoption will help contractors grow their businesses more rapidly.

The most successful workforce development programs rely on multisector collaboration. When employers, educational providers and community leaders work together to promote workforce development, they are able to leverage their unique capabilities and resources to maximize program outcomes. While employers can often develop effective in-house training programs, a partnership with an educational institution

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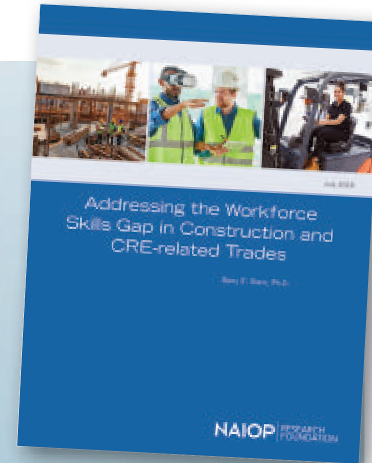

Get the Report

To view and download "Addressing the Workforce Skills Gap in Construction and CRE-related Trades," visit www.naiop.org/Research/Our-Research

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The construction industry has struggled to recover the workers it lost during the 2008-9 recession. This can partly be explained by declining secondary school resources devoted to vocational education and relatively limited millennial interest in construction trades. The logistics industry faces a similarly limited pipeline for new workers while demand for employees in warehouse and distribution centers is growing.

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and local community leaders can allow for more effective and comprehensive training, unique insights into the local talent pool and better access to prospective workers.

It is important to align workforce development programs with local trends. Worker training and recruitment programs should be designed to prepare prospective workers for jobs that are currently in demand in their local area. Program leaders should also tailor recruitment efforts to the local pool of prospective workers. For example, a new program in a rural area may need to demonstrate that prospective workers can find long-term employment in the area.

Demonstrating that a job can be part of a long-term career is important to recruitment and retention in the logistics and construction industries. This is particularly true for recruiting and retaining workers in entry-level positions as these workers are less likely to be familiar with industry career tracks. When prospective or current employees are aware of future opportunities for development and advancement, they are less likely to treat a job as a short-term arrangement and are more likely to invest in their own skills.

The construction and logistics industries need to invest in training and recruiting high school students and recent graduates. Declining public school investment in vocational education has contributed to lower awareness of careers in construction and logistics. This has exacerbated a shortage of entry-level workers. To reverse this trend, employers in construction and logistics will need to proactively reach out to high school students to expose them to opportunities in each industry and offer them relevant vocational training. ■

Shawn Moura, Ph.D., is the director of research for NAIOP.


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Property Tax Battle Targets CRE

The split roll ballot initiative in California could lead to much higher assessments — and it could also happen in other parts of the U.S.

By Rich Tucker

State and local governments argue they need additional funding for programs and services. That is forcing them to turn to other sources of revenue, such as commercial real estate taxes.

Consider California, where voters will decide next year on whether to lift the protections provided under Proposition 13 and increase the property tax burden on commercial real estate to generate more revenue for education.

Robert Gutierrez, president and CEO of the California Taxpayers Association, commented in a recent NAIOP webinar that before Proposition 13 passed in 1978, massive, frequent and unpredictable jumps in property tax bills were not uncommon. Many owners were forced to sell their homes or businesses to pay excessive property taxes.

The 'Split Roll'

Proposition 13 limits the growth of tax rates on both residential and commercial property to no more than 1% of the assessed value per year. It also caps annual increases in assessed value at 2% per year. The fair market assessment is established at the time of purchase and can be reassessed only when the property sells or is substantially improved.

After Proposition 13, people could afford to remain in their homes, and businesses could invest in property with confidence that they wouldn't be priced out by tax increases. It's helped contribute to California's astonishing growth during the past four decades.

That's why NAIOP is working to oppose the California Tax on Commercial and Industrial Properties for Education and Local Government Funding Initiative, in which property taxes would be levied on commercial real estate at a higher rate than other types of properties. This "split roll" would lift the cap on assessments and require the reassessment of commercial and industrial properties at least every three years. According to an October 2018 article in the San Francisco Chronicle, imposing the split roll could lead to approximately $11 billion per year in higher property taxes for commercial real estate.

Commercial real estate already pays a higher share of property tax than it did before Proposition 13. Gutierrez reports that business property accounted for 58% of real property tax revenues in 1978 and accounts for 63% now.

Far-Reaching Effects

Rex Hime, president and CEO of the California Business Properties Association, spoke about split roll at NAIOP's I.CON West event earlier this year in Long Beach, California.

"Raising property taxes on businesses means they will pass on the costs to every Californian by increasing prices

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According to an October 2018 article in the San Francisco Chronicle, imposing the split roll could lead to approximately $11 billion per year in higher property taxes for commercial real estate.

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on just about everything we buy and use, from diapers and day care to gasoline and groceries," he said. Those price increases, of course, would also be seen across the country. That's one reason split roll will be an important topic at NAIOP's CRE.Converge in Los Angeles this October.

Increasing the property tax burden on commercial real estate would have consequences that are detrimental to economic growth and job creation. **Michael Lucci**, vice president of state projects at the Tax Foundation, said in the NAIOP webinar that higher property taxes lead to less business, because companies can move from higher-taxed jurisdictions to lower-taxed ones. He stated that a 10% increase in property taxes has been associated with a 1% to 2% decrease in investment in particular states. He also noted that businesses usually end up paying far more in property taxes to local governments than they receive back in services.

Lucci also noted that local governments rely on property tax because it's efficient — the assets are impossible to move and difficult to hide.

"State and local initiatives are increasingly turning to commercial real estate as a revenue source. The split roll initiative targets one industry, and one industry only: commercial real estate," **James Camp**, president of NAIOP California, wrote in a post for NAIOP's Market Share blog in May. "Any NAIOP member who invests in commercial real estate or receives professional services from a California business would be impacted."

As Goes California …

Property taxes continue to be the main source of funding for local governments, and NAIOP members need to be aware that it's not just the Golden State, often a bellwether for social and political trends, that could be affected. If California alters Proposition 13, it could cascade across the country, with other states following suit and targeting commercial real estate to increase tax revenue. ■

Rich Tucker is NAIOP's director for public policy communications.

Chapter Profile: NAIOP Greater Toronto

Canada's largest city has a strong economy that's attracting real estate investors from all over the world.

By Trey Barrineau

With more than 1,200 members, NAIOP Greater Toronto is one of the association's biggest chapters. In early 2019, it was named NAIOP's Chapter of the Year in the Large Chapter category. NAIOP Greater Toronto President **Sam Barbieri**, senior vice president of asset management at LaSalle Investment Management, answered a few questions about what is happening in commercial real estate in the Greater Toronto Area (GTA).

Development: *How are the market conditions for member companies in your chapter?*

Sam Barbieri: Toronto is experiencing some of the strongest market conditions in recent history. Bolstered by a diversified economy, a stable political climate, a diverse, multilingual and highly educated workforce, Toronto has attracted significant attention from global companies and foreign investors alike. Toronto's burgeoning economy has positioned the city as the tightest office market among all major cities across North America. In the fourth quarter of 2018, Toronto reached its lowest office vacancy on record (1.8%) and it currently remains at an impressive 2.1%. Major global technology players Netflix, Shopify, Index Exchange, Spaces, Microsoft and WPP have all completed major lease deals in Toronto recently, accounting for more than 1.4 million square feet in newly leased space. This strong momentum is expected to continue as Toronto asserts its reputation as a global technology hub.

Getty Images

The office vacancy rate in Toronto stands at just 2.1%, according to Sam Barbieri, president of NAIOP Greater Toronto.

"Toronto is experiencing some of the strongest market conditions in recent history. Bolstered by a diversified economy, a stable political climate, a diverse, multilingual and highly educated workforce, Toronto has attracted significant attention from global companies and foreign investors alike."

— Sam Barbieri, president, NAIOP Greater Toronto

Development: *What are the biggest challenges in either the business or regulatory climate in Ontario?*

Barbieri: Inequitable taxation policies at the municipal and provincial levels of government. As governments struggle with their budgets, it is politically easier to raise taxes on businesses than on residents and individual taxpayers. Uncompetitive commercial-to-residential property tax ratios, business-related tax rates earmarked for education that favor specific regions of the province, and increased assessment pressures in urban centers are significant policy challenges for NAIOP members.

Development: *Can you discuss the potential impact of Bill 108, which was recently passed by the Legislative Assembly of Ontario?*

Barbieri: Bill 108 introduces a number of significant reforms that should help residential and commercial developers meet the needs of a growing Ontario

NAIOP Greater Toronto At a Glance

Year founded: 1977

Number of members: 1,222

Number of companies represented: 295

Website: www.torontonaiop.org

while respecting the concerns of the surrounding community. With the GTA's population growing dramatically, the act's changes to the planning and appeal process will help address the pressure being placed on housing and office space. The reforms include new time limits for municipal decisions, changes to how development charges are assessed, and simplifying planning rules and community benefit calculations. While the legislation has been welcomed by NAIOP members, the subsequent implementation of its regulations will be something that NAIOP is closely monitoring.

Development: *What are some of your chapter's other legislative or regulatory priorities? For example, Natural Resources Canada's Pan-Canadian Framework on Clean Growth and Climate Change seeks a 30% reduction in energy use through building efficiency. How is the chapter responding to that?*

Barbieri: The Pan-Canadian Framework on Clean Growth set (but did not mandate) ambitious energy reduction targets to help guide Canada toward a greener future. A key recommendation was to develop a model "net-zero energy" code by 2030, meaning that newly constructed buildings in Canada would be essentially self-sufficient on their own renewable energy supplies. We have seen this sustainability push in the 2018 revision to the Toronto Green Standard (TGS V3) and various other bylaws from GTA municipalities. Many of these outline a set of minimum sustainability performance measures

> **"NAIOP Toronto is committed to sustainability, and to helping our members navigate the changing regulatory environment by providing education and opportunities to share best practices."**
>
> *— Sam Barbieri, president, NAIOP Greater Toronto*

that must be met by all new developments and provide incentives for achieving superior energy and resource performance. Our chapter expects increasingly stringent sustainability requirements from all municipalities and the province going forward. NAIOP Toronto is committed to sustainability, and to helping our members navigate the changing regulatory environment by providing education and opportunities to share best practices.

Development: *What are some notable projects going on right now in the GTA?*

Barbieri: While there are any number of remarkable projects in various stages of development underway in the GTA, it has been especially exciting to see the explosion of new office proposals both as it relates to more traditional space in the downtown core and the planning for new employment centers such as the East Harbour site by First Gulf and Union Station West at Toronto Pearson International Airport. Other notable activity in this space includes the increasing use of timber construction (e.g. 80 Atlantic designed by Quadrangle) and ongoing discussions with Sidewalk Labs, the urban development subsidiary of Google's parent company Alphabet, to build a "smart city" on 12 acres along Toronto's waterfront.

Development: *You mentioned your chapter's subcommittees and the work they do. Would you like to elaborate on that?*

Barbieri: The NAIOP Greater Toronto committees are formed of volunteers from the industry who are dedicated to advancing the association and commercial real estate in the GTA overall. Our committees are centered on either key functions (e.g. Programs/Suburban Programs, Membership, Government Relations), specific member groups (e.g. Developing Leaders) or platform events (e.g. Real Estate Excellence [REX] Awards, Annual Ski Day). The committees play an integral role in ensuring that the chapter's programming and benefits are aligned with the members it serves. ■

Trey Barrineau is the managing editor of Development magazine.

Six Students Receive NAIOP Diversity Scholarships

For the fourth year, the association has awarded scholarships to graduate and undergraduate commercial real estate students from a wide range of backgrounds.

By Hannah Buckles

NAIOP is pleased to announce the six recipients of the 2019 NAIOP Diversity Student Scholarships.

The scholarship program was established in 2016 to support graduate and undergraduate students pursuing degrees at NAIOP university-member schools that will lead to careers in the commercial real estate industry. Preference is given to students from backgrounds that have not had significant representation in the industry.

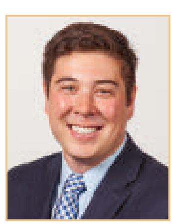
In addition to a $5,000 scholarship for graduate students and a $2,500 scholarship for undergraduate students, beneficiaries also received complimentary registration to NAIOP's CRE. Converge 2019 conference, which will be held October 14-16 in Los Angeles.

A panel of industry experts reviewed dozens of applications before selecting these six candidates. All winners are NAIOP student members involved in commercial real estate through NAIOP events, club memberships, and volunteer or work experience.

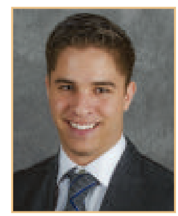
NAIOP champions diversity through strategic initiatives aimed at incorporating professionals from traditionally under-represented groups — including women, African Americans, Asian Americans and Hispanics — throughout the industry.

Graduate Students

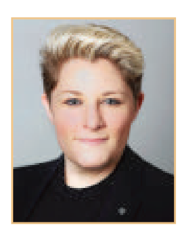
Robert Conley is a former chief of police for Clark Atlanta University who recently earned a master's degree in real estate development from Auburn University. While working full-time as the owner and president of a security and investigations firm, Conley immersed himself in the commercial real estate industry and earned a Georgia real estate broker license. He has brokered multiple sales of retail space and developed a medical office building. He intends to expand his newest company, the Conley Realty Group, into mixed-use development projects. Conley is a community volunteer for various causes, including medical missions and homelessness, and he participates in CRE events with NAIOP, the Atlanta Commercial Board of Realtors and other groups.



James Kilpatrick is a spring 2019 graduate of the David Eccles School of Business at the University of Utah. Kilpatrick earned a master's in real estate development while working as the business development manager at Cameron Construction. He previously worked in marketing at Bowen Studios and BNA Consulting Engineers before following the example of his grandfather — a Chinese immigrant who worked and saved to develop apartments in Salt Lake City — to pursue a CRE career. Kilpatrick plans to pursue brokerage, business development and eventually, development of industrial, office and multifamily properties. He plans to use his work experience, education and strong community relations background, including volunteering as a basketball coach with Jr. Jazz, the official youth basketball league of the NBA's Utah Jazz, to help him make the next steps in his CRE career.



Gabriel Lazcano left Tampa, Florida, where he worked with Phillips Development & Realty and Berkshire Hathaway Home Services Florida Properties Group, to attend Clemson University in South Carolina for a master's in real estate development. Before starting the graduate degree, Lazcano had already earned a Florida real estate license and become a LEED Green Associate. He aims to put his degree and experience to work developing affordable housing for low-income communities and revitalizing inner cities through the redevelopment of abandoned buildings. Lazcano is an avid participant in Habitat for Humanity, and he eventually wants to open his own non-profit to develop health care facilities for underserved communities.



Melissa J. Meagher, a graduate student at Portland State University, is expecting to receive her master's in real estate development in late 2019. Meagher has held various positions within CEG Multifamily, a real estate investment firm, including operations, marketing and asset management. She also founded and is the head of Real Estate Emerging Leaders, an interdisciplinary organization

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at Portland State for individuals in all CRE-related fields focused on inclusivity, innovation and resilience. Following graduation, Meagher intends to create a development firm emphasizing equitable, sustainable, people-centric designs. She hopes that with an increase in new perspectives emerging in CRE, the field can expand in value culturally, ecologically and economically.

Undergraduate Students

Nathan Huynh is a double major in real estate and finance at University of San Diego (USD). Huynh has held many internships, including a research position with Cushman & Wakefield: Land Advisory Group, Agribusiness Solutions Team. He plans to build on his internship experience with the Land Advisory Group after graduation and enter a career in land brokerage. He says he would like to use CRE to make a positive impact on his community. Huynh is actively involved in USD's Real Estate Society and the local Urban Land Institute (ULI) and NAIOP chapters. In his spare time, he enjoys volunteering as a dance instructor.

Linh My Tran is a student in real estate and development/urban studies and planning at the University of California, San Diego (UCSD). While in school, she was also an instructor in accounting for the San Diego Community College District. Tran is a believer in the power of networking, and she has sought opportunities to connect with mentors and learn from a variety of CRE professionals. Following graduation, she wants to use her development and urban studies knowledge to create public-private partnerships to address issues regarding affordable housing and create opportunities for upward mobility for members of those communities.

NAIOP champions diversity through strategic initiatives aimed at incorporating professionals from traditionally under-represented groups — including women, African Americans, Asian Americans and Hispanics — throughout the industry. ■

Hannah Buckles is the member services coordinator for NAIOP.

NAIOP represents commercial real estate developers, owners and investors of office, industrial, retail and mixed-use properties. It provides strong advocacy, education and business opportunities, and connects its members through a powerful North American network. **For more information, visit naiop.org.**

Programs and Services

NAIOP Membership
For membership, information or changes to your membership record, contact membership@naiop.org.

Chapter Network
NAIOP chapters provide local and regional education, networking and legislative affairs.

naiop.org
NAIOP's central resource for industry and association news, programs, advocacy efforts and connections.

National Forums
Special-interest groups that comprise senior-level NAIOP members in a non-competitive environment for exclusive networking and experience exchange.

Center for Education
The principal learning resource for the commercial real estate development professional. Offerings include online, on-demand and live courses, plus two certificate programs.

Development Magazine
Current and past issues are available online. Readers can also access an interactive digital version and download a mobile app for Development magazine on-the-go.

NAIOP Research Foundation
Research projects and initiatives to improve the understanding of the built environment and the challenges that lie ahead for individuals and organizations engaged in real estate development, investment and operations.

Career Center
Online resource designed to help employers and job seekers find new commercial real estate job opportunities.

Business Development Industry Partners
Enhance your company's presence as an industry partner by sponsoring, exhibiting or advertising.

Government Affairs
Strong, effective support and guidance to create, protect and enhance development and property values. NAIOP's government affairs team is active on Capitol Hill, in state legislatures and in Canadian provinces.

Market Share Blog
Insights on trends, CRE-related topics and professional development tips. Subscribe to weekly posts, interviews and news at blog.naiop.org.

Mobile Apps
Take NAIOP wherever you go. Access the membership directory, find news, chapters and events, and connect on social media. ■

People + Companies INDEX

For information regarding advertising opportunities, contact Christopher Ware at 800-666-6780.

* *This is a listing of NAIOP members who are mentioned in this issue, as well as paid advertisers, which appear in bold.*

2019 Industry Partners

NAIOP wishes to thank our Industry Partners, whose financial support helps us to provide quality programs and communications to you throughout the year. We encourage you as a NAIOP member to include these partners, wherever possible, when you are considering services and products for your business.

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Finding Meaningful Ways to Give Back

As I sat down in July to draft my third Development magazine column, which typically covers association news or recognizes the success of one of our conferences, my mind was distracted by a tragic accident that occurred on June 30 in my home market of Dallas. A small private aircraft crashed shortly after taking off, killing all 10 people aboard. Two of those killed, **Steve** and **Gina Thelen**, were local friends in the real estate business. Steve was managing director at JLL and was a successful, well-liked and respected tenant rep broker in our market.


Greg Fuller

I knew Steve and worked with him often, as he represented many tenants in Granite Properties’ office buildings and joined us for numerous broker golf outings. My family and I also had the good fortune of being neighbors with Steve’s family for a time. Personally, the shock of this tragedy is surreal, perhaps because Steve and I are the same age, shared both a business relationship and a friendship, and have similar family lives. Regardless, it’s incredibly unfortunate and has caused me to reflect on our many relationships in the business and what’s truly important — our families, friends and living a meaningful life while we have the opportunity.

As I have traveled around the chapter network this year, a common theme has surfaced. During nearly every visit, I’ve made it a priority to talk with Developing Leaders (DLs) in the chapter, our members who are 35 years of age or less. Because they’re newer to NAIOP, they can be unaware of what NAIOP offers outside their local chapter, and I’ve enjoyed sharing conversations about our research, courses and events that can help build their careers.

The DLs I’ve met are ambitious and enthusiastic, and one message is clear: They are looking to NAIOP to prepare them for long-term CRE careers, and they want opportunities to hear from the generations who have come before them. It might be hard to admit, but my peers today are labeled as “veterans” or “seasoned” for a reason — we’ve experienced enough cycles of prosperity and perseverance over the years to have earned those characterizations.

Sharing our wisdom and war stories is a meaningful way to help shape the industry for decades to come. Blending this knowledge with their optimism is powerful. It helps our industry create effective spaces that support economic growth and enhance communities. Isn’t that a legacy we’d all like to leave behind?

As an organization, we find ourselves in this fortunate position, as so many groups are struggling to engage younger generations. DLs are the fastest-growing segment of NAIOP membership, and from our legislative work, both locally and federally, to education courses and research that help these members navigate their careers and businesses, NAIOP is uniquely positioned to support their careers from the first day on the job through retirement.

I encourage each of you to initiate conversations and build relationships with the DLs in your chapter. If your chapter doesn’t have a mentorship program, which is an excellent platform for this type of relationship-building, I’d encourage you to start one. NAIOP makes it easy for chapters by providing an online program that supports your efforts. Contact our membership team to learn more.

This summer, we are surveying our DLs on the issues that matter to them: What do they see as the biggest industry threats? Where is the next wave of opportunity? What is their outlook for the future of CRE? We also want to know about their NAIOP experience, asking how the association can better support them now and prepare them for the future. This effort is being led by **Jason Ting** of Ting Realty in Tulsa, Oklahoma. Jason is an ex-officio member of the NAIOP executive committee, representing the Developing Leaders and sharing their perspectives with our leadership. I look forward to seeing the feedback from our DLs and sharing that with you later this year.

Three-quarters of my year as chairman has nearly passed, and I hope that my contributions thus far have had a positive impact on our association. Certainly these conversations with DLs have prompted me to think of ways to connect with rising leaders in our industry and association. Every so often, and sometimes in tragic ways, we are reminded that life is short. So let’s be good to one another, work hard to give back to our industry, and help the next generation of leaders in every way we can. ■

By **Gregory P. Fuller**, President and Chief Operating Officer, Granite Properties, Inc.
2019 NAIOP Chairman