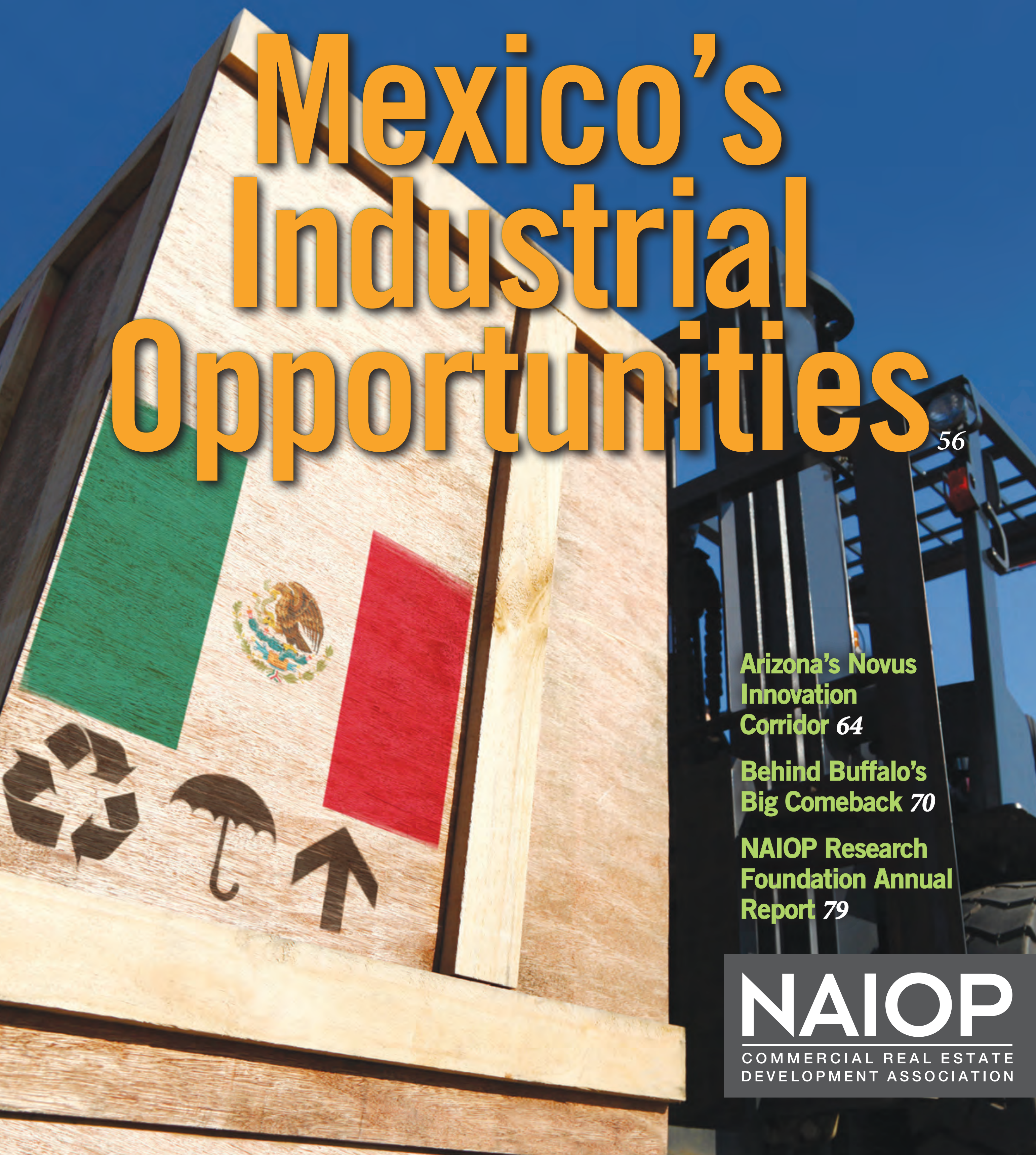
Commercial Real Estate Development SPRING 2023

# Development

IDEAS | ISSUES | TRENDS

# Mexico's Industrial Opportunities *56*





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# Contents

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## 2022 INDUSTRIAL INVESTMENT SALE HIGHLIGHTS

**AMAZON-LEASED INDUSTRIAL PORTFOLIO**
*Utah and California*
1,160,000 SF
Sold on behalf of:
A Family Office

**RSF PORTFOLIO**
*Multicity, MA*
295,602 SF
Sold on behalf of:
Seyon & Wheelock Street

**1710 AUTOMATION**
*San Jose, CA*
196,647 SF
Sold on behalf of:
EQT

**INTERCHANGE INDUSTRIAL CENTER**
*North Las Vegas, NV*
683,431 SF
Sold on behalf of:
CapRock Partners & Carlyle

**AHF PRODUCTS PORTFOLIO SALE LEASEBACK**
*Multi-state*
969,030 SF
Sold on behalf of:
AHF Products LLC

**KEARNY MESA LOGISTICS CENTER**
*San Diego, CA*
299,381 SF
Sold on behalf of:
Crow Holdings & Lincoln Property Company

**44 LOWELL JUNCTION ROAD**
*Andover, MA*
135,077 SF
Sold on behalf of:
Griffith Properties

**300 TOLAND**
*San Francisco, CA*
22,674 SF
Sold on behalf of:
HNWI

**3900 INDIAN AVENUE**
*Perris, CA*
579,708 SF
Sold on behalf of:
Clarion Partners

**11404 COMMANDO ROAD**
*Everett, WA*
246,640 SF
Sold on behalf of:
Capstone

**100 RUSTCRAFT**
*Dedham, MA*
422,117 SF
Sold on behalf of:
RJ Kelly & Independencia Asset Management

**PACIFIC GATEWAY INDUSTRIAL PARK**
*Kent, WA*
823,600 SF

**KLOSTERMAN BAKERY PORTFOLIO SALE LEASEBACK**
*Multi-state*
526,492 SF
Sold on behalf of:
Klosterman Bakery Company

**BRISTOL LOGISTICS CENTER**
*Bristol, CT*
1,138,144 SF
Sold on behalf of:
BLDG Management

**NORFLEET DISTRIBUTION CENTER**
*Kansas City, MO*
702,000 SF
Sold on behalf of:
LaSalle Investment Management

**2620 DECKER LAKE**
*Salt Lake City, UT*
423,881 SF
Sold on behalf of:
Dakota Pacific

# Contents

## Development® Spring 2023


Industrial investment in Mexico could be poised to take off as more U.S. companies take advantage of near-shoring opportunities in the aftermath of the COVID-19 pandemic.

## COLUMNS



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# A Note From the Editor

## CRE Remains a Crucial Part of the Economy

Although the industry will undoubtedly face challenges this year, particularly in the office sector, commercial real estate will continue to be a major economic engine in North American economies. Last year, in the U.S. alone, the development and operations of commercial buildings contributed $2.3 trillion to U.S. GDP, generated $831.8 billion in personal earnings and supported 15.1 million jobs.


Jennifer LeFurgy

Real estate development doesn't occur in isolation — we can all learn and prosper from each other's experiences. To this end, Development will be offering more Mexican and Canadian content. In this issue, **Kat Grimsley**, the NAIOP/Thomas J. Bisacquino Distinguished Fellow, and professor **Héctor Salazar Sánchez** write on the current state of Mexican industrial development. Additionally, MG2 describes its experience designing a Costco to fit seamlessly underneath a public park in a neighborhood of Mexico City.

Stay connected,
**Jennifer LeFurgy, Ph.D.**
Editor-in-Chief

### Future NAIOP Events

- **National Forums Symposium**, May 17-19, Boston
- **I.CON East 2023**, June 7-8, Jersey City, New Jersey
- **CRE.Converge**, October 18-20, Seattle

For the most current information on upcoming NAIOP events, both virtual and in-person, visit naiop.org/Events-and-Sponsorship


### Most Popular From Winter 2022/2023

1. **"Aging Office Buildings Are Having a Midlife Crisis"** (naiop.org/23aging office), page 52
2. **"How E-Commerce Affects Urban Industrial Lands and Transportation Systems"** (naiop.org/23ecommerce), page 60
3. **"What Lies Ahead for Commercial Real Estate?"** (naiop.org/23liesahead), page 74
4. **"What the Widening Talent Gap Means for Today's Business Leaders"** (naiop.org/23talent), page 12
5. **"From Broker to Developer: The Challenges (and Rewards) of a Major Career Transition"** (naiop.org/23challenges), page 34

## In Brief

Notable facts and figures on the state of the commercial real estate industry, culled from media reports and other sources.

### INDUSTRY OUTLOOK

**65% The percentage of commercial real estate leaders who are optimistic about the industry in 2023**, according to JPMorgan Chase & Co's 2023 Business Leaders Outlook survey. Additionally, "almost half of real estate leaders are optimistic about the global (44%) and national economy (46%)," according to the survey. It's not all roses, though — 55% expect a recession in 2023, and 67% of respondents said rising interest rates and the growing cost of capital are increasing their business costs.

**$175 Billion The amount of real estate credit that is already distressed**, according to data compiled by Bloomberg for an article that was published in January. "As the toll from higher interest rates and the end of easy money mounts, many real estate markets are almost frozen with some lenders telling borrowers to sell assets or risk foreclosure amid demands for additional capital from landlords," the article notes.

**$20 Billion The amount of money that institutional investors asked to withdraw from property funds in 2022**, according to IDR Investment Management. "It's like the nightclub where everybody lines up to get in and then lines up to leave when it closes," **John Murray**, head of global private commercial real estate at Pacific Investment Management Co., told Bloomberg.

### OFFICE

**19.5% The office vacancy rate in Washington, D.C., in the fourth quarter of 2022**, according to Cushman & Wakefield research. That's a record number, and it reflects "the federal government's overall unwillingness to return en masse (to the office)," **Nathan Edwards**, senior research director at Cushman & Wakefield, told the Wall Street Journal in January.

**218 The number of office buildings in the U.S. that were converted to other uses between 2016 and 2021**, according to CBRE. About 40% of the conversions were to multifamily, which created 13,420 apartments. In 2022, there were 42 office conversions completed, according to a report in the New York Times.

**9.5 Million The number of square feet of office space in Manhattan's "commodity buildings" (Class B and C) that was three-quarters rented in 2022**, according to data from CBRE. A December 2022 analysis by Commercial Observer notes that "the market is on the verge of breaking the 10.2 million square-foot post-pandemic high set last year and challenging the 16.9 million square feet rented in 2019," which was one of the best years ever in Manhattan, according to **Michael Slattery**, a research manager with CBRE.

## INDUSTRIAL

**415 Million The amount of industrial square footage delivered in 2022**, according to research from Matthews Real Estate Investment Services. "The big question moving into 2023 is has industrial hit its peak? The short answer is probably not," **Alexander Harrold**, Matthews' senior vice president and senior director wrote in the firm's "End of Year 2022 Industrial Market Report." "The looming recession and difficult lending environment will impact the sector, but the last two years of record growth and performance will prop up industrial during challenging times."

## LOGISTICS

**26% The decline in the number of TEUs (20-foot equivalent units) handled at the ports of Los Angeles and Long Beach from November 2021 to November 2022.** According to a December 2022 report from the Wall Street Journal, "that is the lowest level since March 2020, when the COVID-19 pandemic stifled global trade." Imports at the ports have been below pre-pandemic levels since September, according to the newspaper. ■

## CORRECTIONS

In New & Noteworthy in the Winter 2022-23 issue, the name of the developer of the Seaport 16 Trade Center on page 13, Rooker, was misspelled. Also, the Peoria Logistics Park on page 17 is in Arizona, not Illinois. Additionally, the name of Watershed Development Group's project on page 19, Sixth and Chicon, was misspelled. ■

# Supply Chains Improve, But Labor Lags

## Construction firms continue to struggle to find workers.

By Ken Simonson, AGC

The supply chain for some construction materials improved markedly during 2022. But there are still several bottlenecks that may throw off the completion date for many projects.

The biggest supply challenge may be labor, not materials. Construction firms continue to report difficulty filling positions and finding subcontractors willing to bid on projects because they already have more work than workers to execute them.

In its 2023 Construction Hiring and Business Outlook survey, conducted with Sage, the Associated General Contractors of America found that 80% of the more than 1,000 respondents reported having a hard time filling some or all positions, compared to only 8% that reported no difficulty. (The remainder had no openings.) The majority — 58% — expect it will be as hard or harder to fill positions over the coming 12 months.

These findings are consistent with employment data from the Bureau of Labor Statistics (BLS). On January 4, it reported that construction industry job openings at the end of November were the highest total for that month in the 22-year history of the series. The 344,000 openings at the end of November 2022 exceeded the 234,000 employees hired during the entire month by nearly 50%, implying that contractors wanted to hire 2.5 times as many workers as they were able to find. (See chart below.) This hiring gap actually worsened in late 2022, even as homebuilding turned sharply lower and other sectors of the economy slowed their hiring.

There has been widespread improvement in the supply chain for many

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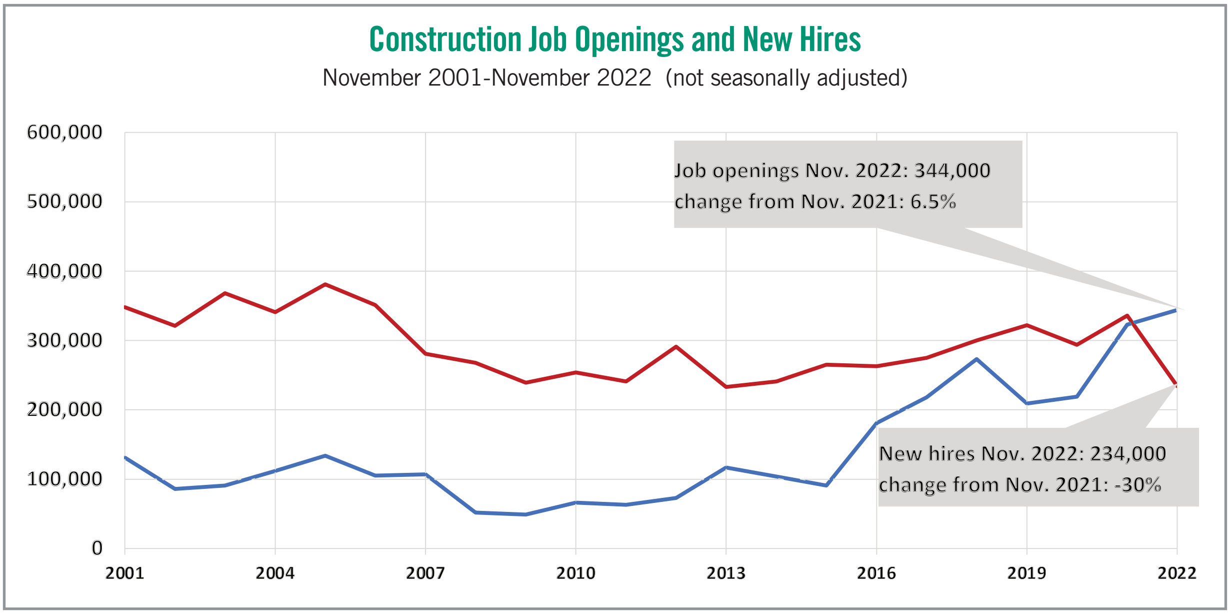



*Source: Bureau of Labor Statistics, www.bls.gov/jlt, Job Openings & Labor Turnover Survey (JOLTS)*

**There has been widespread improvement in the supply chain for many materials. Waiting times at ports were back to a more typical 24 hours or less by January of this year as compared to early 2022 when more than 100 containerships waited to unload outside of Long Beach and Los Angeles.**

materials. Waiting times at ports were back to a more typical 24 hours or less by January of this year as compared to early 2022 when more than 100 containerships waited to unload outside of Long Beach and Los Angeles. Similarly, normal (if less eye-catching) vistas have replaced the mountains of containers and trailers waiting to be moved inland or unloaded at already glutted warehouses. Production and shipping times are close to pre-pandemic "normal" levels for lumber and various types of steel used in construction.

Not everything is copacetic on the supply side, however. Materials as diverse as concrete, electrical equipment and semiconductors remain problematic.

The Portland Cement Association reported in October that 43 states were experiencing "tight supplies" of cement. In addition, supplies of fly ash and slag — residues from burning coal that are sometimes used to replace or add to portland cement (the most common type used in construction) when making ready-mixed concrete — have been shrinking as coal-fired power plants shut down. While there may be limited additions to domestic cement production and a possible expansion of imports, many contractors are likely to find that they are put on allocation (receiving only a fraction of previous deliveries) or are shut out altogether in certain regions.

Two types of essential electrical products have experienced ever-lengthening delivery times. One maker of switchgear reported in May that its lead times had doubled from 20 weeks to 40 weeks since the outbreak of the war in Ukraine three months earlier. By December, lead times had reportedly doubled again. Meanwhile, some local electrical utilities have warned contractors that they won't have enough transformers to allow hookups from the street to new buildings. Lead times for larger or custom transformers that contractors install have reportedly stretched past two years.

Shortages of semiconductors for new vehicles have been well publicized; reports indicate that these have eased in recent months. But semiconductors are also vital components of construction machinery, "smart tools," and a myriad of building systems and equipment. With orders for each of these types of chips being so much smaller than for vehicles, availability of the specialized chips can be spotty.

In short, many developers will find getting a project to market will be easier than during the past three years. But there are likely to be unpleasant surprises regarding some completion dates, for a variety of reasons. ■

**Ken Simonson** is the chief economist with the Associated General Contractors of America. He can be reached at ken.simonson@agc.org.

# A Seamless Blend of Retail and Recreation

## A one-of-a-kind Costco arises in a Mexico City neighborhood.

By Matthew Goelzer, AIA, and Maribel Barba, AIA, MG2


*Photo by Omar Franco, courtesy of MG2*

**A new Costco in the Santa Fe neighborhood of Mexico City was built almost entirely underground. It features a green roof, a soccer field and basketball courts.**

Imagine playing soccer or shooting hoops on the outskirts of Mexico City while atop a 524,549-square-foot Costco Wholesale project. Built on a landfill, this unique retail warehouse, parking structure and loading bay is almost completely hidden from public view.

In addition to the soccer field and basketball courts, the Costco also houses a children's roller park and a green roof, which are designed to meld into the neighboring landscapes and serve the community. A pedestrian bridge and walking/running path connect the sports facilities to the adjacent Parque La Mexicana, integrating the new installation with the urban park's sprawling recreational offerings.

It's not news that large parcels of developable land can be difficult to come by in dense urban areas. Finding a location in burgeoning Santa Fe, once a sand quarry, then a construction landfill, and now an economic hub dotted with high-rises outside Mexico City, was no small challenge.

### A Public-Private Partnership

The site became available in 2016 through a public/private partnership. In this case, the local Santa Fe community established a parks commission to build and maintain a new park, now known as Parque La Mexicana.

A key element of the plan was for Parque La Mexicana to be entirely self-sufficient. The initial agreement set aside 30% of the park's land for commercial development, which would pay for the operating costs.

The development partner, Grupo Danhos, played a key role in funding the initial capital investment. It was that triad of partners — community, parks department and developer — that set the stage for the creation of a unique green space.

In November 2017, Parque La Mexicana, designed by architects **Mario Schjetnan** and **Victor Marquez**, opened to the public. The enormous 70-acre recreational site includes two lakes, fountains, large grassy expanses, an amphitheater, a playground, a dog park, and paths for walking, running and biking.

**Commercial retail is fundamental to Parque La Mexicana. It is dotted with boutique shops, cafes and restaurants, creating an immersive experience. Costco Wholesale's role demonstrates the partnership at play. The rooftop provides sports facilities that benefit the community and integrate into the fabric and programming of the green spaces beyond.**

Commercial retail is fundamental to Parque La Mexicana. It is dotted with boutique shops, cafes and restaurants, creating an immersive experience. Costco Wholesale's role demonstrates the partnership at play. The rooftop provides sports facilities that benefit the community and integrate into the fabric and programming of the green spaces beyond. The ground lease creates a sustainable model for the venture by providing ongoing funding for park maintenance. And in return, Costco gains a primary location in the heart of Santa Fe.

### Imaginative Thinking and Creative Design

Costco desired a Santa Fe location and had been searching for an ideal site,

## New & Noteworthy

### 3.7 million sq. ft.

**MRP Industrial** and **Hillwood Development Company** are developing the **Bainbridge Logistics Center**, which will eventually span 3.7 million square feet of space on the grounds of the former Bainbridge Naval Training Center in **Port Deposit, Maryland**. The first two of four planned buildings on the site – totaling 1,026,000 square feet and 605,280 square feet, respectively – are under construction. The site is close to the Chesapeake Bay and three miles from Interstate 95.

### 1.7 million sq. ft.

**CT Realty**, in joint venture with **PGIM Real Estate**, will develop the **Garden State Logistics Park**, a 1.7 million-square-foot **logistics center** in **Pennsville, New Jersey**. The site is near Interstate 95 and will have access to the entire regional logistics transportation network. The project will include two modernized distribution buildings measuring 1.2 million square feet and 500,000 square feet, with 40-foot clear heights and either cross-dock or front-loaded building configurations.

### 620,000 sq. ft.


**BARDAS Investment Group** and **Bain Capital Real Estate** have announced plans for the $600 million redevelopment of a former television center in **Hollywood** that will transform the aging facility into a modern, 620,000-square-foot **urban studio campus**. The 6.4-acre property, which once served as Technicolor's headquarters as well as the studio lot for Metro Pictures Corp., is one of the largest development sites in Hollywood.

Photo by Omar Franco, courtesy of MG2

**An aerial view of the new Costco in Santa Fe, Mexico, shows the facility's green roof, soccer field and basketball courts.**

as well as the right partners. (The company did not receive any incentives to build in Santa Fe.) The warehouse was designed to be an integrated extension of the park first, and a commercial center second. That called for imaginative thinking and creative design, as well as a full commitment to the business goals of the public/private partnership, the needs of the community and the operational requirements of Costco to serve its members.

Making this happen on a brownfield site in one of North America's most seismically active regions, all while maintaining a construction schedule during COVID-19 and balancing the budget needs of Costco and the park, was a huge challenge that demanded total commitment and active participation from all stakeholders. It was critical to communicate with the park's team on a daily basis. The capacity to be agile and adjust design plans during the construction cycle was essential to the project's success. Dedication to common end goals was critical, and Costco maintained this commitment throughout development and beyond.

Construction began in March 2020 and was halted on and off because of the pandemic. Costco opened in November 2021 and the sports facilities opened in Fall 2022.

Because of the natural topography of the site, only one side of the project is fully exposed to the public; the design envisioned three sides strategically hidden from view and blending into the existing landscape. Custom-designed metal screens on the façade support native plants crawling from the base of the building and cascading down from the roof above. These plantings will grow over time to further obscure the building. "Montanitas," or tall berms covered in native plants, trees and grasses, surround the building to create, even on the streetside exterior, a park-like environment.

Because the project exists in a seismic zone and each roof supports various loads, the warehouse, multilevel parking garage and receiving area were all built separately using different

**Making this happen on a brownfield site in one of North America's most seismically active regions, all while maintaining a construction schedule during COVID-19 and balancing the budget needs of Costco and the park, was a huge challenge that demanded total commitment and active participation from all stakeholders.**

materials. The warehouse, with the green roof above it, is made of pre-engineered metal that is 95% recycled steel. The three-level parking garage is a post-tension concrete structure and will support a large load. The receiving area with the children's roller park above is made of metal steel columns and conventional concrete metal decking.

The receiving area proved particularly challenging. The semi-trucks that unload merchandise required an area that was both large and tall enough for them to maneuver, making column placement extremely important. The solution was to integrate a custom 90-foot-long beam at one area of the roof, which provides enough room for

# New & Noteworthy

## 519,478 sq. ft.

**The HYM Investment Group** is building **100 and 150 Salt Street**, a 519,478-square-foot **life science and biomanufacturing facility** in **Revere, Massachusetts**. The first phase will be delivered in 2024. The buildings will feature flexible floorplates that can range up to 106,500 square feet. The top three floors will be for research and development, and the bottom two floors, with 24-foot floor-to-floor heights, will be for biomanufacturing.

## 335,000 sq. ft.

**Scannell Properties** is building **820 Crossing**, a 335,000-square-foot **warehouse** in **Haltom City, Texas**, a suburb of Dallas. The facility will feature 36-foot clear heights, a rear-load configuration, 62 dock doors, two drive-in ramps and a 185-foot truck court. The warehouse is about eight miles from downtown Fort Worth and 14 miles from Dallas-Fort Worth International Airport.

## 270,000 sq. ft.

**The Opus Group** is building the **Rider Logistics Center**, a multiphase **speculative industrial development** in the **Des Moines, Iowa**, metro area. The first phase includes one 270,000-square-foot building on 16.5 acres, with up to 56 dock doors, two drive-in doors, up to 242 vehicle parking stalls and 32-foot clear height. The building is suited for multiple tenants in need of warehouse, distribution or light manufacturing space.

**In Mexico City, water restrictions are severe. Because of this, Costco Santa Fe's water systems were carefully designed to adhere to strict local environmental laws.**

the semi-trucks while simultaneously supporting the weight of the roller park above.

In Mexico City, water restrictions are severe. Because of this, Costco Santa Fe's water systems were carefully designed to adhere to strict local environmental laws. A water filtration plant, installed onsite, makes use of reclaimed water sources for urinals and toilets. Additionally, reclaimed water from the city is used for landscaping and irrigation throughout the site. A reverse-osmosis system purifies the city's domestic water to assure the quality and safety Costco demands for its members. And in another example of the full partnership and commitment between Costco and the park, stormwater from the warehouse's roof is collected after pretreatment by a green roof system to use in La Parque Mexicana for its water features, including lakes and fountains.

As land becomes more difficult and expensive to develop in urban areas around the world, there are opportunities for architects, developers and jurisdictions to work together early on to find creative solutions that meet the complex challenges of warehouse design and delivery. The Costco project in Santa Fe, Mexico, demonstrates the results of that level of cooperation. ■

**Matthew Goelzer**, AIA, LEED AP, is a principal in the Seattle office of architecture and design firm MG2. **Maribel Barba**, AIA, is a design architect and project manager, also in MG2's Seattle office.

# Cold Storage Warehousing: Four Factors Driving Site Selection and Feasibility

**This booming industrial segment requires a lot of planning for developers.**

■ By Mike Jeitner, PE, Bohler

Refrigerated warehouses can range in height from 80 to 150 feet to house the racking required for automated storage and retrieval systems. Standard distribution centers are generally around 30 to 40 feet tall.

Cold storage warehousing and distribution is expected to grow into a $324 billion market by 2030, according to Acumen Research and Consulting. That's up from $114.6 billion in 2021. This remarkable growth has been powered by the COVID-19 pandemic, which forced more people to rely on e-commerce deliveries of fresh food.

A June 2022 report from CBRE revealed a 58% year-over-year increase in online sales of refrigerated and

**Modern cold storage facilities have unique design features and must overcome specific challenges. Factors such as building height, utility demand, foundation requirements and rail access differ significantly from those seen in standard warehousing and distribution centers.**

frozen foods as of October 2021. In addition, the same report shows that e-commerce's share of total U.S. grocery sales is expected to reach 21.5% by 2025 — up from 13% in 2021. The report also notes that there were 3.3 million square feet of speculative cold storage development underway in the U.S., up from only 300,000 square feet in 2019.

Investor interest has soared as well. CBRE noted that nearly 40% of respondents to its 2022 U.S. Investors Intention Survey are pursuing cold storage assets this year, up from 22% in 2021 and 7% in 2019.

### Four Critical Design Factors

Modern cold storage facilities have unique design features and must overcome specific challenges. Factors such as building height, utility demand, foundation requirements and rail access differ significantly from those seen in standard warehousing and distribution centers. Understanding these factors and evaluating them early in the due-diligence process

## New & Noteworthy

### 250,000 sq. ft.


**Pennybacker Capital LLC** and **M2G Ventures** have redeveloped a 250,000-square-foot brick warehouse built in the 1960s into **PROTO Park**, an **urban industrial project** focused on light industrial and logistics users in the West Brookhollow sub-market in **Dallas**. The nine-acre site is close to Uptown Dallas, Downtown Dallas and Dallas Love Field, making it accessible to the Metroplex's most densely populated areas.

### 200,000 sq. ft.

San Antonio-based **Studio8 Architects** will design a new 19.7-acre **corporate campus** for electric contractor **Alterman** in **Live Oak, Texas**. The master-planned campus will include support functions for all Alterman locations, along with offices for its San Antonio staff and fabrication facilities that will allow the company to create opportunities for innovation and collaboration. The first phase of the campus will have two buildings totaling roughly 200,000 square feet.

### 37,142 sq. ft.

**Long & Foster Real Estate's Commercial Division** recently completed a multimillion-dollar **renovation** of a 37,142-square-foot **office building** in **Springfield, Virginia**. The highly visible building in the suburbs of Washington, D.C., is located near the intersection of interstates 95, 395 and 495. It is also across the street from the popular Springfield Town Center, which offers numerous dining and shopping options.

may help development teams quickly identify sites and assess the feasibility of projects.

### Building Height

Cold storage buildings can range in height from 80 to 150 feet to accommodate automated storage and retrieval systems. That's much taller than standard distribution centers, which are generally around 30 to 40 feet tall. Unless the proposed project is a smaller-scale microfulfillment center — typically 15,000 to 50,000 square feet — this requirement could be a deal-breaker when it comes to municipal approvals.

During due diligence, assess the surrounding properties within the proposed building's "line of sight." The design team can anticipate potential opposition to the project and help the client negotiate a height variance if needed.

### Utility Demands for Refrigeration

Compared to a standard warehouse, water and power demands are significantly higher for cold storage to support the various layers and temperature-controlled chambers within the facility — some dipping below -10 degrees Fahrenheit. Increased water flows are required for the condensers, and power demand can range from 4,000 to 8,000 amps.

The required utility demands may not be available at the proposed site or could require significant upgrades or offsite extensions. During due diligence, evaluate potential cost implications if these services are not already provided or aren't readily accessible and available.

### Geotech Investigations for Building Foundations

Cold storage facilities bear a much heavier load than standard warehouse buildings because of taller heights, refrigeration equipment, and automated storage and retrieval systems. Depending on the site's soil conditions, the building foundation could require costly reinforcements to prevent shifting and maintain the facility's stability.

**Compared to a standard warehouse, water and power demands are significantly higher for cold storage to support the various layers and temperature-controlled chambers within the facility — some dipping below -10 degrees Fahrenheit.**

Perform a thorough geotechnical investigation as early as possible in the development process. A geotechnical consultant should drill core samples across the entire site to better understand the types of soils that are present.

### Rail Access and Accommodations

Many third-party logistics (3PL) providers and refrigerated warehouse tenants are interested in facilities located near rail lines. Receiving products via insulated rail cars and shipping them via trucks remains an effective distribution strategy.

To determine whether a particular site along a rail line is feasible, it's critical to understand the rail provider's routes and operations. Allotting time and budget for the design and permitting of a rail spur — the secondary track used to unload railcars without interfering with the main line — is also important. Determine the layout of the rail spur and understand that there could be a potentially lengthy approval process.

### Considerations for Retail Conversions

Owners and developers continue to find new opportunities by converting underperforming big-box stores and shopping malls to warehouse and fulfillment center space. These centers may have all the necessary criteria for a retail-to-warehouse conversion, including large buildings, generally ample parking and typical access to major traffic corridors. However, if the facility is being considered for conversion to cold storage, it's important to investigate whether the building's thermal envelope would be suitable. The thermal envelope includes the foundation or slab, roofing systems, walls, doors and windows.

But beyond square footage, parking counts and proximity to highways, there are many additional factors to consider when evaluating whether this type of repurposing is feasible.

In addition to building height and utility capacity, consider factors such as truck circulation patterns, loading dock heights, pavement material and strength, and potential impact on off-site traffic conditions. A comprehensive understanding of the current condition and future requirements will help the development team understand what adaptive reuse could entail and enable them to better prioritize sites for potential cold storage conversions.

### Considerations for Last-Mile Microfulfillment Facilities

Microfulfillment centers are beginning to pop up for refrigerated last-mile distribution. Products are stored for a short period of time with a faster turnaround. These facilities do not require taller building heights. Because of this, retail facilities often can be repurposed for this use.

Speed to market can be the leading

**In addition to building height and utility capacity, consider factors such as truck circulation patterns, loading dock heights, pavement material and strength, and potential impact on off-site traffic conditions.**

driver for last-mile distribution. Facilities are often designed, approved and start construction before tenants sign on, so last-minute redesign and reapproval is common.

### How to Streamline Tenant Sign-On

To simplify the process of acquiring tenants, it's crucial to gather critical information about tenant operations to help the design team customize the site layout. Factors such as the size and type of vehicles used (especially if they are electric vehicles), how much parking and vehicle storage is desired, loading dock sizes, utility draw and number of employees can all have a significant impact on design.

Timely communication is key. As soon as the developer obtains critical operations data for a potential tenant, bring the design team up to speed so they can adjust the site design and quickly resubmit plans for updated approvals. Make sure the design team is coordinating with each other and tracking how plan revisions affect other features of the project.

Finally, the design and development teams must be prepared to react quickly to tenant updates, identify potential challenges and budget impacts, and offer prompt solutions — often within two weeks' time. ■

**Mike Jeitner**, PE, is a principal at civil engineering firm Bohler.

## New & Noteworthy

### 11,109 sq. ft.

**Adolfson & Peterson Construction** is building the **Community Learning Center for Flowing Wells Unified School District No. 8** in **Tucson, Arizona**. The 11,109-square-foot building will be used as a community center and preschool for the surrounding north Tucson area. The complex will house a community learning space, professional development offices, open office workstations, preschool classrooms, an enclosed play yard and outdoor gathering patio.

### 10,865 sq. ft.


**Anchor Health**, in collaboration with **OU Health and Intuitive Health**, recently completed a **hybrid freestanding emergency department and urgent care** in **Oklahoma City, Oklahoma**. The dual emergency and urgent care model, developed by Texas-based Intuitive Health in 2008, aims to eliminate the need for patients to self-diagnose the severity of their health concerns before selecting the most appropriate medical center for care.

### 7,353 sq. ft.

**Ware Malcomb** recently finished **Bellevue Brewery** in **Bellevue, Washington**, in Bellevue's Spring District. The 7,353-square-foot **new interior renovation** includes a brewery, restaurant and commercial kitchen. The décor within the space pays tribute to the local area with reclaimed Douglas fir wood salvaged from nearby structures, such as a University of Washington police station and a covered bridge in Sweet Home, Oregon. ■

**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.**

# Compensation Takes Center Stage in A Challenging Market

**Survey shows that commercial real estate firms must focus on finding and retaining top talent in 2023.**

By Christopher Lee, CEL & Associates

The commercial real estate industry is facing many challenges as it moves into 2023. Amid rising interest rates, the lingering impacts of COVID, high levels of inflation, a recessionary economy, shifting capital markets, technological advancements, the Great Resignation, quiet quitting and demographic transitions, one element remains clear and constant — talent management. The real estate industry can't operate and deliver successful outcomes without exceptional talent and leadership. However, those two factors also come with rapidly rising compensation and retention challenges.

Several recent CEL & Associates post-COVID surveys found that rewarding and retaining talent has become the No. 3 or No. 4 priority for real estate CEOs and boards of directors. Exceptional talent and HIPOs (high-potential employees) are difficult to find and even more challenging to retain without a robust talent-management strategy, and competitive compensation and long-term incentive plans. Talent comprises 65% to 70% or more of most real estate firms' operating budgets, yet only 27% of real estate organizations have a competitive, well-thought-out talent-management plan. Only 32% of real estate firms have a formal succession plan for CEO and other C-suite positions. Slightly more than 76% of real estate firms have "concerns" relative to retaining top talent.

### 2023 Recommended Talent Management Pivots

| |
|---|
| ❑ Reimagine the employee experience [remote and onsite]. |
| ❑ Instill a culture of continuous learning. |
| ❑ Utilize non-traditional channels for talent recruitment. |
| ❑ Simplify the recruitment process. |
| ❑ Enhance the onboarding experience. |
| ❑ Increase efforts to assure work-life balance. |
| ❑ Strike a balance between virtual and in-person engagement. |
| ❑ Take care of high-potential employees (HIPOs). |
| ❑ Utilize technology to bring the employee voice into staffing models. |
| ❑ Remove silos and fiefdoms…focus on teams and networks. |
| ❑ Become a more agile organization with multiple bonus programs. |
| ❑ Strengthen talent analytics and integrate values into performance evaluations. |
| ❑ Revise/upgrade the compensation plan. |

*Source: CEL & Associates*

**Real estate leaders must rethink not only how they can attract new talent but also how they can draw existing talent back to the office — and workforce. Customizing work schedules, embracing hybrid staffing models and showing employees how their work makes a difference is the new normal for talent management.**

Real estate leaders must rethink not only how they can attract new talent but also how they can draw existing talent back to the office — and workforce. Customizing work schedules, embracing hybrid staffing models and showing employees how their work makes a difference is the new normal for talent management.

### Surveys Reveal Strategy Changes

According to the 2022 CEL & Associates National Real Estate Compensation & Benefits survey, the largest in the real estate industry (and co-sponsored by NAIOP and the National Apartment Association), 54% of participating real estate firms are changing/adapting their human-resource policies to appeal to a young talent base [Millennials and GenZs]. Approximately 38% of the real estate industry workforce is working remotely.

## Significant Benefits Continue to Shift

| Category | % Of Real Estate Firms | | | |
|---|---|---|---|---|
| | 2018 | 2020 | 2022 | 2020-2022 |
| Formal Severance Plan | 37.6% | 41.8% | 38.1% | ↓ |
| Benefits As % Of Total Salary | 24.3% | 23.8% | 21.9% | ↓ |
| Telecommuting Option | 45.1% | 55.2% | 68.3% | ↑ |
| Flex Time Option | 49.4% | 54.6% | 60.8% | ↑ |
| FT Business Casual Policy | 44.6% | 49.0% | 63.4% | ↑ |
| Wellness Program | 55.1% | 57.6% | 60.5% | ↑ |
| Onsite Workout Facility | 34.1% | 43.6% | 40.7% | ↓ |
| Subsidized Professional Development | 61.4% | 68.0% | 68.6% | ↔ |
| Formal Exit Interview | 45.1% | 57.0% | 64.0% | ↑ |

*Source: CEL & Associates*

The larger the firm, the fewer remote-work options. Smaller firms have had to adapt more remote work options in order to retain talent.

An increasing percentage of real estate firms are "future proofing" their talent-management strategies to retain top performers. Current data suggests that more real estate firms will increase their use of independent contractors, outsource agencies (foreign and domestic), freelancers, consultants and part-time personnel to fill key but not core positions.

DEI (diversity, equity and inclusion) remains an important strategy. For example, women, while nearly 60% of college enrollees today, comprise only 9% of the C-suite positions in the real estate industry — and 44% of those positions are human resources. Approximately 46% of today's workforce is age 55 or older.

However, only 36.3% of real estate firms have a formal DEI policy, and only 20.9% have a formal plan for ESG (environmental, social and governance).

Staying competitive, remaining profitable and building for tomorrow will be recurring themes throughout the real estate industry for 2023.

Pay raises in 2023 will likely hover around 5%, with exceptions for those employees who create value. Of course, total compensation also includes benefits. According to CEL's research, nearly 94% of real estate firms provide a vision plan, 84% provide basic long-term disability benefits and 98% offer dental benefits. The average number of paid days off (fixed and floating) is now 11 days. Nearly 96% of real estate firms have a 401[k] plan. The total "benefits" load as a percent of total salaries is now 21.9%, while the total benefits load as a percent of operating revenue is around 4.5%. Average bonus achievement (for 2022 performance) is expected to be 90.5% as a percentage of the target (potential) bonus.

Interestingly, according to CEL & Associates research, 68.3% of real estate firms now offer a telecommuting option. To retain young and talented professionals, 74.1% of real estate firms now pay or subsidize professional society/association dues.

### Looking Ahead

It is clear from the data that real estate firms emerged from the pandemic with greater awareness and concern for their talent and leadership pool. Long-term incentive plans are being offered deeper in the organization. Enterprise value incentive plans are becoming more commonplace.

Talent management is an art as well as a science. Getting it right means making talent a priority. In 2023, real estate firms must take a comprehensive look at all aspects of talent management. From the initial recruitment process, selection and onboarding to

## Compensation Trends

| Year | Metric | Merit Increases | | | | | Other Budget / Planning Trends | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Top Executives (1) | Senior Manage-ment | Exempt Employees | Non-Exempt Employees | Overall Company | General Inflation Rate (a) | Incentive Compensa-tion Bonus Realization | U.S. GDP Growth (b) | Total Medical $ Growth (c) | Employee Share of Healthcare Costs (d) |
| 2015 | Average | 3.1% | 3.5% | 3.5% | 3.2% | 3.4% | 0.1% | 82.8% | 2.7% | 6.3% | 8.0% |
| | 75th Percentile | 3.0% | 4.0% | 3.6% | 3.0% | 3.6% | | | | | |
| 2016 | Average | 3.0% | 3.4% | 3.4% | 3.3% | 3.4% | 1.3% | 86.7% | 1.7% | 4.7% | 5.3% |
| | 75th Percentile | 3.5% | 4.0% | 3.8% | 3.3% | 3.8% | | | | | |
| 2017 | Average | 2.9% | 3.5% | 3.5% | 3.4% | 3.5% | 2.1% | 85.5% | 2.2% | 4.3% | 5.3% |
| | 75th Percentile | 3.8% | 4.0% | 4.0% | 3.6% | 4.0% | | | | | |
| 2018 | Average | 3.2% | 3.7% | 3.5% | 3.3% | 3.4% | 2.4% | 86.7% | 2.9% | 4.5% | 1.0% |
| | 75th Percentile | 3.9% | 4.0% | 4.0% | 3.6% | 4.0% | | | | | |
| 2019 | Average | 3.2% | 3.5% | 3.4% | 3.1% | 3.3% | 1.8% | 90.5% | 2.3% | -3.3% | 3.8% |
| | 75th Percentile | 3.6% | 3.8% | 3.7% | 3.5% | 3.7% | | | | | |
| 2020 | Average | 3.1% | 3.5% | 3.1% | 3.1% | 3.3% | 1.2% | 86.8% | -2.8% | -2.0% | 3.8% |
| | 75th Percentile | 3.5% | 3.5% | 3.7% | 3.2% | 3.7% | | | | | |
| **2021 (2)** | **Average** | **4.8%** | **5.2%** | **5.0%** | **4.4%** | **5.2%** | **4.7%** | **93.7%** | **5.9%** | **13.2%** | **4.4%** |
| | **75th Percentile** | **5.4%** | **5.8%** | **5.6%** | **5.2%** | **5.6%** | | | | | |
| **2022 (3)** | **Average** | **4.7%** | **5.0%** | **4.9%** | **4.4%** | **5.1%** | **6.7%** | **90.5%** | **1.4%** | **4.6%** | **4.7%** |
| | **75th Percentile** | **5.5%** | **5.5%** | **5.4%** | **4.7%** | **5.3%** | | | | | |
| **2023 (4)** | **Average** | **5.1%** | **5.3%** | **4.8%** | **4.6%** | **5.0%** | **5.5%** | **88.5%** | **0.5%** | **6.0%** | **5.0%** |
| | **75th Percentile** | **5.8%** | **5.7%** | **5.4%** | **5.3%** | **5.5%** | | | | | |

*Notes: (1) Defined as positions reporting to the CEO, generally "C" Suite positions and/or senior officers.*
*(2) Final (actual) 2021 merit awards as reported in CEL 2022 National Compensation Survey.*
*(3) 2022 figures based on CEL 2022 National Compensation Survey (2Q/3Q 2022). 2022 inflation and GDP growth figures are for the full 12 months of 2022.*
*(4) Forecasts for 2023 incorporate tracking through 2Q 2022, early feedback on assumptions for budgeting, review of economic forecasts with wide variations of expectations.*
*Source: CEL & Associates*

performance/goal setting, compensation administration, benefits and employee recognition, a firm's messaging must be multi-generational, reflect current and emerging market trends, and motivate every employee. Real estate firms will face many external challenges in 2023. As a result, employers will need to focus on building and maintaining morale, improving workplace productivity, nurturing relationships, and accommodating hybrid work options and work-life balance expectations. In times of disruption, internal communications must be robust and frequent.

In 2023, real estate firms are likely to experience more, not fewer, operating, performance and talent-management hurdles. The competition to retain talent, along with economic uncertainty, means real estate CEOs will face expectations for more compensation. They will also be considering the productivity of employees working from home. Balancing employee satisfaction, creating a welcoming and productive workplace environment, and providing a culture that supports work-life balance has become requirements for real estate firms.

Getting through 2023 to harvest the opportunities in 2024–2025 will require a focused and thorough review of talent-management plans and strategies. These next 12 months will

**It is clear from the data that real estate firms emerged from the pandemic with greater awareness and concern for their talent and leadership pool. Long-term incentive plans are being offered deeper in the organization. Enterprise value incentive plans are becoming more commonplace.**

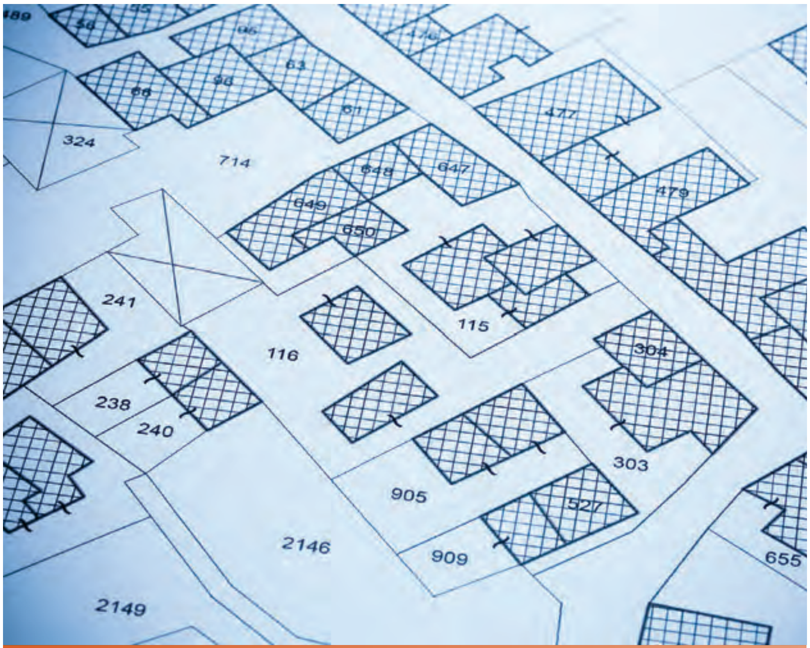
be transformative, full of surprises and replete with challenges. However, great people, collaborative teams and aligned leadership can and will outperform the market. ■

**Christopher Lee** is president and CEO of CEL & Associates, Inc.

# The Legal Consequences of Downzoning

## A case in California explores whether developers can be compensated because of a change in land-use designation.

■ By Brad Kuhn and Jillian Friess Leivas, Nossaman LLP




Downzoning is the process in which a city or town rezones land to a less intensive use.

"Downzoning" is when a government agency rezones a parcel of land once previously zoned for a more intense use to a more restrictive use (for example, changing the zoning designation of an undeveloped parcel of land to agricultural or open space). Those who purchase an undeveloped property zoned for commercial, industrial or residential uses only to later have that property rezoned for agricultural or open-space uses unquestionably suffer a loss. But when is such an action entitled to compensation?

If the municipality simply wants to change the zoning to a more restrictive use, the law in places such as California provides that unless the change in zoning results in a regulatory taking or deprives the owner of a vested right, the property owner is not entitled to compensation. In other words, the owner is not entitled to compensation unless the new zoning designation results in a loss of substantially all economically viable uses of the property, or the owner has done substantial work or expended large sums of money in good-faith reliance on a development permit.

However, if the downzoning is done in bad faith, the owner may be entitled to compensation. For example, if the change in zoning can be shown to be a subterfuge to reduce the acquisition price in a subsequent condemnation action, it may constitute a taking. Similarly, compensation may be owed if the change in zoning was meant to accomplish the same purpose of acquisition of the land (i.e., for open-space purposes). And a government agency may be on the hook if it tries to preserve the status quo by denying development applications for the purpose of reducing the eventual acquisition price.

### A Case Study from California

A recent case, *FFV Coyote LLC v. City of San Jose*, analyzed this issue and it was found that the plaintiffs had made a takings claim based on the Fifth Amendment that was strong enough to survive a motion to dismiss. (In addition to its well-known protections against self-incrimination and double jeopardy in legal proceedings, the Fifth Amendment includes a clause noting that private property cannot "be taken for public use, without just compensation.")

**If the municipality simply wants to change the zoning to a more restrictive use, the law in places such as California provides that unless the change in zoning results in a regulatory taking or deprives the owner of a vested right, the property owner is not entitled to compensation.**

The plaintiffs, FFV Coyote LLC, own property in San Jose, California, originally acquired in the 1960s. The land is undeveloped and unused, except for a seasonal pumpkin patch and related attractions.

The city of San Jose's general plan originally designated the property as "light industrial," but through general plan amendments, the property's zoning has changed over time to "agricultural," "campus industrial" and later, "industrial park." As development became more likely in the area that encompasses the property, community pressure increased to keep the area as open space. The city even purchased land adjacent to the property (which was also designated as "industrial park") to preserve it as open space.

In 2019, the city explored a general plan amendment to address development in the area, including the property. Ultimately, the general plan was amended, and the property designation was changed from "industrial park" to "agricultural." While the amendment was under review, the owners signed a contract to sell the property to a developer for $44.1 million. Days after the property's designation was changed, the developer terminated the contract to buy the property.

The property owners sued in federal district court, claiming, among other things, that the city's general plan amendment violated the takings clause of the Fifth Amendment. The city filed a motion to dismiss for failure to state a claim.

### In the Courtroom

The district court determined that the plaintiffs stated a claim for violation of the Fifth Amendment as a regulatory taking under the *Penn Central* factors, and denied the city's motion to dismiss. The *Penn Central* test requires the evaluation of three factors: the economic impact of the regulation on the claimant, the extent to which the regulation has interfered with distinct investment-backed expectations, and the character of the governmental action. The plaintiffs satisfied the requirements, at least at the pleading stage.

First, the plaintiffs alleged that the economic impact of the city's action was "severe," in that it was directly responsible for the termination of the $44.1 million sale agreement. Further, the plaintiffs' complaint cited an expert's report supporting the position that agriculture is not an economically viable use of the property. Also, the plaintiffs argued that even the most recent use of the property as a pumpkin patch would no longer be permitted under the new land-use designation. Given these allegations, the district court ruled that the plaintiffs had made a strong case that the economic impact of the regulatory change may be so severe as to constitute a taking.

Second, the plaintiffs stated that the property was purchased as a long-term investment that could reasonably be sold for development. They claimed that the land use designation history for the property indicated that the property was suitable for industrial development and that there had been a significant investment in infrastructure improvements in the area since the 1980s to facilitate industrial uses. The district court concluded that deciding whether the expectation of future industrial development was reasonable was a factual inquiry that could not be resolved at the pleading stage.

Third, the plaintiffs alleged that the city's action was intended to "pre-

**However, if the downzoning is done in bad faith, the owner may be entitled to compensation. For example, if the change in zoning can be shown as a subterfuge to reduce the acquisition price in a subsequent condemnation action, it may constitute a taking.**

serve" the property for the benefit of the public in a way that requires just compensation. They said that the city accomplished this goal through the downzoning set forth in the general plan amendment. The district court concluded that these allegations support a regulatory-takings claim.

In sum, the district court determined that plaintiffs had sufficiently stated a claim for a taking in violation of the Fifth Amendment. At this stage, the city's motion to dismiss was denied and the claim for a regulatory taking can proceed.

### What's Next?

While this is not a final determination whether downzoning constitutes a regulatory taking, it demonstrates the type of allegations that can survive a motion to dismiss. This case will be interesting to follow to see if the court determines that this is a permissible use of the city's police power, or if it rises to the level of a regulatory taking. ■

**Brad Kuhn** is a partner and **Jillian Friess Leivas** is an associate with Nossaman LLP in Orange County, California.

# How Supply Chains and Logistics Drive Site Selection

## The "Rule of 1.5" explains the impact of transportation costs on industrial real estate.

By Adam Roth, CCIM, SIOR, NAI Hiffman

A recent Q&A in the Wall Street Journal with **Marie-Christine Lombard**, CEO of international freight-forwarding firm Geodis SA, includes a comment that sums up the current state of the global logistics industry: "The entire supply chain is being rethought and recalibrated and re-costed."

Lombard is correct. Risk is being assessed differently and the supply chain is changing, which means industrial real estate will follow.

For example, when transportation costs 10 times more than rent, transportation will dictate site selection. It is far and away the biggest determining factor that goes into where companies locate industrial real estate. Specifically, there is a concept called the "Rule of 1.5," which is defined as whatever affects transportation will impact industrial real estate a year and a half later.

### A Rough Road for Transportation

The transportation sector has experienced tremendous challenges over the past few years. In 2017, the railroad industry accelerated the shift to PSR (precision scheduled railroading), which focuses on fewer served destinations, fixed schedules and the consolidation of intermodal terminals to improve profitability. It has also led to the loss of railroad workers; for example, more than 20,000 were laid off in 2019, according to a January 2020 report from The Washington Post.

Simultaneously, the trucking industry entered the ELD (electronic logging device) era. According to the Federal Motor Carrier Safety Administration (FMCSA), an ELD "monitors a vehicle's engine to capture data on whether the engine is running, whether the vehicle is moving, miles driven, and duration of engine operation (engine hours)." While this improved work conditions for drivers by preventing companies from driving beyond their hours via the old system of pen-and-paper logbooks, it also effectively removed 8% to 10% of the industry's capacity from the road.

Additionally, the railroad industry's shift to PSR has added more pressure on trucking to make up those lost miles. (For example, a company

**For example, when transportation costs 10 times more than rent, transportation will dictate site selection. It is far and away the biggest determining factor that goes into where companies locate industrial real estate. Specifically, there is a concept called the "Rule of 1.5," which is defined as whatever affects transportation will impact industrial real estate a year and a half later.**

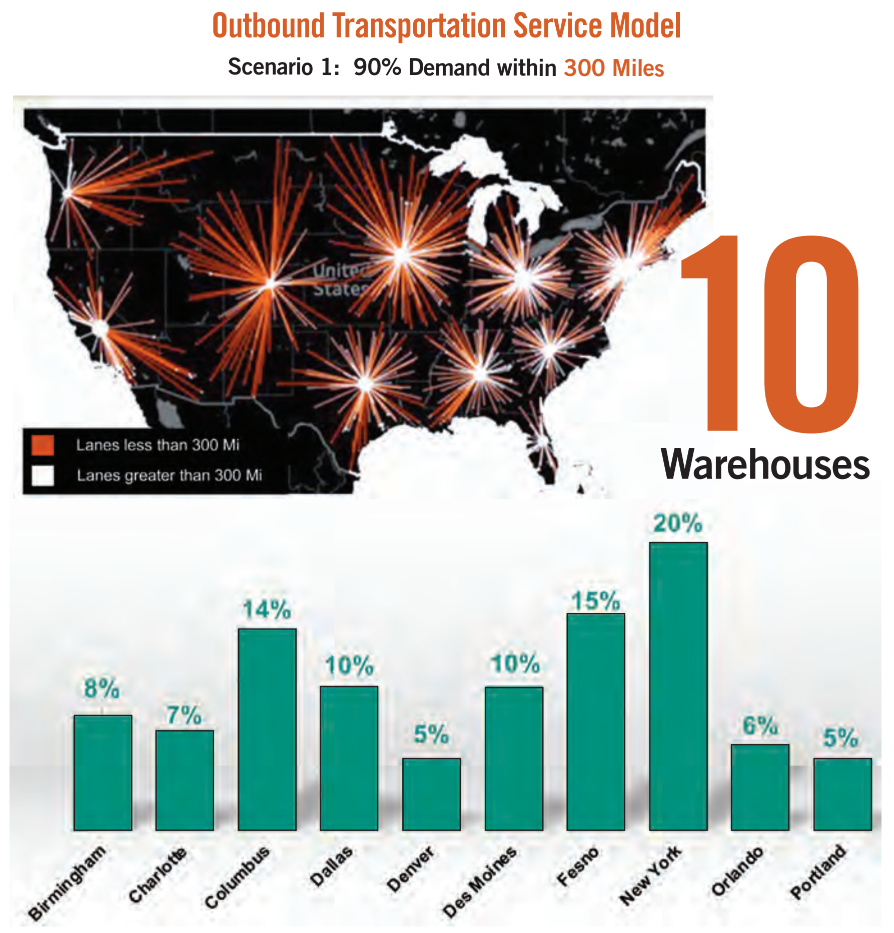
that used to get its rail deliveries in a secondary or tertiary market might now have to get them from a major metro. Those goods would have to travel by truck.)

Then in early 2020, FMCSA launched the DAC (Drug and Alcohol Clearinghouse). This online database houses up-to-date information about drug and alcohol violations by those who hold commercial driver's licenses (CDLs) and commercial learner's permits (CLP). A November 2021 report by the New York Post claims that more than 72,000 U.S. truckers had been suspended because of DAC violations since January 2020. This number is equivalent to Schneider, US Express, Werner, Swift and JB Hunt suspending all their drivers.

Then came COVID, which compressed 10 years of e-commerce adoption into three months. Transportation costs increased rapidly, aided by inflation, clogged supply chains and soaring gas prices.

## The Rule of 1.5 in Action

A team at NAI Hiffman created an outbound transportation network model for a fictitious company shipping a fictitious product. It uses the same algorithm technology that corporations use in site selection. It's based on population (consumers and labor) and a service-level constraint (distance). Additional calculations by corporations can include factors such as real estate cost, taxes, labor cost and ZIP code analysis all the way down to the SKU level. The outcome is a two-pronged solution, with the identified locations representing forward-point deployment with access to the population (the end consumer). These operations would be backfilled by multistate replenishment hubs with intermodal access.




*The bar graphs represent the percentage of product that would be delivered from each forward-point location based on that location's proximity to the local population.*

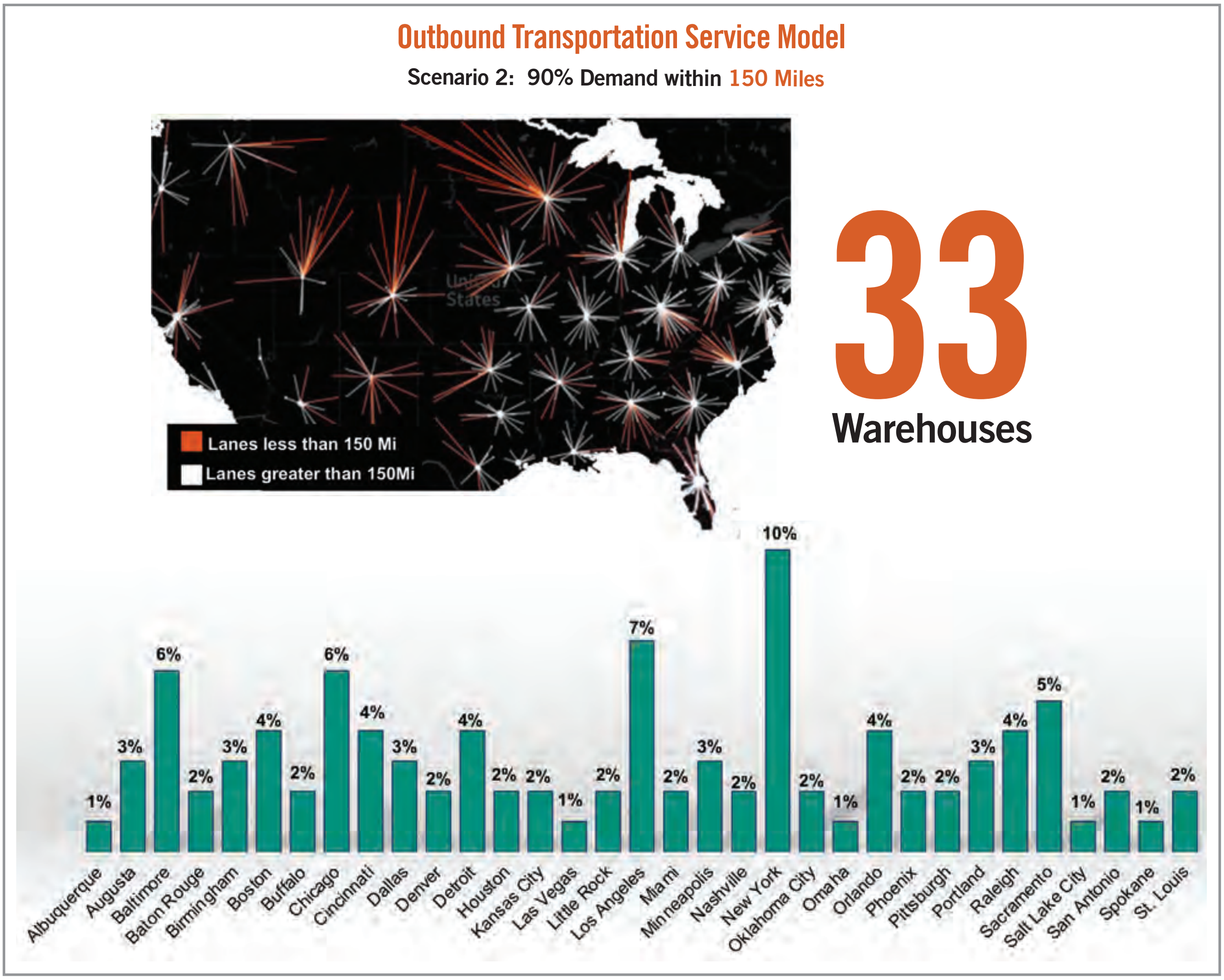
*Source: NAI Hiffman*

The model showed that it is nearly impossible to meet 100% of demand within 300 miles of a warehouse, but reaching 90% of demand could be done by building just 10 facilities. Meeting 90% of demand within 150 miles of a warehouse required 33 facilities.

Also included in the model is the percentage of the fictitious product that would service the population out of each location, along with the amount of space that should be allocated to each location. In other words, if the Des Moines location handled 10% of the product and the national warehouse footprint was a million square feet, the Des Moines facility should be 100,000 square feet.

This brings us to the present, where corporations have realized that their

**In a sense, the Rule of 1.5 has written the future of industrial real estate. Corporations will be forced to combat length of haul. A nonlinear supply web will replace the supply chain as "international regionalization" will reduce distances while increasing the ability to react to the market.**




*The bar graphs represent the percentage of product that would be delivered from each forward-point location based on that location's proximity to the local population.*
*Source: NAI Hiffman*

supply chains are not as robust as they thought. A lost sale eliminates the efficiencies of a complex, inconsistent network, so "just in time" (goods are shipped only when needed) is being replaced by "just in case" (large inventories are kept on hand to ensure that orders can be fulfilled). Additionally, China is proving to be an unreliable supplier. While it will remain a key component, corporations are exploring alternatives to diversify their supply lines. (See related story, page 56.)

## The Bottom Line

In a sense, the Rule of 1.5 has written the future of industrial real estate. Corporations will be forced to combat length of haul. A nonlinear supply web will replace the supply chain as "international regionalization" will reduce distances while increasing the ability to react to the market. This could lead to a new form of globalization with bilateral trading blocs between like-minded nations, multishoring, near-shoring, reshoring, and friend-shoring (encouraging companies to shift manufacturing away from authoritarian states and toward allies) as the U.S. decouples from China.

It is no coincidence that U.S. manufacturing jobs increased by 350,000 (25%) in 2022. A Deloitte study showed that 62% of corporations were considering reshoring/near-shoring, and in Thomas' 2021 State of North America Manufacturing Report, 83% of companies reported that they were looking to add manufacturing in North America.

A new network model is under development. As that progresses, there will be surprises. Model 2.0 will take it further than population and service level by including power, gas, water and climate concerns while maintaining that critical transportation overlay.

Now there just needs to be a name for the fictitious company that will be a reality in 1.5 years. ■

**Adam Roth** is a director of NAI Global Logistics at NAI Hiffman.

# Is Your Smart Building an Easy Target for Hackers?

**IoT sensors can provide unprecedented amounts of useful data for building owners, but they also require extensive security.**

By Coleman Wolf, ESD

Modern buildings are increasingly connected to the rest of the world through new technology and a series of internet of things (IoT) devices. This brings many benefits to these facilities, but it also increases their vulnerability to cyberattacks. Intelligent buildings, with their integrated control systems and data-collection capabilities, represent the future of facilities management, but they also create an increasingly tempting target for hackers.

## The Rise of Intelligent Buildings

Advancements in smart building technology have revolutionized the day-to-day management of buildings. Almost every aspect of a facility can now be controlled remotely through interconnected sensors and computers, from heating, ventilation and air conditioning (HVAC) to air filtration, fire protection, elevators, building security and more. Proactive, protective and energy-efficient property management are just some of the features owners, operators and tenants now expect.

As the world emerges to an evolving, post-pandemic workplace, smart buildings are fulfilling new demands such as greater control and monitoring of indoor air quality, detailed awareness of occupancy as people move through the space, and greater control over access to the facility. The increased data collection, analysis and control made possible by modern intelligent building systems also helps position properties to address new health threats as well as future environmental sustainability requirements.

## Where to Look for Unexpected Vulnerabilities

Early building control systems were not traditionally built with system security in mind. They were self-contained, nearly impervious to external access, and it would take a physical breach to compromise them. Thanks to the proliferation of IoT devices connecting modern buildings with the outside world, the danger of cyberattacks is growing exponentially.

But what does a connected lobby monitor displaying a welcome message to visitors have to do with securing payroll records? Think of it this way: If car keys are left in an unattended, unlocked vehicle often enough, it shouldn't be surprising if it is eventually stolen. And if that automobile also has an automatic garage door opener, the enterprising thief could possibly gain access to a home. The same holds true for unprotected devices connected to building systems. Easily guessed passwords or unchanged, easily found default passwords set by the equipment manufacturer can make a hacker's job effortless.

The sheer amount of IoT devices makes them uniquely vulnerable. According to IOT Analytics, the number of connected IoT gadgets was expected to grow 18% in 2022 to 14.4 billion devices globally. The trend also spotlights the increased dangers property owners and cybersecurity professionals will face. And it's not just the business aspects that are worrisome; the health, safety and well-being of anyone — staff, customers, the public — who might be in

Motion sensors are among the internet-connected devices that can be found in modern commercial buildings of all kinds.

an environment could be affected by compromised systems.

## Limiting Access and Opportunity

While data theft often gets the most attention, other threats can be just as costly and potentially more dangerous. Protecting systems that control and monitor facility operations is also needed. Reliability and integrity are important, but these systems also have the potential to impact occupants' health and safety. Everything from major power stations to personal medical devices could be at risk. The nonstop collection of information by IoT devices about individual environments and circumstances could also seriously impact how business and personal decisions are made. Fortunately, better protection measures are being developed, although there is still a long way to go.

Here are some IoT security tips to better protect buildings and operations:

**IoT devices should have unique passwords** for each unit.

*continued on page 28*

*continued from page 26*

**Follow a mandatory best practice of always changing the default username and password** for any device connecting to the internet.

**Follow a regular routine of software and firmware patches and updates** to reduce risk exposure.

## Cybersecurity is a Journey, Not a Destination

**Implementing a successful cybersecurity risk-management plan** is a cycle that begins with awareness and works through implementation before starting over again. While engaging a qualified third-party expert to help guide you along the way as well as conduct follow-up inspections, there are specific steps every company should take now:

- Get the IT and OT teams together now
- Obtain support from top down to address organizational risks
- Work jointly to identify gaps in security measures
- Develop a unified cybersecurity policy
- Develop mitigation strategies
- Know the company's security posture
- Document your systems ("You can't manage what you don't know")
- Assess vulnerabilities and risk
- Run vulnerability scans
- Conduct blackbox assessment
- Do a whitebox assessment
- Conduct penetration testing
- Test social engineering
- Conduct regular checkups to reassess posture and assess corrective measure ■

**Document your systems thoroughly.** Too often a company doesn't have accurate system information, and you can't manage what you don't know.

**Perform cybersecurity testing of systems on a routine basis.** The systems themselves are not static and new vulnerabilities are discovered every day, so it is important to stay current.

If a device cannot support password, software or firmware updates, do not connect it to a system; at a minimum, those less-secure devices should be segregated from more critical systems.

## Creating a Cybersecurity Action Plan

Between information technology (IT), operational technology (OT) and the internet of things (IoT), there are many T's to cross to keep a company safe from cyberattacks. As IT and OT systems become increasingly intertwined, it is clear a unified approach to security is needed. But who should take charge? According to a survey by ASIS, an association for security professionals, the biggest obstacles keeping organizations from adapting to combined systems revolve around staffing issues. Physical security departments often operate amid siloed traditions and functions. Personnel are often hesitant to give up or share control of what they consider to be core competencies, including people management, intelligence and investigations. IT professionals can be equally rooted in their own routines built around the latest technology, system innovations and cyberthreats. Loss of authority, status, control or staff are equally feared by both groups.

**The sheer amount of IoT devices makes them uniquely vulnerable. According to IOT Analytics, the number of connected IoT gadgets was expected to grow 18% in 2022 to 14.4 billion devices globally.**

Despite these hesitations, companies are beginning to understand that both OT and IT systems need to be managed holistically under the umbrella of risk management. Communication is key to successful convergence.

In many instances, IT is the gatekeeper to what IoT devices are allowed on a company's network. Bringing IT and OT stakeholders together early in the project design development process — preferably during the master planning phases — can help avoid conflicts and eliminate delays in implementation schedules. While it is common for organizations to put their intelligent building systems and individual IoT components on the company's enterprise network, it comes with inherent cybersecurity risk. If devices are not thoroughly vetted, tested and approved by IT, chances are they will not be allowed to connect, potentially leading to missed expectations and lost operational opportunities.

Finally, being more integrated and interconnected does not necessarily mean a facility is more vulnerable. Having more IoT can actually make building automation systems safer if the integration of these devices and systems drives more and better engagement about cybersecurity between risk-management and facility-management stakeholders. Creating and following best practices can lead to better security, improved operations, reduced utility consumption and increased occupant comfort, delivering on the promise of the intelligent building. ■

**Coleman Wolf**, CPP, CISSP, is the security services studio leader at global engineering and technology firm ESD.

# CEO on Leadership: Marc Selvitelli

**The new president and CEO of NAIOP talks about the challenges of leading a major real estate association that has more than 20,000 members and 52 chapters across the U.S. and Canada.**

By Ron Derven

Marc Selvitelli

"The most important thing I have learned about the definition of leadership is that the leader has been invited to lead. What I mean is that you must earn your position as leader, which is willingly given to you by others."

*— Marc Selvitelli, President and CEO, NAIOP*

***Development:*** *What attracted you to a career in association management?*

**Marc Selvitelli:** I didn't go to Penn State to major in association management; I initially went to study meteorology. I have always been passionate about two things — the weather and politics. Politics won out in the end. In one of my first jobs in association management, I became involved in advocacy. Focusing on my passion for politics and being an advocate was a natural fit for me. Beyond politics and advocacy, however, my association work allowed me to be a resource for people to help them grow. I love this work, and I have never looked back.

***Development:*** *Prior to joining NAIOP, you worked for other real estate-related associations. What draws you to this industry?*

**Selvitelli:** The built environment has always fascinated me. When I was a child, my father created an elaborate train setup down in the basement for me and my siblings. The trains were wonderful, but what really fascinated me even then were the buildings. My brothers and sisters wanted to play with the trains; I wanted to build more buildings. Additionally, I grew up outside of Boston, and when we as a family traveled down the expressway to visit relatives, I was always captivated by the Boston skyline, the buildings and everything else that a city environment represents.

Earlier in my career, when I took a job with the National Association of Home Builders (NAHB), I experienced firsthand how entrepreneurial, dynamic, exciting and variable the real estate industry is.

***Development:*** *What drew you to NAIOP in particular?*

**Selvitelli:** When I worked at NAHB, I was in government affairs. We joined with other real estate-related associations to form a coalition to work on pressing issues, so I became familiar with NAIOP. I was hired at NAHB by **Jim Rizzo** and we became great friends. Jim was later hired by NAIOP as vice president of membership and chapter relations. We continued to keep in touch, and Jim frequently talked about how much he loved his work at NAIOP. He was particularly impressed with the leadership of **Tom Bisacquino** [former president and CEO of NAIOP]. I took a job at NAIOP as well. Although I admired the leadership of NAIOP, its staff and the quality of its membership, after working for several years at NAIOP, I regretfully had to leave to pursue an opportunity where I would lead another association. It was a job I had to take for the career path I was on. When I returned to NAIOP after three years, I was delighted to see that most of the great staff that I had come to know during my previous tenure were still here. That is a great credit to NAIOP and to Tom.

***Development:*** *President and CEO of NAIOP requires you to wear many hats. You work with an extraordinarily talented group of entrepreneurial volunteer board members; 52 chapters; 20,000-and-growing NAIOP members;*

*and a highly talented headquarters staff. Could you talk about this very challenging leadership role?*

**Selvitelli:** There are many constituencies here at NAIOP, not the least of which is our growing membership, which I am happy to say will likely surpass 21,000 this year. We are an entrepreneurial organization at every level, and no one is shy about sharing their ideas. My challenge is to synthesize all these ideas into common goals and then move forward as an organization.

**"Senior leaders are not simply leading their own staff, they are to some degree supporting and leading our volunteers as well. They are working with people who are generously giving their time and their expertise."**

*— Marc Selvitelli,*
*President and CEO, NAIOP*

***Development:*** *How do you define leadership?*

**Selvitelli:** The most important thing I have learned about the definition of leadership is that the leader has been invited to lead. What I mean is that you must earn your position as leader, which is willingly given to you by others. But if you as leader do not earn their trust, if you do not inspire and lead people toward a common goal, that leadership can be easily taken away. Every leader must be extremely conscious of this fact. Your position as a leader is not a given. To be an effective leader requires being committed to lifelong learning and having the willingness to evolve and adapt. That is how I define leadership. I am in my role at NAIOP because I have been invited to be leader. I must continually earn that. And if I don't, I am not doing my job.

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

**Selvitelli:** The key thing I look for when hiring senior staff is a willingness to teach, mentor and grow with the association. Senior leaders are not simply leading their own staff; they are, to some degree, supporting and leading our volunteers as well. They are working with people who are generously giving their time and their expertise.

At NAIOP, we are a very lean organization regarding staff. I need people who will do their best every day and people who are also adaptable. If you

> **"The biggest challenge for me is navigating the transition from Tom Bisacquino to me. Tom was a great CEO who led the organization for 31 years.I have to demonstrate to members, volunteers and staff that while I may have a different approach to leadership than Tom, NAIOP will continue to be a strong and vibrant association in the real estate industry."**
>
> *— Marc Selvitelli, President and CEO, NAIOP*

have a big ego, you need to check it at the door. When we are at a NAIOP conference, for example, and see that the registration lines are beginning to back up, all of us, me included, need to pitch in and be of service.

For senior leadership, it is about taking an entrepreneurial approach to leading. Our members are entrepreneurial, and the association must be the same way. NAIOP must continually evolve, just like any commercial real estate business needs to evolve. Complacency is a big danger for associations.

***Development:*** *What has been your greatest leadership challenge at NAIOP to date?*

**Selvitelli:** The biggest challenge for me is navigating the transition from **Tom Bisacquino** to me. Tom was a great CEO who led the organization for 31 years. I have to demonstrate to members, volunteers and staff that while I may have a different approach to leadership than Tom, NAIOP will continue to be a strong and vibrant association in the real estate industry.

***Development:*** *In your role, what have you found are the best ways to resolve internal conflicts or outright mistakes?*

**Selvitelli:** It is really about a willingness to have difficult conversations. It is critical to resolving internal conflict. I've observed that strife makes the world go round. That is, it is OK to disagree and to have frank conversations, because ultimately it helps resolve the issues and gets to a place where we can identify solutions. But you must be willing to have honest dialogues.

***Development:*** *You plan to visit all 52 NAIOP chapters in person over the next year. Why is that face-to-face presence so important?*

**Selvitelli:** It is my goal to visit all 52 chapters by June 30, 2023. Commercial real estate is built on personal relationships and through face-to-face meetings. This is extremely important as we come out of the pandemic, because for years we could not have those face-to-face meetings. By making these in-person visits, it lets me hear directly from members and chapter leadership about where we should go in the coming years. While you can have meetings on Zoom, it is not the same.

***Development:*** *You have mentioned that in your role as president and CEO of NAIOP, you have three primary goals. Could you talk about them and tell us why they are important for the association?*

**Selvitelli:** First, reconnecting the NAIOP chapter network. The pandemic was hard on all of us. It did not allow us to do business in person — and I am not just talking about conferences, I am talking about having that connection from NAIOP corporate to our chapters and vice versa. In speaking person-to-person with the chapter leadership over the past few months, it has become apparent to me that corporate needs a better understanding of what is important to our chapters and our members. The second goal is to increase members' awareness of the benefits that are offered both on the chapter level and at corporate. The final goal is to expand our educational opportunities. In 2023, we are going to release a new podcast series. We will also debut a new conference around cold storage, and we will launch new microlearning opportunities. These microlearning courses will take a different approach. They focus on a single subject, a specific topic, and educate our members in eight to 10 minutes on that topic. These are my goals, and they are leading up to the development of our strategic plan, which we will be working on throughout 2023.

> **"Leadership at its core is profoundly uncomplicated, involving three critical areas. It is imagining a better future, getting others to join in that journey and then getting them there. But there is no playbook, no simple formulas and certainly no prescription on how you are going to get there."**
>
> *— Marc Selvitelli, President and CEO, NAIOP*

***Development:*** *What's been the best advice you have been given over the course of your career regarding leadership?*

**Selvitelli:** The CEO of a former employer, SmithBucklin, was a real student of leadership, and he deeply influenced my views on it. He said that leadership at its core is profoundly uncomplicated, and it involves three critical areas. It is imagining a better future, getting others to join in that journey and then getting them there. There is no playbook, no simple formulas and certainly no prescription on how you are going to get there. But there are principles and guidelines that the leader can learn and apply. I have this quote sitting on my desk. I see it every day.

***Development:*** *Finally, how do you like to relax during your time off from NAIOP?*

**Selvitelli:** I am a sports junkie and I have wanderlust, so I like to combine the two. I am on a quest to achieve what is known in certain circles as the 124 Club. What's the 124 Club? There are 124 professional major league North American sports franchises in hockey, baseball, basketball and football. It is my goal to see every one of these teams play a home game in their arenas. I have work to do on football and basketball, but I love being in those environments. It combines the best of both worlds of sports and travel for me. That is my ultimate relaxation. ■

**Ron Derven** is a contributing editor to Development magazine.

## Introducing NAIOP's New Podcast, Inside CRE

**Inside CRE** is hosted by NAIOP President and CEO **Marc Selvitelli** and features candid interviews with commercial real estate leaders who share their industry and career insights.

Hear perspectives and personal stories, and get to know the people and personalities behind the projects and companies making an impact in the industry.

Subscribe now on Spotify or Apple Podcasts to stay in the loop and catch the newest episodes when they drop. ■

# From Broker to Developer: Let's Make a Deal

**Commercial real estate experts reveal specifics about transitioning to the ownership side of the business.**

*Second in a series.*

By Trey Barrineau

Advancing from broker to developer is a common career path in the commercial real estate industry. Brokerage is often the first step in a future developer's career because it touches on many aspects of development.

"Brokers serve as liaison between multiple parties in a commercial transaction, know extensive demographic and location information, and provide in-depth financial analyses to determine whether a property is good for their client's bottom line," according to a June 2022 article by Motley Fool.

Developers, on the other hand, need an even more expansive perspective.

"The real estate developer combines land, labor and capital to make a profit by creating a finished product whose value is greater than the costs of the component inputs," according to the NAIOP Center for Education's "Essentials of Real Estate Development: Overview of Real Estate Development" online course.

> **"The knowledge of every step is invaluable, considering that millions of dollars are at stake. You really must know enough to be dangerous about a lot of different facets of the industry."**
>
> *— Lindy Deller, development manager, Panattoni Development Company*

Development magazine asked experts who have made the leap from broker to developer to share advice that might help those who want to follow a similar path in the commercial real estate industry. (For an earlier article, see "From Broker to Developer: The Challenges (and Rewards) of a Major Career Transition" in the Winter 2022/2023 issue of Development.)

## Know the Role

First, it's important to understand the key differences between working as a broker and working as a developer.


Deller

"The major difference in my mind is the role the individual plays in the overall process," said **Lindy Deller**, a development manager at Panattoni Development Company in Reno, Nevada. "As a broker, typically you are involved in a very small piece of the process (i.e., helping with acquisitions, dispositions, leasing, etc.)."

As a former broker who now works as a development manager, Deller said she doesn't just work closely with the brokers; she also has a hand in every aspect of a development, from land acquisition, to entitlement, to construction and disposition.

"The knowledge of every step is invaluable, considering that millions of dollars are at stake," she said. "You really must know enough to be dangerous about a lot of different facets of the industry."

For developers, that means there is no such thing as a typical workday, according to **Lewis Agnew**, president of Charles Hawkins Co., in Nashville.


Agnew

"There is much more variety in my day-to-day work now," he said. "As a broker, I was very systematic with how I structured my day — cold calls in the morning, and then the afternoon was reserved for e-mail, paperwork and transactional work. In development, I have more meetings, tours, calls and Zoom meetings with the deal team. I am also more reactive with my time — often having to deal with emergencies or ongoing property management issues."

**Greg Fuller**, president and COO of Granite Properties in Dallas, also emphasized that working as a developer is vastly different from working as a broker.


Fuller

"A broker adds value by being an expert in their market," he said. "They work a lot of their day prospecting customers to serve. They facilitate transactions between landlords and tenants. Meanwhile, a developer sources opportuni-

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*— Lewis Agnew, president, Charles Hawkins Co.*



ties, working with brokers, city leaders, government officials, landowners, architects, contractors and many more to understand the opportunity they are pursuing. They underwrite the financial aspects as well as the design and construction aspects of a project. They find debt and equity for their projects, develop marketing plans and more depending on the complexity of the projects."

### When Opportunity Knocks

Networking is critical when it comes to getting the opportunity to make the leap from broker to developer. Associations such as NAIOP can play a vital role.

"I met my current boss through our local NAIOP chapter," said Deller, who is also president of NAIOP's Northern Nevada chapter. "I was the Developing Leaders chair at the time, and I was putting together our Developing Leaders Institute. I had requested that he be an instructor. I sought several other opportunities to pick his brain on development and the industry, and when the time was right and the position was open, he asked me to join his team."

According to Fuller, it can be challenging to move from broker to the owner's side.

"Brokers are often viewed as transaction-oriented and less concerned with how it is all put together," he said.

To speed his transition to developer, Fuller said he took an interim job with a construction firm that had a real estate arm. Some of the projects he worked on turned into build-to-suits and real estate investments.

"After a successful track record in that regard, I was a better candidate to work with an investor-owner-developer-operator like Granite Properties," he said.

### First Taste of Success

Moving from broker to developer is not just professionally rewarding; it also can be quite profitable.

**Jonathan Tratt**, principal for Tratt Properties, LLC, a development and investment company based in Phoenix, began working as a broker in 1986. By the late 1990s, he was specializing in warehouse and distribution properties.


Tratt

Tratt said his first deal as a developer involved a 95,000-square-foot warehouse in an established industrial park. He teamed up with a retail client who leased 80,000 square feet for 10 years and was a 50/50 joint-venture partner.

"We leased the vacant 15,000 square feet and then sold the property 18 months after completion," he said. "The cost was $3.1 million, and we sold it for $4.1 million."

Tratt said he also earned a 1% sales fee and a small management fee during the ownership. Later, the joint-venture partner's bank provided a $2.6 million loan and accepted the land as $250,000 of equity (the land cost was $175,000) and Tratt's partner contributed $250,000 cash equity.

"I earned an approximate 10 multiple of the cash equity that I had invested as I had borrowed $125,000 from a friend for the land purchase with me contributing only $50,000 from my pension plan as my only equity," he said. "I was very pleased with the financial outcome, and I thoroughly enjoyed the multi-faceted job and creative process."

A first deal doesn't just boost a developer's bank account. It can also be a learning experience. For example, Deller's first project was the Longley Commerce Center, a 12-tenant, 270,000-square-foot industrial building in Reno that was built in 2018.

"I jumped into the project when slabs were poured and we were just starting to tilt the panels," she said. "This experience was definitely like drinking from a fire hose. As a broker, I had only seen a small portion of the process. This project opened my eyes to all the complications and obstacles you must overcome during the life of a development."

Fuller's first deal could be seen as an example of good business acumen and salesmanship.

"I helped a small logistics company build their own building and convinced them to become a landlord as well by building twice as much as they needed at the time," he said. "It worked out well for all."

Agnew moved into asset management after working as a broker. From there, he did a project to redevelop an existing asset into creative office space.

"I took over the project, and it was ultimately successful," he said. "I've continued to seek out new development opportunities since that deal."

The bottom line according to Agnew?

"You're only as good as your last deal," he said. "If you do a good job, your investors will stick with you. If you don't, you'll be looking for new investors, and it will be much more difficult." ■

**Trey Barrineau** is the managing editor of publications for NAIOP.

# Design Obstacles Inspire Desirable Green Amenities

## In Nashville, the site challenges of a multifamily project reveal appealing solutions.

By Carl Malcolm, JHP Architecture / Urban Design

Nashville has experienced significant job growth, and with it came a dynamic, competitive housing market. Developers and designers of The Gupton, a recent residential project in a revitalized industrial zone near downtown Nashville, are using the site's obstacles to create a unique, wellness-focused property.

Nashville's boom was evident before the pandemic (overall job growth averaged 4% per year in the five years prior, according to Oxford Economics) and the region saw a 5.9% increase in employment from October 2021 to October 2022. As workers come to the city, new high-rise housing developments are trying to meet rapid demand. According to Apartmentdata.com, more than 15,000 units are under construction in the city, and more than 32,000 units are in the planning stages.

*Courtesy of JHP Architecture/Urban Design*

**The Gupton, a recent residential development in a revitalized industrial zone near downtown Nashville, incorporates healthful features as design solutions to site constraints.**

### Going Up for More Green

The Gupton project's site includes several challenges that the design team is working to turn into benefits. For example, local zoning laws require all construction to be set back considerably from the street. This provided an opportunity to create attractive outdoor decks and extra green space surrounding the building.

The zoning for the site was for four-story buildings consisting of housing over a two-story garage structure. However, this was inadequate to meet the demand for the number of units. While the developer, Chartwell Residential, was hesitant to increase stories because of the added expense, the design team showed how to capitalize on the zoning constraints for the footprint and construct a 14-story tower that would ultimately pay for itself — even though it was more expensive to build from the outset. The increased height enhanced the green spaces added later, creating a "garden in the sky."

*continued on page 40*

**The Gupton project's site includes several challenges that the design team is working to turn into benefits. For example, local zoning laws require all construction to be set back considerably from the street. This provided an opportunity to create attractive outdoor decks and extra green space surrounding the building.**


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**Another example of constraints becoming assets was the water-quality requirements, which led to the creation of a green roof. The civil engineer had initially proposed placing the water-quality-management elements for stormwater runoff underground, but the site's crowded urban infrastructure was limiting. The design team instead decided to add a green roof to accommodate the water quality system.**

*continued from page 38*

Another example of constraints becoming assets was the water-quality requirements, which led to the creation of a green roof. The civil engineer had initially proposed placing the water-quality-management elements for stormwater runoff underground, but the site's crowded urban infrastructure was limiting. The design team instead decided to add a green roof to accommodate the water quality system. The green roof required nine inches of soil depth to manage the water. This created green space, but the design team took it a step further to make it a usable amenity with benches, paths and play areas. They also had to navigate the HVAC and other required infrastructure.

**Creating accessible and healthful outdoor spaces in a high rise provides an amenity that stands out in the market. While private and semi-public green spaces on elevated decks are uncommon for a high rise, the approach is gaining popularity, especially after pandemic quarantines kept apartment dwellers indoors.**

The result was a graceful hanging garden, combining efficiency with aesthetic appeal. The hanging garden and sod treatment were defining characteristics of the design, but the project also has an excellent overall amenity package, including a club room opening onto a garden on the green roof and a 12th-floor pool overlooking the green roof garden on the sixth floor. The top three levels are luxury penthouse units. Because the team pushed past the requirements with creative solutions, the result was a beautiful space that should attract tenants and provide greater ROI for developers.

### Thinking Beyond the Pandemic

While private and semi-public green spaces on elevated decks are uncommon for a high rise, the approach is gaining popularity, especially after pandemic quarantines kept apartment dwellers indoors. The architectural design trend integrating living plants speaks to a broader theme of wellness and appeals to a wide range of potential tenants.

This mindset change goes beyond simply responding to the cultural shifts brought on by the pandemic. It speaks to a wellness-focused lifestyle that has been gaining in popularity. People understand the positive physical and mental health effects of spending time outdoors and being part of a community.

**The COVID-19 pandemic changed much about how and where people work and live, with shifting priorities in work/life balance and wellness-focused living. Because of that, having an outdoor space has become a much bigger priority than before.**

For architects, designers and developers, the key to optimizing these types of amenities is three-fold: seeing opportunity in constraints, asking the right questions, and moving through the iterative process of refining solutions to each challenge as it arises. This approach will eventually result in amenities and features as unique as the character of the site itself. ■

**Carl M. Malcolm** is president of JHP Architecture/Urban Design in Dallas.

# Multifamily Offers Stability in the Face of Uncertainty

**The sector has always performed well during recessionary periods.**

By Sean Burton and Ryan Graf, Cityview

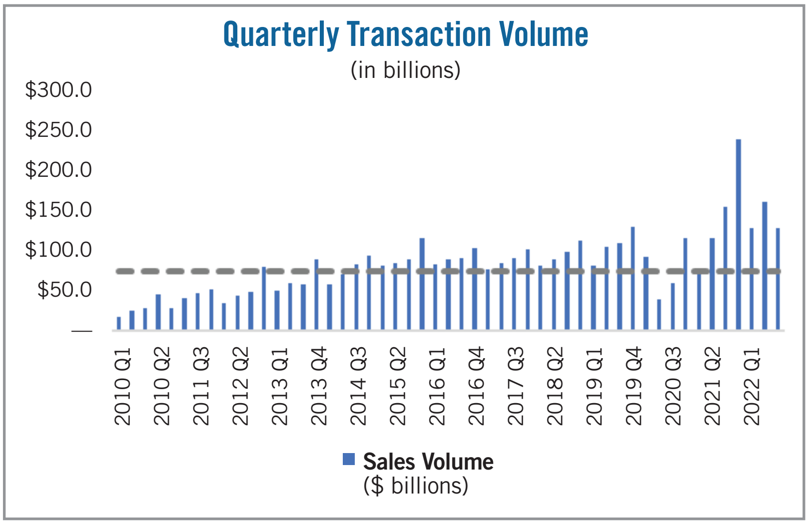
Multifamily real estate is poised to continue to be a bright spot in 2023 despite current economic uncertainty, with the potential for distinct pockets of opportunity for those looking in the right places — and even more so for those with the expertise to build.

## Where Do Things Stand Today?

While the real estate market has been significantly affected by recent macroeconomic uncertainty and rising interest rates, rental rates over the past three years have seen historic growth among a stable tenant base. This created a dichotomy between macro conditions and on-the-ground operations. According to research from Real Estate Investment Services and Federal Reserve Economic Data, apartment rents have increased by 21% since 2020, while inflation has risen by 15.5% in the same period.

Although there have been historic transaction volumes in the past few years (See Figure 1), much of that centered on existing product rather than new development, which has done little to help the persistent shortage of housing that plagues many markets in the U.S. The fundamental need for housing and a lack of sufficient supply, especially in the workforce segment, support the growing case for multifamily development, especially in undersupplied markets with high barriers to entry.

Figure 1



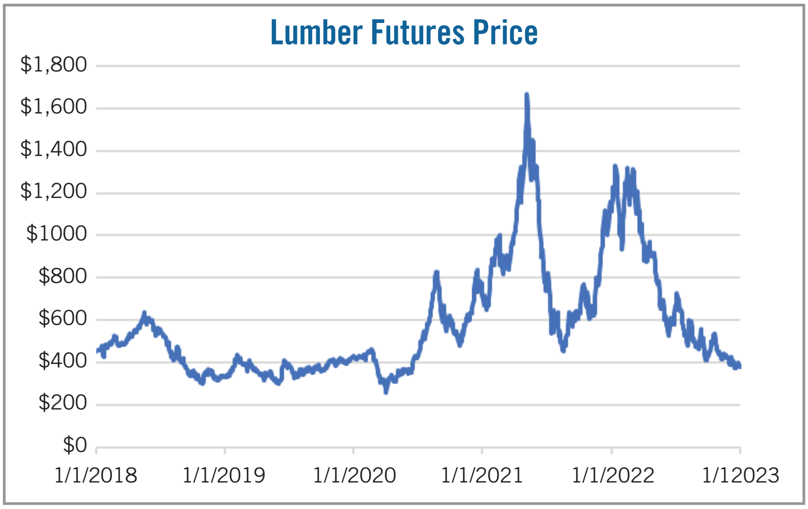

*CoStar Market Data – Total U.S. sales volume for four major property types: Industrial, Multifamily, Retail and Office by quarter*

The existing U.S. housing shortage was significantly exacerbated by the drop in housing construction following the 2008 Global Financial Crisis (GFC). Freddie Mac data indicates a shortage of four million units nationwide. This shortage is particularly acute in the workforce-housing segment, typically defined as market-rate housing affordable to households earning between 80% and 200% of a market's area median income. In contrast to the push for government-subsidized affordable housing and growth in the high-end market, the middle segment has received significantly less attention, and it is not keeping up with growing demand. The workforce cohort in the U.S. saw outsized growth during the 2010s, with the number of households earning $75,000+ growing by 3.7 million between 2009 and 2019, according to the Harvard Joint Center for Housing Studies.

Furthermore, this housing shortage is not spread evenly across all markets. Supply-constrained markets like those on the West Coast face a uniquely difficult challenge as developers must possess specialized expertise to solve regulatory, political and geographic challenges.

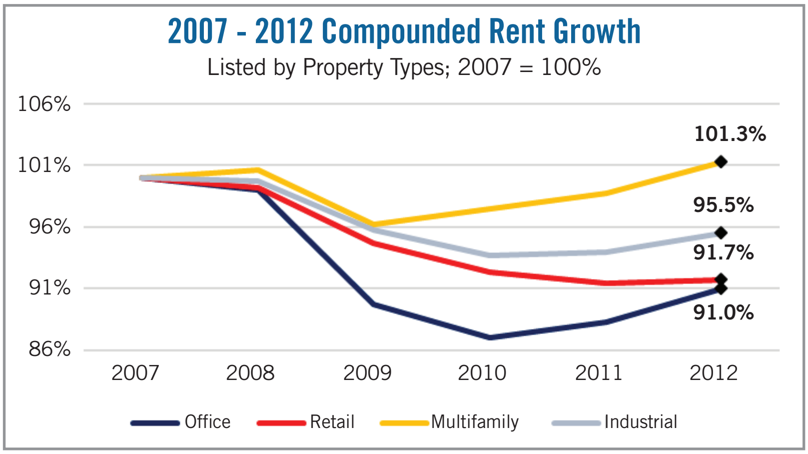
**The existing U.S. housing shortage was significantly exacerbated by the drop in housing construction following the 2008 Global Financial Crisis (GFC). Freddie Mac data indicates a shortage of four million units nationwide. This shortage is particularly acute in the workforce-housing segment, typically defined as market-rate housing affordable to households earning between 80% and 200% of a market's area median income.**

Figure 2




*Source: NASDAQ*

Figure 3




*Source: CoStar*

Demographic trends are also driving demand for multifamily housing. Educated young adults continue to prefer metropolitan locations that provide quality social and professional opportunities, areas that often lack sufficient workforce and attainable housing. These highly amenitized locations offer diverse employment opportunities in addition to convenient public transit, rich cultural experiences and nightlife. This supply/demand imbalance presents attractive opportunities for savvy developers experienced enough to deliver quality product in these attractive locations that is priced for this demographic group.

Over the past three years, the global economy has faced numerous challenges. COVID-19's initial impacts caused an unprecedented disruption. Unemployment jumped from 3.5% in February 2020 to nearly 15% by April, and GDP saw an 8.8% drop from the first quarter to the second quarter of 2020, the largest quarterly drop ever recorded. Apartment demand dried up quickly, but it snapped back at breakneck speed as government stimulus kickstarted consumer spending and employment quickly recovered. However, compared to the speedy, volatile moves in aggregate demand, supply chains moved at a glacial pace. Worker shortages and supply chain disruptions persisted much longer than most anticipated, including the Federal Reserve. As a result, demand significantly outpaced supply throughout 2021, leading to the highest level of inflation since the early 1980s.

Fortunately, recent evidence suggests that supply chain disruptions and related price increases have abated. Figure 2 illustrates how the price of lumber grew from $460 per 110,000 board feet in February 2020 to a peak of $1,670 in May 2021. This was then followed by a volatile period between the second quarter of 2021 and the second quarter of 2022 before dropping to today's price of $377, less than its pre-COVID level.

Another example comes from looking at container shipping prices. At their peak in September 2021, the price of shipping one container from East Asia to the North American West Coast was $20,586. As of January 4, 2023, that price has fallen to $1,382, a drop of over 93%, according to data from Freightos.

## How Multifamily Generates Strong Returns

Supply chains returning to normal and costs leveling off will help assuage a primary development concern — uncertainty in the escalation of development costs. 2020-2022 saw unprecedented cost escalations reaching 1% to 2% a month in certain markets. However, data from CBRE shows that development costs are leveling off and are now expected to rise at a more predictable, pre-COVID rate of 2% to 4% per year in certain markets, providing more cost certainty and better returns to developers and investors.

Unfortunately, investors do face a new set of risks with rising interest rates and a looming recession. Here, the development business model may present a unique opportunity. Its long time horizon and relative insensitivity to interest rates (up to four times less sensitive compared to value-add product strategies, according to an internal analysis by Cityview) make it a potential source of strong returns for investors seeking to add differentiated growth exposure to their portfolios while also hedging against inflation. A multifamily development project can be four times less sensitive to a change in interest rates than a value-add or core project, due in large part to the value generated through the development process and the timing of when funds are utilized. This allows investors and developers to capitalize on the potential benefits of multifamily, including its historical recession resiliency, while offsetting some of the interest rate impact in today's macro environment.

Recent recessions have shown multifamily to be uniquely resilient to macroeconomic volatility. It has historically been the best-performing property type during recessions, with demand remaining relatively strong and rents recovering faster than other property types. This is shown in Figure 3's depiction of rent growth by property type during the GFC.

Occupancy data tells a similar story, as multifamily occupancy fell only 0.7% at its lowest point during the GFC, which is just half of the drop in retail occupancy (1.4%) and less than 1/3 of the drop experienced by industrial (2.4%) and office (2.7%), according to data from CoStar. Furthermore, the recovery and subsequent expansion period following recessions has also seen strong performance, with multifamily rents averaging growth of 20%.

Multifamily's recession resiliency, ability to function as an inflation hedge and historical growth post-recession make it an attractive investment in these uncertain times for those looking to add differentiated growth exposure to their portfolios. Those who can develop and build may have the opportunity to supercharge that growth

**Multifamily's recession resiliency, ability to function as an inflation hedge and historical growth post-recession make it an attractive investment in these uncertain times for those looking to add differentiated growth exposure to their portfolios.**

by generating value that isn't always obtainable by merely operating an existing building with the added potential benefit of delivering new product into a post-recession market that has historically seen outsized returns. ■

**Sean Burton** is the CEO of Cityview; **Ryan Graf** is associate of capital raising and investor relations at Cityview.

# Evaluating ESG Investing with a Critical Eye

## The principles can help commercial real estate firms make responsible investing a priority.

By Ryan Swehla, Graceada Partners

Environmental, social and corporate governance (ESG) has become shorthand for principled decision-making in the professional world. Most people agree that keeping the planet clean, prioritizing social good and promoting ethical business practices are net positives.

According to an article published in November 2021 by NASDAQ, institutional and retail investing in ESG strategies grew 42% from 2018 to 2020. It's important to remember that ESG investing is a strategic mindset. There are no assets that are inherently ESG by nature. Investors can scrutinize their options to determine which financial decisions meet the criteria of ESG for their portfolio.

A green roof at an office building is an example of an environmental intervention that is a key component of ESG principles in commercial real estate.

### An ESG Primer

Investors should be mindful of the three components that make up ESG:

**Environmental.** Enhancing an asset's environmental performance will positively impact its long-term investment performance. For a real estate portfolio, this is a simple input-output equation: focusing on renewable energy implementation, energy consumption reduction, waste reduction, water usage reduction, hazardous materials removal and carbon emission reduction all improve the physical environment where the property is located.

> It's important to remember that ESG investing is a strategic mindset. There are no assets that are inherently ESG by nature. Investors can scrutinize their options to determine which financial decisions meet the criteria of ESG for their portfolio.

**Social.** Investors should strive to cultivate a healthy work environment for employees, tenants and the communities that are involved. According to a 2019 survey by BuiltIn, an online community for startups and tech companies, this is not just anecdotal; their findings revealed that 88% of employees believe that a strong, supportive company culture was vital to their company's success. On top of that, software developer TeamStage found that businesses that embrace a socially responsible mindset could see a four-fold increase in revenue, suggesting that there is no tradeoff between social considerations and profitability.

**Governance.** Governance simply refers to a company holding itself to a higher ethical standard and establishing a framework of transparency, benevolent policies and fair procedures. These governance principles are best outlined in the United Nations-supported Principles of Responsible Investment (PRI), a pledge for organizations striving to uphold ethical business practices and moral financial decision making. The number of signatories is in the thousands and spans more than 130 countries. This includes big organizations such as Blackstone, Prudential PLC and the Harvard University Endowment, as well as smaller companies such as Graceada Partners, which all pledge to follow responsible principles for investing.

These principles can provide an excellent starting point for commercial real estate firms that want to prioritize responsible investing. For example, when a firm buys a new property, it would evaluate making water conservation and energy efficiency a required and central part of its investment process instead of something that's ancillary. And when a new office or apartment building is acquired, the firm would specifically evaluate social and community aspects of the property and their management practices.

## Putting ESG Values into Practice

When planning for the fiscal year or even the next quarter, an ESG-conscious real estate investor can run an investment analysis of a property or an asset that promotes itself as incorporating ESG. By scrutinizing the three main factors that go into investment analysis — risk, cash flow and resale value — while having an ESG overlay to those components, investors can make ESG-conscious investment decisions that can simultaneously maximize these three categories.

It's one thing to seek out ESG investments, but it's another to live by them. Companies that integrate ESG values into their own business model have the potential to stand out from those that don't. For a commercial real estate investor, locating properties that make efforts toward renewable energy implementation, energy-consumption reduction, waste reduction, water-usage reduction, removal of hazardous materials and carbon-emission reduction helps create ESG-positive, long-term investments.

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To maintain the highest level of ethical business practices, it's important to establish an organization-wide framework of expected policies and procedures. Having these guidelines in place will provide transparency and create control measures to ensure adherence to social investment principles. This framework includes — but is not limited to — a code of ethics, sexual harassment policies and a regularly updated compliance manual. Encouraging employees to lead ethical lifestyles within office hours has been shown to translate to better productivity and company satisfaction.

According to the Forum for Sustainable and Responsible Investment's 2020 trends report, in 2010, the 10 largest investment firms held more than 70% of all sustainable assets under management. By 2020, the 10 largest firms held under 40%. This indicates that more organizations are actively seeking ESG investments. And while ESG-focused investments in gateway cities and primary markets have led the charge, there has also been growth in ESG considerations in secondary and tertiary markets across the U.S. These markets have considerable room for improvement and therefore represent a significant opportunity for major ESG impacts in the future.

## Promoting and Committing to ESG

There are two ways to promote ESG investment values: directly or indirectly. A direct initiative to promote ESG within the commercial real estate space would involve a firm joining organizations that raise awareness about ESG, such as PRI and the U.S. Green Building Council's LEED certification, and working alongside other like-minded corporations. This not only helps each business, but also the environmental and social spheres involved. An indirect approach could be described as "leading by example," which can encourage other firms and investors to follow suit.

Both tactics are helping to create a new foundation for investing. In late 2021, The Wall Street Journal predicted that within the next five years, 100% of investments will be classified as either an ESG risk or ESG opportunity. If this becomes the case, the discussion that investors will be having at the end of this decade will not be about ESG vs. non-ESG but weighing the merits between two ESG-oriented investments and determining which one edges out the other.

It's important for investors to be aware of ESG and its impact on the industry. Taking a stance and pledging to adhere to a set of core values can be beneficial; it's something many firms have done with the UN PRI pledge. Enshrining values is ultimately an opportunity to signal to key stakeholders a desire to incorporate ESG efforts into every investment decision. And if The Wall Street Journal's prediction indeed holds true, organizations will want to ultimately be on the side of opportunity, not risk. ■

**Ryan Swehla** is co-CEO and co-founder of Graceada Partners, an investment firm in Modesto, California.

# Where the Sidewalk Ends: Green Street Infrastructure

**Advances such as permeable pavement can help contain stormwater runoff.**

By Alice Devine

"Slow it, spread it, sink it" is the tagline of urban planners trying to manage water on city streets. From Roman aqueducts to fountains whose dolphins spew arcs of water, builders have long used hard materials such as stone, brick and concrete to contain and circulate water.

Ironically, the impermeable materials of built environments that are so effective at containment create problems of their own. They are, in some ways, too efficient. For example, winter storms underscore the need for drainage when the ferocious rush of water can overwhelm a system, creating large puddles and local flooding.


In Burlingame, California, a mural project for storm drains reminds residents of the importance of managing stormwater runoff.

*Photo by Jennifer Lee, courtesy of City of Burlingame, California*

The rapid transit of rain and water runoff can inundate storm systems, causing erosion and carrying pollutants into rivers, bays, lakes and oceans. Developers and municipalities, however, are choosing to substitute porous and planted materials for solid pavement, mimicking the slowing and filtering seen in a natural marsh.

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## System Overwhelm

Traditional sidewalk treatments exacerbate water runoff and heat gain. When a natural ecosystem is altered to urban land use, water that previously ponded on the ground before being converted to groundwater is frequently turned into surface runoff.

Rainy weather allows stormwater to flow from rooftops, sidewalks and streets, accumulating pollutants such as motor oil, pesticides, trash and animal waste. The contaminated water then travels, untreated, into storm drains and other bodies of natural water. The results manifest themselves in local flooding, and less obviously, in polluted waterways.

The direct and rapid route from stormwater system to fresh bodies of water causes erosion, too. According to an article by Penn State Extension, "the key to preventing soil erosion is slowing down stormwater where it falls, because slow-moving water contains less erosive energy."

Additionally, solid waste can be swept up in the rapid route from rain to drain. Because gutters and drains often go unnoticed, campaigns such as Burlingame, California's Storm Drain Mural Project solicit artwork from its residents to be painted next to such drains. Small, colorful murals with phrases such as "keep it clean, we're all downstream" educate and create community awareness.

## Green Infrastructure

Like the tip of an iceberg, permeable surfaces are generally part of a greater green network. An integrated system might include curb extensions, gutters, bioretention (rain) basins, selected planted materials and soil, and underground piping systems all designed to slow runoff. Beneath the soil, perforated pipes allow water to dissipate while blocking solid materials. The water exits into landscaped areas or special draining pavements that are designed to absorb, filter and break down pollutants. While green infrastructure best replicates a natural ecosystem, component parts can still improve areas that do not undertake wholesale change.

### Permeable Paving

Permeable paving, also called pervious paving, is the top surface layer in the form of interlocking pavers or special concrete and asphalt mixes. While the dark red bricks set in a herringbone pattern on downtown streets in Berkeley, California, may appear decorative, the lack of grout between pavers allows disbursement of water to a subsurface. Another lattice form, a favorite of Green Dot Transportation Solutions' consultant **Kelly Rice**, allows planted material to grow in between concrete diamond shapes. These surfaces sit on gravel layers that filter and hold large volumes of stormwater. This process allows gradual water movement as the earth absorbs liquid and slows the progression to natural waterways.

Of course, paving selections must be site appropriate. According to Rice, "permeable alternative materials can be too sensitive to use on main roads because trucks weigh far too much." Instead, such paver systems work best in pedestrian-only and low-vehicular-traffic areas with minimal debris accumulation (such as leaves), which can impair infiltration ability.

### Bioretention Facilities

Alongside permeable paving, bioretention facilities — also called rain gardens or rain basins — combine stormwater runoff control and treatment with aesthetic landscaping and architectural detail. These vegetated depressions in the land use soil and plants to trap pollutants as the water percolates through the system.  Plants

**Traditional sidewalk treatments exacerbate water runoff and heat gain. When a natural ecosystem is altered to urban land use, water that previously ponded on the ground before being converted to groundwater is frequently turned into surface runoff.**

are chosen for their hardiness and cleaning abilities. For example, the SPINE project in San Pablo, California, uses Persian ironwood trees and California buckeye in a network of rain basins along a popular street lined with dozens of stores.

Technical descriptions of rain basins, however, belie their attractiveness. They can be filled with flowing gray and green grasses beneath a pink cherry tree alongside "cut out" gutters that curve, a welcome visual change from linear gray concrete and lackluster lawns. Additionally, landscape designers can use the basins to create placemaking spaces in the community, illustrating values such as walking areas, bike paths and physical beauty.

### Environmental Impact

In addition to slowing and cleaning water runoff, permeable materials lessen heat load. Nature's soft colors have less of an albedo effect — words used to describe a surface's ability to reflect sunlight and heat — than the blacks or grays of solid concrete and asphalt. The textures and articulation of plants and trees also diffuse light differently. The overall slowing process of filtering reduces water temperature, too, as warm water can encourage harmful algae growth that threatens plant life and swimmers.

Further, green street infrastructure represents efforts to meet environmental, social and governance (ESG) goals. The San Francisco Estuary Project reports that, in two case study projects (the SPINE project and a library parking lot in Daly City), water quality monitoring showed significant reductions in pollutant ranges. The most notable change related to plastics, a reduction that ranged from 44% to 99%, while concentrations of metals such as copper, lead, nickel and mercury were also lowered.

**Although the upfront costs of green infrastructure are higher than traditional street treatment, their long-term payoff results in decreased operations and maintenance expenses. The additional design considerations, labor and material, and initial maintenance needs add 12% to 25% to the cost of street improvement, according to the San Francisco Estuary Project.**


### Lower Long-term Costs

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Economies of scale can reduce these added expenses. In Campbell, California, a mile of residential roadway was reconstructed at a cost of $5.24 million, adding 17% to the cost. Yet, the San Francisco Estuary Project reports that "the project transformed 25% of the (mile-long) street into a linear green space, including a bioretention system and more than 60 newly planted street trees."

Funding for green infrastructure is often a combination of public and private monies, in conjunction with development or redevelopment projects. In instances such as San Pablo's SPINE rain basin network, the California Department of Transportation contributed $1.8 million to offset the paving needed for construction of a nearby bridge. Local property owners will pay for ongoing rain basin maintenance.

Benefits accrue in the expenses not incurred, such as for resurfacing (which is more expensive than replanting), irrigation and reduced damage due to overwhelmed piping systems. The SPINE project replaced concrete and lawn with curb cuts to allow water to flow into 19 bioretention cells heavily planted with native shrubs and trees. Over time, drought-tolerant plants will require much less irrigation than thirsty lawns. ■

**Alice Devine** lectures at the University of California, Berkeley Haas School of Business and is the author of the award-winning "Suite Deal: The Smart Landlord's Guide to Leasing Real Estate."

# Reimagining Car-Centric Properties

**Vast surface parking lots around offices can be enticing targets for redevelopment.**

By Shaun R. Adams, Parker Poe

For many metropolitan areas, the period from the 1980s through the 1990s saw a boom in suburban growth. Land was relatively inexpensive, vehicles were a necessity and Generation X was coming of age with an eye toward the American dream of owning a home. The willingness of people to commute a reasonable distance for work in order to achieve this dream led to a migration away from employment centers. This resulted in the continued development of suburban communities with a heavy focus on residential neighborhoods featuring retail along major thoroughfares.

Suburban planning during this time centered around the automobile. Homes had multicar garages or carports, and retail centers wanted visibility along major thoroughfares with ample parking in front. Office buildings also had high parking ratios of more than one space per person due to the need for employee parking with additional spaces reserved for visitors.

In reaction to emerging trends such as increased live/work environments, flexible working conditions and a departure from automobile dependency, developers and municipalities are adapting in order to keep pace.

More developers are turning underutilized parking lots into mixed-use developments.

## New Priorities

As millennials and Generation Z entered the workforce, their preferences for less automobile dependency and proximity to work, entertainment and retail has led to newer employment centers and office buildings being developed as part of mixed-use centers. Unlike the office buildings of the 1980s and 1990s that were largely standalone structures with ample parking, many of the newer employment centers were built around public amenities such as multiuse paths, transit stops or live/work communities that attract younger professionals. The developments include additional interior amenities for the tenants such as robust fitness facilities, collaboration areas or lounges, and onsite food and beverage. This change has placed aging office stock at a competitive disadvantage.

In reaction to emerging trends such as increased live/work environments, flexible working conditions and a departure from automobile dependency, developers and municipalities are adapting in order to keep pace. One way has been to leverage the reduced demand for parking by activating underutilized surface parking areas to create mixed-use environments.

At the same time, many suburban areas are running out of greenfield space and are becoming redevelopment communities. The ability to activate vast, underutilized parking areas surrounding office buildings and create vibrant mixed-use developments can revitalize an aging property.

This has local governments — cities in particular — reconsidering their zoning ordinances to align with this trend. The most common changes include a reduction in parking-ratio requirements for office buildings and mixed-use developments, changes to mixed-use ordinances to allow for mixed-use developments on smaller parcels, and the inclusion of bonus density for developments that incorporate certain amenities or enhance existing public amenities such as multiuse paths, transit and public art.

### A Win-Win Situation

In metropolitan Atlanta, new housing stock has not kept pace with population growth. This is due, in part, to competing forces such as the desire for more low- to medium-density ownership products, the availability of land, and the shift toward lower-maintenance properties that are walkable to commercial and entertainment centers.

One solution is a local government allowing the development of townhomes or multifamily into an existing office product. This would create mixed-use developments that are mostly commercial while introducing higher-density residential in smaller allotments throughout the community. It allows local governments to create new housing near job centers throughout the community rather than in larger-scale, single-use multifamily developments.

**One solution is a local government allowing the development of townhomes or multifamily into an existing office product. This would create mixed-use developments that are mostly commercial while introducing higher-density residential in smaller allotments throughout the community.**

For this to work, there must be an agreement between the current property owner and the developer of the residential component — assuming different entities — as the whole site will likely need to be rezoned for higher density. For example, a 10-acre office site may have approximately two to three acres of excess parking that the developer wants to activate with a multifamily building or combination of uses. Typically, residential uses are not permitted in an office-zoned designation, thus triggering the need for rezoning.

Additionally, most suburban multifamily zoning districts allow for less density per acre than what could be obtained through a mixed-use zoning designation. Therefore, if the developer were to seek multifamily rezoning for two to three acres, the allowable density would be too low to justify the project. However, if the developer and the property owner agree to rezone the whole 10-acre parcel as one mixed-use development, the density for the residential component will be calculated based on the whole parcel, despite only being developed on a portion of the site.

The result is a mutually beneficial development that enhances the value of the office building through a vibrant, small-scale, mixed-use community that shares amenities commonly found in newer office developments. The developer can leverage all the acreage for density purposes while only acquiring a smaller portion of the property for development. The local government benefits from the creation of small-scale live/work environments that lessen the demand on road infrastructure while bringing the design aspect of the development in line with their future vision for the community. It also adds necessary housing stock to the community in a development that is inherently less dependent on automobiles, thus minimizing their impact on existing infrastructure.

With greenfield sites harder to come by and workers accustomed to working remotely, creative redevelopment opportunities will become increasingly valuable to local jurisdictions. They can meet the housing demands created by population growth while ensuring the long-term viability of their office stock, which ultimately results in a healthy and vibrant community. ■

**Shaun R. Adams** is part of Parker Poe's Development Services Industry Team in Atlanta.

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Cover Story

# Industrial Spotlight: Mexico

### At a Glance

- The Mexican industrial market has grown significantly in the past few years.
- A large percentage of industrial space in Mexico is located near the U.S. border.
- AMPIP, an association that represents Mexican industrial parks, has worked with NAIOP since 2006. ■

**The Tlalnepantla Logistics Center is in the State of Mexico, the federal entity that encompasses Mexico City and its surrounding municipalities.**


Photo courtesy of AMPIP



# Nearshoring, Foreign Investment Create Opportunities

## COVID-19 drew greater attention to this growing market where the fundamentals are strong.

By C. Kat Grimsley, Ph.D., and Héctor Salazar Sánchez, Ph.D., George Mason University

Industrial real estate emerged as a clear winner during and after the COVID-19 pandemic thanks to increased demand for e-commerce, a new emphasis on nearshoring and greater investment in logistics solutions.

In particular, Mexico, with its proximity to the U.S. consumer market, has seen substantial growth in industrial development in recent years. The Mexican Association of Industrial Parks, known by its Spanish acronym AMPIP (for Asociación Mexicana de Parques Industriales Privados), has worked with NAIOP since 2006. It is the leading organization providing support and resources for industrial owners, investors and developers in Mexico.

**In 2022, 65% of Mexico's industrial space construction was concentrated in just four cities** — Mexico City (20%), Monterrey (19%), Ciudad Juarez (16%) and Tijuana (10%), the last three of which are states that border the U.S. and have greatly benefited from nearshoring.

AMPIP's deep knowledge of the Mexican market may be of special interest to U.S.-based investors who seek new opportunities in 2023, and it can also serve as a resource for the exchange of ideas related to sustainability and energy solutions for a new generation of industrial parks.

## Market Overview

Although notably smaller than the neighboring U.S. market, which has 14.5 billion square feet of industrial property, the Mexican industrial market benefits from strong fundamentals and continuing positive trends. According to research from JLL, Mexico's industrial market encompasses 908.5 million square feet across all product types, including manufacturing. It has seen year-over-year decreases in vacancy, along with increases in rental rates and continued positive absorption. Research from Datoz, a leading Mexican provider of data on commercial real estate, shows that during the first three quarters of 2022, total industrial space construction in Mexico hit a historic level of 43 million square feet, which is 60% higher than the same period in 2021.

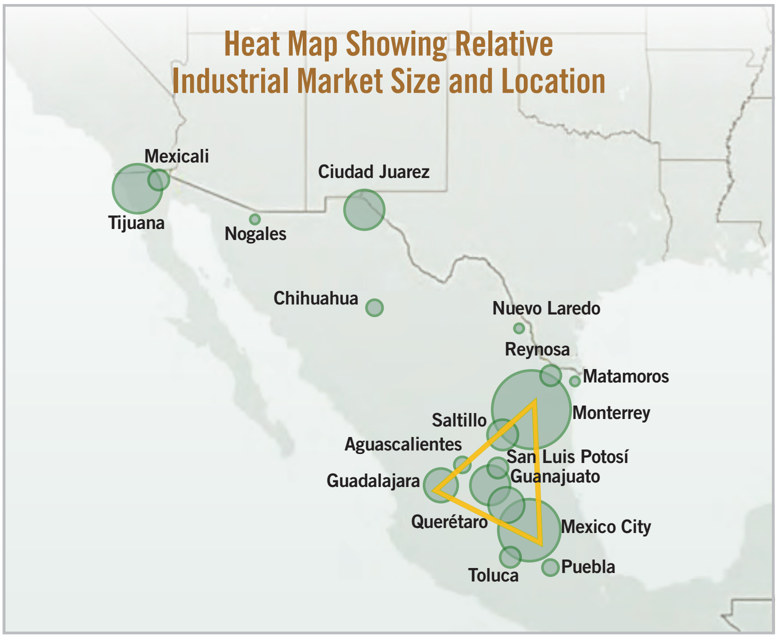
In 2022, 65% of Mexico's industrial space construction was concentrated in just four cities — Mexico City (20%), Monterrey (19%), Ciudad Juarez (16%) and Tijuana (10%), the last three of which are states that border the U.S. and have greatly benefited from nearshoring. As a result of increased demand in specific geographic areas, particularly in markets like these along the U.S. border, land scarcity may present challenges in the future. However, it may also create opportunities for expansion into new markets.

The largest concentration of industrial properties is in an area called the "Golden Triangle," bounded by Monterrey in the north, Mexico City to the south and Guadalajara to the west. This area accounts for more than 60% of the industrial space in Mexico.

Within these areas, most industrial properties are located in private industrial parks, the majority of which are AMPIP members. These private parks can usually address many of the market challenges encountered in Mexico, such as a lengthy process to consolidate fractured land ownership, the need for extensive negotiations to provide reliable infrastructure, improved compliance and governance, and the opportunity to provide smart and sustainable solutions to investors, tenants or end-users with an ESG (environmental, social and governance) focus.

Many of the flexible solutions developed within the Mexican industrial park model are applicable in many areas of the U.S. For example, in the Southwest and West, the increasing unreliability of power grids can introduce costs and operational threats to industrial owners and tenants. Similarly, the demand in the U.S. for sustainability may benefit from the goals being developed by AMPIP and its members, which are outlined in greater detail in "Road Map to 2030: Towards a New Generation of Smart and Sustainable Industrial Parks," published in April 2020.

According to AMPIP's research, the distribution of product type within these industrial parks var-




Source: Authors' research © 2022 Mapbox © OpenStreetMap


*Source: Banobras with information from World Bank*

ies by submarket, but is generally divided between logistics (22%), manufacturing (22%), automotive-specific (23%) and all others (33%). However, an interesting innovation within the Mexican market is mixed-industrial product, such as a blended manufacturing and distribution facility. The possibility of combining different sectors in the same space would seem to fit in with the ongoing development of more efficient global supply chains powered by logistics and automation.

Of the standard product types, absorption related to the automotive sector has been particularly strong, and all data indicates that it will stay strong into the future. According to a December 2022 article in El Financiero, a Mexican publication that reports on the country's business and financial markets, automotive has an absorption rate of 27%, followed by logistics (18%), electric (13%) and other products and services (42%).

### Market Drivers: Foreign Direct Investment and Nearshoring Demand

The World Investment Report 2022, published by the United Nations Conference on Trade and Development (UNCTAD), shows that Mexico ranked No. 10 globally as a recipient of foreign direct investment and fifth among developing economies. Additionally, the Ministry of Economy reported that in 2022 Mexico received more than $31.6 billion in foreign direct investment, most of which was allocated to manufacturing.

According to the Inter-American Development Bank (IDB), nearshoring could add $78 billion a year in additional exports of goods and services from Latin America and the Caribbean — $64 billion in exported goods and $14 billion in services. Thanks to the country's unique nearshoring advantages, IDB estimates that Mexico would

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potentially achieve up to 55% ($35 billion) of the total estimate of exported goods from Latin America and the Caribbean. This is consistent with the commercial strength of Mexico as the leading exporter in the region. According to Banco de Mexico and the World Bank, in 2021 Mexico ranked as the world's No. 12 exporter and importer, and was the No. 1 Latin American exporter, responsible for 37.9% of all exports from the region.

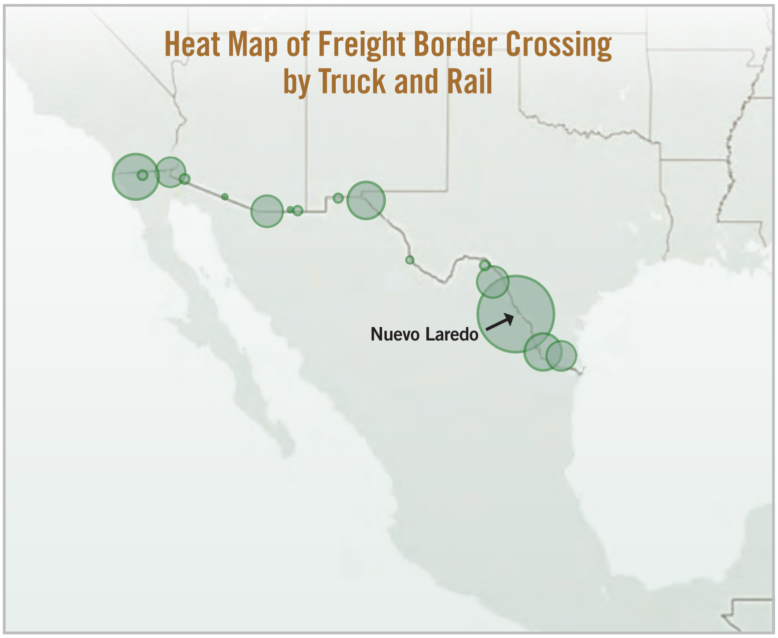
The low vacancy rates for Mexico's industrial properties during the first half of 2022 reflect the strong nearshoring demand for space and is correlated to the increasing level of foreign direct investment in Mexico in the aftermath of the COVID-19 pandemic, which the Bank of Mexico says is expected to reach $35 billion this year. For 2023, companies relocating to Mexico are expected to make significant investments in industrial space — roughly $2.5 billion to build new industrial parks and another $10 billion specifically for the automotive sector, according to a December 2022 report in El Financiero. Monterrey represents the connection between nearshoring, industrial demand and foreign direct investment: not only is it the largest industrial market overall by size, it is also the largest market within the state of Nuevo Leon and a significant destination for foreign investment because of its proximity to Texas.

### Strong Underlying Conditions Create Industrial Market Opportunities

Mexico's status as one of the world's most competitive countries for attracting investments drives its overall success at creating market opportunities. Six key factors that have a direct connection to Mexico's industrial market are:

**An open economy with access to the most important markets worldwide.** According to the Mexican Secretariat of the Economy, the country has 13 free trade agreements with privileged access to 50 countries, which represents 60% of global GDP and more than 1.3 billion potential consumers. The most important of these agreements is the United States-Mexico-Canada Agreement (USMCA), which replaced NAFTA and took effect on July 1, 2020. USMCA is one of the world's largest free trade zones, spanning 495 million people and totaling more than $24 trillion in GDP (28% of global GDP) and $2.6 billion in exports (13.3% of total global trade).

**A strategic geographical position relative to the U.S.** The approximately 2,000-mile-long U.S.-Mexico border creates abundant opportunities thanks to the U.S. consumer market, which is the largest in the world in terms of spending. While Mexico's ports and airports are essential for global distribution, rail connections and highways provide critical access between the U.S. and Mexico. According to the U.S. Bureau of Transportation Statistics, an average of 230,000 vehicles and 70,000 trucks traverse the border daily at 56 international crossings, and $56.1 billion in transborder freight moved between the U.S. and Mexico in October 2022 alone. Nuevo Laredo is the most significant cross-border gateway for rail and truck containers, despite having a relatively small industrial footprint as measured in square feet.




*Source: U.S. Bureau of Transportation Statistics, 2021 data* *© 2022 Mapbox © OpenStreetMap*

Photo courtesy of AMPIP

**A building within Advance Real Estate's Puerto Interior industrial park, which is located in Silao in Mexico's Guanajuato State.**

Perhaps unsurprisingly, a significant 24% of Mexico's GDP is generated in the border region. According to Mexico's Secretariat of the Treasury and Public Credit, the economic activity of the 10 border states of both countries (California, Arizona, New Mexico and Texas in the U.S.; Baja California, Sonora, Chihuahua, Coahuila, Nuevo Leon and Tamaulipas in Mexico) would represent the world's third-largest economy. Indeed, research from Prologis forecasts a continued increase in market demand in 2023, driven in large part by ongoing trends in nearshoring.

**Increasingly skilled workforce.** Mexico's main high-tech manufacturing hubs in Monterrey, Guadalajara and Mexico City have developed a highly trained and skilled labor force. The country also has well-recognized STEM education programs, which graduate an average of 130,000 engineers and technicians annually. Should nearshoring opportunities continue to develop, Mexico could help fill the roughly 1 million information-technology jobs that currently go unfilled in the U.S., according to a March 2021 article from Forbes.

**Lower labor costs.** Mexico has a plentiful labor supply with an economically active population of 59.5 million, half of which work in the manufacturing and service industries. Relatively low labor costs may remain a primary factor attracting foreign companies to relocate their manufacturing operations to Mexico. For example, according to Statista, Mexico's average hourly manufacturing labor costs in 2020 were $4.82, compared to $6.50 in China.

**The U.S.-China tariff war.** Starting in early 2018, the U.S. announced a 30% tariff hike on Chinese solar panels and, by the end of 2019, higher U.S. tariffs affected two-

According to the U.S. Bureau of Transportation Statistics, an average of 230,000 vehicles and 70,000 trucks traverse the border daily at 56 international crossings, and **$56.1 billion in transborder freight moved between the U.S. and Mexico in October 2022 alone.**

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thirds of all imports from China. As a result, Chinese imports were partially replaced by Mexican exporters, according to an October 2021 joint study by the Center for Strategic & International Studies and the Peterson Institute for International Economics. The report estimated that China's share of the U.S. market fell by 4.12% while Mexico's share increased by 1.63%. With respect to sales increases, the study estimated that Mexican overall sales in the U.S. rose by 3.4%.

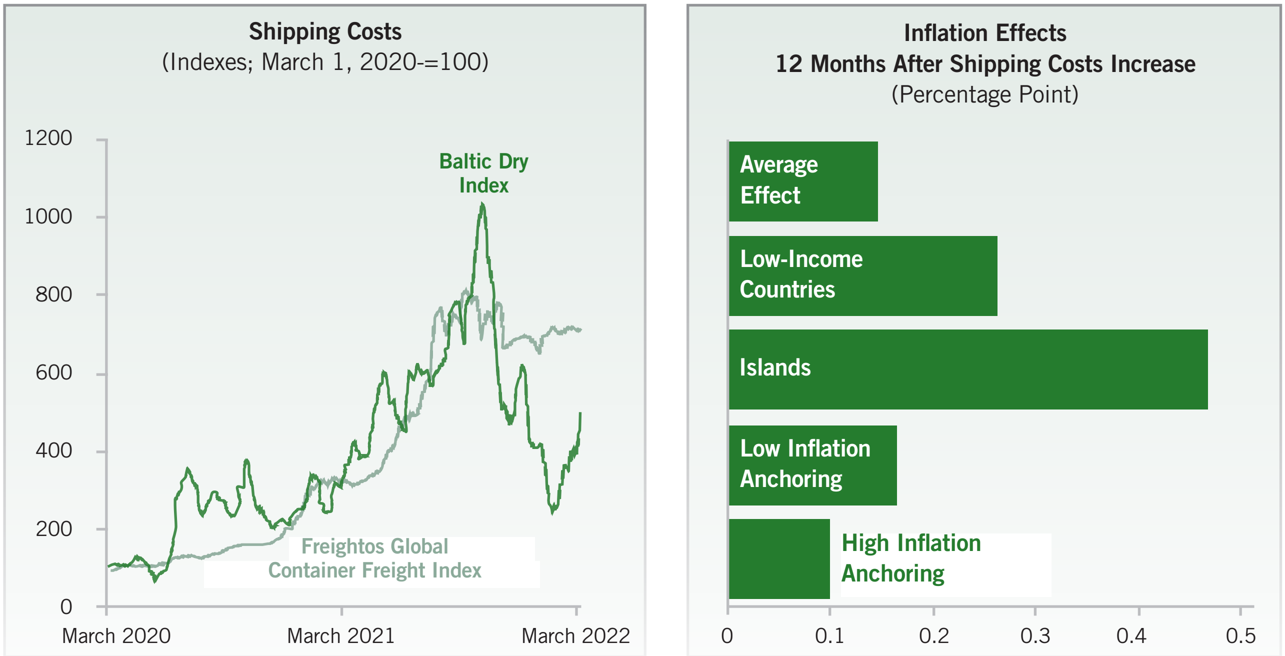
**Transportation and logistics costs.** A crucial aspect of remaining competitive in the global manufacturing economy is the ability to optimize transportation and logistics costs. (See article, page 23.) Pandemic-related global supply chain disruptions and the higher costs of fuel associated with the war in Ukraine have pushed more companies to consider reshoring from China to the U.S. and Mexico, according to an October 2022 article from Mexico Business News. Similarly, according to the International Monetary Fund (IMF), the result of those supply chains disruptions at a global scale was that "the cost of shipping a container on the world's transoceanic trade routes increased seven-fold in the 18 months following March 2020, while the cost of shipping bulk commodities spiked even more." The IMF concluded that the higher shipping costs seen in 2021 continued to impact global inflation by about 1.5 percentage points in 2022.

## U.S. vs China as Lead Investor for Nearshoring in Mexico

Rising labor costs in China, persistent global supply chain gaps, the need for greater self-sufficiency in microchip production, and new tensions between Taiwan and China suggest that U.S. companies will continue to relocate from Asia. According to the most recent report from the Reshoring Initiative, between 2010 and 2021, China has been the source of 44% of reshoring cases to the U.S.

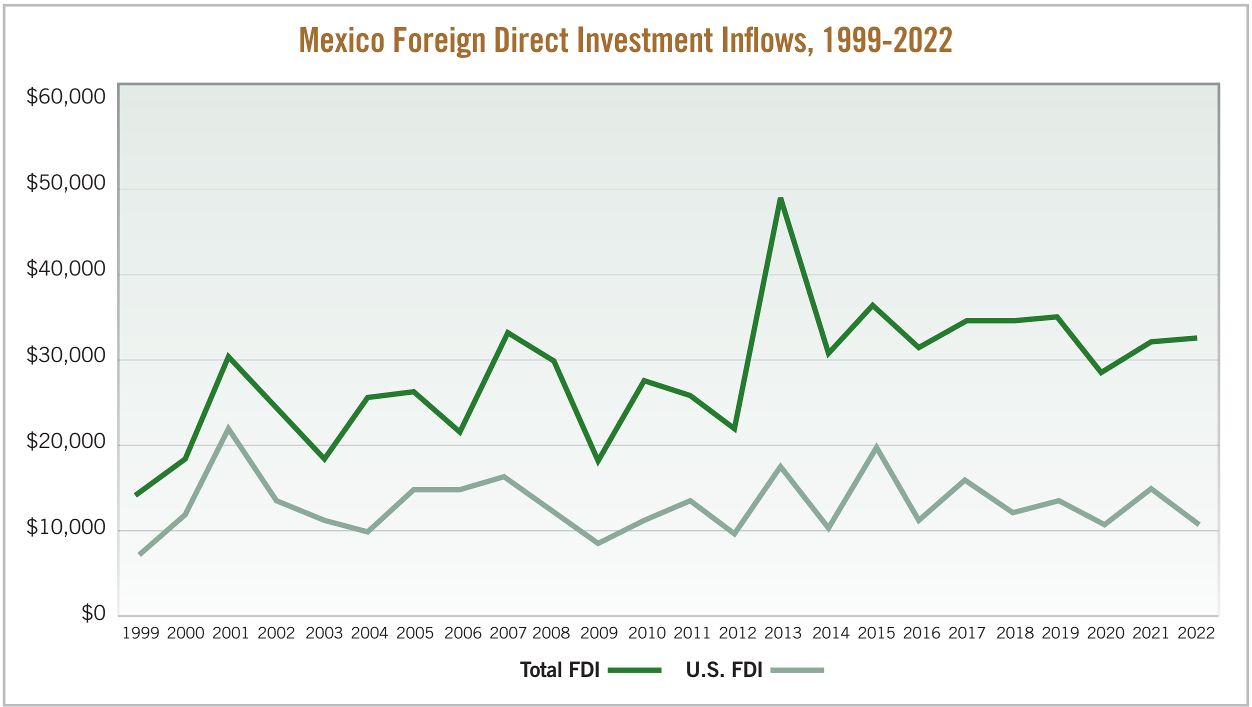
### Cargo Crunch

**Global shipping costs surged during the pandemic, and are likely to continue boosting inflation through year-end.**




*Notes: The right panel is based on estimates in Carriere-Swallow and others (2022), and presents the impact of a one-standard-deviation increase in world shipping costs. (+21.8 percentage points) on domestic headline inflation after 12 months.*

*Sources: Haver Analytics and IMF staff calculations.*




*Sources: Banco de México, and Secretaría de Economía. México*

These trends clearly underscore why it is important for Mexico to keep attracting foreign direct investment from the U.S., historically the country's leading foreign investor. Figures provided by the Mexican Secretariat of the Economy illustrate this trend:

- From January 1999 to June 2022, the U.S. invested $308.7 billion in Mexico, which represents 46.3% of the total foreign direct investment for that period.
- 50.4% of direct investment from the U.S. went to the manufacturing sector.
- 54.0% of U.S. investment in manufacturing is concentrated in transportation equipment, chemicals, and the beverage and tobacco industries.
- 48.3% of the accumulated investment in the automotive sector comes from the U.S.
- 96.3% of the accumulated foreign direct investment in the retail trade subsector in self-service and department stores comes from the U.S.
- 71.0% of U.S. investments are in eight states (Mexico City, Nuevo León, State of Mexico, Chihuahua, Baja California, Jalisco, Coahuila and Tamaulipas).

## Putting it All Together

The Mexican economy benefits from a robust combination of favorable conditions that continue to attract foreign direct investment and drive growth. Within the industrial property market, economic and labor fundamentals combined with post-pandemic increases in demand have created significant value for industrial developers. As nearshoring trends are anticipated to continue, future opportunities in this market are available for firms with an appetite for international expansion. ■

**C. Kat Grimsley**, Ph.D., and **Héctor Salazar Sánchez**, Ph.D., are professors at George Mason University. Contributing to this report: **Claudia Esteves Cano**, Executive Director/CEO, AMPIP; **Héctor Ibarzábal**, Managing Director, Mexico, Prologis; **Daniel Quezada**, Senior Associate, Mexico Industrial/Logistics Development, USAA Real Estate; **Gerardo R. Ramírez Barba**, Executive V.P. Industrial, JLL Mexico; and **Kim Snyder**, President, West Region, Prologis

## About AMPIP

**The Mexican Association of Industrial Parks**, known by its Spanish acronym AMPIP, was founded in 1986. It started working with NAIOP in 2006.

AMPIP is made up of private real estate developers, investment funds, real estate investment trusts (REITs), trusts managed by state governments and suppliers related to industrial parks. AMPIP views industrial parks as part of Mexico's strategic supply chain infrastructure.

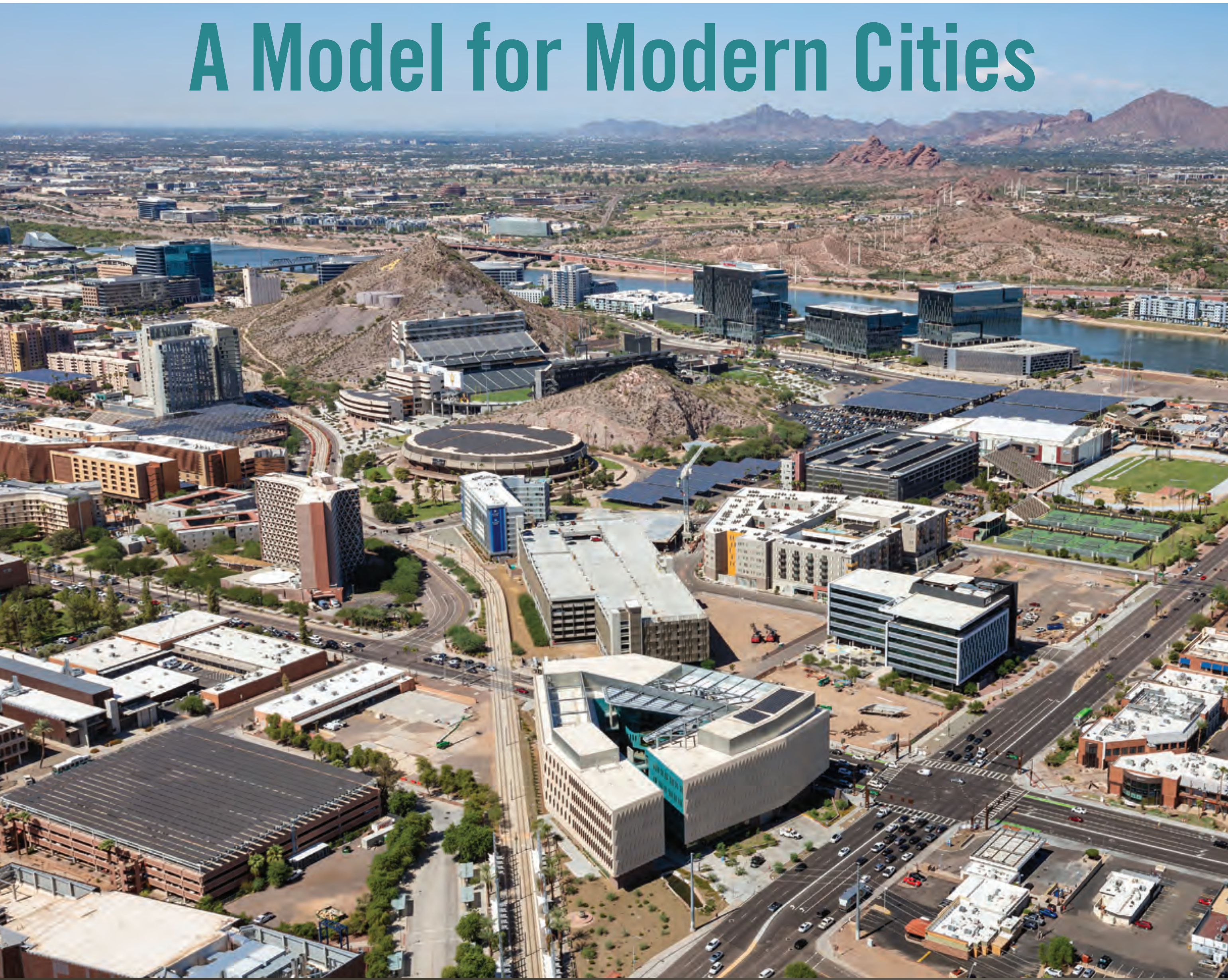
AMPIP represents:

- 430 industrial parks in 21 Mexican states in addition to industrial buildings in six other Mexican states.
- 3,700 installed companies.
- 2.9 million jobs generated.
- Approximately 474 million square feet of industrial space constructed.

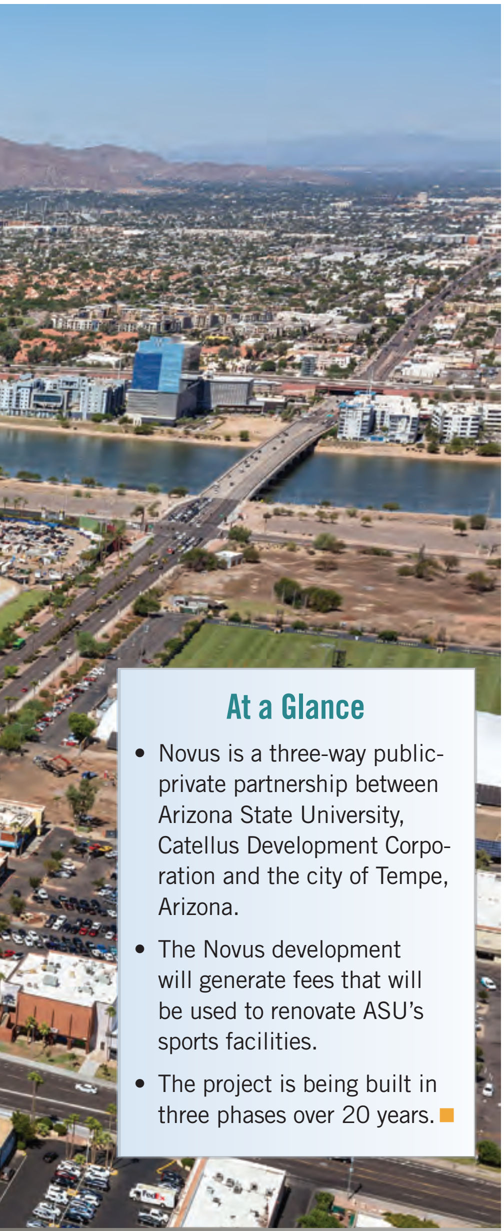
For more information about AMPIP, visit www.ampip.org.mx/eng/index.php ■

# Novus Innovation Corridor:

## A Model for Modern Cities



An aerial view of the Novus Innovation Corridor at Arizona State University in Tempe. When completed sometime around 2035, it will include more than 10 million square feet of urban, mixed-use developments.



## At a Glance

- Novus is a three-way public-private partnership between Arizona State University, Catellus Development Corporation and the city of Tempe, Arizona.
- The Novus development will generate fees that will be used to renovate ASU's sports facilities.
- The project is being built in three phases over 20 years.

*Photo by Todd Photography, courtesy of Novus Innovation Corridor*

# In Arizona, a new mixed-use development harnesses the power of universities to shape urban life.

By Charley Freericks, Catellus Development Corporation

Universities across the nation are facing a conundrum — how to maintain best-in-class sports facilities without using taxpayer or student dollars. Arizona State University (ASU) and Catellus Development Corporation may have found a solution.

The big idea: transform the last 355 acres on the university's 100-year-old main campus in Tempe, Arizona, into a revenue-generating opportunity that benefits students and graduates, employers and the community at large. To that end, the Novus Innovation Corridor will encompass more than 10 million square feet of urban, mixed-use developments conceived and built with sustainability as a design condition and powered by smart infrastructure components to create a connected community.

The project has four pillars: To be an adaptive urban environment at the geographic crossroads of the Phoenix region; to become a global-caliber sports performance, training and entertainment destination; to make sustainability a design condition and be powered by smart city elements; and to be ASU-driven, with long-term alliances that create commerce opportunities and exceptional experiences.

Following a 20-year build-out across seven phases (two of which are already completed), Novus will feature 4.5 million square feet of Class A office space, more than 4,100 residences, 1,000-plus hotel rooms and 275,000 square feet of retail stores, restaurants and entertainment options in five pedestrian-friendly neighborhoods. There will be numerous outdoor spaces


Courtesy of Novus Innovation Corridor

**The Piedmont is a six-story, 318-unit luxury apartment community in the Novus Innovation Corridor.**

designed as gathering places for residents and visitors, as well as the 5,000-seat Mullett Arena, which will host ASU athletics and other sports and entertainment events. Additionally, Mullett Arena will serve as the temporary home of the National Hockey League's Arizona Coyotes as the team works to develop and build a new permanent stadium in the area.

According to the U.S. Census Bureau, the Phoenix region added 160,000 residents between 2010 and 2020, making it the fastest-growing area in the country during that time. Naturally, a lot of development flows from that population growth. Amid this sea of activity, Novus will be within a 10-mile radius of 1.25 million residents and nearly 1 million employees, according to research by ASU and Catellus.

ASU President **Michael Crow** credits Novus for contributing to its designation as the most innovative university for the eighth year in a row in U.S. News & World Report's annual Best Colleges rankings.

## A Novel Concept

Novus was born out of a pioneering collaboration among three public- and private-sector partners — ASU, Catellus and the city of Tempe — to create a new type of development for modern cities while driving measurable economic results.

ASU came up with a plan to reimagine the university's last developable parcels of land into something that would have a profound and lasting effect in creating a 21st-century university. As ASU's development partner, Catellus is helping to bring this vision to life, drawing upon its more than 40 years of experience as a master developer in projects nationwide. The company has transformed former airports, military bases and urban industrial sites into retail, residential and commercial communities.

The city of Tempe also plays a central role in Novus, helping to guide the visioning process and choose a developer. At the start, Tempe saw the project's potential to build upon the city's investments and relationship with a top research university while leveraging the project's prox-

Novus is one of seven ASU Innovation Zones, which are designed to provide access to knowledge, people and ideas while empowering businesses of all sizes — from startups to global enterprises — to grow and scale quickly. **Through Novus, ASU aims to create high-wage jobs and new sales tax revenues while increasing surrounding property values and attracting new private investment to the area.**

## Novus Innovation Corridor Fast Facts

- 355 acres
- 10 million square feet of mixed-use space
- Approximately 4.5 million square feet of Class A office space
- 4,100 planned residences
- 1,000-plus hotel rooms
- Approximately 275,000 square feet of retail, restaurants and entertainment
- 34,430 jobs, generating $2 billion in annual wages for a total annual economic impact of $4.6 billion ■

imity to the popular Tempe Town Lake and other local assets.

Realizing the financial pressures universities face and the public demand for top athletics facilities, ASU lobbied the state legislature twice to create a University Athletics Facilities District for the state's three public universities. The idea was to lease Arizona Board of Regents' land for private development while maintaining university ownership. This will allow the developers to pay fees to ASU instead of property taxes. Funds generated from the district would cover the cost to renovate existing sports facilities and finance new ones. The city of Tempe, along with the state and county, would receive revenues from the development. Tempe also would benefit from the project's sales tax, as well as utility and infrastructure fees.

The statute passed in 2010, though not without controversy from some watchdog groups critical of the precedent that would be set by a public university becoming a private-sector real estate developer. ASU eased these concerns by citing the benefits Novus would bring to the community, such as tax revenue, jobs and increased economic development.

## A Big Impact

Novus is one of seven ASU Innovation Zones, which are designed to provide access to knowledge, people and ideas while empowering businesses of all sizes — from startups to global enterprises — to grow and scale quickly. Through Novus, ASU aims to create high-wage jobs and new sales tax revenues while increasing surrounding property values and attracting new private investment to the area.

At Novus, entrepreneurs could be small companies with potential to grow, while larger national and global enterprises can benefit from the research capabilities and highly skilled workforce. The initiative leverages the knowledge assets of the university, including the brainpower of faculty, staff and students. This, in turn, will help attract companies looking to locate in an intellectual environment.

The opportunity to create this environment also has positive economic benefits.

ASU's Seidman Research Institute projects that Novus will generate an economic impact of $1.86 billion and add 34,000 jobs by 2035 through office, hotel, multifamily and retail operations. The $1.86 billion impact includes the 2.1 million-square-foot Marina Heights office complex (Phase I) along Tempe Town Lake, the renovation of Sun Devil Stadium (Phase II), Hyatt Place/Hyatt House, 777 Tower, The Piedmont and Novus Place Parking Structure in Phase III, as well as ASU's newest research and athletics facilities within Novus. The local economy will also benefit from more than 20,000 temporary construction jobs.

## A Model for Sustainability

For developers locally, nationally and globally, green building is important. It helps combat climate change, foster sustainable and thriving communities, meet ESG goals and bolster economic growth.

Novus is an example of green building in action and represents ASU's


*Courtesy of Novus Innovation Corridor*

**The 5,000-seat Mullett Arena will host Arizona State athletics and other sports and entertainment events. Additionally, it will serve as the temporary home of the National Hockey League's Arizona Coyotes.**

efforts in sustainability, which were recognized in April 2022 when the university was ranked second in the world and first in the U.S. in the Times Higher Education Impact Rankings,  a measure of how well universities are meeting the United Nations' Sustainable Development Goals. Novus will offer many opportunities for business collaboration and expansion via the integration of facilities and technologies.

A case in point: Novus became the first LEED-ND (Neighborhood Development) community certified at any level in Arizona. The Gold certification is the second-highest certification awarded by the U.S. Green Building Council on its scale of Certified, Silver, Gold and Platinum designations. The 62-point certification ranks Novus among the top 10 best-scoring LEED-ND projects ever in the U.S. The LEED-ND program is designed to combat urban sprawl by helping to create more sustainable and well-connected communities.

Additionally, buildings within Novus are earning green building certifications, beginning with 777 Tower, a six-story building with 160,907 square feet of office space and 8,316 square feet of retail space, which achieved LEED Gold-level certification. In 2020, NAIOP Arizona named 777 Tower its Sustainable Project of the Year.

Novus will also focus on devising and implementing effective solutions in transportation, resource and utility usage, and responsible waste management. Companies co-locating at Novus will be at the center of an urban environment that's connected to students, faculty and some of the nation's top research facilities.

## A Big Vision Beginning to Unfold

Aside from the economic impact, Novus will drive a significant influx of employment in cutting-edge industries while bringing education, commercial real estate, living, entertainment and research together

**Best of all, the growth, jobs and commerce associated with Novus will enable one of the nation's largest and growing universities** (enrollment was more than 79,000 in August 2022) to operate from a more economically viable position and create a sustainable financial model for the future.

## Timeline

**The Novus Innovation Corridor** at Arizona State University will be fully built out in 20 years. A timeline:

**Phase I (Marina Heights):** Construction began 2017

**Phase II (reinvention of Sun Devil Stadium):** Construction began 2018

**Phase III (19 acres on the northeast corner of Rural Road and University Drive):** Construction began 2019 ■

in one location to develop the 21st-century university.

For example:

- Novus will help satisfy the demand for additional housing in Tempe with The Piedmont, a six-story, 318-unit luxury apartment community and another 500 units in two new multifamily developments.
- ASU Athletics will give local residents a state-of-the-art venue for sports competitions and other events with the multi-purpose Mullett Arena, which debuted at the Arizona Coyotes home opener in October. The arena also will host collegiate hockey, wrestling and women's gymnastics, along with public concerts, youth competitions and other events.
- Hyatt Place/Hyatt House, Novus' first dual-branded hotel with 259 rooms, a rooftop pool and bar with uninterrupted views and a host of other amenities, served approximately 130,000 guests from April 2021 to April 2022.
- ASU dedicated its newest research building — the Rob & Melani Walton Center for Planetary Health — last spring. The 281,000-square-foot high-performance research facility features a 389-seat presentation hall, public outreach and exhibit space, research labs and classrooms. The building houses ASU's College of Global Futures, the Julie Ann Wrigley Global Institute of Sustainability, the Rob and Melani Walton Sustainability Solutions Service, the School of Sustainability, the Institute of Human Origins and the Starbucks Center for the Future of the People and the Planet.

### A Promise for the Future

The world — especially the world of development — has evolved. Old modes of building are being replaced with creative new developments that will appeal to many different audiences in many different ways.

At Novus, entrepreneurial startups to global enterprises in emerging industries should be able to find a home.

The community's highly walkable location, access to the light rail and proximity to all that ASU has to offer will be a magnet for Tempe's skilled workforce, too. And the array of dining, plus daylife and nightlife, that is planned for the community's Main Street retail district, Novus Place, will make it a destination for residents and visitors alike.

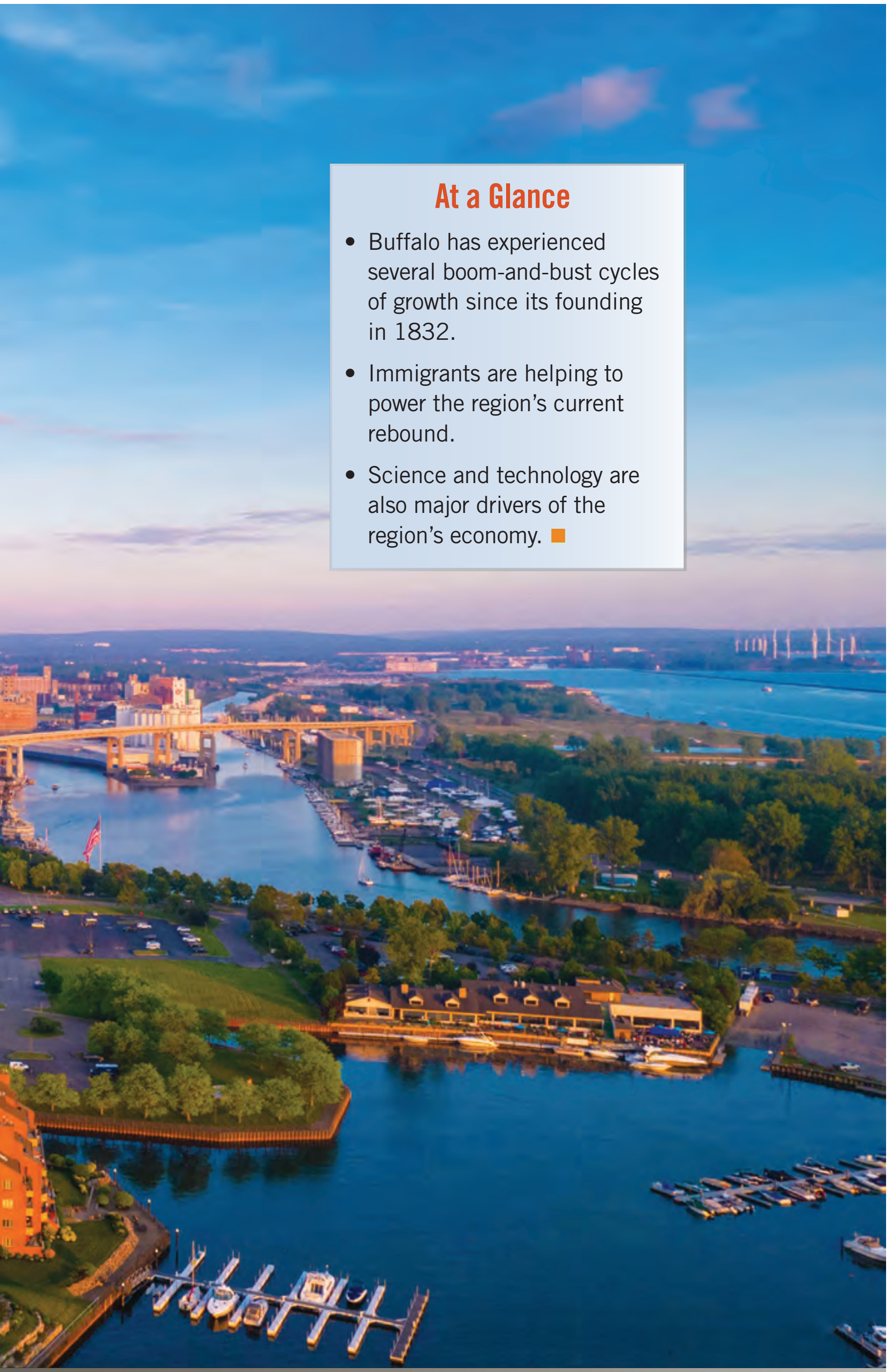
Best of all, the growth, jobs and commerce associated with Novus will enable one of the nation's largest and growing universities (enrollment was more than 79,000 in August 2022) to operate from a more economically viable position and create a sustainable financial model for the future.

With all this in mind, an August 2022 report from Axios Phoenix noted that ASU and Catellus are fielding inquiries from universities, including Purdue, Ohio State and the University of California, Berkeley, about how they can replicate the Novus model. ■

**Charley Freericks** is senior vice president of Catellus Development Corporation.

# Buffalo, New York: A New Take on Grit

The skyline of Buffalo, New York. More than $22.6 billion has been invested in development within the region that surrounds the city during the past five years.




*All photos courtesy of Invest Buffalo Niagara*

# A Rust Belt city rebounds thanks to catalyzing state and federal investments.

■ By Tom Kucharski, Invest Buffalo Niagara, and Brandye Merriweather, Buffalo Urban Development Corp.

The city of Buffalo, New York, had a reputation for being gritty.

The term was a nod to the city's industrial heritage, hard-working people and maybe even the NFL team. But the Buffalo that is now being built could be characterized by a different type of grit. The city is determined to build a better future by welcoming new opportunities within technology, entrepreneurialism, advanced manufacturing, clean energy transfer and more.

Over the past five years, an estimated $22.6 billion of development has launched within the eight counties that constitute the Buffalo Niagara region. This includes construction at the Buffalo Niagara Medical Campus, new coworking spaces, the Northland corridor manufacturing and clean energy cluster expansion, increased residential real estate, hotels, industrial plants, food processing facilities and more.


*University at Buffalo-DouglasLevere_UB-JacobsInstitute*

**The Jacobs Institute is a vascular medical technology innovation center on the Buffalo Niagara Medical Campus in Buffalo. It's one of two technology corridors in the city.**

The Buffalo region routinely enters into national and even global news coverage with significant project developments, innovations and large-scale transformations. For example, **Joshua Aviv**, the CEO of locally based electric vehicle charging startup SparkCharge, introduced **President Biden** at a White House event in August 2022 celebrating the passage of the CHIPS and Science Act, which aims to boost American semiconductor research, development, and production. SparkCharge was founded at Syracuse University in 2007 and has been headquartered in Buffalo since 2019.

## On The Rise

Founded in 1832 as the eastern terminus of the Erie Canal, Buffalo has experienced several cycles of growth and decline. The city's population reached more than 580,000 in the late 1950s, but it fell over the next few decades, reaching a low of 261,000 in 2010. However, the latest Census data shows that Buffalo's population grew for the first time in decades. The city's population in 2020 was 278,000, an increase of 7% from 2010. Among Rust Belt cities, only Columbus, Ohio, and Ann Arbor, Michigan, saw more considerable population gains during the past decade.

In 2012, New York State pledged to strategically invest over $1 billion in the region. Target areas included advanced manufacturing, health and life sciences, and tourism, as well as entrepreneurship and workforce development. In January 2017, New York state expanded the program by $500 million.

In addition to investments, much of Buffalo's recent rebirth can also be attributed to a growing population of refugees and immigrants, as well as a surge in the number of millennials moving back home or calling Buffalo home for the first time. Burmese, Bengali and many other new Americans are choosing Buffalo for


The Explore & More Children's Museum is part of the burgeoning Canalside district, which is located at the end of the Erie Canal. The area is Buffalo's redeveloped waterfront.

its affordability, job opportunities, and to join family members who have previously made the move and are sharing their experiences. According to a 2016 study, Buffalo's foreign-born population rose by 95% between 2006 and 2013.

Many of those newcomers are drawn to Buffalo's affordable housing. The 2022 Demographia International Housing Affordability study by the Urban Reform Institute and the Frontier Centre for Public Policy found that Buffalo ranks as the ninth-most-affordable city for housing in the world. (Nearby Rochester ranked No. 3.) In August 2022, the median home price in Buffalo was $175,000, according to Realtor.com. (The Federal Reserve Bank of St. Louis says the median home price in the U.S. was $440,300 in the second quarter of 2022.)

The Buffalo Niagara region has 21 colleges and universities that graduate 25,000 students annually. University at Buffalo (UB) is the largest university in Western New York by enrollment and research dollars spent. Nearly one in five UB students are from outside the U.S. — around 6,000 international students are enrolled at any one time. With industry booming and companies growing throughout Western New York, this talent is highly desirable.

## From Shadow to Beacon

There is perhaps no better symbol of Buffalo's resiliency than Seneca One Tower. At 40 stories, it is the tallest building in the city's skyline. In the years following the financial crash of 2008, it stood mostly empty, casting both a physical and symbolic shadow over the city.

Today, Seneca One, owned by Washington, D.C.'s largest developer, **Douglas Jemal** of Douglas Development, has undergone a complete transformation. Façade improvements, including much-needed paint and streetscaping, make the building more welcoming. Douglas Development even added to the square footage of the property, with annexed buildings increasing street-side retail opportunities and walkability improvements. Rather than sitting empty, the building is now almost fully leased. It's a crucial part of the city's thriving technology and entrepreneurial ecosystem.

For example, M&T Bank, the nation's 11th largest bank, is headquartered in Buffalo. In 2019, M&T committed to creating 1,000 new technology jobs in the city. After conducting a comprehensive site

The city's population reached more than 580,000 in the late 1950s, but it fell over the next few decades, reaching a low of 261,000 in 2010. **However, the latest Census data shows that Buffalo's population grew for the first time in decades. The city's population in 2020 was 278,000, an increase of 7% from 2010.** Among Rust Belt cities, only Columbus, Ohio, and Ann Arbor, Michigan, saw more considerable population gains during the past decade.

Niagara Falls is a world-famous attraction a few miles north of Buffalo, but the river that feeds it is also an important source of hydropower in the region.

search for a new tech hub where it could house those 1,000 new hires and coalesce its already existing tech talent — eventually totaling over 1,500 individuals — the company chose Seneca One Tower.

Since the announcement, other tenants have followed. 43North, the state-funded startup competition and incubator that awards $5 million annually to startups that win its "Shark Tank"-style competition, has taken a floor in the building, and it brought along many of the promising young companies within its portfolio. Odoo, a software-as-a-service company headquartered in Belgium, decided on Buffalo for its U.S. East Coast headquarters after a lengthy and data-driven decision-making process. It now employs significantly more than the 100 employees it initially promised. AML RightSource originally expanded to Buffalo in the Larkinville neighborhood before hiring so rapidly that it outgrew its office space, eventually relocating its anti-money-laundering compliance operations to Seneca One.

The building also features retail, 115 residential apartments, and a location just steps from the city's redeveloped waterfront known as Canalside, creating the live/work/play desirability sought by young professionals.

## Talking Tech

Seneca One anchors one end of Buffalo's technology corridor while the Buffalo Niagara Medical Campus (BNMC) anchors the other, just over a mile and a half north on Main Street. This helps facilitate the density and range of opportunities needed for a technology ecosystem to thrive.

BNMC, a leader in the life and health sciences sector, is a 120-acre medical campus in downtown Buffalo. It houses a dynamic consortium of hospitals and health care providers, education institutions and research facilities. BNMC is home to world-renowned leaders in oncology, neurosurgery, immunology, vascular surgery, personalized medicine and cardiology.

BNMC is also headquarters for ACV, Buffalo's first software unicorn. The mobile platform for car dealers to buy and sell cars was a Year 2 winner of the 43North competition, eventually earning a valuation well over $1 billion and hosting a suc-

Built in 1912, the Electric Tower was designed by James A. Johnson in the Beaux-Arts Classical Revival style.

cessful IPO in 2021. ACV now has thousands of employees in Buffalo and across the country.

Rural Sourcing, a company that matches U.S.-based software developers to clients, is yet another technology company that chose Buffalo for a new location. It added the region to its portfolio of eight development centers across the U.S. due to the concentration of technology talent in the region.

## A Focus on Advanced Manufacturing

Buffalo Niagara has enjoyed a long history of manufacturing success, and manufacturing is now the third-largest employer sector in the Buffalo Niagara economy.

Companies choose Western New York because of its talent and expertise within the industry. Additionally, the region is a 10-hour drive from 40% of the population of both the U.S. and Canada.

Another draw is affordable power. Industrial electric rates are roughly 15% below the national average, and the New York Power Authority allots low-cost hydropower from the Niagara River and Niagara Power Project to expanding or relocating companies within the region.

A new wave of innovators and builders is changing the future of advanced manufacturing. In 2021, Plug Power announced that its new green hydrogen fuel cell plant will be built at the WNY Science Technology and Advanced Manufacturing Park (WNY STAMP). WNY STAMP is a mega-site in Genesee County, located between Buffalo and Rochester and only a 45-minute drive from the Canadian border. It offers 1,250 acres of land with access to hydropower. The site positions Western New York to capture new opportunities within the clean energy sector.

The city of Buffalo hosts an advanced manufacturing campus centered around the Northland Workforce Training Center (NWTC). NWTC is a state-of-the-art training center for students interested in careers in advanced manufacturing and clean energy, including welding, mechatronics and more. NWTC boasts an 87.6% employment placement rate for its graduates and has minority population enrollment totals of more than 50%. What once was a stretch of dilapidated warehouses is now a place of opportunity in East Buffalo, a historically disadvantaged community.

**In addition to investments, much of Buffalo's recent rebirth can also be attributed to a growing population of refugees and immigrants, as well as a surge in the number of millennials moving back home or calling Buffalo home for the first time.** Burmese, Bengali and many other new Americans are choosing Buffalo for its affordability, job opportunities, and to join family members who have previously made the move and are sharing their experiences.

## A Rich Architectural History

**In January 2023, Buffalo was named one of Architectural Digest's "23 Places to Travel in 2023."** According to the magazine, the city's industrial heyday "yielded some of the most superlative American buildings of the early 20th century." These include **Louis Sullivan**'s tile-clad Guaranty building and **Frank Lloyd Wright**'s iconic Martin House. Other architectural marvels include **Eero** and **Eliel Saarinen**'s Kleinhans Music Hall and **Gordon Bunshaft**'s modernist auditorium addition to what is now the Albright-Knox Art Gallery. ■

## By the Numbers

Some statistics about Buffalo:

**Median income:** $42,186 (Source: 2020 U.S. Census)

**Median home price:** $175,000 in August 2022, according to Realtor.com (By comparison, the Federal Reserve Bank of St. Louis says the median home price in the U.S. was $440,300 in the second quarter of 2022.)

**Office vacancy rate:** 16% in the fourth quarter of 2022, according to Cushman & Wakefield

**Industrial vacancy rate:** 4.9% in the fourth quarter of 2022, according to Cushman & Wakefield ■

**"Shark Girl," by artist Casey Riordan, is one of the most-visited attractions within Buffalo's popular Canalside development.**

The Northland Campus also hosts other manufacturing resource organizations and leases space to manufacturing companies. In addition, in September 2022, the WNY regional office of Empire State Development was awarded approximately $25 million through the federal Economic Development Administration Build Back Better Regional Challenge to invest in East Buffalo and accelerate the growth of advanced manufacturing in the region. Of these grant funds, more than $14 million was awarded to BUDC (Buffalo Urban Development Corporation) to accelerate additional development with the Northland Corridor.

In March 2021, Invest Buffalo Niagara completed and mobilized the Western New York Industrial Real Estate Strategy, a study focused on improving the availability of industrial buildings and sites in the region through many strategies. Since undergoing the project, three new speculative industrial developments have already been approved and have begun construction, specifically at Renaissance Commerce Park, the former home of Bethlehem Steel.

### Making a Place

Canalside, located at the end of the Erie Canal, is Buffalo's redeveloped waterfront. Many credit the work at Canalside during the past decade for helping to catalyze the region's resurgence. A once-abandoned area is now one of the city's premier attractions, featuring green space, a boardwalk, a carousel and a small sand beach for children.

Explore & More Children's Museum completed its move downtown just a few years ago into a new building, and other mixed-use developments are underway now as additional parcels around the canal continue to infill. The nearby Outer Harbor also features acres of reclaimed recreational land with more developments to come.

Just a few minutes from Canalside, another significant waterfront project is also underway. The Ralph C. Wilson Jr. Foundation has pledged more than $50 million to renovate the former LaSalle Park in downtown Buffalo with a mirrored investment in Wilson's home city of Detroit. The new Ralph C. Wilson


Larkinville is one of many up-and-coming neighborhoods in Buffalo. The former industrial area is now home to shops, offices and Larkin Square, a public space that hosts food trucks and other events.

Jr. Centennial Park will contain 100 acres along Buffalo's waterfront, including a pedestrian bridge that will further neighborhood connectivity. The project broke ground in 2022 and is scheduled to be completed in 2024. (Wilson was the founder and owner of the Buffalo Bills.)

Recently, the city of Buffalo launched its Race for Place, to better connect its urban areas and increase the vibrancy in each. The campaign first focuses on advancing infrastructure investments, streetscaping, increasing pedestrian and bicycle access and safety, implementing smart city technology solutions, and collaborating with other regional campaigns, such as Be in Buffalo, the region's talent-attraction initiative.

## A Resurgence Renewed

The resurgence of Buffalo, with its thousands of job opportunities and investments in its desirability, are not the only factors that may inspire more people to move to Western New York.

The investments in place and community over the last 20 years have made Buffalo a more desirable place to work, purchase a home and raise a family. The successes within the region's entrepreneurial ecosystem have created more wealth, experience and risk tolerance that will continue to pay dividends. The gains within technology and advanced manufacturing industries have helped to create thousands of jobs.

And the feeling of regional pride — and yes, grit — can sustain a long-term resurgence that writes the next chapter of Buffalo's history, with different buzzwords and assumptions but driven by the same engine that makes everything possible: the people. ■

**Tom Kucharski** is president and CEO of Invest Buffalo Niagara. **Brandye Merriweather** is vice president of downtown development with the Buffalo Urban Development Corp.

The investments in place and community over the last 20 years have made Buffalo a more desirable place to work, purchase a home and raise a family. **The successes within the region's entrepreneurial ecosystem have created more wealth, experience and risk tolerance that will continue to pay dividends. The gains within technology and advanced manufacturing industries have helped to create thousands of jobs.**

NAIOP RESEARCH FOUNDATION

# Cutting-edge Research That Has an Impact

2023 ANNUAL REPORT

The past year was one of recovery but also uncertainty for the commercial real estate industry. While the U.S. avoided a recession in 2022, economists underestimated how inflation would accelerate to the highest levels in 40 years. As the availability of capital decreased, investors became wary of the office sector as it struggled from the impacts of hybrid work. In response, the NAIOP Research Foundation focused on the forces shaping the office market throughout the year – the 2022 Office Space Demand Forecasts indicated that remote work, preferences for smaller and newer footprints, and the large supply of sublease space will continue to slow absorption into next year. Additionally, Professor Emil Malizia of the University of North Carolina, a NAIOP Distinguished Fellow, explored the challenges and possibilities in converting obsolete office buildings to life science, multifamily and medical uses.

The Foundation's research in 2022 examined the forces impacting office space demand in a time of significant change.

In the summer of 2022, the Foundation formed the Talent Development Task Force to examine how industry practitioners and educators can work together to bridge knowledge gaps between instruction and employment, improve industry access for diverse candidates and grow the talent pipeline. The task force was composed of commercial real estate professionals (brokers, investors, developers) and leaders from university real estate programs. The meetings revealed an immediate need to strengthen the CRE workforce, create greater awareness of real estate careers among younger generations, particularly those of diverse backgrounds, and capture the perspectives of employees and employers regarding new ways of working.

The task force recommended that the Foundation commission an in-depth study in 2023 of the challenges and opportunities facing the industry around talent development, as well as recruitment and retention issues. The study will examine how practitioners can work with educators to ensure employees have the relevant skills firms need. Additionally, NAIOP will survey its membership, including the Developing Leaders and company executives, on the relevant and emerging skills CRE employees will need to succeed.

We are fortunate to have a network of remarkable researchers who share their extensive knowledge of the CRE industry. Their expertise and generous contributions from the Governors enable the Foundation to publish important reports, available free of charge on the Foundation's website.

I look forward to another productive and collaborative year for the Foundation.

Jennifer LeFurgy, Ph.D.
Executive Director,
NAIOP Research Foundation
Vice President for
Knowledge and Research, NAIOP



# Innovative Research Published in 2022

## Economic Impacts of Commercial Real Estate, 2022 U.S. Edition

Development and construction of new commercial real estate in the United States – office, industrial, warehouse and retail – generates significant economic growth at the state and national levels. This annual study, published by the NAIOP Research Foundation, measures the contribution to GDP, salaries and wages generated and jobs supported from the development and operations of commercial real estate. The report's appendices also include data by state.

In 2021, combined commercial, residential, institutional and infrastructure development and operations of existing commercial buildings generated the following economic benefits:

- Contributed $4.8 trillion – 21% of U.S. GDP
- Supported 32.7 million American jobs (a measure of both new and existing jobs)
- Significant personal earnings and state revenues, adding inventory to attract new businesses and jobs

**naiop.org/contributions22**

## Economic Impacts of Commercial Real Estate in Canada, 2022 Edition

The NAIOP Research Foundation commissioned this report to examine the economic benefits of commercial construction across four distinct CRE asset classes, namely industrial, retail and entertainment, office and multifamily housing during 2021. The report also describes the benefits of commercial brokerage, property management and landlord operations. It analyzes the CRE sector across Canada and for selected major metropolitan areas including Montréal, Ottawa, Toronto, Calgary, Edmonton and Vancouver. Metrics are also provided for the provinces of Quebec, Ontario, Alberta and British Columbia.

The commercial real estate sector's building construction spending and ongoing operations generated the following economic benefits in Canada in 2021:

- Generated $148.4 billion in net contribution to GDP
- Created and supported 1.0 million jobs, of which 372,710 are direct jobs
- Generated $67.5 billion in income for workers

**naiop.org/canadiancontributions22**

# Looking Ahead

JAN

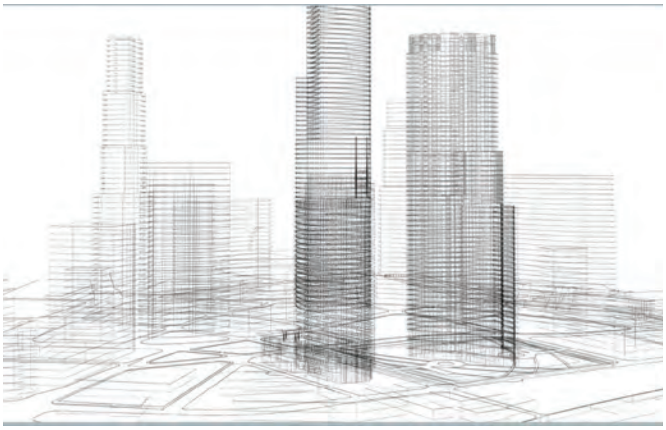
Recognize Sustainers Fund donors who supported the Foundation with an annual gift

Economic Impacts of Commercial Real Estate, 2023 U.S. Edition

FEB

**Wellness in Industrial Real Estate**

This project will examine design features that can improve employee health and well-being in warehouses and distribution centers. It will expand on existing wellness standards for commercial buildings to develop a framework that is tailored to the needs and unique characteristics of logistics facilities.



## The Role of Data Analytics in Commercial Real Estate Siting, Design and Valuation Decisions

To gain a sense of how CRE firms are using advanced data analytics, the NAIOP Research Foundation commissioned this report to examine applications in site selection, design and valuation for commercial buildings. The author conducted secondary research and interviewed brokers, data providers, investors, developers and professionals at CRE technology firms.

**naiop.org/dataanalytics**

## Sustainable Brownfield Redevelopment

Former industrial sites and other properties that may be contaminated – commonly called brownfields – can be viable targets for redevelopment. However, the costs and risks associated with environmental remediation often make these projects challenging. This brief offers insights into the key considerations that guide sustainable brownfield redevelopment.

**naiop.org/brownfieldsresearch**

## New Places and New Spaces for E-commerce Distribution: Three Strategies Bringing Industrial and Retail Real Estate Closer Together

The NAIOP Research Foundation commissioned this report to examine three trends: the conversion of shopping centers to distribution centers, adding distribution uses to existing retail buildings, and the development of mixed-use properties that include both distribution and retail.

**naiop.org/newplaces**

## Findings from the Development Approvals Index

The NAIOP Research Foundation released "The Development Approvals Index: A New Tool to Evaluate Local Approvals Processes" in February 2021. This brief shares the results from an initial round of data collection and provides a first look at comparative applications of the index.

**naiop.org/developersindexfindings**

MAR

Industrial Space Demand Forecast Q1

### Development Approvals Across North America

This research brief will analyze data on development approvals in jurisdictions located across 31 U.S. states and Ontario using the Development Approvals Index. Summary data that will accompany the brief will serve as a reference for developers, NAIOP chapters and local officials on the relative transparency, accountability and consistency of approvals processes in individual cities and counties.

APR

### Value-enhancing Improvements in Environmental Sustainability

Not all investments in environmental sustainability are created equal. This report will identify cost-effective and value-enhancing approaches to sustainable building design and environmental retrofits, as well as operational interventions that enhance sustainability and maximize rental income.

*THE LATEST IN INNOVATIVE RESEARCH* – CONTINUED.

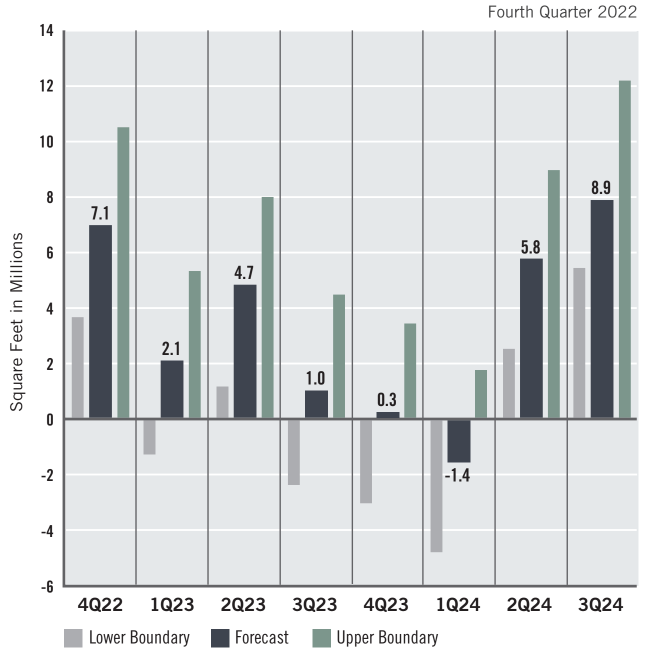
## Industrial and Office Space Demand Forecasts

These forecasts provide an outlook on current and future conditions in the U.S. commercial real estate market. The reports help to define linkages between economic and specific sector activity and the demand for office and industrial real estate.

The most recent **Office Space Demand Forecast** (Q4 2022) stated that office absorption will continue to slow into 2023 amid economic uncertainty. Given concerns about a potential recession in 2023, net office space absorption in the fourth quarter of 2022 is forecast to be 7.1 million square feet, with absorption in 2023 forecast to slow to 8.1 million square feet for the entire year. Moving forward, the forecast projects that absorption in the first three quarters of 2024 will total 13.3 million square feet. (See chart at right.)

**naiop.org/officedemand**

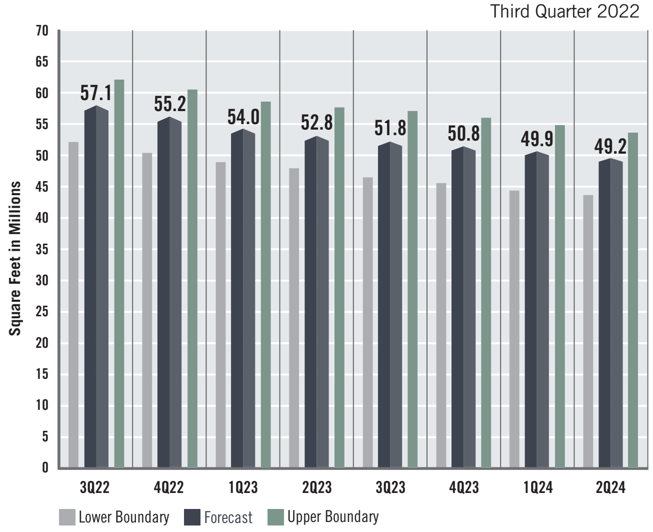
**The NAIOP Office Space Demand Forecast**
U.S. Markets, Quarterly Net Absorption




The most recent **Industrial Space Demand Forecast** (Q3 2022) stated that amid lower pressure on global supply chains, increasing inventory carrying costs, a cooling economy and a decrease in the rate of e-commerce expansion, retailers and logistics firms have slowed the rate at which they acquired additional industrial space this year. Net absorption of industrial space in the first two quarters of 2022 was 151.2 million square feet, down sharply from 2021's record pace but still notably higher than in prior years. The authors expect the still-hot industrial market to cool, and they forecast that the net absorption rate will continue to decline until it returns to the pre-pandemic trend. Total net absorption of industrial space in the second half of 2022 is forecast to be 112.4 million square feet, and full-year absorption in 2023 is  forecast to be 209.4 million square feet. (See chart at right.)

**naiop.org/industrialdemand**

**Out-of-Sample Forecast of the Industrial Net Absorption Rate and its 95% Confidence Intervals**
U.S. Markets, Quarterly Net Absorption




APR
Spring Research Foundation E-newsletter

MAY
New Governors and Visionaries inducted

Governors, Trustees and Industry Trends Task Force meet at National Forums Symposium

JUN
Office Space Demand Forecast Q2

**NAIOP Market Monitor**
This report will categorize the 50 largest industrial and office markets in the U.S. by their size and risk to provide better insights into the relative risks of different geographic markets than is currently provided by traditional ranking methodologies. A comparison of recent data to historical trends will also provide insight into how local market conditions have evolved over the last few years.

*THE LATEST IN INNOVATIVE RESEARCH* – CONTINUED.

## Seeing Past the Pandemic: Industrial Demand and U.S. Seaports

This research brief reviews historical trends in port activity, local logistics employment, and vacancies, rents and absorption rates in adjacent industrial markets. Building on observations from the historical data, a regression analysis of the relationship between changes in port activity, truck traffic and industrial space absorption demonstrates that changes in import volume have a substantial effect on occupancy in port markets.

**naiop.org/seaports**

## New Uses for Office Buildings: Life Science, Medical and Multifamily Conversions

The NAIOP Research Foundation commissioned this report to evaluate the risks and opportunities associated with office building conversions. The author conducted a review of recent publications and market data on office conversions and interviewed developers, architects and other commercial real estate professionals to provide an overview of the key considerations that go into converting an office building to a life science, medical office or multifamily use.

**naiop.org/newuses**

"The Visionaries program is an excellent way for young industry leaders to help shape the Foundation's future. Their perspectives, ideas and energy push programmatic and research initiatives in exciting directions and keep the Foundation's mission relevant for new generations of CRE professionals."

– F.E. "Skip" Kalb, Jr., Principal, Skip Kalb Strategies, LLC; Chair, NAIOP Research Foundation

JUL

**Which Office Properties Will Succeed in the Hybrid Work Environment?**

This study will evaluate how the widespread adoption of hybrid work is affecting office occupier preferences and which types of office properties are most likely to perform well in this new environment. The report will inform building owners and developers of the factors driving building performance so that they can better position existing assets and future projects.

Summer Research Foundation E-newsletter

AUG

**Best Practices in Diversity, Equity and Inclusion in the Commercial Real Estate Industry**

This report will examine how CRE firms are working to promote diversity, equity and inclusion in recruitment, retention and promotion. The report will evaluate the advantages of having a diverse workforce and will provide professionals with information on practices that can contribute to greater diversity, equity and inclusion within their own firms.

# Foundation Research in the News

Research by the Foundation has been cited in leading news publications:

### CRE ‘Largely Spared’ from Pandemic Recession

“Despite some whipsaw employment numbers – which didn’t prove too detrimental – the construction market in 2021 was ‘largely spared’ from the pandemic recession, according to the annual research study conducted by the NAIOP Research Foundation.”

*GlobeSt.com* I Feb. 2, 2022

### How Dull Suburban Offices Can Be Reactivated with Modern Amenities

“Eighty-seven percent of office landlords said they’re offering classes and other events, including everything from more happy hours to concerts to art installations in lobbies, according to a report by the NAIOP Research Foundation.”

*Propmodo* I March 15, 2022

### How Much Reshoring is Actually Happening?

“Businesses returning production to the United States may find it challenging to locate an available factory. Industrial real estate can expect record absorption through 2023, according to data from the NAIOP Research Foundation.”

*Supply Chain 24|7* I April 27, 2022

### NAIOP: Industrial and retail real estate sectors will converge

“The pandemic and the e-commerce trends that preexisted it have led to a dramatic confluence of the industrial and retail real estate sectors, according to a new report published by the NAIOP Research Foundation.”

*Real Assets Advisor* I June 15, 2022

### Long-term office outlook appears positive, says insider

“Prepared for the NAIOP Research Foundation by Toronto-based real estate services company Altus Group, Economic Impacts of Commercial Real Estate in Canada (2022 Edition) emphasizes Canadian CRE’s positive economic impacts in 2021: the generation of $148.4 billion in net contribution to the GDP; $67.5 billion in labour income for workers; and the creation/support of one million jobs (372,710 direct).”

*Globe and Mail* I Nov. 22, 2022

### NAIOP Expects Growing Weakness in Office Demand

“The national office market absorbed 6.6 million square feet during the second and third quarters of 2022, but the vacancy rate continued its climb to 17.1%, the highest level since the third quarter of 1993, according to the NAIOP’s Office Space Demand Forecast for the fourth quarter of 2022 published by the NAIOP Research Foundation.”

*CoStar* I Dec. 12, 2022

AUG — Industrial Space Demand Forecast Q3

SEP

OCT — Governors, Trustees and Industry Trends Task Force meet at CRE.Converge

National Research Directors gather for annual meeting

Fall Research Foundation E-newsletter

NOV — Office Space Demand Forecast Q4

**Terms and Definitions of Commercial Real Estate**

Last updated in 2017, this publication defines the terms commonly used by owners, brokers, developers and others in their day-to-day business operations. Since 2017, several new terms have become common, and design standards have evolved. This project will update the existing publication to reflect current usage.

DEC

# 2022 Distinguished Fellows

The Research Foundation's Distinguished Fellows Program engages the nation's foremost commercial real estate, economic and public policy experts. Distinguished Fellows are active participants in NAIOP and contribute articles to NAIOP's Development magazine, present to the association's leadership and provide advice, feedback and information regarding research being conducted in commercial real estate.

**Mirle Rabinowitz Bussell, Ph.D.**
Associate Teaching Professor and Director of Undergraduate Studies, Urban Studies and Planning, UC San Diego

**Chris Caplice, Ph.D.**
Silver Family Research Fellow Senior Research Scientist, The MIT Center for Transportation & Logistics, Massachusetts Institute of Technology

**Suzanne Lanyi Charles, Ph.D.**
Associate Professor, Department of City and Regional Planning and the Baker Program in Real Estate, Cornell University

**Jim Clayton, Ph.D.**
Professor and Timothy R. Price Chair, Brookfield Centre in Real Estate & Infrastructure, Schulich School of Business, York University

**Mark J. Eppli, Ph.D.**
Director, James A. Graaskamp Center for Real Estate, University of Wisconsin-Madison

**Julia Freybote, Ph.D.**
Assistant Professor of Finance and Real Estate, Portland State University

**Kat Grimsley, Ph.D.**
Director, Masters in Real Estate Development Program, George Mason University

**★ Mariya Letdin**
Associate Professor, Florida State University, College of Business

**Keven McGhan**
Instructor, JR Shaw School of Business, The Northern Alberta Institute of Technology

**Glenn Mueller, Ph.D.**
Professor, Franklin L. Burns School of Real Estate and Construction Management, University of Denver

**Anthony Pennington-Cross, Ph.D.**
Robert Bernard Bell Sr. Chair in Real Estate, Marquette University

**Dustin Read, Ph.D.**
Professor and Director of the Master of Real Estate Development Program, Clemson University

**Spenser Robinson, Ph.D.**
Associate Professor and Director of Real Estate, Central Michigan University

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George L. Ruff Chair in Real Estate Studies, DePaul University

**Mark Stapp**
Fred E. Taylor Professor of Real Estate, Executive Director of Real Estate Programs, W.P. Carey School of Business, Arizona State University

**Zhou Yang, Ph.D.**
Associate Professor of Economics, Robert Morris University

Read more about this elite group at **naiop.org/distinguishedfellows.**

★ *Denotes new Distinguished Fellow*

# Foundation Leadership, Governors and Visionaries

The work of the Foundation would not be possible without the leadership of the Governors. They are a group of senior industry professionals united in their desire to ensure the profession has the necessary tools to respond to the challenges it faces and to capitalize on emerging trends. Governors are instrumental in shaping the Foundation's research agenda, and through their commitment, provide the means for it to continue its important research, education and dissemination activities in perpetuity. A Governorship is individually held and a lifelong distinction.

The Visionaries program was developed by the Foundation to provide meaningful mentoring, high-level networking and research-related experiences to rising industry leaders who are 40 years of age and under. Participants have an unparalleled opportunity to learn from and network with senior professionals, and also play an important role in the Foundation's research development process by sharing their perspectives and expertise.

Learn more about the Governors program at naiop.org/research-foundation.

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**Vice Chair,**
**NAIOP Research Foundation**

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Executive Director – Investments,
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**Secretary/Treasurer,**
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Robert G. Cutlip
Retired

★ *Denotes former Visionary*

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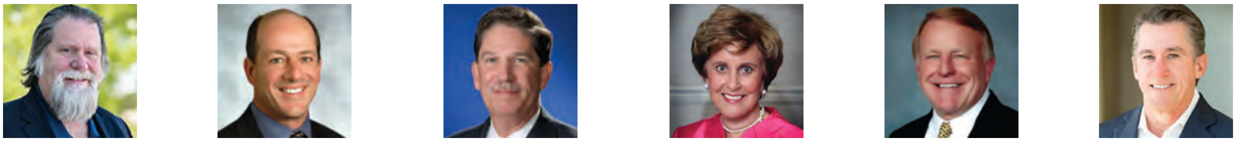

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Gregory P. Fuller
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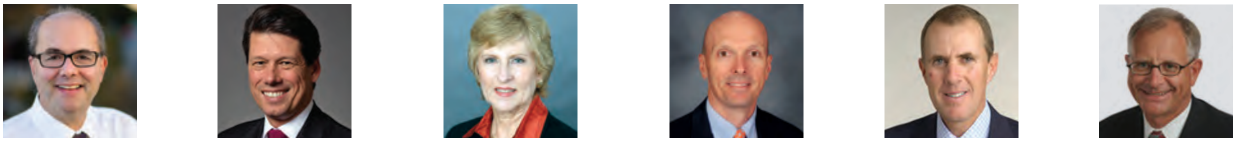
Granite Properties, Inc.



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Langan Engineering and Environmental Services, Inc.

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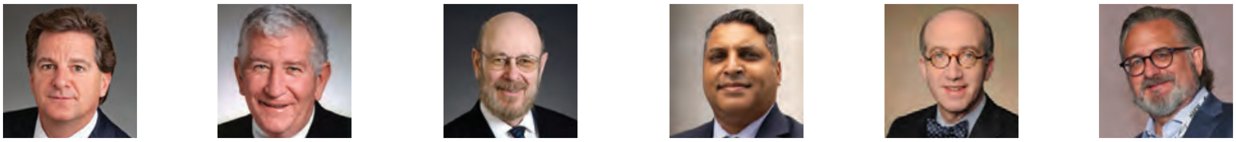
Primera Companies, Inc.

Douglas Howe
CEO, Howe Family Holdings LLC



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Nazir Khalfe
Principal, Powers Brown Architecture

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Edmund Klimek
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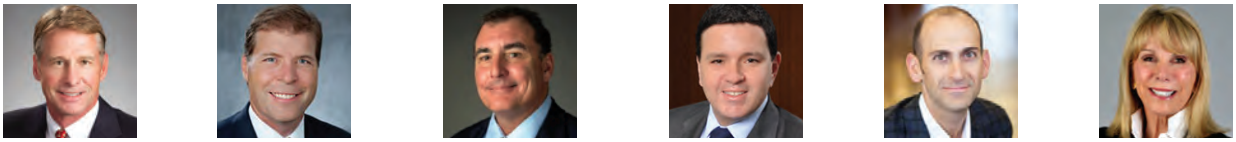
KSS Architects



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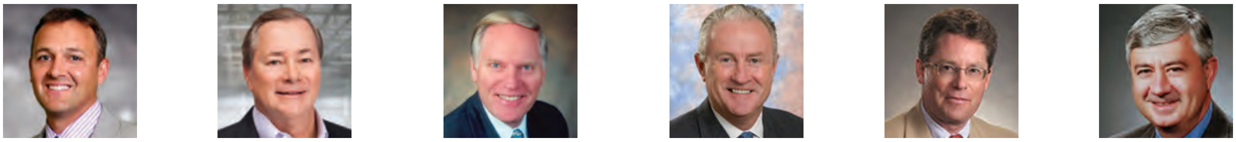

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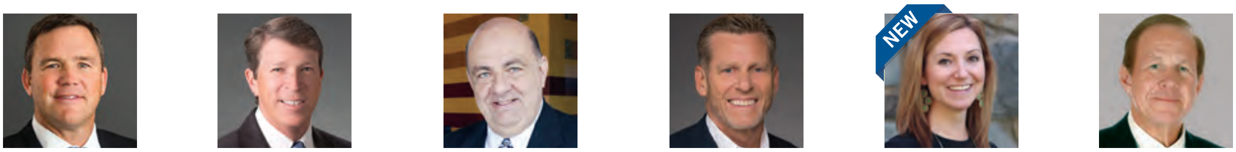


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Ronald A. Pizzuti
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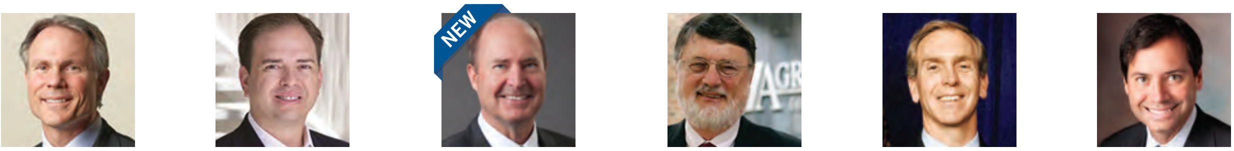
The Pizzuti Companies

Lawrence A. Pobuda
Executive Vice President, General Manager,
Opus Group

★ Marie Purkert
Senior Director of Corporate Strategy and Principal, christopher consultants, ltd. (now IMEG)

Ronald L. Rayevich
President,
RayMar Associates, Inc.




Eugene F. Reilly
CIO,
Prologis

★ Drew Richardson
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Jim Ryden
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*FOUNDATION LEADERSHIP, GOVERNORS AND VISIONARIES* – CONTINUED.

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Rialto Capital


Douglas Swain
Senior Vice President
Development,
Mohr Capital


Gerard H. Sweeney
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Brandywine Realty Trust


Dwight S. Taylor
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Stonegate Partners, LLC


Joseph S. Taylor
President and CEO,
Matrix Development Group


Rick Tollakson
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Hubbell Realty Company


Jonathan Tratt
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★ Colleen Wevodau
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Joan C. Woodard
Retired


Richard L. Woodruff
Real Estate Consultant,
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★ Christopher Zarek
Development Partner,
Cowboy Partners

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Bixby Land Company


Jordan Nathan
Senior Vice President
– Midwest Markets,
Faropoint


Maria Elena Poyer
Development Manager,
Amazon.com


Bryan Rosenberg
Director,
Eastdil Secured


Philip Storch
Vice President,
Construction,
Ancora Real Estate


Graham Wahlberg
Vice President,
Investment Management,
Goodman

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Thank you to our founding Legacy Society members, **Ron Rayevich** and **Joan Woodard**, for their commitment to the Foundation's future.

Please contact **Bennett Gray** at the Research Foundation for more information or to discuss giving options.

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Our thanks to those who contributed to the fund in 2022:

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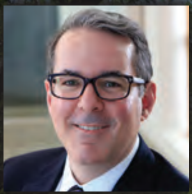

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# Federal Incentives Could Help Spur Property Conversions

**Struggling office properties are prime candidates for adaptive reuse into residential buildings.**

By Aquiles Suarez

Converting old and underutilized office properties into residential buildings may not be a new trend in commercial real estate. However, high office vacancy rates, coupled with a housing shortage in many communities, are forcing elected officials and policymakers to focus on adaptive reuse to address both problems.

But the challenges inherent in property conversions have kept them from being undertaken on a broader scale across the country, or in greater numbers in communities that might otherwise benefit from repurposing stranded commercial real estate assets. Now, NAIOP and a coalition of national real estate organizations are urging Congress to look at creating federal incentives that could spur adaptive reuse and property conversions. In fact, it is one of NAIOP's top federal priorities for 2023.

*Left, JLL Capital Markets; right, Kip Dawkins Photography*

**A before-and-after look at the exterior of Park+Ford, a 1980s-era office property in Alexandria, Virginia, that was recently converted into multifamily housing. It was profiled in the Spring 2022 issue of Development magazine. One of NAIOP's top federal priorities for 2023 is urging Congress to create incentives for more adaptive-reuse projects like Park+Ford.**

## Housing Shortage Meets Office Downturn

Two broad societal factors are raising the profile of adaptive reuse. One is the severe shortage of affordable housing across the nation. According to the Pew Research Center, a growing share of Americans say the lack of affordable housing is a significant problem in their communities. In 2020, 46% of American renters spent 30% or more of their income on housing, including 23% who spent at least 50% of their income on rent.

The second is the aftermath of the pandemic and the resulting work-from-home trend. It may become a permanent feature of labor markets, and it is directly impacting office vacancy rates. A study by the National Bureau of Economic Research concluded that by the end of 2022, 30% of all workdays were at home. With fewer workers in the office at any one time, businesses require less space. Office market vacancy rates in the third quarter of 2022 were the highest since 1993, rising to more than 17% nationally. Absorption of office space will continue to slow in 2023 amid economic uncertainty, according to the NAIOP Research Foundation's Office Space Demand Forecast for the fourth quarter of 2022.

The persistence of underutilized and largely vacant office buildings can be particularly troublesome for local governments, especially in cities with high concentrations of office buildings in downtowns. The depressed asset values of vacant and underutilized commercial buildings negatively impact state and local budgets by generating less revenue from property taxes. A study completed in November 2022 by researchers at the NYU Stern School of Business and Columbia University estimated a $413 billion reduction in real estate asset values from continued remote work trends.

Fewer people coming to the office also means less economic activity on a daily basis for the shops and restaurants that normally serve these workers, with a resulting reduction in sales taxes from these businesses. Less revenue translates into a reduction in services for many communities, which could suffer higher rates of crime, homelessness and other social ills as a result. Additionally, a decline in activity in these areas also contributes to the perception that they are unsafe.

The conversion of underutilized commercial buildings into residential use,

## In Memoriam: Rex Hime, 1948-2023


Hime

**Rex Hime**, who led the California Business Properties Association (CBPA) for 37 years and was a friend and legislative ally to NAIOP's California chapters, passed away in February. He was 74.

From 1984 to 2021, Hime served as president and CEO of CBPA, which is the designated legislative advocate for the six NAIOP chapters in California, as well as for ICSC, the Building Owners and Managers Association of California (BOMA CAL), the Retail Industry Leaders Association (RILA), the Association of Commercial Real Estate – Northern and Southern California (ACRE) and AIR CRE. He spoke frequently at NAIOP events, often dressed in one of his signature Hawaiian shirts. During his tenure, the CBPA grew from fewer than 100 members into a group that represents more than 10,000 companies.

Hime's strong leadership led to the defeat of many significant issues at the legislative and ballot-box level, including multiple split roll property tax initiatives.

"Rex was one of a kind," said California Chamber of Commerce President and CEO **Jennifer Barrera** in a statement. "He was an incredible advocate for California business and a mentor to so many of us. Rex's humor and his direct approach to issues were two of his best qualities."

Hime is survived by his wife, **Gwyn Bicker Hime**, and sons **Rex Hime**, **Reagan Hime** and **Trevor Plescia**. ■

in both cities and suburban areas, seems to be a wise and obvious solution. It could help address a supply shortage of housing while preventing the downward economic spiral that results when vacant office buildings contribute to depopulated business centers. Moreover, repurposing an existing structure has added environmental benefits, since the building is essentially being recycled. This results in fewer greenhouse gas emissions and a smaller carbon footprint. Yet despite these advantages, high property conversion costs, city zoning and building codes, and the higher financing costs of riskier adaptive-reuse projects have prevented these from being utilized on a larger scale.

### Governments Launch Incentives

Several states and localities have enacted policies meant to reduce regulatory barriers to property conversions for affordable housing and provide financial incentives to offset the high costs. For example, legislation passed in California last year would open districts zoned for commercial use to residential conversions and streamline the entitlement process for affordable housing projects. The city of Chicago has moved aggressively in this direction, offering tax credits and incentives to repurpose high-vacancy buildings in its downtown financial district. And at the beginning of this year, New York City Mayor **Eric Adams** unveiled recommendations from a city-led task force to facilitate the conversion of underutilized space into new housing.

Action by the federal government would help increase and accelerate the pace and number of these property conversions. Legislation introduced in the last Congress by Senator **Debbie Stabenow** (D-Michigan), modeled on the historic-preservation tax credit, would provide a 20% credit for qualified property conversion expenditures. A building would have to be 25 years old at the time of conversion and provide at least 20% of the resulting units for affordable housing to qualify. The real estate community suggested changes to the legislation, including expanding the category of properties eligible for the credit, extending the incentive to real estate investment trustees and reducing the level of conversion expenditures required, among others. The bill was referred to the Senate Finance Committee, but no action was taken prior to Congress adjourning.

With the new Republican majority in the House of Representatives and the Senate in Democratic hands, many expect legislative gridlock to predominate through the next election. Certainly, legislation will have to be strongly bipartisan at a minimum. Getting the federal government to provide financial and tax-related incentives for adaptive reuse will not be easy. Generally, Republicans tend to be wary of tax credits that they see as interfering with the operation of the free market. For their part, Democrats are suspicious of tax incentives for businesses unless stringent conditions are imposed. Both sides will need convincing.

Regardless of the legislative challenges, NAIOP and the broader real estate community will make the case to elected leaders that property conversions can help alleviate the affordable housing crisis and promote healthier local economies. Eligible properties should include a broad range of underutilized commercial buildings that could be repurposed to serve a community's housing needs. In addition to offices, these could include shopping centers, suburban office parks or other structures that can be turned into mixed-use developments with a housing component. And the legislation should consider and reward, perhaps with additional incentives or preferences, actions taken by localities to streamline zoning and building codes in support of these conversions. ■

**Aquiles Suarez** is the senior vice president for government affairs for NAIOP.

# Chapter Merit Awards Honor the Best of NAIOP's Local Efforts

**Education, membership, advocacy and special events were among the programs recognized in 2022.**

By Trey Barrineau

NAIOP recognized the exceptional work by its chapters and associated individuals in 2022 during the Chapter Merit Awards, held during the association's annual Chapter Leadership and Legislative Retreat (CL&LR) in Washington, D.C., in late January.

"The Chapter Merit Awards are a way to highlight the tremendous work of all 52 of our chapters," said NAIOP President and CEO **Marc Selvitelli**, who led attendees in a champagne toast in honor of the occasion.

The Chapter Merit Awards salute outstanding achievements in education, special events, membership, legislative affairs, diversity, equity and inclusion, and leadership. These programs included virtual events, charitable initiatives, competitions for college students and much more. A volunteer committee selected the winners.

## Chapter of the Year

NAIOP Southern Nevada received the Chapter of the Year award in the Large Chapter category. NAIOP Southern Nevada's membership grew by 13% over the previous year. The chapter also mobilized and responded to a proposed statewide moratorium on evaporative coolers for new development.

NAIOP Oregon was honored as Chapter of the Year in the Medium Chapter category. The chapter added an average of nine new members a month in 2022 and increased the number of annual sponsors from 19 in 2021 to 35 in 2022.

## Diversity, Equity and Inclusion

NAIOP Chicago received the top prize in the Large Chapter category. The chapter expanded its University Scholarship Program from three to nine schools, with a special emphasis on ap-

continued on page 96


Photo by Robert Cherouny

Members of NAIOP Southern Nevada accept the award for Chapter of the Year during the Chapter Merit Awards, held as part of NAIOP's Chapter Leadership and Legislative Retreat in Washington, D.C.



*continued from page 94*

plicants who would not have access to college without scholarship assistance.

NAIOP Raleigh Durham won the award in the Medium Chapter category for its $100,000 financial commitment to North Carolina Central University's new MBA concentration in commercial real estate, the first ever offered by a historically black college or university.

NAIOP New York City was honored in the Small Chapter category for hosting a panel discussion on how supplier diversity and workforce diversity can help commercial real estate firms meet both environment, social and governance (ESG) and diversity, equity and inclusion (DEI) goals.

## Education

NAIOP Minnesota received the top recognition in the Large Chapter category for a hybrid in-person/remote panel on the local office market that received overwhelmingly positive reviews from attendees.

NAIOP Central Florida won the award in the Medium Chapter category for a two-part panel discussion on the local office market in the aftermath of the COVID-19 pandemic.

## Legislative and Government Affairs

NAIOP San Diego took top honors in the Large Chapter category for several legislative successes, including its work on blocking legislation that would have essentially banned warehouses and logistics centers in California.

NAIOP Inland Empire won the award in the Medium Chapter category, also for its work against the California warehouse ban.

## Membership

NAIOP Southern Nevada was honored in the Large Chapter category. The chapter went from 580 to 652 members in a year, a nearly 13% increase.

**"The Chapter Merit Awards are a way to highlight the tremendous work of all 52 of our chapters."**

*— Marc Selvitelli, President and CEO, NAIOP*

## Special Event

NAIOP Georgia won the top honor in the Large Chapter category for its School Challenge, a case-study-based academic competition between Emory University, Georgia State, Georgia Tech and the University of Georgia.

NAIOP Vancouver took the top award in the Medium Chapter category for its refreshed and rebranded Commercial Real Estate Awards of Excellence that attracted more than 400 attendees.

NAIOP Northern Nevada received the award in the Small Chapter category for its Cirque du Summit Awards, a creative reimagining of a long-running event that featured aerial performances and singing.

## Outstanding Leadership by a Chapter President

**Hayim Mizrachi**, president of NAIOP Southern Nevada, was recognized in the Large Chapter category. Among his many accomplishments, Mizrachi has turned the chapter's monthly breakfast program into a must-attend event in the Southern Nevada market by drawing in relevant content and speakers.

**Evan Bernstein**, president of NAIOP Oregon, won in the Medium Chapter category. Under his leadership, the chapter's membership grew by 42%, and it ended 2022 in the best financial position in its history.

**Lindy Deller**, president of NAIOP Northern Nevada, won in the Small Chapter category. She oversaw an expansion in the chapter's lobbying efforts and helped boost NAIOP Northern Nevada's profile with several successful events.

## Outstanding Contribution by a Chapter Executive

**Sally Modjeska**, chapter executive for NAIOP DC I MD, won in the Large Chapter category. During her 20-year tenure, chapter membership has risen by more than 570%. She has also ensured that the chapter has a large balance of net cash assets.

**Barbie Rosario**, chapter executive for NAIOP Hawaii, was honored in the Medium Chapter category. She has helped grow the chapter's Developing Leaders group from just two members to 47, which represents 25% of the chapter's total membership.

## Volunteer of the Year

**Steve Neiger** of NAIOP Southern Nevada was recognized as Volunteer of the Year in the Large Chapter category. Neiger was active in the chapter's Government Affairs committee and led efforts on many legislative and code issues.

**TJ Sellers** of NAIOP Central Florida was honored as Volunteer of the Year in the Medium Chapter category. Among his many accomplishments was his leadership in establishing a $10,000 fund for a Diversity and Equitable Access Scholarship Program.

**Lindsey Juriaan** of NAIOP Northern Nevada won the award for Volunteer of the Year in the Small Chapter category. She participates in several committees and co-chairs the CREW-NAIOP Charity Golf Tournament Committee. ■

**Trey Barrineau** is managing editor of publications for NAIOP.

# New Applications for Data Analytics in Commercial Development

**A new report from the NAIOP Research Foundation examines how these technologies are being used in site selection and design.**

By Shawn Moura, Ph.D.

With the ever-increasing availability of digitized information, data analytics is emerging as an important aid to decision making for businesses in multiple industries. Most data-analytics applications for commercial real estate have focused on measuring the performance of existing buildings to optimize facility operations and systems. More recently, some firms have begun to use data analytics to support land and building development decisions and improve construction project outcomes.

The NAIOP Research Foundation's October 2022 report, "The Role of Data Analytics in Commercial Real Estate Siting, Design and Valuation Decisions," examines emerging applications for data analytics in commercial real estate development. The report's author, **Clifford A. Lipscomb**, Ph.D., interviewed developers, commercial real estate services providers and CRE tech firms to evaluate the current state of data analytics adoption in the commercial real estate industry and explore applications for investors and developers.

The report reveals that most developers and investors continue to rely primarily on traditional forms of market research to inform investment decisions, but many are increasingly supplementing traditional research with data analytics. Some developers are beginning to use analytics to optimize interior layouts, amenities and other elements of building design, while others turn to analytics to narrow the range of potential sites for new speculative buildings. Experts expect that data analytics will become more widely adopted within the commercial real estate industry as relevant data become available and advances in artificial intelligence enable new applications.

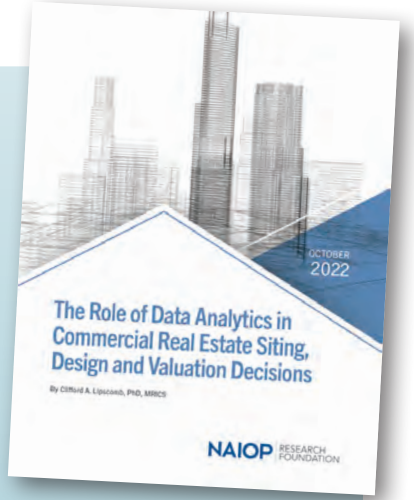
Due to the high costs associated with developing data-analytics capabilities, most investors and developers currently outsource analytics tasks to consultants and CRE technology firms. Several of these firms have developed software that draws from data analytics to support key stages of the development process. Some programs can analyze the zoning and dimensions of parcels within a given municipality to support site selection and land packaging or to model multiple potential building designs that are compatible with existing zoning. Other programs track and analyze images of a site or building to support construction management or create building renderings for use in cost estimation or to market a building to buyers or tenants.

Due to the high costs associated with developing data-analytics capabilities, most investors and developers currently outsource analytics tasks to consultants and CRE technology firms. Several of these firms have developed software that draws from data analytics to support key stages of the development process.

These applications have the potential to reduce project costs and shorten timelines. They may also allow development teams to test out a wider range of design options than would be feasible using traditional methods.

As analysts and programmers continue to find new uses for data analytics, it is likely they will become central to project planning and execution. ■

**Shawn Moura**, Ph.D., is research director at NAIOP.




## Get the Report

**To view and download** "The Role of Data Analytics in Commercial Real Estate Siting, Design and Valuation Decisions," visit www.naiop.org/research-and-publications/research-reports/reports/the-role-of-data-analytics-in-commercial-real-estate/ ■

## In Memoriam: Nino Pedrelli, 1956-2023


Nino Pedrelli

**Nino Pedrelli** passed away on January 14. He was an avid supporter of the NAIOP Research Foundation, serving as a governor, a dedicated research committee member and eventually a Trustee. He was also a NAIOP Center for Education faculty member and had been part of the Private Developer Forum I since 2008.

Pedrelli made an indelible impression on NAIOP and he will be missed by the many friends and colleagues he made while a member.

"There are certain people that you meet in this life that you connect with instantly," said **Skip Kalb**, chair of the NAIOP Research Foundation. "They have a humble, gentle spirit and are genuinely interested in you and immediately become your friend. Nino was one of those people — he took an interest in everyone he met, put the interest of others first and wanted them to succeed in this business."

Pedrelli received his bachelor's degrees in civil engineering and management science from the Massachusetts Institute of Technology, his master's in civil engineering from Stanford University, and his Ph.D. in real estate from the University of Wisconsin-Madison. He had more than 40 years of experience and leadership in construction finance and commercial real estate investment, development and research. At the time of his death, Pedrelli was the principal of State Street Realty Advisors. For a decade, he served on the board, and eventually as president, of Hammer Residences, a nonprofit organization that provides quality services for adults and children with intellectual disabilities.

The NAIOP Research Foundation is accepting donations in Pedrelli's name that will support its programs. Please contact **Bennett Gray**, Vice President, NAIOP National Forums and Research Foundation, if you would like to contribute. ■

# Talent Development and the Future of the CRE Workforce

**NAIOP Research Foundation task force takes on urgent issues.**

By Jennifer LeFurgy, Ph.D.

As the talent wars escalate, commercial real estate firms of all sizes and sectors are experiencing challenges in recruiting and retaining employees. The pandemic, economic uncertainty, demographic shifts and the changing nature of work have created a unique situation for employers. Trends that are affecting CRE firms include:

**Post-pandemic expectations:** The pandemic profoundly upended the U.S. job market. In 2021, more than 47 million U.S. workers quit their jobs. Real estate and other professional service firms were also faced with managing remote work and implementing employee preferences for more flexibility and inclusivity. Job hopping, once considered undesirable, is now common as workers seek the most optimal work situations.

**Retention during downturns:** Commercial real estate firms face additional headwinds due to the cyclical nature of the markets. Payrolls grow and shrink according to the economy's health, making it more difficult to retain talent during downturns. Rapid hiring and firing may no longer be sustainable for some firms.

The NAIOP Research Foundation's Talent Development Task Force examined how industry practitioners and educators can work together to grow the talent pipeline for commercial real estate.

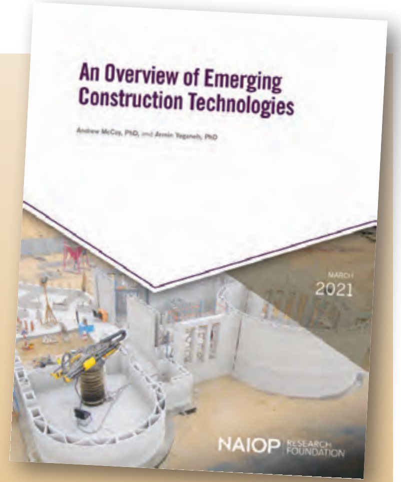
**Fewer workers:** As baby boomers exit the workforce, there are fewer employees to take their place; this demographic imperative will worsen as childbearing plummeted during the Great Recession. Economics professor **Nathan Grawe** sounded the alarm in his 2018 book, "Demographics and the Demand for Education." Grawe estimated that between 2021 and 2026, the number of college-age students will drop 15% due to the recessionary baby bust. Fewer students means a shrinking talent pipeline.

**New skill sets:** CRE has a reputation for slowly adopting technologies, and this may dissuade younger, digital-native workers from pursuing it as a career choice. The industry is gradually embracing proptech, AI and advanced analytics for construction management, building design and site selection. In addition to having the requisite communication and business skills, CRE leaders and their employees will need to know how emerging technology can best drive their businesses forward. However, the rate of digital transformation is outpacing the number of available experts (see "What the Talent Gap Means for Today's Businesses," Development, Winter 2022/2023).

## Relevant Research

**In March 2021, the NAIOP Research Foundation** published "An Overview of Emerging Construction Technologies." The report explores emerging construction technologies and their implications for the construction and real estate development industries.

To view and download the report, visit: www.naiop.org/research-and-publications/research-reports/reports/an-overview-of-emerging-construction-technologies/



**Awareness:** Although the number of post-secondary real estate degree programs is increasing, many young people are unaware of commercial real estate as a career path. To those not familiar with the field, real estate usually conjures working as a residential broker. Additionally, people often come into the business through family connections or by chance rather than by choice.

## NAIOP Responds

In the summer of 2022, the NAIOP Research Foundation formed the Talent Development Task Force to examine how industry practitioners and educators can work together to bridge knowledge gaps between instruction and employment, improve industry access for DEI candidates and grow the talent pipeline. The task force was composed of commercial real estate professionals (brokers, investors, developers) and leaders from university real estate programs. Research Foundation Chair **Skip Kalb**, **Mike Riopel** of Northwestern Mutual and **Andrew Hunt** of Marquette University led the task force, which met twice virtually and once in person with a select group of CEOs and company leaders during CRE.Converge 2022 in Chicago. The meetings revealed an immediate need to strengthen the CRE workforce, create greater awareness of real estate careers among younger generations, particularly those of diverse backgrounds, and capture the perspectives of employees and employers regarding new ways of working. Based on their discussions, the task force made the following recommendations:

- The NAIOP Research Foundation should commission a study of the challenges and opportunities facing the industry around talent development, as well as recruitment and retention issues. The study should examine how practitioners can work with educators to ensure employees have the relevant skills firms need.
- NAIOP should survey its membership, including the Developing Leaders and company executives, on the relevant as well as emerging skills CRE employees will need to succeed. Survey results should be shared with NAIOP university members and other educators.
- Obtain an analysis of CRE job posting sites to discover the most in-demand skill requirements.
- Encourage the Research Foundation's Distinguished Fellows and NAIOP university members to attend NAIOP events with students and recommend educators participate in conference panel sessions and Forum presentations. This strategy will lead to more significant interaction among practitioners and students while reinforcing opportunities within the field. NAIOP chapters should also engage with local educators on a consistent basis.

NAIOP will continue leveraging its relationships with educators and local chapters as well as its programmatic efforts in DEI, career development, online courses and scholarship support to create greater recognition of CRE as a career path.

As demographic shifts and trends continue to shape commercial real estate and its workforce, companies must develop robust talent strategies that accommodate evolving needs and shortages. To this end, partnerships between the industry and educators are critical — they form essential channels of communication and cooperation that help each adapt and build the talent pipeline. ■

**Jennifer LeFurgy**, Ph.D., is the editor in chief of Development magazine.

Students in UC San Diego's B.S. in Real Estate and Development program.

### Expanding the Pipeline

In a feature article in the Winter 2021/2022 issue of Development magazine, **Shawn Moura**, Ph.D., NAIOP's research director, examined diversity initiatives in university-level commercial real estate programs. According to Moura, "increasing the diversity of undergraduate and graduate real estate programs can be a particularly effective way to increase the diversity of the commercial real estate industry."

www.naiop.org/research-and-publications/magazine/2021/winter-2021-2022/business-trends/expanding-the-pipeline-promoting-diversity-in-undergraduate-and-graduate-real-estate-programs/ ■

# NAIOP Resources

ASSOCIATION PROGRAMS AND SERVICES

**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 and are mobile-responsive for those who want to read 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.*

## 2023 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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# Getting to Know the Chair

NAIOP's members are what makes this association special. They are top-notch professionals with pride in the industry, and I'm excited to be leading the association this year.

To help get to know me, Development magazine asked if I would share my thoughts on our industry and NAIOP.

Kim Snyder

### What can the industry expect this year?

We will undoubtedly face challenges in 2023 as we grapple with economic uncertainty, but there are also reasons for optimism. A downturn can present opportunities for capital investment, creative problem-solving and recruiting new talent. Savvy commercial real estate developers learn to predict and assess external factors to overcome obstacles on the path to success.

Whether in office, retail, hospitality or logistics, developers need tenants. I love getting to know customers — their businesses and their needs — and helping them solve their problems so they can flourish. This makes me excited to go to work every day. Our real estate investments and career opportunities are much bigger than one development project — we're helping create a strong economy and better communities for people to work and live.

NAIOP will help its members navigate choppy waters in the year ahead with continuing education, new research on timely topics and a collaborative membership that is willing to help others by sharing our experiences.

### What areas are poised for growth in industrial development?

Sustainable logistics is an area that I expect to boom. As companies develop industrial projects, ensuring that they are designed, constructed and operated sustainably will be key to winning and maintaining community support. Fully featured 40-foot-clear warehouses are as popular as ever, making them a solid investment opportunity. That said, smart investors are putting money into properties that are built with an eye toward the future (solar, LED, EV, etc.).

Fleet electrification, while in its infancy, is significantly impacting the industry. As landlords and tenants strive to achieve net-zero goals, the emergence of electric vehicles of all kinds will be part of that solution.

### What are your goals as NAIOP Chair?

Our association is growing — surpassing new records at the end of 2022 — yet the membership structure is complex and can be challenging to explain. We need to simplify and streamline, making the structure easier to understand to avoid potential barriers for members. I'm pleased to share that a task force has been appointed to examine this issue.

During the past two years, the industry has strengthened its commitment to diversity, equity, inclusion and belonging (DEI&B). As we develop the next strategic plan, we need to establish meaningful and actionable tenets supported by the executive committee and propelled into action steps by our board. This commitment needs to be supported with a budget for further recruitment, development and education for all members on the merits of a diverse workforce so that our association can demonstrate its commitment to all underrepresented individuals in commercial real estate.

For decades, NAIOP Corporate — uniting 52 chapters across the U.S. and Canada — has successfully represented the members on federal policy issues; however, we need to work with our chapters to align our priorities on common issues and problems facing regions, states and provinces. This year, we'll survey members to identify key issues to create a more focused approach to advocacy on all levels. ■

**Kim Snyder,** President,
Western Region
Prologis
2023 NAIOP Chair

## Let's Get Personal

**Years in the industry?**
38 years

**How did you get involved in NAIOP?**
I started attending local NAIOP events for networking purposes and soon realized the educational opportunity was immense. I also appreciated the convergence of my interest in government and public policy with NAIOP's legislative efforts, and I still find this focus very rewarding.

**Family?** Married with four kids: two boys and two girls, ages from 17-30.

**Last book read?**
"1421: The Year China Discovered America" by **Gavin Menzies**

**Best vacation spot?**
Kauai, Hawaii

**Favorite out-of-the-office activity?**
Learning a new tune on my guitar. It's amazing how good playing can make me feel.

**Industry mentor?**
**Hamid Moghadam**, Prologis' CEO and the best CEO I have ever worked for in my career.

**Best words of wisdom you ever received?**
"Work smarter, not harder."

Read more from **Kim Snyder** in the Market Share blog: blog.naiop.org ■

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