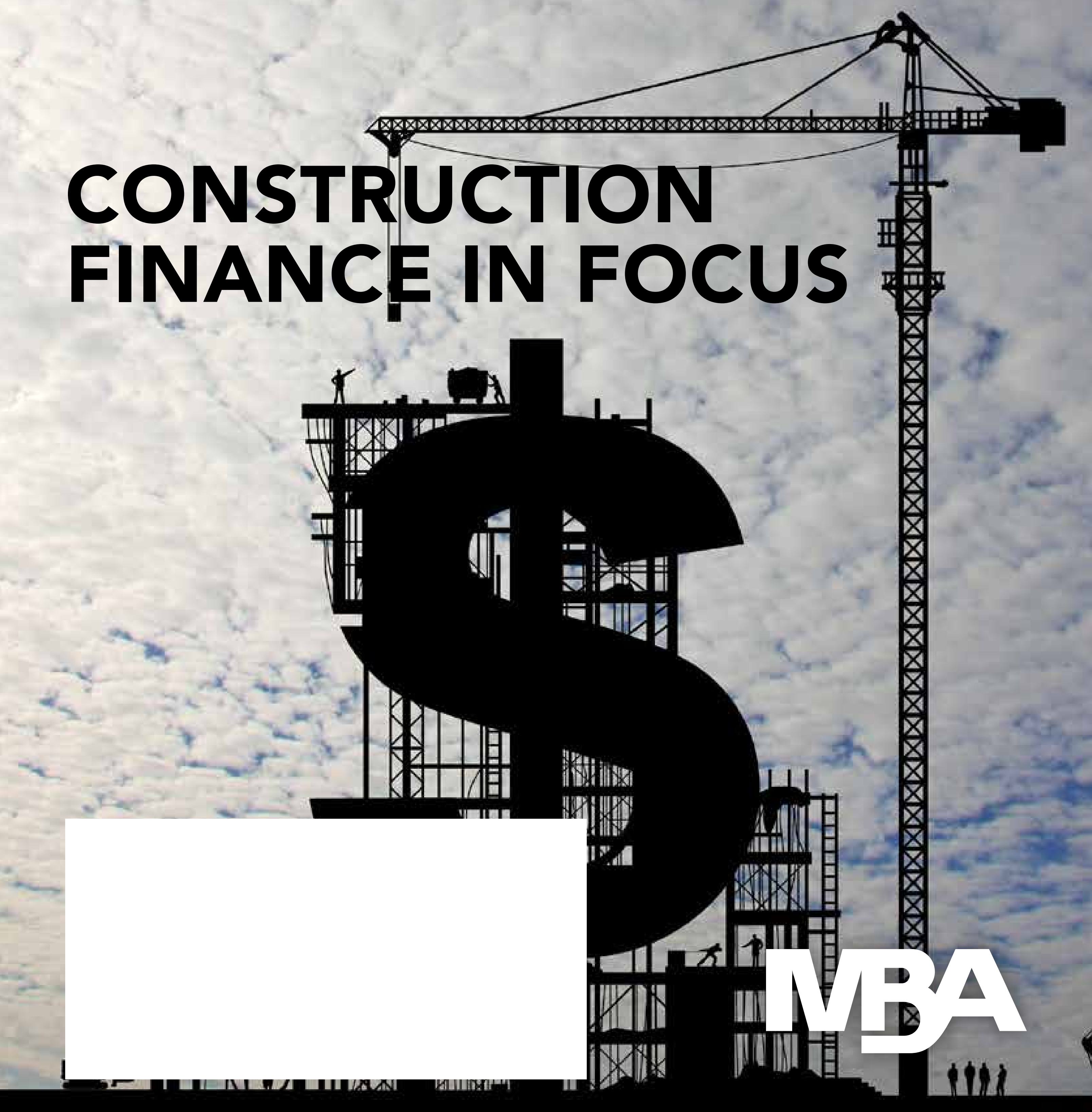
Breaking Ground

THE MAGAZINE OF THE MASTER BUILDERS' ASSOCIATION OF WESTERN PENNSYLVANIA

MAY/JUNE 2022

CONSTRUCTION FINANCE IN FOCUS




McKAMISH
BUILDING EXCELLENCE
www.mckamish.com
LNG / LPG

Contents 2022

PUBLISHER
Tall Timber Group
www.talltimbergroup.com

EDITOR
Jeff Burd
412-366-1857
jburd@talltimbergroup.com

PRODUCTION
Carson Publishing, Inc.
Kevin J. Gordon

ART DIRECTOR
Carson Publishing, Inc.

GRAPHIC DESIGN
Blink

CONTRIBUTING EDITOR
Anna Burd

CONTRIBUTING PHOTOGRAPHY
Candidly Yours Photography
Master Builders' Association of Western PA
NAIOP Pittsburgh
Mosites Construction Co.

ADVERTISING DIRECTOR
Karen Kukish
412-837-6971
kkukish@talltimbergroup.com

MORE INFORMATION:
BreakingGround™ is published by Tall Timber Group for the Master Builders' Association of Western Pennsylvania, 412-922-3912 or www.mbawpa.org

Archive copies of BreakingGround™ can be viewed at www.mbawpa.org

Keep up with regional construction and real estate events at www.buildingpittsburgh.com

Correction: There were errors in two of the listing of MBA Building Excellence Awards in the March/April edition. The architect for the Duquesne University UPMC Chuck Cooper Fieldhouse was DRS Architects. The architect for the Carnegie Library of Pittsburgh Mt. Washington Branch was Elagin Architecture, Inc.

PUBLISHER'S NOTE

The reactions I received following the publication of the January/February edition tells me that some of you are still reading this column. Upon reflection, I'm concerned that I've become too negative, too cranky in my old age. So, for this edition at least, I want to comment on a couple of interesting positive trends I believe are developing in Pittsburgh. If you came for another testy rant, you may want to move along to the Regional Update now.

One of these trends has become obvious. Pittsburgh is getting younger. If you're still hearing (or telling) the anecdote that only Dade County, FL has an older population than Allegheny County, it is no longer true. In addition to Allegheny County's population growing from 2010 to 2020, it got a lot younger, thanks to the residents of the city proper. The median age of a Pittsburgh resident was 32.9 last year. That's five years younger than the median U.S. resident, and almost 10 years younger than the median PA resident.

More important than this reversal of the aging trend is how it should be accelerating over the next couple of decades. My generation still has plenty of life in it, but we Boomers are retiring quickly and will begin shuffling off this mortal coil with increasing frequency over the next 30 years. Because of the 1980s Pittsburgh diaspora, there is a hole where Gen X should be. Come 2050, there may be fewer old people in greater Pittsburgh than in most other cities in the U.S.

If you like what you have been seeing in the Strip, Lawrenceville, and Downtown over the past decade, imagine what Pittsburgh 2040 or 2050 will be like. Pretty vibrant.

The other trend is far less obvious, especially in Pittsburgh. There has been a concerted effort to create a more inclusive economy in Pittsburgh, while diversity and inclusion have become larger societal goals. This has not been without pain or pushback. The successes have been measured in new hires, promotion, and elections.

The economic benefits of diversity and inclusion have largely not found their way into the communities that have been excluded. Those tangible benefits of economic equity are going to follow if there continue to be constant incremental gains at the grassroots level. Efforts like the Builders Guild's Pre-Apprentice Training Program are placing minority students into working careers in construction in meaningful numbers. Young people of color now grow up seeing people like them in commercials, the White House, and even in the mayor's office in Pittsburgh. The impact of that should be significant, but it won't be immediate.

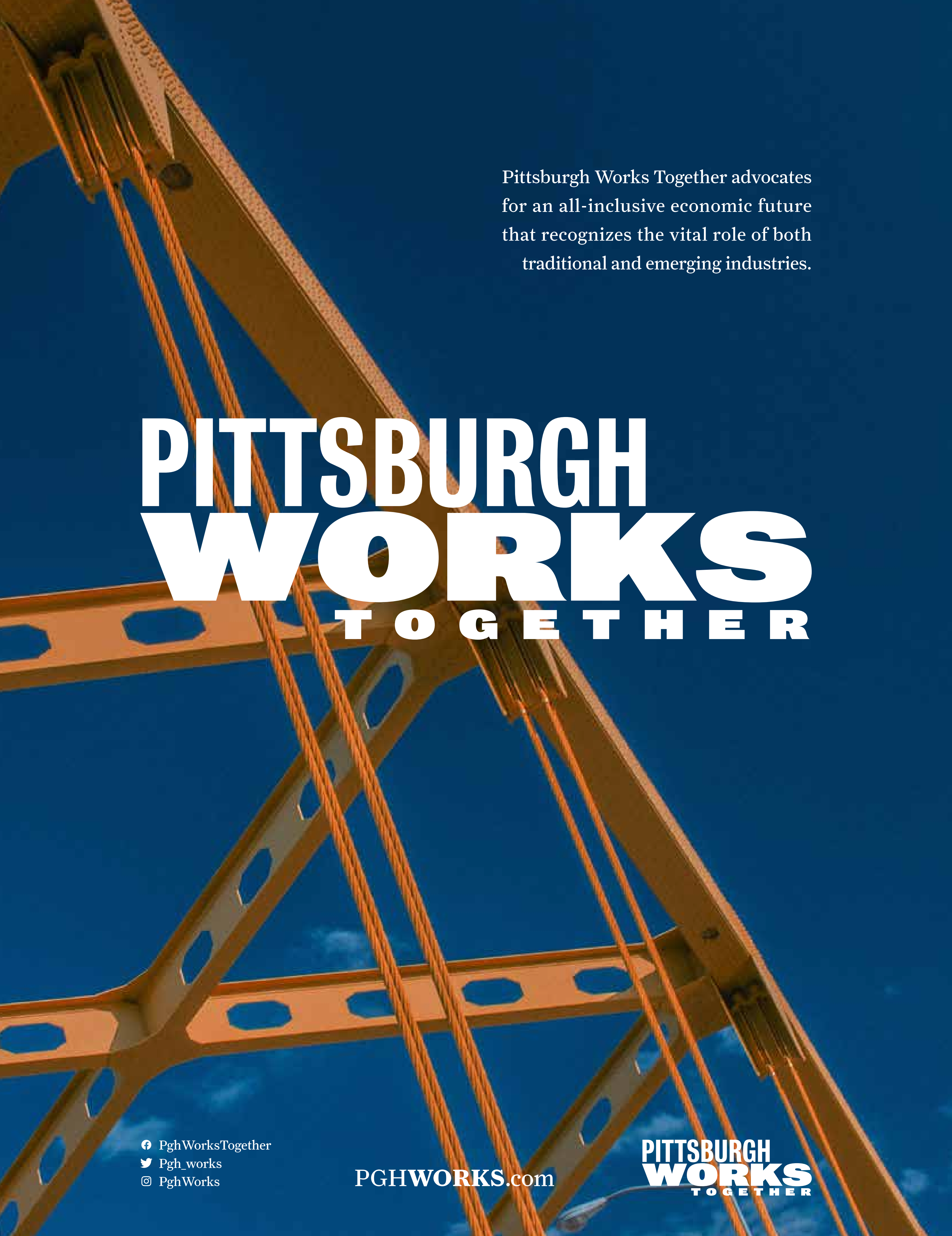
Look, I'm a 65-year-old white guy near the end of a very fortunate business career. That means I have no right to encourage patience about change for the future. But whether you're talking about changing economic inequity or demographic trends, you're talking about major changes.

When progressive people see things that should change, they tend to look for solutions that bring about change now. That makes sense. If, for example, you feel that minorities or women have been under-represented in society, you want to see that reversed sooner than later. The simple, painful truth is that acceptance of change requires time.

One of the things about Pittsburgh's recent transformation that has stuck with me is that Mayor Caligiuri predicted it 35 years ago, when he warned that it would take a generation to fix the damage done by the exodus of heavy industry from our region. He made that prediction numerous times when he spoke to business and civic leaders in the mid-1980s. The mayor was not being negative. He was simply conveying an acceptance that what needed to occur for Pittsburgh to achieve a new, more balanced economy was going to take 25 years or more. What he was not saying, of course, was that the leaders of the day should wait 25 years or more to effect change. Caligiuri was setting expectations so that those who were striving for change understood where the finish line was.

That's good advice for today's leaders. Pittsburgh is now a much younger city than it was at the turn of the century. I don't think that trend will reverse. I believe the same is true for economic equity, but we haven't seen that positive trend materialize yet. If you are serious about seeing our industry and our region offer opportunities for all people, let the transformation of the last 30 years be your inspiration. Behave urgently but don't be discouraged by the lack of immediate gratification.

Jeff Burd



Pittsburgh Works Together advocates for an all-inclusive economic future that recognizes the vital role of both traditional and emerging industries.
PITTSBURGH WORKS TOGETHER
PghWorksTogether
Pgh_works
PghWorks
PGHWORKS.com
PITTSBURGH WORKS TOGETHER

REGIONAL MARKET UPDATE

SPONSORED BY:

DollarBank

Let's get you there.

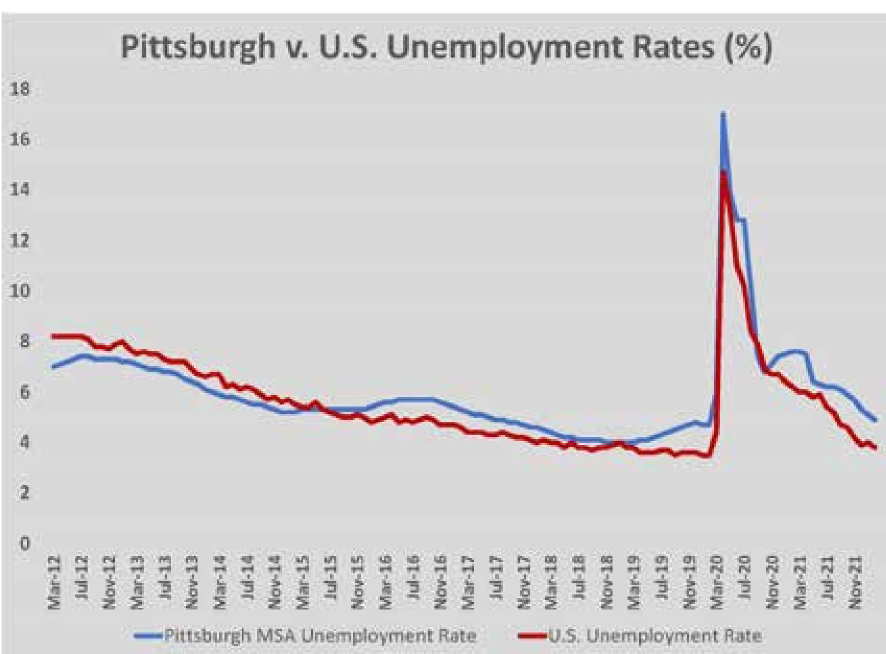
The headline story for construction in Western PA is the same as the headline for the rest of the U.S. The supply chain has not recovered from a pandemic that is still flaring up, and the result is lead times and inflation that have not been seen in a generation. As projects in the pipeline coming into 2022 are now being priced, it is becoming clearer that this overarching macroeconomic reality is going to have a microeconomic impact on construction activity. There will be a slowdown that will lead to less construction started in 2022.

The relationship between macroeconomic and microeconomic conditions is something akin to the relationship between climate and weather. Global macroeconomic factors, like extraordinary inflation or demographics, create conditions that affect all regions to some degree. For a secondary or tertiary market like Pittsburgh, however, microeconomic drivers can run counter to the macroeconomic climate. That was certainly the case in the mid-1980s when the loss of heavy manufacturing jobs left the Pittsburgh region on the sidelines for the Reagan recovery. It was also true in the early 2010s, when Pittsburgh saw a milder impact from the financial crisis and recovered quicker than all but two other cities in the U.S.

Pittsburgh's economy is influenced by interest rate-sensitive industries to a lesser degree than most of the gateway cities. The housing market is smaller. Real estate and corporate transaction volumes are much lower. Capital investment in businesses and facilities, although increased in recent years, is relatively low. Trends that have a significant impact on capital investment and liquidity are less damaging to Pittsburgh. To the extent that other economic drivers create a significant impact that offsets a negative macroeconomy – such as the natural gas industry did in the 2010s and emerging technologies are doing today – the Pittsburgh economy can be shielded from the harsher effects of a downturn.

One microeconomic metric that appears to be an outlier is Pittsburgh's unemployment rate. Through February (the latest regional data available) the unemployment rate for the seven-county metropolitan area was 4.9 percent, which was 1.1 percentage points higher than the U.S. rate. February's reading was nearly back to the 4.7 percent unemployment rate of two years earlier, which was 1.2 percentage points higher than the U.S. rate at the time. Since the beginning of the pandemic, total nonfarm employment has declined by 65,000 jobs in Pittsburgh.

Commercial real estate development has been the primary beneficiary of the trends in microeconomics in Western PA for the past decade, but macroeconomic changes pose a threat to new construction in the pipeline.



Source: U.S. Bureau of Labor Statistics

Inflation has emerged as a dual threat to commercial real estate. As a direct challenge to new developments, construction inflation disrupts the financial pro forma for development. Higher costs force developers and investors to accept lower returns or to risk that higher rents can be asked to offset the additional cost. Interest rates have risen as a result of the elevated inflation, adding to the cost of capital and pushing capitalization rates higher. Cap rates have been compressed by low interest rates for more than a decade, which has lifted property values artificially to a degree. Higher interest rates reduce the net income from a property, pushing cap rates up and property values lower. That presents a challenge to investors, both for permanent financing and for the exit sale. Rising cap rates will cool property sales and new development.

HOUSING STARTS	SFD	SFA	M/F	TOTAL
Total Pittsburgh MSA 2022:1	523	282	297	1102
Total Pittsburgh MSA 2021:1	608	260	647	1515
% Change	-14.0%	8.5%	-54.1%	-27.3%

Source: Pittsburgh Homebuilding Report

Macroeconomic challenges have thus far had little impact on the demand for commercial property. The growth of logistics and e-commerce continue to drive demand for more space, particularly in tertiary markets like Pittsburgh. Inventory of homes for sale continue to be outpaced by household formations, creating demand for apartments that has not been seen in a generation. And the strong consumer economy is driving unexpected demand for retail space.

Demand for office space remains suppressed, even as corporations look to begin normalizing return to work. The continued surges in COVID-19 infections will complicate return to work, but there is both anecdotal and quantitative evidence that workers are expecting to work from home at least part of the work week going forward. Some form of hybrid office environment is likely to become the norm, at least for the next few years, and that will complicate space planning and office leasing. This shift in office demand will have the biggest impact on downtown Pittsburgh. On the plus side for construction, the "new normal" is spurring more relocations and tenant improvements; however, the leasing activity is resulting in a net loss of space in almost all cases, adding to the challenge of bringing occupancy levels back to pre-pandemic levels.

Pittsburgh's booming institutional market is also vulnerable to the dual threat of inflation and higher interest rates.

In the public sector, which has two of the largest projects – ALCOSAN's expansion and the Pittsburgh International Airport – currently under construction, the impact of escalation is already being felt in the spring bidding season. In the case of ALCOSAN and the airport project, significant portions of the overall project bid in 2021 or earlier, and the bonds issued to finance the projects were sold at lower rates. For remaining bid packages, as well as the K-12 and municipal market in general, the risk of future inflation is borne by the contractors, and bids will likely reflect that.

For the other two major institutional sectors – healthcare and higher education – the inflationary impact comes at a poor time. UPMC, University of Pittsburgh, and Carnegie Mellon University all have multiple projects over $100 million in the pipeline, with only two under construction. Unlike with public sector bidding, these institutions have the option of delivering projects in ways that can mitigate some of the risks of inflation, although cost escalation is mostly unavoidable. Thus far, the reports about the preconstruction process show that the project teams and owners have been working to manage the risks of cost escalation and longer lead times. While it is likely that projects like Pitt's Victory Heights, student residences, and UPMC Heart and Transplant Hospital at UPMC Presbyterian will get underway later than originally planned, projects have not been shelved.

Residential construction has been impacted by the stresses of higher costs and longer lead times. The inventory of new homes remains at record low levels, which should be driving more new construction. The head winds for home construction in Pittsburgh – insufficient lot inventory and higher development costs – remain strong enough to contain whatever new construction demand might have been spurred by the existing home shortage. When supply channels recover and material prices normalize, those head winds will continue to keep new construction bounded between 5,000 and 6,000 new total units annually.

Through March 31, new home construction was on a slower pace than the first quarter of 2021. There were 805 single-family homes for sale started in January through March, compared to 868 during the same period in 2021. Permits for new multi-family units were lower during the first quarter, with 297 units started compared to 647 in 2021. The drop-off in apartments was a result of timing, rather than a change in

Nonresidential/commercial starts were 16 percent lower in the first quarter compared to 2021.
Source: Tall Timber Group

trend. The market dynamics are still strongly supportive of new multi-family, with a pipeline of more than 4,000 units; however, more of those units will start during the next six months than were built mid-2021. Roughly 700 units have been approved and are being priced to get underway in the second quarter.

Nonresidential/commercial construction is also on a slower pace than 2021. Construction starts topped $736 million during the first three months of 2022, 16 percent lower than the $876 million in starts during the same period a year earlier. Both of those totals exclude the construction put-in-place at the Shell Franklin project, which is within the last six months or so prior to completion.

Construction volume during the first quarter of any given year tends to be about 15-20 percent of the full year's total. The rule of thumb played out accurately in 2021; however, inflation and supply chain delays will almost certainly increase the number of projects delayed as 2022 unfolds. Although the pipeline of work, especially large institutional projects, is fuller than at the same time one year ago, activity in the second and third quarters may be lighter than expected. The outlook is for slower start volume, with perhaps 25 percent lower volume for the full year.

That's a prescription for a cooling construction market that would allow the supply chain to catch up, shortages to be re-filled, labor and field supervision to catch its breath, and prices to return to the long-term trend. While businesses rarely cheer for a slowdown, construction in Western PA was overheating. The risk of a cooling off is that the market could fall into recession. Demand for facilities in Pittsburgh is strong enough that 2023 and 2024 should see a rebound in construction, regardless of the noise from the global economy. BG

Our people and partnerships make the difference.

PJ DICK | TRUMBULL | THE LINDY GROUP | LET'S BUILD.

NATIONAL MARKET UPDATE

The leading economic story of spring 2022 is the Federal Reserve Bank's tightening of its two major monetary policies to rein in inflation that has lasted longer, and spiked higher, than was expected.

Since the earliest months of the re-opening of the economy in late spring 2020, the Fed's policies have focused on providing a bridge to the other side of the public health crisis. The central bank dropped its overnight lending rate to near zero and initiated another round of bond purchases, also referred to as quantitative easing, to ensure that credit would be available to businesses and consumers. Coupled with fiscal policy moves by the Trump and Biden administrations that put cash in the hands of consumers and businesses, the Fed's accommodative monetary policy made the rapid recovery that followed the rollout of vaccines possible. It also helped fuel the inflation that resulted from that overheated economy.

One year later, fiscal stimulus has dissipated. What remains are the excess of liquidity and demand that exceeds supply. To respond to these conditions, the Federal Reserve hiked its Fed Funds rate one quarter of a percent in March and has strongly signaled that half-point hikes in May and July are likely. At the same time, the Fed began reducing its balance sheet, allowing maturing bonds to expire and selling off other bonds. That action will put further upward pressure on interest rates and force the private sector to re-assume its role in purchasing bonds, including mortgage-backed securities. The pressure on rates and reduction of liquidity are intended to cool demand and let the markets respond.

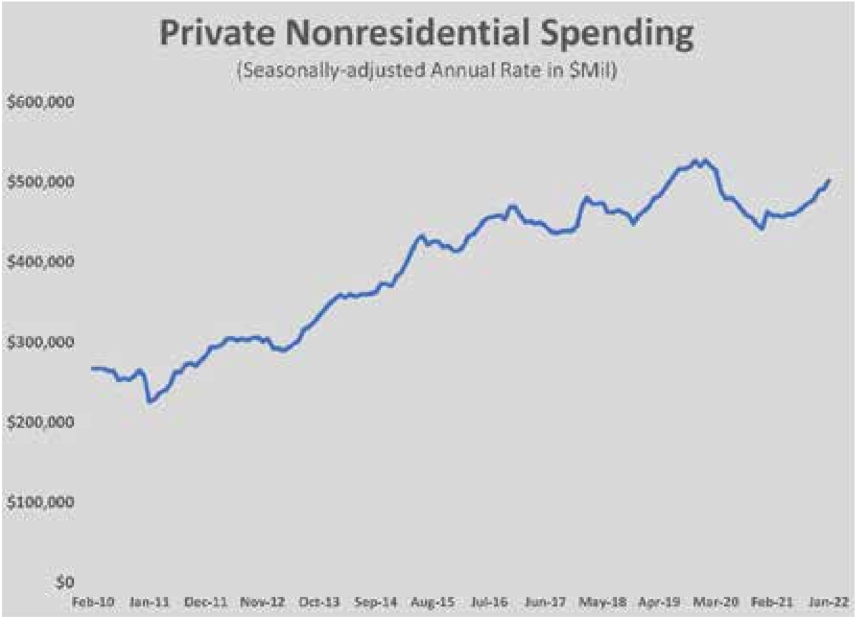
In the first 30 days after the Fed hiked rates, the core inflation rate responded. Inflation, stripped of volatile energy and food prices, was 6.5 percent year-over-year in March and rose 0.3 percent from February, less than the 0.5 percent that was expected. The problem with the focus on this so-called "core inflation" in spring 2022 is that the Russian-Ukrainian war is most directly impacting energy and food prices. For the Federal Reserve Bank, that means successes in cooling off the economy through monetary policy changes could be offset by shortages in oil, gas, and wheat. Those shortages will drive prices higher at the gas pump and grocery store, regardless of Fed actions.

Other factors are also cooling off demand. The impact of higher inflation on fuel, food, and other basics is reducing consumer spending. The expiration of stimulus measures that occurred in 2021 is also causing belt tightening. For consumers and businesses still planning to invest in construction, the jammed-up supply chain is causing delays and deferrals. Inflation is snarling a growing share of projects as well. As the factors slowing expansion pile up, it is easy to envision the economy tipping into recession by 2023.

Should the Fed get its tightening right – and history shows that is a very difficult task – the cascading impact of the reduced spending, lingering inflation, and slower supply chain response could facilitate the kind of soft landing that will cool the economy temporarily. That scenario resets the economy for growth that avoids inflation above the long-term trend again.

Such a soft landing has proven elusive in the past. A recession has followed eight of the last nine periods of Fed rate hikes. In terms of stifling inflation, a recession triggered by tighter policy will have the desired effect, but the medicine will be difficult to take.

Based upon some of the leading indicators of the economy, it appears that few professionals have confidence that a slowdown – if not an outright technical recession – can be avoided. A Bank of America survey of global fund managers found that more than 75 percent expected the global economy to be weaker in April 2022. Bond prices have begun readjusting to the reality of higher rates. While that has reversed the short-lived yield curve inversion that occurred in late March, the steady increase in the 10-year Treasury bond has been accompanied by higher borrowing



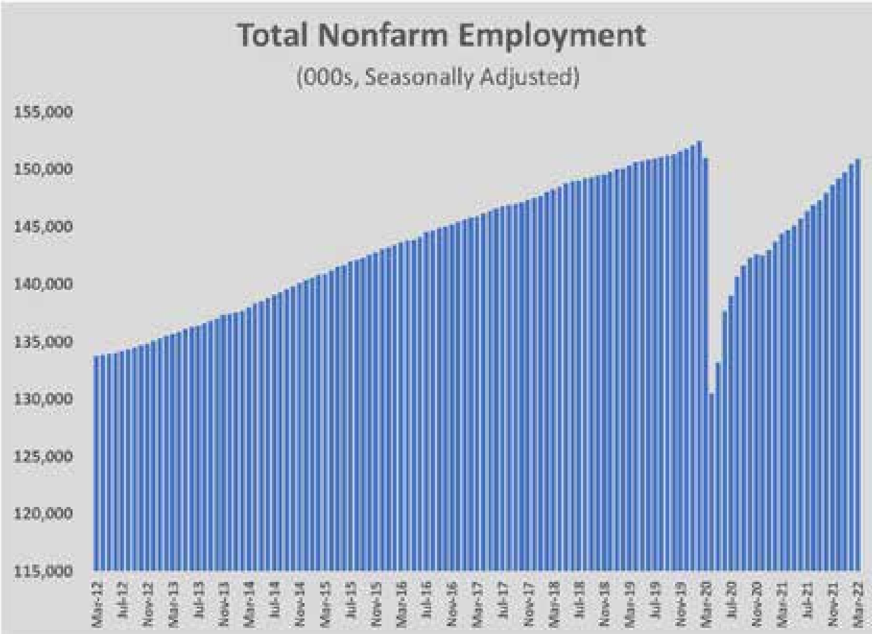
Source: U.S. Census Bureau

rates for commercial and residential buyers.

The outlook for the long-term inflation trend is little changed. The 5-year Breakeven Inflation Rate – a measure of inflation expectations derived from the 5-year Treasury Constant Maturity Securities that implies what market participants expect inflation to be – has become elevated twice since the end of 2021; however, that rate had fallen below 3.3 percent as April ended.

Thus far, the impact of the Fed tightening and geopolitical uncertainty has done little to dampen demand for development or construction. The U.S. economy has returned to pre-pandemic trendlines for nearly all metrics. While the Fed action, inflation, and the Ukraine war are likely to pare back some economic activity, forecasts for gross domestic product (GDP) growth in 2022 are still in the neighborhood of three percent. Compared to other parts of the world, the U.S. has generally returned to pre-pandemic daily activity, putting U.S. companies in a better position to respond to demand than their competitors in China, India, and other emerging markets. Demand for housing is still significantly higher than the available supply of existing or new homes.

Bond market expectations for inflation over the next five years remain below 3.5 percent. Source: U.S. Treasury Department, Federal Reserve Bank.



Total nonfarm payrolls are less than one percent below the peak of the last business cycle. Source: Federal Reserve Bank.

What will dial back demand for space will be the incremental increases in borrowing costs, as the Fed Funds rate ticks upward towards 2.75 percent in 2022, and in construction costs. While it is too early to measure how much the increases will reduce the amount of construction in 2022, there are signals that work is slowing.

The housing market reacted to the prospect of rising rates during the first quarter. The average 30-year mortgage ticked above five percent in mid-April. Roughly 200 basis points higher than mid-November 2021. Major banks, such as Wells Fargo and CitiGroup, reported mortgage origination volumes off by 33 percent or more during the first quarter. The Mortgage Bankers Association forecasts a 35.5 percent decline in originations in 2022, with a 64 percent drop in refinancing. Homebuilders cited the move above five percent as the reason for declining sentiment in the April National Association of Homebuilders/Wells Fargo Housing Market Index. The reading of 77 was the fourth consecutive month of falling sentiment (although that reading was higher than any monthly reading between July 1999 and August 2020).

Housing starts edged slightly higher in March to 1.793 million units annually (seasonally adjusted), the highest level since


Quality
Commercial Interior Construction
and Exterior Wall Systems
WYATT
INCORPORATED
PITTSBURGH
412-787-5800
PHILADELPHIA
215-492-5800
www.wyattinc.com


safety
FERRY ELECTRIC
COMPANY
Electrical Contractors

June 2006. Starts were pushed higher by an increase of nearly five percent in multi-family units. Permits for new multi-family spiked 10.9 percent. While single-family starts and permits were lower in March, the backlog of homes not started was 280,000, a record high level. The high backlog was blamed on delays due to inflation, supply chain problems, and labor shortages.

Architectural billings moved sharply above the break-even 50 level in March. The American Institute of Architects' Architectural Billings Index (ABI) was 58 in March, with the ABI for new inquiries rising again to 63.9. Always a good indicator for construction activity a year in the future, ABI may be particularly enlightening for the balance of 2022, as owners that expect inflation to trigger a recession are likely to put projects on hold. That would drop the index below 50. Should the ABI remain positive, that would be an indication that owners are continuing to pay for design services in anticipation of temporary cooling in demand.

Inflation has pushed construction spending to all-time highs. Total spending in March 2020 topped $1.7 trillion. Private nonresidential investment in construction climbed to $503 million, the highest total since March 2020.

Other economic metrics also showed growth. Consumer confidence slipped slightly in April but remained high; and consumer spending continued to grow, especially for durable goods like appliances and automobiles. Factory orders reflected the strength in durable goods purchasing, increasing 0.8 percent in March. Orders for goods excluding transportation and military purchases advanced by a full point. Capital goods orders by businesses increased 1.1 percent. The first estimate of GDP growth for the first quarter was a decline of 0.4 percent, a reflection of steep declines in inventories and exports, and the decreased activity caused by the Omicron variant spike in January and February. Consumer spending grew GDP by 0.7 percent.

Despite the first quarter decline, economists are not expecting the downward trend to continue. Drags from inventories will be reversed. Net exports should not fall further. The factor that could reverse trend is consumer spending, which will reflect more of the higher inflation exacerbated by the Ukraine war.

Labor markets remain puzzling. Employers added 1,285,000 jobs during the first quarter of 2022, bringing the unemployment rate down to 3.6 percent. The total number of unemployed fell to 6.0 million, nearly back to the February 2020 low. The number of persons unemployed for more than 26 weeks fell to 1.4 million, still 300,000 more than in February 2020 but 300,000 fewer than in March 2019. Total U.S. nonfarm employment increased to 158.5 million persons in March, roughly one million more than the number employed in March 2019; however, more than 11 million positions remained unfilled at the end of March. A gap of roughly 1.5 million workers exists between the civilian workforce in March 2022 and February 2020.

It is the gap in the civilian workforce and between the number of openings and the number of unemployed that is hardest to explain. Household survey data from the Census Bureau seems to corroborate the anecdotal evidence that the pace of retirements increased during the pandemic, with as many as three million more people retiring during the two-year period. If this pace continues – even if less accelerated levels – it will be difficult for employers to staff the expansion plans that the record number of job openings suggest. Moreover, should the number of openings remain twice the number of job seekers for an extended period, the current upward pressure on wages (which are increasing at a five percent annual clip) will remain, regardless of GDP growth or decline.

In the near term, the surplus of six million job openings is a cushion that should keep unemployment from rising dramatically if the economy slows. The imbalance also suggests the current shift in bargaining strength enjoyed by workers will persist. If that is the case, higher wage rates will keep inflation higher than expected, eroding business profits. That trend, in turn, will also cool off hiring and bring labor markets back into balance.

No word describes the state of the U.S. economy better than imbalanced. Almost unprecedented imbalances exist between consumer demand and supply, business demand and supply, labor demand and workforce participation, and U.S. Treasury demand and Federal Reserve Bank balance sheet. The current levels of inflation are a result from some or all these imbalances. Restoring balance can be managed by interventions like those being executed by the Federal Reserve Bank, but the marketplace will ultimately self-correct the imbalances that remain. The risk of recession increases to the degree that the market corrects the imbalances. BG


BOROUGH OF FOREST HILLS

WHAT'S IT **COST?**

As the policy of the Federal Reserve Bank shifted from neutral to restrictive during the winter of 2021-2022, two possible scenarios have emerged for the impact of inflation on construction. One is specific to the supply chain and the other to the overall economy. Both scenarios lead to more balance in supply and demand by the end of 2022; however, one of the scenarios will be easier to bear than the other.

The easier path to follow will be one where the recovery from the pandemic gradually restores the supply chain and prices moderate, reducing the number of rate hikes from the Fed in 2022. Some softening of demand is inevitable in this scenario; in fact, the reduced construction volume will expedite normalization of the supply chain. That should help nudge producers, like energy and steel companies that have been remarkably disciplined in their restraint to date, to expand production.

The harder path is that of a cooling economy, which dials back demand for goods and facilities. There is evidence that this path is already being forged. In response to the Fed's first small hike in rates in March, long-term mortgage rates went significantly higher. As subsequent hikes in the Fed Funds rate are taken throughout the balance of the year, mortgage rates will increase more slowly but will settle in higher, probably above five percent. That will cool off construction of houses. Likewise, higher long-term rates will dampen or defer business investment, including physical plant expansion and nonresidential construction. This scenario is likelier to bring inflation back under three percent, but it is also likelier to result in recession.

Because the path that is harder for the economy is more palatable politically, expect the emphasis to be on cooling demand through rate hikes, especially since the unemployment rate is so close to that of full employment. This more likely scenario is also one that will cool off construction in 2022 and 2023.

Data from the Bureau of Labor Statistics indicates that neither scenario had much impact on construction inflation in March. The price of inputs overall was flatter compared to the past 90 days but remained nearly 17 percent higher than a year ago. A 20 percent jump in diesel fuel prices from February to March – the result of the Russian invasion of Ukraine – drove producer prices higher; however, a 4.9 percent drop in steel mill products led declines in 10 categories, a sign that input inflation is leveling. More upward pressure is now coming from contractor bids, which are reflecting the risk of ongoing inflation on materials and installation that will occur three-to-nine months after bids are prepared.

Throughout most of 2021, bid prices reflected escalation rates of less than five percent, even as material prices were escalating at rates that were 10 or 15 points higher. That changed dramatically in the fourth quarter. The producer price index (PPI) for bids jumped 17 percent year-over-year in February, suggesting that bids will catch up to material prices by the end of the second quarter. Based upon the last three business cycles, material prices should begin to decline steadily from that point. BG

PERCENTAGE CHANGES IN COSTS	March 2022 compared to		
Consumer, Producer & Construction Prices	1 mo.	3 mo.	1 yr.
Consumer price index (CPI-U)	1.3	3.1	8.5
Producer price index (PPI) for final demand	1.7	4.1	11.2
PPI for final demand construction	0.6	4.8	16.7
PPI for new nonresidential buildings	0.6	4.8	17.0
Costs by Construction Types/Subcontractors			
New warehouse construction	0.5	7.2	28.7
New school construction	0.3	3.4	12.6
New office construction	0.8	5.8	17.2
New industrial building construction	0.3	4.8	18.5
New health care building construction	0.7	3.9	15.4
Concrete contractors, nonresidential	0.8	2.8	19.3
Roofing contractors, nonresidential	2.1	6.9	15.0
Electrical contractors, nonresidential	1.0	2.4	12.4
Plumbing contractors, nonresidential	0.5	3.6	11.5
Construction wages and benefits	N/A	0.9	3.5
Architectural services	0.4	0.5	2.7
Costs for Specific Construction Inputs			
#2 diesel fuel	19.9	43.8	83.8
Asphalt paving mixtures and blocks	(0.1)	11.0	8.3
Cement	0.2	4.3	8.2
Concrete products	0.3	3.2	9.9
Brick and structural clay tile	0.2	4.0	9.4
Plastic construction products	1.5	4.5	35.2
Flat glass	(1.4)	1.8	9.5
Gypsum products	1.5	5.1	20.8
Lumber and plywood	5.1	29.0	20.9
Architectural coatings	0.7	9.9	20.8
Steel mill products	(4.9)	(15.3)	42.9
Copper and brass mill shapes	2.2	6.1	16.4
Aluminum mill shapes	6.2	17.9	43.7
Fabricated structural metal	(0.7)	3.7	40.4
Iron and steel scrap	27.6	14.3	29.2

Source Bureau of Labor Statistics, Updated April 13, 2022
Compiled by Ken Simonson, AGC Chief Economist


CO
FIN
ERAL RESE

NSTRUCTION ANCE IN FOCUS

If bankers, developers, mortgage brokers, and institutional owners are honest with themselves, they would admit that the current market conditions are not a surprise. Younger professionals can be excused for their lack of experience with higher rates. Likewise, a minority of the people in the real estate or construction industry, including lenders, were plying their trade 40 years ago when inflation played such a strong role in the economy. By the same token, a third-year economics student would have assessed the situation in 2021 and predicted that the year ahead was going to bring rising rates and the threat of recession.

On the heels of the pandemic shock, talk of a recession feels wrong. It seems like just a few months ago that the U.S. economy got to its feet again, with job gains that brought back talk of full employment.

It is the surprising strength of the U.S. economy, in particular the labor market, that is the root of the problem. Whether it is your view that inflation stems from the disrupted supply chain, expansion of the money supply, or an unintended consequence of the much-needed pandemic aid handed out by the federal government to businesses and consumers in 2020, the U.S. economy has more demand for goods and services than can be supplied. The response of any market to that condition will be higher prices.

The recipe being used to knock down high inflation is the one that worked most recently, in 1981. High inflation persisted throughout the 1970s and inspired numerous policy responses, including price and wage controls, without success. It was not until the beginning of the Reagan administration, when Federal Reserve Bank chair Paul Volcker stepped on the throat of the economy with Fed Funds rates above 19 percent, that inflation finally eased.

The side effect of that cure for inflation was a deep recession. In 2022, after 40 years of lower inflation, there seems to be the wisdom among policy makers that Volcker's remedy may not be required. Expectations about inflation beyond the next few years are low. Inflation today can be explained as temporary, although painful. As a result, the Fed has signaled it will try to cool off the overheated economy by getting rates back to what was normal.

Conditions underlying finance are solid. An increase in interest rates that adds a couple of percentage points will be welcome news for lenders. Demand for facilities is strong, depending on the type of building. Unemployment continues to fall, which keeps consumers paying back their loans. Businesses have lots of cash. Properties are trading hands at record high prices. There is slack in the economy for a little cooling off without creating deeper problems. Underwriting has been disciplined since the financial crisis, so there are few delinquent borrowers.

Owners and developers needing to finance construction or acquisitions should not face conditions that vary so greatly from those of a couple years ago. Financing a project will likely pose fewer problems than the uncertainty about costs or availability of materials. Construction financing is still in a calm state. The rest of 2022 should reveal whether the clouds on the economic horizon portend a gentle rain or tropical storm.

The Problem: Higher Interest Rates and Inflation

When the path of inflation continued higher throughout 2021, and spiked significantly in 2022, the posture of the Federal Reserve Bank shifted from watchful to aggressive over the course of two Federal Open Markets Committee (FOMC) meetings. While it was a bit surprising that the Fed's approach escalated to expectations of half-point hikes every other month, the prospect of tighter monetary policy had been baked into the market before the 2021 holidays. Now, the uncertainty in the marketplace is over how quickly and how high the Fed will hike rates before the economy slows to the point that inflation eases.

What is not uncertain is that the economy will cool down. The balancing act for the Fed is to create slowing without causing recession. This has proven to be almost impossible in the past. The last nine times the Fed has raised rates, it has achieved a soft landing – one without recession – only once. Until the results of this round of hikes is apparent, however, the market has shown what it feels the path of rate hikes will be.

Based upon the options and swaps trading that has occurred, bond markets have expectations of four 50 basis point hikes in 2022. That would put the Fed Funds rate at 2.5 percent by the end of 2022, with the top of the hikes hitting 3.25 percent.

That is higher than the indications of the Federal Reserve by about half percent. It is worth noting that bond markets have historically overshot the eventual arc of rate hikes, which makes the implied Fed Funds rate of 2.75 percent in 2023 seem likely. During the course of recent rate hike stretches, it has taken six to nine months for the higher rates to impact the economy in a meaningful way. If that is the case in 2022, an early 2023 slowdown might push the Fed to slow or stop rate hikes. Given the other challenges facing the global economy, beyond inflation, that scenario becomes more possible.

What does a hawkish Federal Reserve mean for construction lending? There are positives. Lenders earn more money with higher rates, giving them more flexibility in underwriting. Projects with weaker pro forma projections are less likely to find financing. That slows construction a bit but reduces the chance of overbuilding. And a slower construction market will bring supply chains closer to demand levels, in turn taking the heat off inflation and lead times.

Of course, higher rates also make borrowing more expensive. Higher borrowing costs can become a problem for commercial real estate when the cost of servicing the debt reduces the return on investment sufficiently to suppress liquidity, or the amount of capital willing to invest. The key metric for commercial real estate is the capitalization, or cap, rate. The cap rate is a calculation of the return on investment that equates the return with the operating income divided by the value of the property. As interest rates increase, income declines and cap rates rise. Investors in commercial property realize their returns at exit, when the property is sold or refinanced. Selling at a higher cap rate than when the property was purchased means that the value of the property declined. That can be because the investment decision was poor, or the property was poorly managed. If investors sense that rising cap rates are a trend, however, they will pull back from investing.

For now, the anticipated increase in interest rates is not chilling investor demand in commercial real estate. Two major property types, industrial and multi-family, are performing extremely well. The other property types - hospitality, retail, and office - are suffering from cyclical demand problems unrelated to interest rates.

"The permanent market is healthy, liquid, and looking for deals now more than ever. We're seeing very few permanent lenders and investors hit the pause button right now. If they're doing that it's because of other factors, not interest rates," observes Mark Popovich, senior managing director and co-head of the Pittsburgh office of JLL Capital Markets, Americas.

Ahead of the May 4 FOMC meeting, cap rates had been little changed. That was, in part, because the rate hikes had just begun. The market dynamics, with so much of the demand for real estate concentrated in two or three property types, also muted the impact of higher rates on property values and rents. But markets were ahead of the Fed, pushing the 10-year Treasury almost 1.25 percentage points higher since March 1. Popovich expects the next hikes to have greater impact.

"I think we are approaching a tipping point. For industrial and multi-family, we are seeing a 25-basis point increase in cap rates compared to a 100-basis point interest increase in the 10-year Treasury over the last 90 days or so. Typically, the correlation is closer to 50 basis points of increase in cap rate for every 100-point increase in the Treasury rate," he explains. "For these types of properties, where buyers are accepting a lower yield just to get the capital out, there is also strong demand on the tenant side. Right or wrong, investors believe that the demand is strong enough that rents will outpace inflation. They're willing to pay aggressive cap rates today in the hope that in two or three years, with increased rents, the property will grow into the cap rate."

"I think the rate will be in the high three percent or low four percent for 10-year debt," predicts Dan Puntil, senior vice president and Pittsburgh office manager for Grandbridge Real Estate Capital. "I don't think that is high enough to impact debt service coverage or makes deals not work. But I do think the rate increase will influence cap rate."

Mortgage rates have nearly doubled since January 2021. Source: Federal Reserve Bank.

Puntil points out that delinquency rates are near zero for life insurance companies and banks, and that the temporary uptick in commercial mortgage-backed securities loans had settled back from 2021 to low levels today. Lender concern overall seems to be focused less on the impact of higher rates on performance than on the ability to exit. Developers and owners looking to build, stabilize, and sell the property could be constrained by the perception that the future value of the property will be diminished by higher cap rates.

"There are concerns in the permanent financing market about where rates will be. That affects cap rates. What will it be like at the exit?" asks Tyler Noland, chief operating officer for PenTrust Realty Advisors, which manages the ERECT Funds. "If you buy an apartment complex at a five percent cap rate, are you sure you can exit at even 100 basis points higher in five years? Pegging cap rates and where exits will and can occur seem to be an exercise in futility at this point."

Noland says that the concerns about inflation, which preoccupied the market six months ago, have morphed into a two-pronged nemesis to consummating deals since interest rates began rising.

"Everyone is trying to lock in pricing on construction contracts, at the same time they are trying to lock in interest rates," he says. "Lenders are willing to lock in rates for a couple of weeks and contractors are willing to lock in prices for a couple of weeks. Coordinating both sides to the point of leaping off the diving board is getting more difficult."

Two hikes into an upward trend in interest rates, there is little impact on permanent financing for real estate projects. To the extent that remains true, construction lending should find ample liquidity and conditions that do not squeeze supply. Construction loans are sensitive to interest rate increases, but the base rate for construction loans – because they are short-term loans – is much lower. Construction lending is based upon the London Interbank Overnight Rate (LIBOR) or, increasingly, on the Secured Overnight Financing Rate (SOFR). The rate the borrower pays is a combination of that base rate, plus the spread the lender applies to the loan.

Current LIBOR and SOFR rates have increased significantly since mid-March, but off a very low base. The average six-month LIBOR rate was around 1.5 percent at the end of April, while the 30-day SOFR was lower than 0.3 percent, with an index around one percent. At those rates, a small change in lender's spread can offset increases in the construction loan interest.

"If the lender is bullish on the borrower or the project, and the market is good, lenders that want to get the money out can lower the spread by 20 or 30 basis points. That makes up for the increase in that index rate," says Popovich.

Even with the market flashing caution signs, lenders are still being competitive. Don Chilcot, senior vice president and commercial real estate division manager for Dollar Bank, points out that the strong business environment has been magnified by the CARES Act Paycheck Protection Plan (PPP), which left borrowers and lenders with strong balance sheets. The desire to put cash to work continues to fuel lending.

"The spread is where a bank gets to price its risk but over the last decade risked-based pricing has gone out the window. Most banks have a boat load of cash from PPP. That's a lot of money on the balance sheet to get out the door," Chilcot says. "It will be interesting to see how it goes the remainder of this year. At some point, banks will be satisfied with their balance sheets and will no longer do loans at two or 2.25 percent spreads. We'll go back to the 2.5 to 2.75 spreads that I think of as normal and start earning some money."

Construction lenders have other tools at their disposal to mitigate the risk of rising rates and inflation during the project's life cycle. Robert Powderly, senior vice president, investment real estate for First National Bank, sees a greater emphasis on compressing the preconstruction schedule to close the gap between final pricing and financing commitment.

"The challenges are still supply chain, the cost and the reliability of materials, and the availability of labor. That is being experienced across the footprint from Ohio to North

Carolina," Powderly says. "We can sit with developers and look at investment models in terms of rental rate and absorption, but the real wild cards are cost, completion, and availability of materials and labor.

"What we have seen on the single-family side is that more builders are waiting until they get to the drywall stage before pricing the property. On the commercial side, I think we're building in adequate contingencies on hard costs and forcing the developers to firm up bids and schedules as much as possible, as early as possible. It compresses the timeline final for drawings and commitment."

"Higher interest rates make the deal a little tighter. We're having discussions with clients about supply chain issues, labor issues, concerns about whether or not the interest reserve is great enough to withstand an extended construction period," says Greg Sipos, executive vice president, corporate banking for First Commonwealth Bank. "We're identifying those factors on the front end of underwriting and making sure we have coverage."

Construction lenders, which are primarily banks, can also mitigate the risk of higher rates by requiring interest rate swaps – a derivative agreement through which the two parties exchange one stream of future interest payments for another – or caps that require the borrower to pay the lender when the floating rate exceeds an agreed upon level. Popovich says that the long run of low and stable rates allowed lenders to forgo rate protection during construction as late as last year.

"Construction lenders are requiring swaps or interest rate protection, whereas a year ago they might have let it float. I don't know anyone lending without interest rate protection today," Popovich says.

"We are building in rates of 5.5 percent in our pro forma and we are using derivatives and forward contracts to try to eliminate interest rate risk in the transactions," agrees Powderly.

Borrowers are also looking at protection against fast-rising interest rates. Dollar Bank's senior vice president of commercial banking, Brian Waychoff, reports a significant uptick in discussions with clients interested in locking in rates on variable rate business loans and lines of credit. Chilcot notes a similar interest in early payment of variable commercial real estate and construction loans.

"In terms of the institutional markets we have

Yields on the 20-year bonds, which parallel municipal bonds, have doubled since 2020 but remain below 10-year averages. Source: U.S. Treasury, Federal Reserve Bank.

had payoffs come early most likely due to businesses wanting to get in before the rates go up," Chilcot says. "We have seen close to $120 million in unscheduled payoffs so far this year."

"We have had several instances of borrowers taking us out [repaying the loan] before the property has been stabilized, including before construction has been completed," notes Powderly.

Higher interest rates generally also have a deleterious effect on the institutional construction markets, those which typically finance projects by issuing bonds. In the western Pennsylvania region, institutional projects are the largest in the pipeline of construction. For several reasons, however, the increase in interest rates should not have a major impact on construction of schools, hospitals, higher educational, and government projects.

Long-term bond issuances, while bringing yields that are higher than a few months ago, are still being received well, allowing municipal and institutional owners to raise debt without paying more to attract buyers. The average yield on AAA-rated 30-year municipal bonds was 2.75 percent at the end of April. For A-rated agencies (like Allegheny County Airport Authority) the yield was 3.25 percent. U.S. debt of all types is attractive, and municipal debt has the advantage of its yield being free from income tax. That tax advantage also allows bond issuers to offer lower rates than private long-term debt of equivalent quality.

Municipal bonds are favored by income investors trying to minimize their tax burdens, an apt description of retirees. With a growing share of the U.S. population over the age of 65, demand for municipal bonds, and other long-term high-quality income producing investments, is strong.

Institutional construction mostly serves purposes other than generating rents. That quality allows owners of hospitals or universities, for example, the opportunity to evaluate the return on the capital investment differently than investors in commercial property. Put more directly, institutional owners have the opportunity to agree to pay more for facilities in times of higher inflation or borrowing costs. The construction cost of an emergency room is a fraction of its operating costs, and of the revenues the facility generates. While no hospital wants to pay more, the opportunity cost of having an obsolete or undersized emergency room is likely to be much higher than the additional cost of construction.

There is every indication that the institutions planning major projects in Pittsburgh – UPMC, Pitt, and Carnegie Mellon among them – are wrestling with difficult decisions to proceed because of the accelerated cost of construction. Higher interest rates are not the problem. For the largest project currently getting underway, the $1.4 billion Terminal Modernization Program at Pittsburgh International Airport, bond yields are in line with expectations and roughly one-third of the contracts for the work bid last year, coming in on budget for the most part.

The one sector of the construction industry that could be disrupted by higher bond costs, the public education market, is at a cyclical low point of activity. Only a handful of projects are moving forward that are expected to cost more than $30 million.

The Cure: Liquidity and Rising Rents

Two factors that can ease the nerves of lenders that are worried about rising rates and inflation are more equity and higher rent. The economic conditions are favorable for both those cures for lending anxiety.

In contrast to the recession of 2008-2009, when liquidity drained from the market almost overnight, the brief recession in 2020 had little impact on capital availability. To the contrary, the programs designed to be a bridge to the other side of the pandemic – most notably PPP – boosted the amount of excess capital available for investment. Businesses overall were cash-heavy coming into 2020. A majority of business owners had begun accumulating dry powder in anticipation of a downturn. When 2020 ended, the reserves of excess cash were at record high levels.

"I cannot imagine what would have happened without the PPP program. There were companies that were struggling before the pandemic and the PPP money kept them alive," says Waychoff. "A lot of those companies reduced their capital spending because they were uncertain of the future. With the PPP money they were able to reduce the balances on their lines of credit. When it became clear that the world was going to resume operating, and they needed inventory, they had liquidity to respond. Companies in our region are in a very strong cash position and are in a good position to use lines of credit."

The strong balance sheets are important to lending for several reasons. Cash reserves give owners flexibility and options for repayment of debt. Strong reserves are a cushion for the overall economy against slowdowns and temporary tight credit. Businesses with cash make more capital investments, including in facilities.

Perhaps the most important benefits of excess capital to financing are the demand it creates for deals and the opportunity it creates for more equity in those deals. With cash bringing low returns – even with rates going up – investing in real estate and properties increases. A decade ago, developers struggled to raise the equity to make a conservative loan-to-value ratio deal work. That has not been the case in recent years and is not likely to change until long-term yields get significantly higher.

"We have seen a lot of equity in the larger projects we're doing - 35 or 40 percent - so I don't think the rate increases will have as great an impact as on the small or mid-size projects," Chilcot says.

There are risks to the buffer of liquidity in the market as inflation and interest rates go higher. Inflation erodes the buying power of investors just as it does consumers. A dollar buys less construction today than it did in 2020. A project that goes 10 percent over budget will require additional equity to finance at the same loan-to-value ratio. Investors will see lower returns on their investment. Steven Guy, CEO of Oxford Development Co., has seen signs that investors are aware of this change in the market.

"The high-net-worth investor understands that yields will be lower in the investment cycle. In the institutional market, we have been in conversations with 15 to 20 groups and, while none have come out and said that they expect to see yields go lower to specific numbers, they are all saying that they realize it has to happen," Guy says. "They know there is pressure and, if they want to put money out, investors have to look at that as a reality."

A macroeconomic risk grows when the Federal Reserve reduces its balance sheet, which the central bank has begun to do. When the Fed begins quantitative tightening, it reduces or eliminates the amount of assets it purchases monthly. During the most recent easing period, the Fed included mortgage-backed securities (MBS) in the monthly asset purchases. Reducing the balance sheet means the Fed's share of MBS purchases must come from private sources, which reduces the excess liquidity in the market. Of greater concern is an aggressive sale of Federal Reserve assets, which the Fed has signaled to a degree, because that increases the risk that the supply of MBS or Treasury bonds will exceed demand and push yields higher.

The risk of the Fed unleashing significantly higher rates through tightening is low. Coupled with aggressive hikes to the Fed Funds rate, however, the balance sheet offloading will put upward pressure on rates.

Concerns about financing can also be offset by the prospects of higher rents in future years. Lenders are not underwriting to projected future rents as a basis for debt service coverage – a practice that helped create the financial crisis in 2008 – but properties being developed in markets that are experiencing rent growth will be more attractive to lenders.

Rent growth is as much the story behind the appeal of multi-family and industrial as are the high net absorption and low cap rates. With interest rates looming as a risk for cap rate and exit, owners and lenders can take comfort in properties that see net income rise as quickly as the interest rate. Year-over-year rent growth for apartments was between 12.5 and 13.5 percent nationwide in 2021, rebounding sharply from a slight decline in 2020. Industrial rents climbed between 11.3 and 13.6 percent in 2021. In stronger markets industrial rents were up nearly $2 per square foot.

In Pittsburgh, multi-family rents were less robust, but were still up 8.3 to 13 percent compared to the end of 2020. Industrial rent growth was slightly lower than the multi-family pace; however, rents for new Class A warehouse space outpaced the national growth rate.

Office rent growth was becoming an issue before the pandemic. Rents increased overall by less than one percent in the U.S. in 2021. In Pittsburgh, demand and vacancy rates varied wildly from sub-market to sub-market. The future of office occupancy remains shrouded in uncertainty, yet in Oakland or the Strip District the demand from the universities or university-adjacent industries has outstripped supply. The average Class A urban office rent increased to just above $30 in the first quarter of 2022 but rents in the Central Business District (CBD) continued to slip, as vacant and sublease space grows. Rental rates above $40 per square foot in Oakland and the Strip lifted the overall urban average.

Beyond location, rent growth diverged significantly between new construction and existing office properties. Jim Scalo, CEO of Burns Scalo Real Estate, sees this bifurcation as an early manifestation of what future users will expect from their offices.

"We're not experiencing a ceiling on rents with newer product," Scalo says. "I would parallel it with what we have seen change with multi-family. The low cap rates and rent growth for multi-family have come from all the new product. Multi-family is no longer a commodity and I believe the future of office is that it will no longer be a commodity. There will be older properties that will be rent sensitive and new properties that will not."

Burns Scalo is developing Vision on 15 in the Strip District and is about to begin construction on the 170,000 square foot Diamond Ridge spec office in the Airport Corridor. Scalo is banking on new construction that is rich in amenities and outdoor space that corporate users say is necessary to attract talent. Scalo made a splash in February by offering the penthouse at Vision on 15 for $100 per square foot.

The NAIOP Pittsburgh - RMU Summer CRE Program

will introduce minority students to career possibilities in commercial real estate (CRE), helping to advance greater social equity while building a pipeline of talent in Pittsburgh CRE.

NAIOP Pittsburgh and **Robert Morris University** present a unique learning experience that will immerse 25 rising sophomores, rising juniors and rising seniors in the world of CRE. **Through the camp in June 2022, students will:**

- Explore a potential career path.
- Examine placemaking and the built environment.
- Begin to grow their professional networks.
- Build lasting relationships with fellow program participants.
- Students receive a free laptop.
- Small stipend upon completion of program.

ACCELERATING CHANGE IN PITTSBURGH CRE

Attracting diverse professionals to CRE enriches the talent pool with new voices and enables the industry to better represent the communities that CRE serves. By developing a camp focused on broadening students' horizons to possible CRE careers, the **NAIOP Pittsburgh - RMU Summer CRE Program** endeavors to accelerate greater representation in CRE for minority groups.

ABOUT THE PROGRAM

CRE instruction over five days will provide a balance of academic theory and practitioner instruction. The experience will end with a capstone case-study project. Planning is underway for this inaugural program as a hybrid format combining online coursework with in-person extracurricular activities as current pandemic conditions allow. There is no cost to attend.

NAIOP Pittsburgh welcomes support from corporate, civic and nonprofit organizations that share our objectives of expanding opportunity and educating the future talent of CRE.

For additional information, visit naioppittsburgh.com or contact Brandon Mendoza, NAIOP Pittsburgh, at **info@naioppittsburghc.com**.

PROGRAM PARTNERS

SAMPSON·MORRIS GROUP · NAIOP · SIOR · LLI ENGINEERING · CHAPMAN PROPERTIES · CEC Civil & Environmental Consultants, Inc. · PJ DICK · Junior Achievement of Western Pennsylvania · MEL BLOUNT YOUTH LEADERSHIP INITIATIVE · the Y · vibrant PITTSBURGH

THIS PROGRAM IS HOSTED BY **ROBERT MORRIS UNIVERSITY** AND SPONSORED BY **NAIOP PITTSBURGH**, AS WELL AS CORPORATIONS INVESTED IN SUPPORTING THE NEXT GENERATION OF COMMERCIAL REAL ESTATE TALENT IN PITTSBURGH.

RMU ROBERT MORRIS

SCHOOL OF BUSINESS

RMU.EDU

NAIOP

COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION

PITTSBURGH CHAPTER

NAIOPPITTSBURGH.COM

"I do not expect to get $100 per square foot. I was trying to shock the market," Scalo laughs. "I do think there is room for rents to grow and still be affordable. Corporations are being challenged to create an environment where people want to return to work. The trend is companies taking flight to new or higher quality space but taking less space. ATI moved from Downtown at $30 per square foot to the Vision at $45 but they are saving money because they are occupying less space."

"With the difficulty that tenants are having with recruiting and retaining talent, there is absolutely a flight to quality and location. It has to be the right building," agrees Guy. "Location is critical, but so is asset quality and health of building. We have never seen so many requests for proposal from the tenants that have robust sections on sustainability, well health, and safety. Some of that has to do with the pandemic but it also has to do with who their employees are and how they can get the employees back to the workplace.

"Occupancy cost runs between six and eight percent of a business's operating costs. If they have to push that to 6.5 percent or 8.5 percent, but can do better on their labor line because of the improvement, it is a wise investment."

Kim Ford, CEO of Rise Pittsburgh, represents national and regional corporations looking for space. Her business is very busy with office users looking for space, more of which is for expansion than right-sizing, including about 30 percent that are new to Pittsburgh. She sees the environment for landlords as challenging unless they have invested in the amenities that employees – and their employers – want in an office.

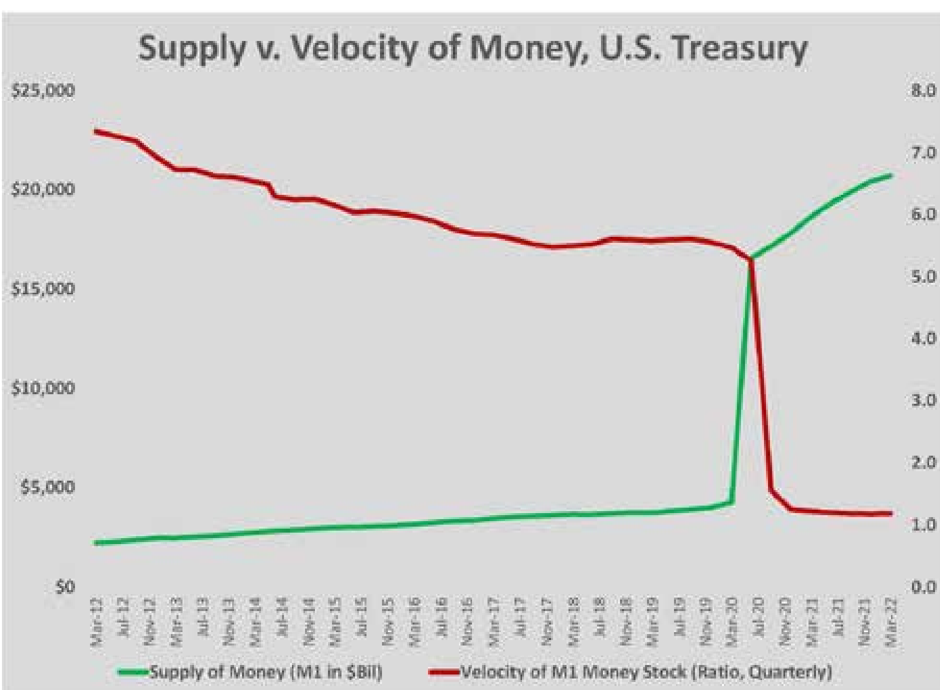
"The corporate C-suite is willing to pay more to have the space that they need, or the visibility or location they want, but they are not going to pay an inflated rate above the market. They can't justify that to their shareholders or board of directors," Ford says. "If there's a property that is inflated because of location, I don't have one client that would go there. They will pay market rate, but they won't go over that. That means they will pay more for rent, but the building will need to have amenities."

Ford insists that the extremely tight labor supply has shifted the balance of power from C-suite to workforce. In terms of real estate, that means employees have expectations that when they are expected to come into the office it should be convenient to be there. That, she says, makes it tougher for central business districts and landlords who cannot offer what is becoming the most expected amenity: ample free parking.

Lenders are understandably not bullish on the prospects for speculative office projects that are not differentiated by amenities or bankable locations. Developers should expect to have a good story to tell about an office deal, and to have more equity in the project.

The Outlook: Rates, Inflation, Recession

Construction can not be de-coupled from the economy. But if there were ever going to be a time during which such a thing can occur, it would be the next 12-to-24 months. In an environment dominated by headlines of soaring prices and interest rates, it is easy to forget how important demographics are to the economy. And demographic support for more and better facilities is very strong.



While money supply has spiked since the beginning of the pandemic, the circulation of money has fallen proportionally. Source: Federal Reserve Bank.

Young adults have supplanted the Baby Boomers as the dominant generation, both in size and in economic force. As a demographic cohort, young Americans are "under-housed" compared to older generations. They also have expectations for lifestyle that will continue to change how people shop, work, travel, recreate, and worship that demands new facilities and drastic changes to existing ones.

This means new homes, apartments, warehouses, and yes, even retail centers, will be occupied as quickly as they are built. Rents will follow. While none of these are completely recession-proof properties, the demographic demand should keep development and construction from falling off very much. Demographic demand is also going to force public school systems to respond to another wave of enrollment growth.

Baby Boomers are not done as a demographic force quite yet either. Healthcare and accommodations for seniors will see steadily higher demand until the middle of the century.

Of course, none of this unusual demand can prevent extreme economic conditions from pushing the U.S. into recession. As noted earlier, the fact that the Fed is tightening money supply and interest rates virtually ensures that there will be a recession-like slowdown in late 2022 or early 2023. Whether that slowdown meets the technical definition of two consecutive quarters of negative GDP remains to be seen, but the Fed's aim is clear: cool the economy so that inflation abates.

The biggest risk facing construction finance in the coming year or so is that the pace of inflation cannot respond to tighter monetary policy. The combination of higher prices and higher rates will certainly cool the economy; however, there is no guarantee that the slower economy – even a global recession – will solve the supply chain problem that spawned inflation. There are few indicators that the disruptions caused by COVID-19 have been resolved. In China, in fact, the "zero COVID" policy has resulted in multi-week shutdowns of several cities, including Shanghai. Moreover, worker shortages in U.S. manufacturing, transportation, and logistics sectors are persisting. What happens if Fed Funds rates tip the economy into recession and inflation persists because the demand for goods still exceeds the supply? That scenario was called the 1970s.

That is the scenario the Fed is trying to avoid, and it is an unlikely one. Fed Chair Jerome Powell has articulated a sufficiently hawkish posture that the more likely outcome is that the markets have overreacted to the initial hikes. The market's track record over the past 40 years suggests that this will be the case. If that is the case, inflation will be allowed to cool as demand is pent up for the next leg of growth. BG


Photo by Candidly Yours Photography..

PROJECT PROFILE

BANK OF AMERICA SOUTH HILLS VILLAGE BRANCH

The financial crisis of 2008 reoriented the banking industry. A decade later, one of the financial institutions that navigated the turmoil of 2008, Bank of America, expanded its network of local banking and financial centers to Pittsburgh. Over the next few years, Bank of America would establish more than a dozen banking locations, including ATMs, throughout metropolitan Pittsburgh. Its first center in Pittsburgh was built in the summer of 2018, on an outparcel of South Hills Village in Upper St. Clair. The new branch was built in less than four months by A. Martini & Co.

It is common practice for banks to select the contractors for construction projects from among the firms that are customers. For a bank that was new to the area, as Bank of America was, there were no such customers. Using CBRE as its corporate owner's representative, Bank of America pre-qualified a handful of general contractors to create a pool of potential bidders for its new offices in Pittsburgh. One of those firms was A. Martini & Co., which had a resume of building hundreds of offices and branches for local banks over 70 years.

The South Hills Village branch was bid in spring 2018 and A. Martini & Co. was identified as the apparent low bidder. In addition to the competitive price and resume, A. Martini & Co. had identified John Latsko, who had 27 years' experience working almost daily with financial institutions, as project manager. Latsko believes that experience made a difference to Bank of America.

"We understand what gets the branch to where it needs to be to have it be successful when it's opened," Latsko explains. "The branding and merchandising are very important. So is the flow of the building, what first hits you when you enter the building, whether that is an ATM, a kiosk, or a sales representative."

To expedite the development process, Bank of America struck a deal with the owner of the property to fully prepare the site in advance of vertical construction by demolishing an existing structure and grading the pad to the new elevations needed for a drive-through branch. For A. Martini & Co., that presented the project's first challenge.

"Since it was a leased parcel all of the site work was done by another contractor, who brought it up to subgrade. We inherited a site that was pad ready," says Latsko. "It was a little bit of a challenge to get the proper grades and still meet all the appropriate codes. A typical financial institution has to have a bypass lane with certain stacking requirements for cars. They try to keep it as level as possible because in the winter months, with

Photo by Candidly Yours Photography..

snow and ice, the last thing they want is to have a car stopped on a hill, particularly if it is going to a drive-through window."

The split responsibility for the site presented minor logistical challenges throughout the schedule, as the site contractor looked to expedite its scope of work.

"Our responsibility was to wrap the building footprint with concrete curbs and bring the landlord's contractor back to do the asphalt paving at a later date," recalls Latsko. "That contractor wanted to complete the paving and get paid, but we needed to drive over it throughout the project with our equipment and bring in the ATM and the vault. We didn't want to damage the new asphalt."

Getting utilities to the property proved to be an additional site challenge. The Bank of America parcel is located at the northwest corner of the property surrounding South Hills Village, at the busy intersection of Route 19 and Fort Couch Road.

"Some of the headaches had to do with the utilities. The site is on the corner of two state roads, so it was a challenge getting a curb cut from PennDOT," says Latsko. "Getting utilities to the site was also a bear because of the location and the adjoining parcels. The utilities connected to Route 19, and we had to shut down part of Route 19 while we connected to the mains. We had to coordinate with PennDOT and Upper St. Clair Township to accomplish that goal."

Some of the challenges of the project were related to the fact that the building was Bank of America's first Pittsburgh location, a geographic expansion that coincided with a change in branding that would affect the architecture. Bank of America was preparing to launch a new brand positioning campaign in November 2018, one which would highlight the ease of use of its local offices. The South Hills Village branch would be one of the first in the U.S. to open with the new marketing approach. Work started on May 8, 2018, and construction would occur during the final stages of planning the brand positioning and new branch design.

Gensler was the architect for Bank of America. Its new branch elevation featured natural elements. The building envelope was primarily masonry, a tan manufactured stacked stone, with horizontal aluminum panel trim and brown horizontal wood ship lap surrounding the storefront. The South Hills Village branch was just under 4,000 square feet and included two drive-through lanes. Some of the interior design decisions related to the brand positioning unfortunately took place after work was underway.

"There were some design hiccups in the beginning because Bank of America was changing their branding and merchandising," Latsko says. "As we were in the initial phases of putting all the colors together, they changed all the signage. We had to tear out elements that were previously installed and revamp them to their new branding. There were some design changes with the structural steel that were necessary to work with the elements they required. It made the project more like a design-build for those [specialty] contractors."

Latsko describes the building as relatively simple from a construction standpoint. The structure was a typical steel frame. Aside from the specialties that are unique to a bank branch, there were no unusual items. The schedule, however, was aggressive and, because it was tied to a larger marketing goal, had no wiggle room.

"They were on a fast track because they wanted to establish themselves in Pittsburgh as quickly as possible," he says. "We were fortunate enough to work through the summer months, so

Photo by Candidly Yours Photography..

Mother Nature did not wreak havoc on us."

"We were fortunate to have a couple of subcontractors that expedited material procurement for us. The big one was Seech Industries, which really expedited the structural steel. That helped us get the building up and get it closed in."

Once the branding decisions were finalized, A. Martini & Co. and its team of subcontractors were able to move quickly to finish the interior and install the banking specialties to complete the construction. There were a couple of final wrinkles with signage, as Bank of America's plans bumped up against the local code.

"Upper St. Clair had some strict stipulations about signage and making sure the rooftop units were not visible from Route 19. Bank of America had large monitors in the lobby that would act like signs in the evening hours. Upper St. Clair made us take those down, which meant we had to patch the walls and replace the monitors with small banners."

Construction was completed at the beginning of September, in time for Bank of America's opening on September 4, the day after Labor Day. For A. Martini & Co., the South Hills Village office was the first of multiple projects as Bank of America built its presence in Pittsburgh.

"Pete Borboroglu from CBRE was great to work with. How we interacted with him, and Bank of America, established a great rapport," Latsko says. "We had a strong superintendent, Mike Smith, on the project and our experience with financial institutions was very important. We knew when the ATM needed to be on site. We knew when the vault needed to be on site and if the slab needed to be beefed up to support it. I think it gave Bank of America that extra confidence level." BG

PROJECT TEAM

Bank of America	Owner
CBRE	Owner's Representative
A. Martini & Company	General Contractor
Gensler	Architect
Sentry Mechanical	HVAC
Advanced Plumbing & Mechanical	Plumbing
Miller Electric Co.	Electric
Preferred Fire Protection	Fire Protection
Albert Tarr Excavation inc.	Excavation
Joseph Testa Concrete	Concrete
Marsa Inc.	Masonry
Seech Industries Inc.	Structural Steel
Kalkreuth Roofing & Sheet Metal	Roofing
Specified Systems Inc.	Glass & Glazing
RAM Acoustical Corp.	Drywall/Acoustical
Hoff Enterprises inc.	Millwork/Casework
A. J. Vater & Sons	Painting
Abbey Carpet & Floor	Ceramic Tile/Carpet
Construction Concepts of PA	Metal Wall Panels
Tom Brown Contracting	Waterproofing
InsulRight	Insulation

Mark Your Calendar

July 15, 2022
MBAYC Clay Shoot
Seven Springs

September 1, 2022
MBA Members Golf Outing
Laurel Valley Golf Club

November 4, 2022
MBA Safety Appreciation Night
Rivers Casino

Master Builders' Association of Western PA, Inc.
631 Iron City Drive | Pittsburgh, PA 15205
Tel: 412.922.3912 | Fax: 412.922.3729
Email: info@mbawpa.org
www.mbawpa.org

CONTRACT PROVISIONS TO DISCOURAGE INFLATED CLAIMS ON PRIVATE CONSTRUCTION PROJECTS

BY SCOTT D. CESSAR

Claims for additional compensation on construction projects are not uncommon. Many claims are well supported and meritorious and result in an adjustment to the contract. Some claims, however, while they may have merit as to entitlement, are greatly inflated as to costs. This is due to a mindset among some in the construction industry that it is an acceptable practice to submit claims with exaggerated costs for purposes of negotiating a compromise somewhere in the middle. These are the claims that stand the greatest chance of resulting in expensive and protracted litigation.

The practice of submitting inflated claims causes problems for owners faced with claims from general contractors and general contractors faced with claims from subcontractors. In addition, suppliers of equipment to both general contractors and subcontractors also find themselves sometimes in the position of having a large back charge due to alleged delivery delays or malfunctioning equipment that result in contractors seeking recovery of substantial delay and loss of productivity costs.

This is due to a mindset among some in the construction industry that it is an acceptable practice to submit claims with exaggerated costs for purposes of negotiating a compromise somewhere in the middle. These are the claims that stand the greatest chance of resulting in expensive and protracted litigation.

On federal government projects, inflated claims are constrained by the Contracts Disputes Act, which requires contractors to certify under oath all claims over $100,000. If a claim is determined to have been falsely certified, both the company and the representative that certified the claim may be held liable under the False Claims Act for civil penalties and damages of $5,000 to $11,000 per violation and up to three times the amount of the false claim. Also, 32 states have false claims acts that govern procurement between those states and private contractors.

Although state prompt payment acts, where enacted, may have prevailing party attorney's fee provisions, they generally do not have provisions comparable to the False Claims Act, which potentially penalize the submission of inflated claims on private construction projects. Here are, however, two suggested contract provisions intended to discourage the practice of submitting inflated claims.

First, the changes clause of the contract should require, as does the Federal Contracts Dispute Act, for the contractor to certify all claims over, at least, $100,000. The following language, borrowing from the Contract Disputes Act, would compel such a certification:

> "All change order requests for amounts in excess of $100,000 must contain a certification under oath and signed by an authorized representative of the Contractor that the supporting data are accurate and complete to the best of its knowledge and belief, and that the amount requested accurately reflects the contract adjustment for which the Contractor believes the Owner is liable. Contractor agrees that provision of this certification constitutes an express precondition for submission of a Change Order and that the failure to provide such a certification shall constitute grounds for denial of the Change Order."

While it does not provide a direct financial consequence to submitting a false certification in support of an inflated claim, such as in federal contracting, requiring such a certification should cause a contractor some pause. From experience on federal projects, the certification process discourages the submission of frivolous or unwarranted claims. The certification process may also create potential credibility problems for the contractor that submits an inflated claim, files suit, and then later amends the claim to a more reasonable amount. He or she will be questioned at trial as to how he or she could attest under oath to a claim of "X" dollars pre-lawsuit and now the claim is one half of "X" dollars. There had better be a good explanation, or a skilled trial attorney will use these facts to impeach the credibility of the contractor and its claim.

Second, many construction contracts contain a provision by which the prevailing party may be awarded its attorney's fees and costs. The court is then left to determine which party is the prevailing party. Oftentimes, courts will be reluctant to award significant attorney's fees based on the justification that, although one party prevailed, it was a "close call." A tighter prevailing party attorney fee provision, as set forth below, however, should serve to discourage the filing of inflated claims and oblige courts to award more significant amounts of fees:

"In any litigation, arbitration or proceeding brought under this Contract by either party, the prevailing party shall be awarded its reasonable attorney's fees, expert fees, and costs. In determining the prevailing party, the court or arbitrator shall base its determination by comparing the largest total amount of the claim or claims requested by the Contractor at any point in the proceeding and without reference to any subsequent downward modifications by the Contractor, as compared to the total amount awarded to the Contractor."

The purpose of this bilateral attorney fee provision is to discourage the filing of the inflated claim that is then amended prior to trial to a more reasonable amount. A more strident contract provision is a unilateral attorney fee provision under which only the owner may recover its attorney fees and not the contractor. Such a provision may even peg the amount of fees and costs recoverable by the owner to the percentage recovery of the contractor of its largest total amount claimed during the proceeding as follows:

"In the event of litigation or arbitration arising out of this Contract, the Owner shall be awarded its reasonable attorney's fees, expert fees and costs as measured by a percentage of the Contractor's claims, based on the largest amount claimed during the proceeding, as a function of the total amount awarded to the Contractor. By example and for the avoidance of doubt, if the Contractor is awarded 60 percent of its claim, the Owner shall be awarded 40 percent of its attorney's fees, expert fees, and costs."

This clause is a hammer clause, and the common law of some states may result in a challenge to its enforceability because it is unilateral. However, in view of the fact that construction contracts usually involve sophisticated parties dealing at arm's length, the odds are that the clause would be enforced. In addition, it is not highly likely that a contractor will want to fund a legal challenge to the enforceability of the clause on a somewhat esoteric legal issue that a court or arbitrator could defer until the end of the case.

In closing, if you are tired of exaggerated claims, there are ways to strengthen your contracts to discourage them and to penalize those who engage in the practice of presenting such claims. BG

Scott Cessar is the chair of the Eckert Seaman Construction Group. He can be reached at scessar@eckertseamans.com.

A REDUCTION IN PA'S CORPORATE TAX HAS A CHANCE TO PASS IN 2022

A reduction in the commonwealth's Corporate Net Income (CNI) tax has been the top of the wish list for business attraction and economic development professionals for years. State legislators and governors from both sides of the aisle have been in favor of a reduction – with varying levels of enthusiasm and at different times – but attempts to reduce CNI have repeatedly fallen short of the finish line. Failure is, of course, still an option with the current legislature and administration, but there is unusual optimism that Pennsylvania's CNI rate, which has been 9.99 percent since 1965, could be lower beginning next year.

On April 13, Senate Bill 771 (SB 771) was approved by the Senate Finance Committee. The measure, introduced by Senator Ryan Aument (R-Lancaster) would bring the CNI from its current 9.99 percent to 6.99 percent by 2024. The legislation, as written, is performance-based, with the extent of further cuts dependent upon Pennsylvania's tax revenues being equal to the revenue projections for 2024 at the 9.99 percent rate.

The average state CNI is 6.0 percent. Pennsylvania currently has the third highest CNI in the U.S. The good news: our neighbor to the east, New Jersey, is slightly higher at 10.05 percent. The bad news: every other state bordering Pennsylvania is 6.5 percent or lower. Ohio, with its aggressive track record of incentive offerings, is one of six states with no corporate net income tax.

The bill calls for reductions that are similar to the ones proposed by Governor Wolf when he announced his 2022-2023 budget in February. The governor called for a two-point reduction in 2023, followed by a drop to 6.99 percent in 2026 and to 5.99 percent in 2027.

Two weeks later the Pennsylvania House of Representatives passed HB 1960, written by Rep. Josh Kail (R-Beaver), which would reduce the CNI rate by one percent in 2023, but only to 7.99 percent by 2025. HB 1960 will be reviewed in the Senate.

Matt Smith, president of the Greater Pittsburgh Chamber of Commerce and a former state representative, has seen numerous attempts at reducing the CNI fail because of concerns about the lost revenues. The Chamber is part of a coalition proposing an immediate two-point reduction. Smith cites the January announcement by Intel Corp. of a $20 billion investment in a chip manufacturing campus in Columbus, OH as a potential turning point in the debate.

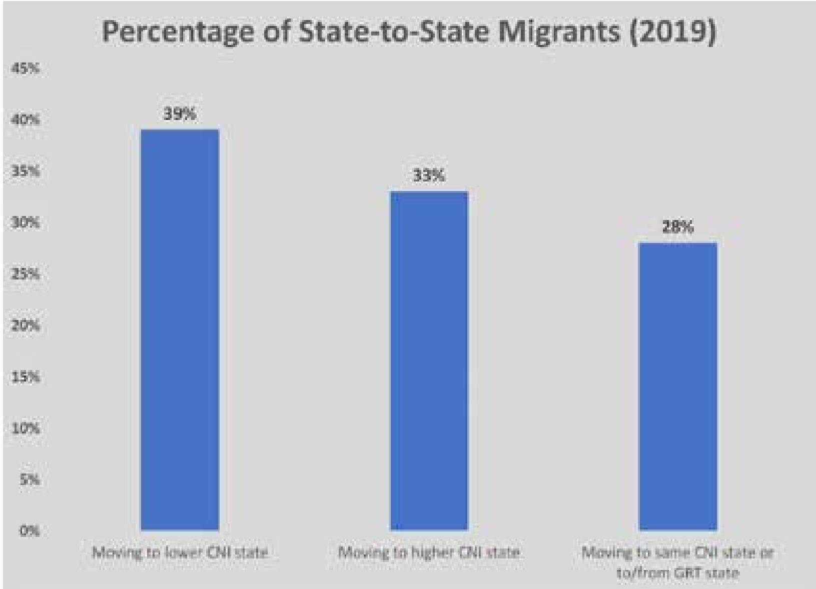
"What has changed now is that other states are moving in this direction, making themselves more attractive to business investment, so there are competitive pressures coming from the outside," Smith says. "The other thing that makes it different now, particularly for Western Pennsylvania, is the competition with Ohio and West Virginia. Ohio has no corporate income tax. They have other business taxes, but they market quite heavily the zero corporate net income tax across the U.S. and into Southwestern Pennsylvania. Intel's investment of billions in Columbus and Nucor's big investment in West Virginia are real wake up calls for Pennsylvania to get its business tax house in order."

Smith notes that proponents of the tax cut are looking beyond the benefits to Pennsylvania's businesses and corporations. In promoting SB 771, Sen. Aument has touted research that shows that states with lower – or the lowest – CNI rates outperform those with the highest rates in several key metrics. Among those metrics are perennial sore spots for Pennsylvania, like population growth, home price appreciation, and government revenues.

According to the research Aument compiled from 17 individual academic and private papers, states with the lowest CNI rates saw state tax revenues growth 103 percent from 2000 to 2022, while states with the highest rates experienced 92 percent growth. Homeowners in the half of the states that had the lowest CNI rates saw their property values increase 36 percent versus 27 percent for homeowners in the highest half of the states from 2010 to 2020. Aument also cited research that a decrease in CNI of one percentage point boosted worker's wages by $223.35.

There is, unfortunately, no research that shows a cause-and-effect relationship between the lower CNI rate and the better financial outcomes. Given the fact that most of the states with the lowest CNI rates are also attractive places to live and work for other reasons (better weather, lower overall taxes, fewer business regulations, etc.), it is possible that the higher state revenues or better home price appreciation are coincidental to the lower CNI.

More intriguing was the positive correlation between lower CNI rates and in-migration of population. While the coincidental factors mentioned above can obviously be driving migration, there is a direct relationship between population growth and job creation. For a state like Pennsylvania, which has been losing population and employment slowly and steadily for decades, a strategy that looks to reverse that trend is attractive.



Source: Corporate Net Income Tax Policy Analysis

Cade Hepner is the research analyst for the PA Senate who assembled and conducted the research supporting Aument's bill. The methodology for the population research was a regression analysis that compared population growth in the 23 states with the highest CNI to the 23 with the lowest. States with no CNI and no tax receipts were excluded (that included Ohio.) Hepner acknowledges that it is not possible to draw cause and effect conclusions between the lower tax rates and the gains in metrics. He points out two statistical probability factors that impressed him about the research on population growth. One, the coefficient of determination (R2), measures how changes in one variable – in this case population growth – can be explained by changes in another variable. The other (P-value) measures the likelihood that changes in the variables are unrelated.

"For this study, the R2 was 13.6, so we could expect the 13.6 percent of the change in population of a state could be correlated to the corporate income tax rate in any given year. That's a pretty good fit for a model that measures the effect of government policy," Hepner explains. "The P-value, the probability that these variables weren't related at all, was 3.9 to the negative 17th power. That's a likelihood of about four in one trillion."

Hepner notes that it is not possible to isolate any one state and judge the impact of a single variable, like the state's CNI rate, on other variables. He is more confident about the conclusions that can be drawn about the overall environment of low-tax rate states.

"I'm a person who doesn't like to say anything is certain, but it's a fairly easy conclusion that these tax rates exist in a pro-business environment," Hepner says. "Alison Felix is an economist from the Federal Reserve Bank of Kansas City who did research on this topic for the National Bureau of Economic Research. Her research found that CNI rates are generally carried down to employees. Based upon the conclusion Felix makes, you could conclude that wages are more attractive in those states because employers don't have the extra burden of the corporate income tax. The evidence supports that argument."

The average state CNI is 6.0 percent. Pennsylvania currently has the third highest CNI in the U.S. The good news: our neighbor to the east, New Jersey, is slightly higher at 10.05 percent. The bad news: every other state bordering Pennsylvania is 6.5 percent or lower. Ohio, with its aggressive track record of incentive offerings, is one of six states with no corporate net income tax.

The high CNI rate is one more obstacle for business attraction in Pennsylvania. Relative to the southern and southwestern states where new business has been flocking since 1980, Pennsylvania has poorer weather, an older declining population, poor infrastructure, challenging topography, and a regulatory environment that is less business friendly. Many of the faster-growing states, like Texas, Florida, and Colorado, also have low (or no) personal income tax rates. That makes talent attraction that much easier. Lowering one major obstacle to corporate location will not eliminate all the challenges of attracting business to Pennsylvania, but it makes sense given some of the state's current strengths.

In Pittsburgh, the pace of development of emerging technologies is quickening. Hundreds of millions have been invested to scale that development from viability to manufacturing. During this decade, many of the emerging companies will mature into high-volume manufacturers. The talent that these companies want is here. The best outcome will be that some of these companies will build plants in Western PA. But when they reach the point of needing those facilities, there will be a long line of smiling faces (with sweet incentives) from other regions. It will be easier to make a case for locating in Pennsylvania if regional leaders do not have to start the conversation by apologizing for the commonwealth's CNI rate, but it will likely not overshadow other key factors in site selection.

"My gut tells me that a lower rate will have less impact in Pittsburgh. The main factor determining these multi-market searches is availability of labor. As long as our population is stagnant and we don't have great labor numbers, Pittsburgh will be overlooked," says Tobiah Bilski, research manager for JLL Pittsburgh. Bilski expresses frustration at the "chicken or egg" dilemma of population and employment gains. "How do you shift that mindset? You need jobs to attract people. If companies are not coming here to provide those jobs, how do you attract people?"

One potential solution to the population dilemma is to retain a higher share of the students graduating from Pennsylvania's colleges and universities, many of which have strong reputations in technology and manufacturing. Roughly half of Pittsburgh's 20,000 graduates leave the area each year. Senator Aument argues that a deeper bench of employers would keep young Pennsylvania residents from relocating to find career opportunities.

The extent to which a reduced CNI rate will benefit business attraction is an open and unanswerable question. What proponents hope for is that the lower rate will reduce the number of opportunities lost because the commonwealth's corporate rate eliminates Pennsylvania before the merits of locating there are presented.

"CNI is a first cut thing. But if a company is looking at the Tri-State area or the Ohio Valley – sites that matter to Beaver County – it can make a difference when compared to the corporate rates in Ohio or West Virginia," says Lew Villotti, president of Beaver County Corporation for Economic Development.

Smith again points to the multi-market Intel site search as an example of the problem the high CNI rate causes.

"What we've been told by various site selectors was that Pennsylvania was never in the hunt for that Intel investment. It's not just that we're not in the game; we're not in the stadium competing for these kinds of investments," he says. "We can make an argument for our sites, our great workforce, and the great universities we know exist here, but we couldn't even make that argument because of impediments that we put in place as a state."

Pressed to estimate how many opportunities are lost because of the high CNI rate, Villotti replies with what is a regular refrain from economic development professionals.

"I don't know the answer to that," he says. "Those opportunities never make it to my front door."

Proponents of SB 771 hope to see it passed by both legislative houses and on the governor's desk for signature by the time the budget is approved in June. Even if the legislation passes with the most aggressive reduction, it will still be several years before Pennsylvania has a CNI rate that is equivalent to its neighbors and competitors. Smith believes that getting on the path to a competitive corporate rate would be an effective tool for the Department of Community and Economic Development (DCED) and its allies.

"Being at 7.9 percent doesn't get us to the place to be competitive but it does enable DCED and economic development organizations throughout the state to market Pennsylvania in a way that is much different from what we've done over the last 30 years," Smith suggests. "We will be able to say Pennsylvania is getting its business tax house in order. It shows we would be serious about making it a priority, which sends the market a signal in an impactful way."

INFLATION IS SHARPENING RISK MANAGEMENT STRATEGIES IN THE SUPPLY CHAIN

Sometime during the late summer of 2021 suppliers began feeling the squeeze from the increased level of construction that followed the recovery of the economy as vaccines rolled out a few months earlier. By October 2021, the producer price index (PPI) that measures all inputs into new nonresidential building construction had jumped to 12.6 percent higher than the previous year. That represented a jump of 7.6 points from September, and nearly 12 points since the beginning of 2021. The big spike in year-over-year change in PPI came as suppliers and specialty contractors began to price the risk of ongoing increases into their bids. As of the latest reading in mid-April, the PPI for nonresidential buildings had reached 17 percent.

What had changed so rapidly? The supply chains for U.S. construction are both local and global. When manufacturers and distributors of building products and materials shut down operations in spring 2020, the supply chain was disrupted worldwide. But from then until the widespread distribution of vaccines made the average person feel safer about renewing normal activities, there had been far less demand for materials than normal. Inventories were not being replenished but building materials and products were not being depleted either. When construction went back into high gear in the third quarter of 2021, demand swamped the ability of the supply chain to keep up. Almost a year later, supply chain conditions have improved only slightly. For custom or value-added products, delays are unprecedented.

In recent years, the construction industry in Pittsburgh has adopted a more collaborative approach to project delivery, bringing construction managers and key specialty contractors on board early in the process. One of the more valuable aspects of that approach is the increased certainty about pricing, which the contractors enable by providing updated budgets throughout the design process. When price quotes are good for one week, budget certainty goes out the window.

"Coming out of COVID, the first big hurdle that we had to overcome was that regional manufacturing sectors were each impacted somewhat differently. The common denominator was companies could not refire manufacturing because they could not staff the plants. Once manufacturers recognized that problem, there was huge competition for workers that became available," say Bill Wilson, CEO of Specified Systems Inc. "Because of the worker shortage there are longer lead times. Fifteen years ago, we could be guaranteed to have product in our hands in eight to 10 weeks; and we're now at 20 to 24 weeks."

"As a rule of thumb, we're telling people to expect a delay of eight to nine months for roofing materials generically," says Bruce Bartholomew, owner, and vice president of Phoenix Roofing. "Lead times vary depending upon the specifics. Standard 60-mil membrane is probably less than eight months, but other materials are longer. I'm taking deliveries right now - and I will be through July - for orders I placed in September."

"If we quote a 30-week lead time right now, we know we can't set our watch by that. We can't be that accurate 26 weeks out when we haven't even acquired the raw material for the windows," says Rick Hangliter, regional manager for Gunton Corporation, the largest independent distributor for Pella Windows in the U.S. "Pella is putting every conceivable resource into procurement and throughput but there is no end in sight for this."

COVID-19 created a perfect storm of conditions to drive inflation. Decades of globalization and lean processes left the supply chain widely dispersed with little excess inventory of either finished goods, components, nor raw materials.

Sheltering at home inspired millions of homeowners to renovate or add onto their house. The nature of the global spread, rising and falling at differing times throughout the planet, left regions that were operating normally looking to buy from regions that were experiencing outbreaks and shutdowns. Shipping and trucking were snarled by workplace shutdowns and worker shortages.

Inflation averaged five percent in 2019 but many businesses were anticipating worsening economic conditions going into 2020. Throughout the first year of the pandemic, the lower volume of opportunities and the overall uncertainty led to a recession-like sales psychology. Prices fell. Year-over-year cost changes were below two percent by September 2020 and remained there through April 2021. Then demand took off.

Double-digit price increases have reverberated throughout the construction food chain, but the points of maximum pressure are at the specialty contractor and material supplier level. First tier subcontractors and their suppliers do the bulk of the bidding that takes place in the market. Part of the art of estimating is anticipating what prices will be 90 days later, which is when decisions to proceed generally occur. In "normal" conditions, suppliers can anticipate what their price will be when the product or material is ordered (usually at a time that is after the decision to proceed) and can quote a price on bid day that can be held for 90 days or more. In spring 2022, it is common for quotes to expire in seven days. Price increases, which have often been rejected by the market in slower years, are regular and unchallenged.

"Prices are going up by about 10 percent per quarter," reports Bartholomew. "The airport job is a good example of the problem. The project includes roughly $100,000 worth of tapered roofing that has doubled since it was bid in late 2021."

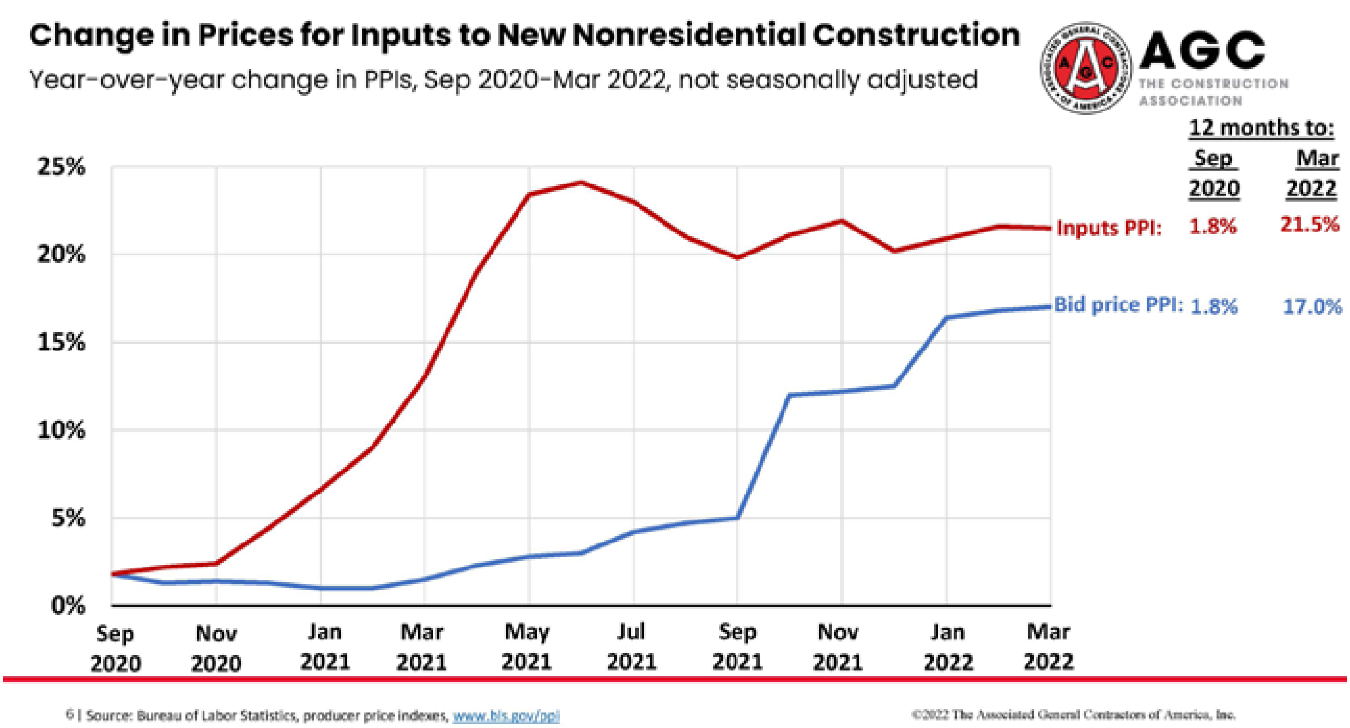
"We're seeing increases of 30 percent for materials. It's a situation that is very difficult for us to forecast," agrees Wilson. "We used to be able to call a manufacturer with a big order and negotiate two percent back to close the deal. Now they say that if we want to negotiate and wait five days, the price is likely to go up two percent."

"Our biggest struggle is with material prices," says Tom Szymscak, owner and president of SSM Industries, a full-service mechanical contractor. "For our sheet metal business, the price of steel coil is up more than any other material. We paid 50 cents per pound for coil in 2019. It's $1.40 to $1.45 now but the signs are that there will be another 15 percent increase in the next quarter. Steel pipe has gone up 30 percent and will go up another 20 percent in the next four months. And the price of stainless steel coil is off the charts."

"Pella just announced an eight-to-ten percent price increase, but I'm not sure it's capturing all the increased costs. I think Pella is hoping that price increase is the last for the year, but no one can promise that," says Hangliter.

Price increases are not the only complication. Roofing manufacturers are pricing materials at the time of shipping, rather than when a purchase order is placed. The sales process, quoting at bid time and receiving purchase orders, serves as a prelude to the final price. That pushes the risk of inflation back from the manufacturer to the roofer.

"We're watching contract language to mitigate our risk. This



has been going on long enough that most of our clients are well educated about the situation," says Jack Scalo, president and CEO of Burns & Scalo Roofing. "We cannot sign a simple fixed-price contract. We are willing to do an open book true up at the end of the project, comparing the purchase order price to the invoice price. A lot of our clients want a fixed price but then we have to be conservative and consider the worst-case scenario."

"We've seen a couple of things come through where the supplier wants to price it when they ship it," says Todd Mikec, CEO of Lighthouse Electric. "I don't think we've signed up for any of that but we are thinking about how we would manage it."

Market conditions like these heighten the risk of bidding. It is an unfortunate coincidence that Pittsburgh's construction market is in the midst of a boom of mega projects, many of which are at the point of final or semi-final pricing. The conditions are especially difficult for budgeting. In recent years, the construction industry in Pittsburgh has adopted a more collaborative approach to project delivery, bringing construction managers and key specialty contractors on board early in the process. One of the more valuable aspects of that approach is the increased certainty about pricing, which the contractors enable by providing updated budgets throughout the design process. When price quotes are good for one week, budget certainty goes out the window.

Asked how he manages the risk of bidding in such an environment, Szymczak jokes, "Very, very carefully. We're making assumptions. Some of them work and some don't. We estimate additions to material costs into our budgets as best we can."

"Our prices are good for today," Scalo laughs. "If we are asked for a fixed price, we use the current prices we have and speculate about the final price based upon the information about percentage increases from the manufacturers. We've been surprised that many clients still want fixed prices."

"We build some escalation into our bids. Is it enough? Maybe not. That's the strategy, while trying to remain competitive," says Mikec. "We are not bidding blindly thinking things are going to come down."

As dangerous as estimating work feels today, managing projects that were committed – but not purchased – prior to 2022 is putting an additional strain on project management. Szymczak notes that his biggest headaches are on the projects SSM priced in late 2019 through mid-2020 that have been purchased over the past six months.

"We have projects where the equipment and material budgets have been blown completely," he says. "We've reached out to a few of the owners. Some are receptive and willing to listen, but others are just saying tough luck. The first hurdle to get through is the construction manager. A CM-at-risk has a different attitude about that than a construction manager not at risk."

At-risk construction managers share the risk of the cost increase with the owner, much as a general contractor would on a hard-bid or negotiated lump-sum agreement. In normal market conditions, the specialty contractor would have little chance of passing on an unanticipated price increase. In today's market, with prices jumping weekly across the spectrum of products and materials, the specialty contractor has a better case, particularly if the project has not been managed well by the contractor or CM.

"We have to be doubly conscious that the project we pursue is not understaffed or that the project team lacks the experience to properly manage the job," says Wilson. "We are spending more time on logistics planning. We have invested more on technology, including more on automating fabrication. And we are spending more time on manpower management."

"What we're finding is that roofing is one of the first things that general contractors are buying. As soon as they land a job they're buying roofing as a long lead item," says Scalo. "They know that sooner is better than later."

While it is impossible for specialty contractors to find certainty in these conditions, contractors have adapted quickly, developing strategies that have mitigated the risks associated with such uncertainty.

"Copper is cyclical. It rises way up and comes back down. We are hopeful that the market will stabilize, but we are prudent about looking out to the future and buying right," says Mikec. "Even if we're not buying the wire today, we are securing it at the right price. We have only built inventory on work that we've booked. We haven't built inventory on speculation."

Scalo reports that he has become a stocking distributor of sorts, holding several million dollars' worth of roofing and appurtenances at his warehouse. Bartholomew is looking for additional warehouse space for the same reason. Wilson is purchasing inventory of commonly used components for fabrication. Szymczak says that they have expedited equipment purchasing to order within the 30 days that the manufacturers will hold prices, regardless of when the installation will occur.

"We have a job coming up where we need the air handling units in April of 2023. I will have to get those units released by the end of May 2022," Szymczak notes. "We will have to bring those units into our facilities and store them."

"Our inventory increased by several millions of dollars. We're double handling, storing, and transporting. We're notifying all of our suppliers that if they have any material that becomes available to call us and we'll take it," says Scalo. "The lead time is still six to eight months so we're mixing and matching products. There are more substitutions going on because of available product. We're seeing that it's far easier to modify a spec than it ever has been."

"We have changed our whole business model. We used to bid a job, get the job, buy the job, and ship the job. Now we buy the job, bid the job, get the job, and hope that we guessed right and bought the right materials so our trades can build the job," Bartholomew explains. "The bigger risk is to get into the season and not have material to do any work, rather than to have material and worry about the inflationary risk." BG

ENERGY SAVINGS IS MORE THAN MEP: HOW TO FIND MORE SAVINGS AND IMPROVE YOUR ENVIRONMENTAL IMPACT

BY JOE HOFSTETTER & MATTIAS DEDOES

Key Takeaways

- A building's MEP systems, such as HVAC and lighting, are often the first target for energy reductions and environmental impact improvements. When we only look at MEP systems, though, we leave opportunities for savings on the table.
- Additional areas for energy savings include the envelope, space programming, occupant equipment, and IT equipment. Achieving those savings involves everyone on the team – owner, architect, and engineer.
- Energy modeling is a practical tool for evaluating what improvements will make a meaningful difference for a building.

Across the U.S., the pressures of operational cost savings and climate change continue to grow. The organizations and institutions we work with are seeking ways to both reduce energy costs and improve their environmental impact. They're turning to their buildings for opportunities, seeking the most impactful and affordable solutions to meet these goals.

When it comes to these efforts, whether with new construction or renovations, MEP systems are often the first target. This makes sense, considering a significant portion of a building's energy use goes to its HVAC and lighting systems. However, as building codes become more stringent and sustainability goals become more aggressive, a more creative, holistic, and collaborative approach is required to achieve significant energy savings.

In this article, we break down how buildings use energy, describe where buildings can achieve energy savings, and show how energy modeling helps everyone on the project team (architects, engineers, owners, etc.) make better, more data-driven decisions.

But first, a brief history lesson.

How Did We End Up Here?

How is it that energy savings are often equated with MEP improvements and not much else? A number of factors feed into this.

First, the mechanical engineer has historically been responsible for the energy model because of their experience and capabilities in load calculations. While load calcs and energy modeling aren't the same, they have common characteristics, and it made sense to assign it to the mechanical engineer.

Another contributing factor is the U.S. Green Building Council's LEED certification program. Almost all LEED-certified projects create an energy model of the building as designed (proposed), and one of the same size, shape, and usage designed to code minimum standards (baseline). This increased the demand for energy modelers as projects around the country sought LEED certification.

The "baseline" energy model is built using ASHRAE Standard 90.1, an energy code focused on HVAC, lighting, domestic water, and the building envelope. Only recently has ASHRAE 90.1 begun to include the operation of plug load equipment. As these requirements were not included in prior versions, many energy efficiency improvements outside the scope of Standard 90.1 (plug load controls, more efficient equipment purchases, occupant behavior) were not rewarded in the LEED rating system. Thus, the burden of energy savings was disproportionately shifted to the MEP engineers.

Speaking of ASHRAE: The organization is the author of Standard 90.1, which is widely adopted as the energy code. The perception is that ASHRAE 90.1 is the be-all, end-all when it comes to energy performance and standards. Most building codes use it as the benchmark, and other industry groups don't address energy performance with the force of authority.

These factors contribute to why, as an industry, we often go straight to the MEP engineers and don't always include the rest of the design team. Yet taking a holistic look at a building can reveal additional opportunities – and produce a better project.

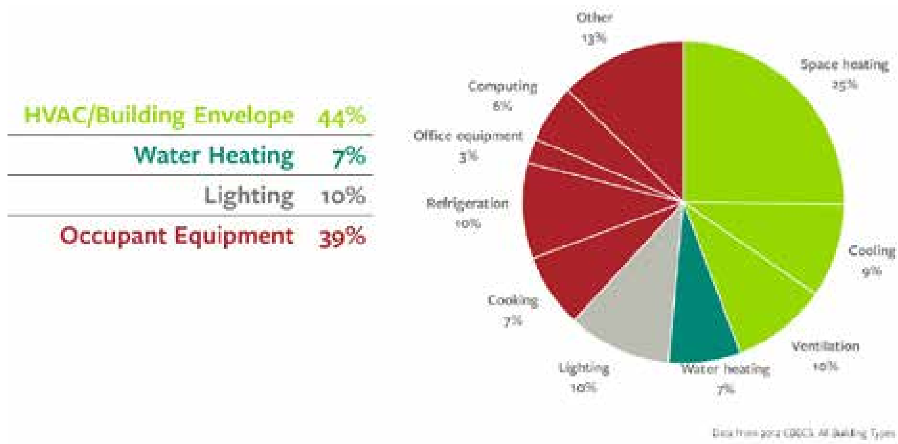
Entities around the country – schools, corporations, municipalities – are setting more stringent energy goals, like "carbon-neutral by 2050." A significant piece of this revolves around the decarbonization of buildings. To serve these ambitious goals, we need to employ some new and improved design techniques.

How Buildings Use Energy

When we look at how buildings use energy, it's easier to see why MEP improvements will only take us so far.

As the chart on page 52 illustrates, engineering and architectural components affect about 2/3 of building energy use. About 44 percent of that is space heating, cooling, and ventilation. While that's a big percentage, it's important to keep in mind that both the building envelope and heat-generating occupant equipment contribute to the HVAC system's energy use.

About 1/3 of building energy use is from occupant equipment, such as elevators and escalators, refrigeration,



office equipment, process equipment, and other miscellaneous power consuming devices.

What this means is that the A/E team can affect only about 2/3 of total building energy use. That's really important to keep in mind when we're looking at energy reduction targets. For example, if the A/E team is asked to make the project 20 percent better overall, they actually have to target 30 percent better on their portion of the project.

If we take this example a step further and rely solely on the HVAC systems for the project's energy savings, we find that the HVAC system's energy consumption would have to be reduced by a whopping 60 percent to achieve an overall 20 percent energy savings for the project.

If we only look at one portion of the energy pie, we leave options on the table and can make it harder to reach our goals.

The LEED certification method mentioned above tries to isolate the A/E team's performance by keeping the red portion of the pie the same between the baseline and proposed models. Using a different metric for rating the building's energy performance can help motivate improvements that may not be rewarded by LEED. For instance, the EnergySTAR rating system looks at the actual utility bills and compares the building's energy use to others around the country of similar size and use, thus giving a more accurate representation of the building's performance. However, using this metric in a design standard means that the responsibility of achieving the performance goal is now shared, not only among the design team, but the owner and even the building's occupants. One major source of uncertainty is the amount of electronic equipment, which will have a significant impact on the EnergySTAR rating of a building and is quite difficult to predict in advance.

Where Else Can We Gain Energy Savings?

The energy use pie reveals additional areas for energy savings. Achieving those savings involves everyone on the team – owner, architect, and engineer.

Envelope. The walls, windows, roof, and floors can all have a significant impact on the building's energy consumption. The relative impact of each of these items will depend on the orientation and shape of the building. However, it is important to note that just getting "more insulation" is not necessarily the best-performing option. A common oversight happens when the thermal bridging impact of insulation fasteners is not accounted for in energy performance calculations. For example, a wall may have two layers of insulation, rated R-12 and R-13, and totaling R-25.

However, one or both insulation layers may not be continuous due to the installation technique or structural members of the building. Our example wall's performance will decrease to approximately R-22 when one layer is bridged, and to R-17 if both layers are bridged – or even more depending on the specific installation or structure. This results in a 1 percent and 2 percent increase in annual energy cost, respectively. Also, depending on the initial R-value, the affected R-values may impact the overall envelope's code compliance.

Space programming. One element to consider is space programming. Where can different spaces be located and what design elements can we include to achieve energy benefits?

The design team for an outpatient healthcare facility leveraged this strategy. A number of functions that don't require windows or natural sunlight were located on the west end of the building. The west-facing wall doesn't have much glass and was heavily insulated, avoiding heat gain from the afternoon sun. On top of that, the architect incorporated a "living wall" of vegetation to create natural insulation and solar shade.

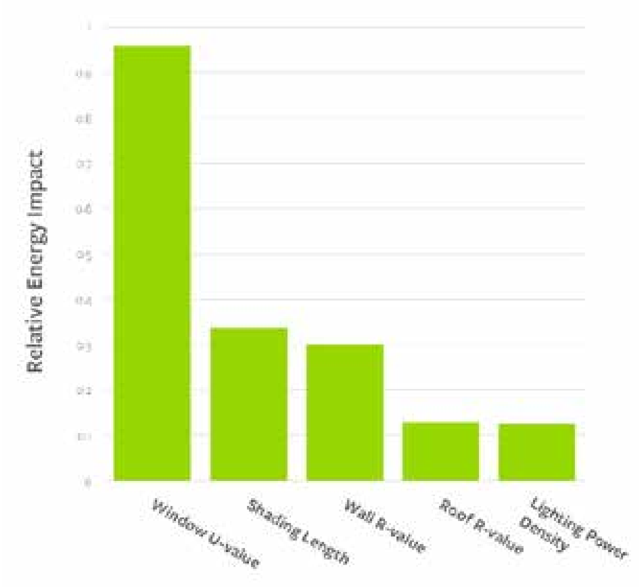
Conversely, the east side of the building features the main entrance. This side called for plenty of glass to provide patients with outdoor views and daylight. At the same time, the design team incorporated canopies to provide shade, avoid undesirable heat gain, and serve as a carport drop-off for patients.

Because of these and other sustainability strategies, this outpatient healthcare facility was able to use standard HVAC systems and still achieve a high level of energy performance.

Occupant equipment. As HVAC, envelope, and lighting technologies keep improving, tenant behavior is accounting for a larger and larger piece of the energy consumption pie. The equipment selected, along with people's behavior, can make a big difference in terms of energy use.

For example, on a high-rise hotel project we worked on, the owner had selected energy-efficient elevators and escalators. Our team modeled the exact elevators and escalators used. In doing so, we discovered that these elevators and escalators reduced the hotel's energy use intensity (EUI) by 20 percent. How is this possible? Not only

	Standard Elevators/Escalators	Improved Elevators/Escalators
Projected EUI	110 kBtu/ft²/yr	88 kBtu/ft²/yr
Energy Savings	N/A	**20%** EUI reduction for the hotel



did the equipment itself use less energy, but it also required less cooling, which translated into HVAC energy savings (see the chart above).

The answer is IT equipment. The equipment in IT rooms uses energy in two ways: power for the equipment, and power for space conditioning to keep the room cool. By using more efficient servers, you can affect the HVAC system efficiency without touching the HVAC system.

How Energy Modeling Helps Optimize Energy-Saving Strategies

When we look beyond MEP, we can end up with an overwhelming number of possibilities for energy savings. Where do we start? How do we know which ones will make a meaningful difference for our building?

This is where energy modeling comes in. An energy model is a computer simulation of a building's energy performance. It calculates a building's energy use at hourly or sub-hourly intervals and allows us to see where energy is being used in a building.

One of the main questions that energy modeling can help answer is, "How much more energy savings can one design option generate compared to the others?" In general, it's unrealistic for a building owner to spring for all the bells and whistles on their project. Energy modeling can really help owners decide where to spend their money to get the most efficient building for their budget.

Here's a practical example. The graph above right comes from an energy model for a residence hall. It compares the relative energy impact of five different design elements: window U-value, shading length, wall R-value, roof R-value, and lighting power density. Through energy modeling, we learned that decreasing the window U-value by 0.05 yields three times the energy savings as increasing the wall R-value by R-5. With that information, we can then evaluate the relative cost of choosing one design option over another.

Other common uses for energy models include:

- Energy modeling can help us understand how systems operate together so that we can quantify different tradeoffs. For example, better lighting might let you save on cooling costs but increase heating costs.
- Energy modeling can also help owners get the best results for a combination of priorities. For example, a building owner may want to reduce energy consumption and carbon dioxide emissions while achieving a specific first cost.
- We can use energy modeling to predict building performance across the lifecycle of the building. This is useful for system selection when we're comparing first costs and lifecycle costs. It can also support an organization's net zero and EnergySTAR goals by showing a path to certain thresholds throughout the design process.
- If an owner wants to meet a certain percentage of their building's energy needs from renewable sources, the energy model can help predict the quantity of energy that needs to be generated to meet this goal. Additionally, it can show how improvements to the building's operational efficiency can reduce the size of these renewables.

Ultimately, energy modeling shows owners where they will get the most value for their budget based on their specific priorities. It empowers them to make meaningful, data-driven decisions.

With today's technologies, organizations and institutions have options far beyond MEP for improving their energy footprint. Using a collaborative design approach that takes advantage of the predictive power of energy modeling, we can discover opportunities that we wouldn't have otherwise. BG

This article originally appeared on karpinskieng.com.

Joseph Hofstetter, PE, CEM, LEED AP, is principal and director of building performance and sustainability at Karpinski Engineering. He can be reached at jhoffstetter@karpinskieng.com. Mattie DeDoes is a building performance and sustainability project engineer for Karpinski Engineering. He can be reached at mdedoes@karpinskieng.com.

INDUSTRY & COMMUNITY NEWS

(From left) Rycon's Ryan Ernst, Miranda Anderson, Haley Loesch, and Allison Earley at the Young Constructors Kickoff on March 31.

(From left) Easley & Rivers' Alema Makota, Kayla Moyer, and Kelly Manno.

(From left) Chet Beres, Randy Krueger and Doug Brenneman from Landau Building Co.

(From left) Neal Rivers from Easley & Rivers, Elizabeth Martini from A. Martini & Co., E&R's Brooke Waterkotte, and Emily Landerman from A. Martini & Co.

Members of Mosites Construction's project team (foreground) lead students from the Pennsylvania College of Technology in Philadelphia on a tour of the Sixth Street Bridge project site.

The MBA's Lance Harrell (second from the right) joins the KML Carpenters CARP Pre-Apprentice program at the Joint Apprentice Training Center on the Parkway West.

MBA Young Constructor's and Green Builders Committee commemorated Earth Day with a cleanup of Duck Hollow Trail Access/Parking Area. Republic Services Inc. provided the trash bags and hauled the waste from the site.

(From left) Mascaro's Cory Kreiger, Zach Brandy, Brandon McDermott, John A. Mascaro, and Jayna Fittipaldo at the Earth Day cleanup.

Turner Construction's Patriece Thompson and Michael Henderson from the Allegheny Conference at the NAIOP Pittsburgh April 21 meeting.

Lynn DeLorenzo from TARQUINCoRE (left), The Caliguiri Group's David Caliguiri, and Mascaro's Alyssa Kunselman.

AWARDS & CONTRACTS

Ringgold Area School District awarded **Caliber Contracting Services** the general construction contract for its $1.9 million Phase II High School Renovations in Carroll Township, Washington County. HHSDR Architects & Engineers.

Landau Building Co. has started construction on the first phase of the fit out for Eos Energy Enterprises at RIDC Keystone Commons Building S in Turtle Creek, PA. The architect for the 46,000 square foot expansion is NEXT Architecture.

Landau Building Company is in the initial stages of a 5,509 square foot tenant fit-out for life sciences company Microbial Genome Sequencing Center, LLC, at the RIDC Chocolate Factory in Lawrenceville. The new space will include offices, research space, and a laboratory. Construction is on schedule to be completed the first week of July 2022. NEXT Architecture designed the facility.

Landau Building Company will be replacing showers and vanities in 11 dormitory suites on the fifth Floor of Vickroy Hall at Duquesne University this summer. This is a continuation of similar work completed in the same building during the summer of 2021.

Westmoreland County Commissioners awarded a contract to **Carl Walker Construction** for emergency repairs to the courthouse parking garage. The architect for the $7 million project is Design 3 Architecture.

Pinecrest selected **Rycon Construction** to build its $60 million, 16-story student housing tower in Richmond, near the Virginia Commonwealth University campus. The project will be managed by Rycon's Washington, DC office. Hickock Cole is the architect.

Rycon Construction was selected by Franciscan University of Steubenville as construction manager for its $40 million, 110,000 square foot Christ the Teacher Academic Building in Steubenville, OH. The architect is MCF Architects.

Rycon Construction is providing preconstruction services on the 198-unit Baumhaus II apartments being developed by Laurel Real Estate. The architects are Workshop ADP and Stantec.

Rycon's Special Project Group is the construction manager responsible for building a new $2.5 million PNC Bank Branch in Brentwood.

Rycon's Special Projects Group was awarded a $4 million GMP contract to modernize restrooms on two floors of the Oak Residence Hall at Penn State Altoona.

Holistic Industries selected **Rycon's** Special Projects Group to renovate three cannabis dispensaries totaling over $2 million in West Virginia.

Rycon's Special Projects Group will be performing office renovations totaling $1.4 million on the ninth floor of a building in downtown Pittsburgh for a financial client.

SITE Centers selected **Rycon's** Special Projects Group to construct a new $1.3 million Aspen Dental location in Vorhees, NJ.

SomeraRoad awarded **Rycon's** Building Group the CM at-Risk for the new $58 million mixed-used development in Pittsburgh's SouthSide Works. The scope includes a 246-unit seven-story apartment.

Rycon's Building Group was awarded the general contract to complete the $26.1 million site work and surface parking package at the new Pittsburgh International Airport in Coraopolis, PA.

LoveSac awarded **Rycon** two renovation projects totaling $500,000 in Atlanta, GA and Kansas City, MO.

In Chesapeake, VA, **Rycon** is completing a 23,700 sq. ft. fit-out of Marshalls at Greenbier MarketCenter.

Rycon is responsible for the Phase 4, $3 million renovation of the 11,600 sq. ft. first floor makerspace at Case Western Reserve University in Cleveland, OH.

A $1.1 million renovation by **Rycon** is underway in Akron, OH at the I PROMISE School for seventh and eighth graders.

In the past year, **Rycon** was selected to build and/or renovate 16 Chase Bank locations throughout Florida, Ohio, and Pennsylvania.

In New Buffalo, MI, **Rycon** is the construction manager awarded a $1.6 million renovation of the Rolling Embers Cannabis Dispensary.

A $2.2 million expansion of the endoscopy center at Wooster Community Hospital will be completed by **Rycon**.

In Medley FL, **Rycon** and ELM Arch is the design-build team awarded a $12.9 million build-out and shell retrofit for a FedEx package distribution facility.

With the award of Countyline Corporate Park Building 18, **Rycon** has officially served on $250 million of work located northwest of Miami, FL.

In St. Cloud, FL, **Rycon** was awarded a $5 million project consisting of three new ground-up commercial buildings for retail and business use.

Rycon was selected to perform a $5.2 million façade replacement to the Bala Cynwyd Shopping Center in Pennsylvania.

In Marlton, NJ, **Rycon** was awarded a 2,500 sq. ft. renovation of Carbon Health Primary & Urgent Care.

Repeat client Chick-fil-A awarded **Rycon** a $1.7 million project to renovate a location in Norristown, PA.

Rycon will be completing a $1 million Fresenius medical outpatient office expansion at Azura Vascular Care/Arlington Ambulatory Surgery Center in Arlington, Virginia.

Spartan Construction Services was the successful bidder on the $1.3 million A & B Pump Stations for McCandless Township Sanitary Authority. The project engineer is KLH Engineers, Inc.

Canonsburg Borough Council awarded **Spartan Construction Services** the general construction contract for the $1.8 million Public Works Garages. KLH Engineers designed the project.

A. M. Higley Company was awarded a contract by Rise Brands for the buildout of the new Pins Mechanical space at South Side Works. Design Collective is the architect for the $6 million renovation that will create a 30,000 square foot bowling and game arcade and bar at the former South Side Works Cinema.

Uhl Construction was awarded a $1.6 million design-build contract to renovate and rehabilitate Exhibit Building 13 at the Washington County Fairgrounds in Chartiers Township.

Western Pennsylvania School for the Deaf selected **A. Martini & Co.** as construction manager for its $7 million campus infrastructure modernization in Edgewood. The architect is DRAW Collective.

Wexford Science & Technology selected **Turner Construction Co.** as construction manager for its new 10 story, 200,000 sq. ft. office tower at 3440 Forbes Avenue in Oakland.

University of Pittsburgh selected **Turner Construction** for the Biomedical Science Tower 3 10th Floor. The project involves approximately 2,500 square feet of renovation and includes change of use space from lab to office, repurposing other areas within the floor, modifications to the existing MEP systems, along with architectural finishes. LSY Architects is the architect.

Turner Construction was awarded a contract to build a confidential secure compartmented information facility (SCIF) in Allegheny County. The project involves 12,000 square feet of renovations to existing office space into a SCIF.

Turner Construction was awarded a contract for UPMC Passavant Operating Room HVAC Upgrades, the replacement of an existing AHU serving four operating rooms along with the installation of a new chiller. The architect is MCF Architects.

DiMarco Construction Co. was awarded a contract for the new $15 million water filtration plant by the Municipal Water Authority of Aliquippa. The project's engineer is Lennon, Smith, Souleret Engineering.

Allegheny County awarded a general construction contract to **DiMarco Construction** for its $6.3 million District 5 Maintenance Facility in Bethel Park. The facility was designed by CDI Infrastructure.

Allegheny County Airport Authority awarded **Independence Excavating Inc.** a contract for the Waterline and Fireline Rehabilitation Project at Pittsburgh International Airport.

PJ Dick has partnered with Manheim Corporation to provide construction management services for the renovation of approximately 30,000 square feet of clinical and office space at West Virginia University's Health Science Center. The renovations will consist of complete and selective demolition of the interior walls and finishes on the first floor as well as some select renovations on the ground floor. The work will be phased over several years to keep the clinic spaces operational.

Allegheny County Airport Authority awarded **Massaro Corporation** a $12,996,000 contract for the general construction portion of the $44 million new Cargo Building 4 at the Pittsburgh International Airport. The 78,000 square foot facility was designed by AECOM.

Mascaro was awarded the contract for the demobilization and surplus management at the Shell Petrochemical Facility.

In Erie, **Mascaro** installed the structural steel and miscellaneous metals at the Veteran Affair Medical Center Chilled Water Plant.

Mascaro is constructing the mixing tank foundations in a power plant in West Virginia.

Mascaro's St. Paul of the Cross Monastery Church Renovation project was awarded the 2021 Lighting Award for Excellence in Historical Lighting by the Electrical League of Western Pennsylvania.

The MuseumLab at the Children's Museum of Pittsburgh, renovated by **Mascaro Construction**, received the Building Museum Symposium's Buildy Award by the Mid-Atlantic Association of Museums. The Buildy Award recognizes the museum's leadership and exemplary accomplishment through the planning, construction, and life after opening.

Volpatt Construction was awarded the contract for the new Dollar Bank branch at Trinity Point in South Strabane Township outside Washington PA. NEXT Architecture Dexter is the architect for the conversion of a former branch office.

Carnegie Mellon University awarded a contract to **Volpatt Construction** for the renovation of the Cai and Keung labs at Mellon Institute. The architect for the $1.7 million project is Stantec.

Victrix LLC selected **Dick Building Company** to do preconstruction for its conversion of the 310,000 square foot former GNC Building at 300 Sixth Avenue into 249 apartments. The architect is Strada Architecture LLC.

Uhl Construction is the general contractor for long-time client Nicklas Supply Company's showroom addition and renovation in Bridgeville, Collier Township. The architect for the 4,000 square foot expansion is Avon Design Group.

DiMarco Construction is nearing completion on the new $7.6 million mother house for the Sisters of Holy Spirit in Ross Township. The architect is DRAW Collective.

DiMarco Construction was the successful bidder on the new maintenance garage for the Ford City Municipal Sewage Disposal Authority in Ford City, Armstrong County. The project's engineer is Nichols & Slagle Engineering.

Carl Walker Construction is performing repairs to the UPMC Presbyterian University Hospital parking garage in Oakland. The architect is DESMAN.

Massaro Corporation is the general contractor for the $10 million, 62-unit Woods Village being developed by Oak Moss in Hazelwood. The architect is Indovina Associates Architects.

TEDCO Construction renovated the offices of Orange Coast Lending Service at Park Place One in Findlay Township. The project was designed by NEXT Architecture.


Powering Pittsburgh Businesses Since 1984
LIGHTHOUSE ELECTRIC
ELECTRICAL CONTRACTORS
724.873.3500
LighthouseElectric.com
NECA


Building The Future
Turner
925 Liberty Avenue, 3rd Floor,
Pittsburgh, PA 15222
Drew Kerr, General Manager
412-255-5400
www.turnerconstruction.com/pittsburgh
THE ASSEMBLY PITTSBURGH

FACES & NEW PLACES

Jendoco Construction Corporation welcomed **Kelsey Armahizer** as controller. She will be involved in all financial aspects of the company working closely with the accounting team. Kelsey brings with her over 10 years of experience in the construction industry.

George Germany started with **Turner Construction Co.** as project engineer. Germany has 15 years of experience in project management. He is a graduate of the University of Akron.

Jeremy Cadez was hired by **Turner Construction** as a procurement agent. Cadez earned a bachelor's degree in finance from University of Pittsburgh.

Patriece Thompson joined **Turner Construction** as community and citizenship manager. She previously worked in business and community development roles at the Allegheny Conference on Community Development, WQED, and YMCA of Greater Pittsburgh. Thompson is a graduate of California University of PA, with a master's in business administration from Point Park University

Greg Komar joined **Turner Construction** as project manager. Komar has 14 years' experience in project management and estimating. He is a graduate of Penn State University.

PJ Dick welcomed **Angela Hess** to its estimating department as an MEP coordinator. Hess has spent over 10 years in the design industry as a mechanical/HVAC design engineer, seven of which were spent at Allen + Shariff Engineering as a senior mechanical designer. She received her BS in architectural engineering from the University of Miami.

Amber Chambers started at **PJ Dick's** Special Projects Group as an assistant project manager working on the Links Brewing Company Expansion and Louis Anthony Jewelers. Amber has gained certifications through US Army Corps of Engineers Quality Control Training, APX, Inc Lead and Asbestos Abatement Courses, and OSHA-30 Hour training courses.

PJ Dick welcomed **Kevin Blue** to its Mid-Atlantic office as an assistant project manager. He is a graduate of Temple University, where he received his degree in civil and construction engineering technology. Kevin has 12 years of experience, 11 of which were spent as facilities engineer and then project manager for the Philadelphia Housing Authority.

Dave Deneen joined **PJ Dick** as a superintendent. Previously, he gained 10 years of experience as a general superintendent/superintendent at Kiewit Power Constructors and seven years as a union pipefitter.

Roberto Fratangelo re-joined **PJ Dick's** Self-Perform Group as a project manager working on the Wyatt Manufacturing Facility and Fifth and Halket Innovation Research Tower. Roberto has 17 years' experience as estimator, project engineer, assistant project manager, and project manager. He earned his degree in civil engineering with a concentration in construction management from the University of Pittsburgh.

Drishika Dugar joined **PJ Dick** as project engineer at the Carnegie Mellon University Scaife Hall project, following the completion of her six-month internship at that site. Drishika is a 2021 graduate from CMU, with a BS in civil engineering and an additional degree in engineering and public policy.

Hayden Howell joined **PJ Dick** as assistant project manager. After graduating in 2016 from Washington State University with his degree in construction management, he spent two years in Seattle at Skanska USA where he gained experience working on various K-12 projects. He then worked at WG Clark where he worked on mixed-use apartment buildings for another two years.

PJ Dick hired **Bill Tomasic** as an MEP superintendent. Bill's responsibilities involve managing HVAC and plumbing contracts for the TMP project at the Pittsburgh International Airport.

Kollin Hiles joined **PJ Dick** as project engineer at the Marshall University College of Business project. Previously, Kollin worked as a project engineer at Howerton Engineering and as a network engineer at State Electric Supply Company. He graduated from Olivet Nazarene University in 2017 with his BS in engineering and a concentration in architectural engineering.

Taylor Johnson joins **PJ Dick's** in-house virtual construction team as a virtual construction technician. Following her graduation from Pittsburgh Technical College in 2018, she spent the past three years as a virtual construction specialist at Lighthouse Electric Company, Inc.

Kyle Fitzpatrick started with **PJ Dick's** Saratoga Springs team. Kyle is a project manager working on a confidential project in Upstate New York. Fitzpatrick has 30 years of experience. He earned his BS in construction management from Utica College of Syracuse University and his associates degree in applied science construction technology from Hudson Valley Community College.

PJ Dick announced the following promotions: **Justin Blackwell** to superintendent; **Jude Champion** to project manager; **Casey McAndrew** to project manager, Self-Perform Group; **Shawn Turner**, project manager; **Selma Voljevica**, project manager; **Matt Bogan**, assistant project manager; **David Eberling**, assistant project manager;

Zachary Hoose, assistant project manager; **Rehan Khan**, assistant project manager; **Thomas Tresky**, assistant project manager; **Brianne Kyle**, corporate CMiC administrator; **Carol Mulderig**, manager of residential division of Special Projects Group.

On March 7, **Brian Shick** joined **Mascaro** as a project manager. With nine years of experience, Brian has managed projects from procurement to commissioning. Brian will manage heavy / industrial projects.

Amanda Myers joined **Mascaro** as a project administrator on March 7. Amanda has 16 years of experience supporting project managers on commercial construction projects upwards of $30 million.

On April 18, **Shane Oliver** joined **Mascaro** as a health, safety, and environmental manager. Shane has over 20 years of experience in the construction and manufacturing industry with nine years as a safety professional. Shane will support the Shell Cracker Plant project.

The Electrical League of Western Pennsylvania inducted **Bill Rost**, **Mascaro's** director of electrical services, into the 2021 Hall of Honor. Bill has nearly 50 years in the electrical industry and has been with **Mascaro** for the last 10 years.

Volpatt Construction added **Perry Cansick** to its staff as project engineer. Cansick served as a military engineer in the U.S. Air Force for eight years, achieving the rank of executive officer, and worked as a project engineer and project manager in the Pittsburgh area for three years prior to joining Volpatt. He earned a bachelors degree in mechanical engineering from University of Pittsburgh and holds a masters in Engineering/Industrial Management from the U.S. Air Force Institute of Technology.

Rycon's Houston office welcomes **William Flores** as vice president. William has over 27 years' experience and holds an environmental design architecture degree from Texas A&M.

Rycon's Houston office hired **Brandon Bass** as project manager.

With over 40 years' experience, **Lee Butler** joins the **Rycon** Fort Myers office as superintendent.

Rycon welcomes **Carrie Conti** as a project coordinator in the Atlanta office.

Troy Cook, alumnus of Texas A&M, joins **Rycon's** Houston office as director of business development.

Rycon's Special Projects welcomes **Matthew Cortazzo** as project manager.

William Crimmins, Georgia Tech alumnus, joins **Rycon's** Atlanta office as project manager.

Rycon's Building Group welcomes **Caitlin Delach** as assistant project manager.

Anthony Didiano joins **Rycon's** Special Project Group as project engineer.

Christopher Duffy joins **Rycon's** Philadelphia office as assistant project manager.

Rycon's Houston office hired **Eric Forton**, with over 20 years' experience, as estimator.

With over 25 years' experience, **Rycon** Atlanta welcomes **Bryan Gandy** as the director of structural components.

Rycon's Fort Myers office welcomes **Christopher Hawkins** as the director of preconstruction.

Rycon welcomes **Brian Hayes** as a superintendent in the Washington, DC office.

Rycon's Fort Lauderdale office hired **Dinna Herrera** as project engineer.

Dylan King, an alumnus of University of Pittsburgh, joined **Rycon's** Service Division the team as project engineer assistant.

Enes Kol joins **Rycon's** Atlanta office as assistant project manager.

Kelly Labor joins **Rycon's** Philadelphia as estimating assistant.

Rycon Pittsburgh's accounting department is pleased to welcome **Evangeline Marshall**.

Nick Nasr, alumnus of Texas Tech, joins **Rycon**' Houston office as project engineer.

Rycon's Washington, DC office hired **Greer Peterson** as assistant project manager.

Jesse Robinson-Evans joins **Rycon's** Building Group as estimator.

Rycon's Fort Myers office welcomes **Patrick Roelle**, with over 40 years' experience, as senior estimator.

Rycon's Cleveland office welcomes **Elizabeth Rogalski** as project engineer.

Chanel Russell joins **Rycon's** Fort Lauderdale office as assistant project manager.

Camila Salinas, alumna of the University of Central Florida, joins **Rycon's** Fort Lauderdale office as receptionist.

George Santiago joins **Rycon's** Fort Lauderdale office as estimator.

Joining **Rycon's** HR department is **Susan Scharf** as human resource generalist.

Russell Siler has been hired in **Rycon's** Houston office as estimator.

Rycon welcomes **Allison Taylor** as project manager, an alumna of Southern Polytechnic State University.

In **Rycon's** Special Projects Group **Daniel Toski** was promoted to project manager.

Joining **Rycon's** Cleveland office is **Ivette Vinicky** as preconstruction coordinator.

Within **Rycon's** Special Projects Group, **Courtney Williams** has been hired as project manager.

In **Rycon's** Building Group, recent promotions include: **Andrew Renckly** as project manager, **Justin Delmaster** as project manager, **Seth Beatty** as assistant project manager, **Vinny DiCarolis** as assistant project manager, **Dan Paul** as assistant project manager, and **Patrick Ehland** as MEP coordinator.

In **Rycon's** service division, recent promotions include: **Adam Hutchinson** as project lead, **Patrick Crummie** as project lead, and **Will Fisco** as estimator.

Also, in **Rycon's** Pittsburgh office, **Leslie Pekular** was promoted to AR team lead within the accounting department and Rob Pell as training specialist within the IT department.

Within **Rycon's** Atlanta office, **Regan Horn** was promoted to estimator and Jamie Rogers was promoted to senior project manager.

Mary Sucre was promoted to staff accountant within **Rycon's** Fort Lauderdale office.

Andrew Shinn was promoted to senior estimator within **Rycon's** Philadelphia office.

In **Rycon's** Washington, DC office, **Jenny Dibra** was promoted to assistant project manager.

MBA MEMBERSHIP

2022 MBA OFFICERS

President
Raymond A. Volpatt, Jr., P.E.
Volpatt Construction Corporation

Vice President and Treasurer
Michael R. Mascaro
Mascaro Construction Company, LP

Secretary/Executive Director
David D. Daquelente

2022 MBA BOARD OF DIRECTORS

John Paul Busse
F.J. Busse Company, Inc.

Alexander G. Dick
Dick Building Company

Domenic P. Dozzi
Jendoco Construction Corporation

James T. Frantz
TEDCO Construction Corporation

Jeffrey C. Landau
Landau Building Company

Anthony F. Martini
A. Martini & Co.

Steven M. Massaro, Past President
Massaro Corporation

David P. Meuschke
Burchick Construction Company, Inc.

M. Dean Mosites
Mosites Construction Company

Jodi L. Rennie
Turner Construction Company

Clifford R. Rowe, Jr.
PJ Dick Incorporated

John W. Sabatos
Rycon Construction, Inc.

Fredrick T. Episcopo (MICA President)
Wyatt, Inc.

GENERAL CONTRACTORS

A. Betler Construction, Inc.
A. Martini & Co.
AIMS Construction
The Albert M. Higley Company, LLC
Allegheny Construction Group, Inc.
Burchick Construction Company, Inc.
Caliber Contracting Services, Inc.
Carl Walker Construction, Inc.
Dick Building Company
DiMarco Construction Co., Inc.
E&G Development, Inc.
F.J. Busse Company, Inc.
Facility Support Services, LLC
FMS Construction Company
Fred L. Burns, Inc.
Independence Excavating, Inc.
Jendoco Construction Corporation
Kokosing Industrial Incorporated
Landau Building Company
Mascaro Construction Company, LP
Massaro Corporation
McCrossin
Menard USA
Mosites Construction Company
Nello Construction Company
Nicholson Construction Company
PJ Dick Incorporated
Rocky Bleier Construction Group
Rycon Construction, Inc.
Shannon Construction Company
Spartan Construction Services, Inc.
Stevens Engineers & Constructors, Inc.
TEDCO Construction Corporation
Turner Construction Company
Uhl Construction Company
Volpatt Construction Corporation

SPECIALTY CONTRACTORS

A Crane Rental, LLC
A. Folino Construction, Inc.
A. J. Vater & Company, Inc.
A.C. Dellovade, Inc.
ABMECH Acquisitions, LLC
ACE Lightning Protection Inc.
Advantage Steel & Construction, LLC
All Crane Rental of Pennsylvania, LLC
Alliance Drywall Interiors, Inc.
Amelie Construction & Supply, LLC
Amthor Steel, Inc.
Brayman Construction Corporation
Bristol Environmental, Inc.
Bruce-Merrilees Electric Co.
Bryan Construction, Inc.
Burke & Company, LLC dba S.P. McCarl & Company
Century Steel Erectors Co., LP
Clista Electric, Inc.
Cost Company
Costa Contracting, Inc.
Cuddy Roofing Company, Inc.
D-M Products, Inc.
Donley's Concrete Group
Douglass Pile Company, Inc.
Easley & Rivers, Inc.
East Coast Metal Systems, Inc.
EMCOR Services Scalise Industries
Fay, An i+iconUSA Company
Ferry Electric Company
Flooring Contractors of Pittsburgh
Franco Associates
G. Kidd, Inc.
Gaven Industries, Inc.
Giffin Interior & Fixture, Inc.
G.O. Services, LLC
Gregori Construction, Inc.
Gunning, Inc.
Geo. V. Hamilton, Inc.
Hanlon Electric Company
Harris Masonry, Inc.
Hatzel & Buehler, Inc.
HOFF Enterprises, Inc.
Howard Concrete Pumping, Inc.
Hunt Valley Environmental, LLC
J.J. Morris & Sons, Inc.
JLJI Enterprises, Inc.
Kalkreuth Roofing & Sheet Metal, Inc.
KELLER North America
Keystone Electrical Systems, Inc.
Kirby Electric, Inc.
Kusler Masonry, Inc.
L & E Concrete Pumping Inc.
Lighthouse Electric Company, Inc.
Limbach Company, LLC
Lisanti Painting Company
Marsa, Inc.
Massaro Industries, Inc.
Master Woodcraft Corporation
Matcon Diamond, Inc.
Maxim Crane Works, LP
McCrossin Foundations, LLC
McKamish, Inc.
Mele & Mele & Sons, Inc.
NAES Power Contractors
Nathan Contracting LP
Noralco Corporation
Paramount Flooring Associates, Inc.
Phoenix Roofing, Inc.
Pittsburgh Interior Systems, Inc.
Precision Environmental Company
RAM Acoustical Corporation
Redstone Flooring, LLC
Renick Brothers Construction Co.
Richard Goettle, Inc.
Right Electric, Inc.
Ruthrauff | Sauer, LLC
Saint's Painting Company, Inc.
Sargent Electric Company
Schindler Elevator
Schlaegle Design Build Associates, Inc.
Schnabel Foundation Company
Specified Systems, Inc.
Spectrum Environmental, Inc.
SSM Industries, Inc.
Swank Construction Company, LLC
T.D. Patrinos Painting & Contracting Company
Tri-State Flooring, Inc.
W.G. Tomko, Inc.
W.O. Grubb Steel Erection, Inc.
Wayne Crouse, Inc.
WGM Contractors, LLC
William. A. Fischer Carpet Company
Wright Commercial Floors
Wyatt, Incorporated

AFFILIATE MEMBERS

4CTechnologies
84 Lumber
ADMAR Construction Equipment and Supply
AE Works Ltd.
AEC Online Store LLC
African American Chamber of Commerce of Western PA
AHN Construction & Design
Allegheny County Airport Authority–Pittsburgh International Airport
Alliant
American Contractors Insurance Group
Amerisafe Group
AmeriServ Trust and Financial Services Company
A. R. Chambers and Son, Inc.
Atlantic Engineering Services
Atlas Marketing
Atlas Wholesale Co., Inc.
AUROS Group
Babst | Calland
Baker Tilly Virchow Krause, LLP
BDO USA, LLP
Black Diamond Equipment Rental
Bowles Rice
Bronder & Company, P.C.
Buchanan Ingersoll and Rooney, P.C.
Building Point Ohio Valley
Burns & Scalo Real Estate Services, Inc.
Burns White, LLC
Cadnetics, Inc.
Case|Sabatini
CENTRIA
Chartwell Investment Partners
Chubb Group of Insurance Companies
Civil & Environmental Consultants, Inc.
Clark Hill PLC
Cleveland Brothers Equipment Co., Inc.
CliftonLarsonAllen LLP
Cohen, Seglias, Pallas, Greenhall & Furman PC
Colliers Engineering & Design
Computer Fellows, Inc.
Cozen O'Connor
Crawford Consulting Services, Inc.
Dentons Cohen & Grigsby P.C.
DesignGroup
Dickie, McCamey & Chilcote, P.C.
Dingess, Foster, Luciana, Davidson & Chleboski, LLP
Dollar Bank
DRAW Collective Architecture
DRS Architects
Eckert Seamans Cherin & Mellott
ECS Mid Atlantic, LLC
EPIC Insurance Brokers & Consultants
FDR Safety, LLC
First National Insurance Agency
Frost Brown Todd, LLC
Gallaway Safety & Supply
The Gateway Engineers, Inc.
Graystone Consulting Pittsburgh Cleveland
Green Dot Active Solutions, Inc.
A.L. Harding & Company
The Hartford Surety
Henderson Brothers, Inc.
Henry Rossi & Co., LLP
HHSDR Architects/Engineers
Highway Equipment Company
Hillis Carnes Engineering Associates, Inc.
Huth Technologies LLC
Intertek - PSI
J. S. Held
Karpinski Engineering
LaFace & McGovern Associates, Inc.
Langan Engineering & Environmental Services
Liberty Insurance Agency
Liberty Mutual Surety
Lytle EAP Partners/Lytle Testing Services, Inc.
Maiello, Brungo & Maiello
Marthinsen & Salvitti Insurance Group
McKim & Creed, Inc.
McNees Wallace & Nurick, LLC
Metz Lewis Brodman Must O'Keefe LLC
Meyer Unkovic & Scott, LLP
Meyers Company
Michael Baker International
Milwaukee Tool
Mobile Air, Inc.
Mobile Medical Corporation
MSA Safety
Multivista
NCI - Nursing Corps
New Millennium Building Systems
Ohio Valley Drywall Supply
Old Republic Surety Company
Philadelphia Insurance Companies
Pietragallo Gordon Alfano Bosick & Raspanti, LLP
Pittsburgh Mobile Concrete, Inc.
Providence Engineering Corporation
R.J. Bridges Corporation
Regional Industrial Development Corporation (RIDC)
Republic Services, Inc.
The Rhodes Group
Rimkus Consulting Group, Inc.
Schneider Downs & Company, Inc.
Scotti Law Group
Seubert & Associates, Inc.
The Sherwin-Williams Co.
Stanley Black & Decker
Steptoe & Johnson PLLC
Suburban Propane
Tarax Service Systems, Inc.
Tom Brown, Inc.
Travelers Bond & Financial Products
Tucker Arensberg, P.C.
UBS Financial Services / The Sofranko Group
UPMC Work Partners
U.S. Film Crew
USI Insurance Services
Werner Co
Willis of Pennsylvania, Inc.
WNA Engineering, Inc.
Zilka and Associates, Inc. Architects
Zurich NA Construction

CLOSING OUT

BY DR. KENNETH A. SIMONSON

What will bring the hot-air balloon of overheated materials costs back to earth? What condition will contractors that were dragged aloft be in?

The liftoff was rocket-like. A comprehensive measure of the cost of goods and services used in construction--the producer price index for inputs to new nonresidential construction--decreased by 4.4 percent from May 2019 to May 2020. Over the following 12 months, the index increased 23.4 percent. That nearly 28-percentage-point swing was the steepest acceleration ever--by far. The year-over-year change in that index has remained in the 20 percent range every month since then.

Contractors were slow to pass along the cost increases. Perhaps they made the mistake of believing Federal Reserve Chair Jerome Powell (and economists like me) who kept asserting the price increases were "transitory" and about to disappear. More likely, they found demand for projects remained lackluster. Indeed, seasonally adjusted employment at nonresidential businesses--general building contractors, specialty trade contractors, and heavy and civil engineering construction firms--stagnated from June 2020 until August 2021.

By then, contractors were finally putting higher prices into their bids. The Bureau of Labor Statistics creates a "bid price" index that reflects the change in what a fixed group of contractors report they would charge to put up a particular set of buildings. Each contractor reports on the same building it was asked about previously, which means the prices simulate production of the same "product" as before.

This index rose at a year-over-year rate of just 1.0 percent as recently as February 2021. But by February and March of 2022 it was climbing at a 17 percent clip, much closer to the 21.5 percent rise in the inputs index.

Some contractors have been able to mitigate or shift part of the pricing pain. One way is by getting owners to agree to price-adjustment clauses at contract signing. Many state highway agencies have long allowed these mechanisms for diesel fuel, asphalt, and/or certain types of steel. Public or private owners who accepted them in the past year could have benefited from sharp downturns in prices for lumber, diesel fuel, copper, or steel--although each of those products has also had sudden upswings as well. Sharing the risk and reward means contractors may be more willing to submit a bid or to include a smaller contingency when they do. But such volatility can make budgeting difficult.

Another technique is to purchase materials much earlier. This approach locks in prices and makes it more likely materials will be on hand when needed, an important consideration in a time of lengthening or unpredictable delivery dates. However, there are downsides: a need to find and pay for storage, a risk of theft or damage, a possibility of having the wrong material or quantity if there are design changes. And materials such as ready-mix concrete can't be stored.

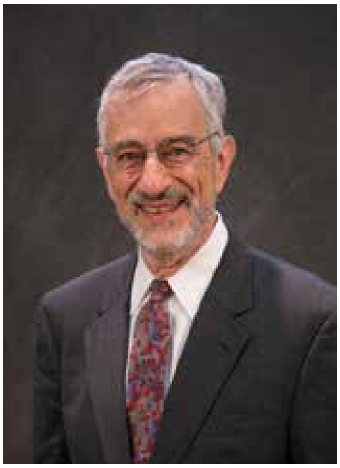
Many owners have shown some flexibility on allowing contractors to substitute materials or propose schedule or design changes. All of these approaches can help blunt the impact of runaway prices or unacceptably long delivery times, but they don't increase supply, the key to a soft landing for costs.

Unfortunately, another way that soaring costs are run to ground is when demand plunges, as with the housing crash in 2007 and the global financial crisis that followed. At the moment, demand for nearly all types of construction appears to be holding up well, but contractors need to be vigilant that their backlogs are as solid as they appear. If not, they may wind up with a lot of expensive materials and no place to use them.

While it is impossible to predict when the supply chain will heal, the imbalance between materials costs and bid prices does eventually disappear and even reverse. In fact, a graph of the difference between the two series shows that over the past 15-plus years, there have been as many months with bid prices exceeding costs as with the reverse situation.

However, the periods with higher costs than bid prices have lasted more than two years on a couple of occasions, from late 2009 to early 2012 and again from late 2016 to late 2018. This time around, the increase in bid prices has trailed the rise in materials costs for 16 months as of March, and the gap between the two has been twice as great as in previous periods--meaning the financial hardship for contractors is twice as intense.

In short, the hot-air cost balloon will land one day. But it's too early to say if the landing will be one that most contractors can walk away from, relatively unscathed.



Ken Simonson is the chief economist for the Associated General Contractors of America. He can be reached at ken.simonson@agc.org or you can subscribe to his weekly newsletter the AGC's DataDigest.