Breaking Ground

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HEALTHCARE MARKET UPDATE

MBA

Contents

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On the cover: St. Clair Health Dunlap Family Outpatient Center. Photo by Matt Dayak.

MBA

PUBLISHER'S NOTE

Something extraordinary happened in New Kensington on May 1. A bunch of local and state politicians joined RIDC and Westmoreland Industrial Development Corp. to announce that Re:Build Manufacturing was going to invest tens of millions of dollars to establish the New Kensington Advanced Manufacturing Park. There was a big media splash that day and then the story faded into memory. What stuck with me was not the details of the construction and development project (I keep notes for those kinds of things.). It was the motivation expressed by the leaders of Re:Build.

Re:Build Manufacturing is a holding company of sorts that intends to spark a new industrial revolution in America. Its chairman, Jeff Wilke, was raised in Pittsburgh and is motivated by his memories of an industrial economy that built the middle class. During the press conference in May, Re:Build's CEO Miles Arnone talked about rebuilding manufacturing in a way that had less to do with re-shoring the supply chain and more to do with revamping our collective values.

> *"As a country, we've sort of engaged in this consensual delusion for about 40 years that it was more important to have cheap fittings than to have quality jobs," Arnone said. "We've seen the impact of that on our country these last decades as we watched our companies feed China and help them build their economy at our own expense and the expense of people that live in communities like Western Pennsylvania."*

He was speaking of the consensual delusion that drove consumerism in America since the 1970s. America's economic rise in the 1950s and 1960s did not change the basic mathematics of capitalism. While a rising tide lifts all boats, some boats will always be smaller than others. The shared delusion that everybody is entitled to as many things as they want means that those in the smaller boats are going to have to buy cheaper stuff. Since the 1980s, that has meant stuff had to be made somewhere other than the United States.

For Re:Build to succeed that shared delusion will have to change. Americans will have to pay more for the things that are made here. Manufacturers will have to return to the business model that elevates quality so that consumers can place a higher value on appliances that last for 30 years or buildings that are cheaper to operate and maintain than they were to build. That will require people like Arnone and Wilke to persuade us to undergo a paradigm shift. I am rooting for them but that is a tall order.

The construction industry could use a little shift in its value paradigm. For roughly the same period, buyers of construction services have shared the delusion that they can get a better bargain than the rest of the industry. While this can certainly be true for some buyers, it can't be true for the entire industry. Architects, engineers, and contractors have consented to this delusion by providing the same quality of services for lower prices because of increased productivity, new technology, and improved processes. Yes, that sounded like a load of baloney to me as I wrote it too.

This is not the first time I wrote these words about the value placed on construction services. I am cynical enough to think that the consensual delusion will continue to motivate owners to ask for "best and final" again and again, and that the marketplace will continue to respond by getting low. But… there are some external factors that might just shake those delusions, or at least erode them at the edges.

The pandemic shook up the supply chain and elevated prices to places where even the most willing participants in the shared delusion had to say no. Maybe that can be a baby step in the right direction. Somehow, despite the massive disruption of COVID-19, the construction market is very busy. With labor of all kinds in short supply, businesses are saying no or putting a precious price on saying yes. That's another step in the right direction. And, with everything else that has gone on in the industry since 2020, there is a growing number of people who are leaving the industry because they are tired of fighting. There are any number of reasons why projects have disputes, but few things spark conflict like all parties starting construction with little or no profit priced in.

I don't know who first said that you could only pick two of better, faster, or cheaper, but I would not be surprised if they were in construction. There has been a scarcity mentality in the Pittsburgh economy since heavy industry left town that has fed, if not created, the shared delusion that you can get things for less if you keep asking. The world has turned, however. There are factors at play – sufficient demand and an insufficient labor force to name a couple – that undercut scarcity thinking. Construction will continue to be cyclical and there will be lean years; however, it's better to say no sometimes, even if it's a lean year. You can't make up for a slow market by losing money.

Consensual delusion requires consent. Be the first to stop giving it.

Jeff Burd

REGIONAL MARKET UPDATE

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Economic activity in Pittsburgh continued to follow the post-pandemic trends during the first quarter of 2023, according to the Pennsylvania Economy League of Greater Pittsburgh's *Southwestern Pennsylvania Quarterly Vitals* report. Among the headlines: Pittsburgh's workforce declined but at a slower rate than the national rate; unemployment fell by more in Pittsburgh than in the state or U.S.; job growth in Pittsburgh was slower than the U.S. rate but about double its long-term average.

Employers added nearly 22,700 jobs compared to the previous year, an increase of 2.0 percent. That lagged the 2.7 percent increase nationwide and the 2.5 percent increase in benchmark U.S. cities. Unemployment in Pittsburgh fell to 3.9 percent in March. Pittsburgh's civilian workforce continued to decline – likely the key factor in the lower rate of job growth – but at a rate (0.1 percent) that was considerably slower than the 3.8 percent decline nationwide. The slower rate of labor force decline is an indication that Pittsburgh's demographic disadvantage may be ending, either through an increase in attracting working-age adults or a decrease in the number of Baby Boomers retiring.

The erosion of the labor force in Pittsburgh has limited the opportunities for businesses to grow. That reality shows up in the comparison of the job recovery compared to March 2019 for the Pittsburgh region and the U.S. While employers nationwide are employing 103.4 percent of the workforce of March 2019, Pittsburgh is still behind full recovery at 97.9 percent. Within the 15 industry clusters measured by the Bureau of Labor Statistics, Pittsburgh's employment level is higher than the U.S. overall in only two, transportation/warehousing and information.

A look at the two sectors performing poorest in Pittsburgh reveals the role workforce depletion can play in slowing growth. Mining and logging has been depressed by economic and political factors nationwide, with employment at 85.9 percent of the March 2019 level. The recovery has been worse in Pittsburgh, with employment in that sector at 67.8 percent. In construction, however, demand is higher than it was in March 2019, both regionally and nationally, yet employment is only 90.8 percent of what it was in Pittsburgh in March 2019. In the U.S., construction employment is 106.8 percent of the March 2019 level. Only three industry sectors have seen a more robust recovery. Demand for construction is equally high in Western PA, but retirements in construction have outstripped recruitment by roughly 60 percent.

A recent report by CBRE Research offers an understanding of why there is a regional emphasis on life sciences. Job growth in life sciences across the U.S. was 87 percent over the past five years. That compares to a 14 percent growth rate of all jobs. Within the life sciences category, jobs in digital and analytics more than doubled during that time, a rate that was 10 times higher than jobs in biology, which was the next fastest sub-sector. Given the intersection of Pitt's life sciences and biology education with Carnegie Mellon's information technology, Pittsburgh has talent and research assets that differentiate the region from competitive cities.

The concentration of biological and biomedical research degrees in Pittsburgh also positions the region competitively for life science growth, and that could be one key to retaining graduates and reversing the population stagnation that plagues Western PA. According to CBRE, Pittsburgh ranked ninth among U.S. cities for bio graduate growth, at more than 22 percent during the past five years.

According to the Allegheny Conference on Community Development, business investment in the region remained above $2 billion in 2022, despite the more challenging conditions. The Conference measures capital investments and development investments, the latter of which saw $1.3 billion in 2022 that resulted in new or expanded businesses. That was down from 2019-2021, but within 20 percent of the development investments in half of the past 10 years.

The overall activity level of the Pittsburgh construction market

has been a surprise through the first six months of 2023. Interest rates have drifted slightly higher, keeping the cost of capital an obstacle for development. Cost escalation has mostly leveled off year-over-year, but many projects remain much more expensive than when the work was proposed. Those uncomfortable facts, coupled with an underlying expectation of a general economic slowdown, should have dampened construction. That has not been the case.

Permits and contract awards for nonresidential/commercial projects during the first six months of 2023 totaled $1.87 billion, including construction put in place at the UPMC Presbyterian Heart and Transplant Hospital. That compares with $1.52 billion during the same period in 2022.

Housing starts continued to be lower than a year earlier. New construction of residential units in metropolitan Pittsburgh declined by 11.2 percent year-over-year during the first six months of 2023, according to the Pittsburgh Homebuilding Report. Based upon building permits issued through May and an estimate of June's starts, construction of single-family homes fell by 226 to 1,310 units, a decline of 14.7 percent. Construction of apartments was essentially unchanged at 603 units.

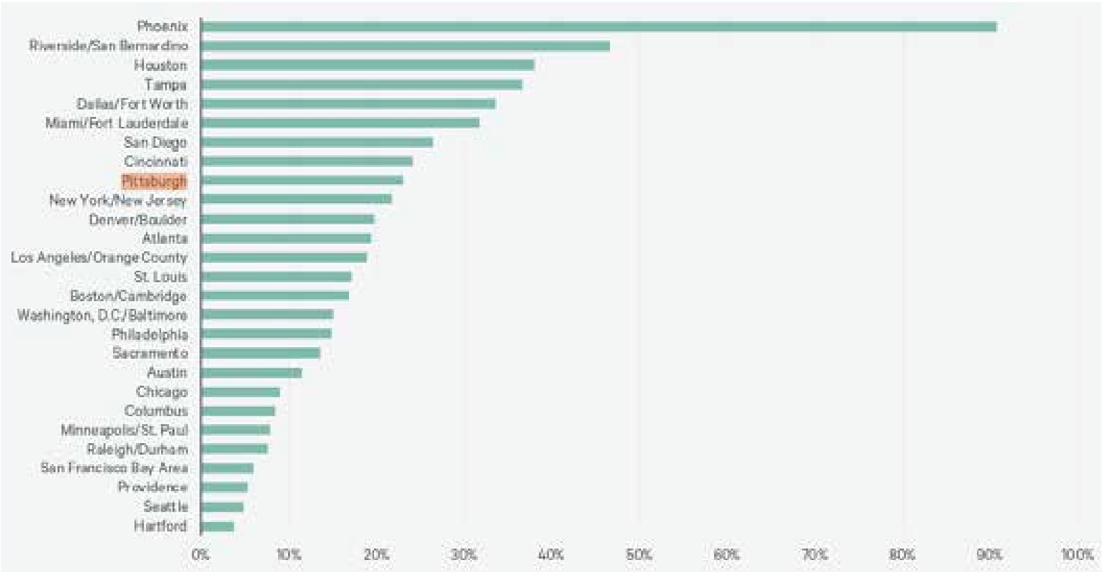
One sector that is stronger than the permit data suggests is the multi-family market. Higher mortgage rates and construction challenges have significantly slowed development of new single-family units. The inventory of existing homes for sale continues to decline. However, new household formations continue to increase at the same rate, primarily owing to the strong job market and favorable demographics. The upshot is a growing demand for shelter that is exceeding the available supply. That has driven construction of apartments to 50-year high levels nationally and keeping occupancy and demand for new construction elevated in Pittsburgh.

Those market trends are driving the Pittsburgh multi-family market. While permits for new single-family construction continue to lag the 2,000-unit pace, apartment development has picked up again. Vacancy in all apartment types has fallen 0.5 percent year-over-year. Rents were 1.7 percent higher in May, more than triple the U.S. average increase. New apartment construction fell below 1,800 units in 2022 but developers have put forward more than 2,100 units of new construction in the past 60 days, and the total pipeline of multi-family units planned to start by the end of 2024 exceeds 5,100 in the seven-county metro area. That total excludes a surge in adaptive re-use that is being spurred by the city's incentives for office conversions.

Several of these conversions have been priced in recent weeks, including 3 Gateway Center. The Urban Redevelopment Authority (URA) awarded its first zero-interest loan for adaptive re-use of offices in May, helping Hullett Development begin renovations to the Triangle Building to create 15 apartments. The URA loan incentive is driving the increase in proposed projects of a larger scale. In addition to 3 Gateway, adaptive re-use projects are proposed to create at least 200 units at the Gulf Tower, K&L Gates, 525 William Penn Place, and 601 Grant Street. Conversion to apartments has been suggested for several other office buildings Downtown that are experiencing high vacancy and major renovations, including the Federal Home Loan Bank building at 601 Grant Street and construction is underway on new units at 300 Sixth Avenue (the former GNC corporate headquarters), 642 Fort Duquesne Boulevard, and the Allegheny Building.

Downtown Pittsburgh has a relatively low residential-to-office ratio, suggesting that as much as six million square feet of office space could be converted into 4,000 multi-family units to match the average share of residential that exists in U.S. cities. Such a surge in conversions would essentially double the current population and unit count. A number of studies have shown that conversion of offices at that scale is unlikely, both because of the cost and the suitability of the office for residential. The more likely scenario for higher occupancy Downtown is the more regular return to office for work.

Pittsburgh's office lease occupancy of roughly 80 percent is in line with most benchmark and aspirational cities in the U.S., outperforming even perceived "hot spots" like Austin and Charlotte. Daily occupancy levels are much lower, however, and Pittsburgh's most recent average daily



The number of biology and biomedical graduates from Pittsburgh has grown by more than 22 percent since 2016. Source: CBRE Research.

employee visits data for May showed that the number of workers in the office was 56 percent of the 70,000 level in January 2020. Bus ridership was down similarly, to 910,000 trips, or 53 percent of the pre-pandemic level.

	SFD	SFA	M/F	TOTAL
Total Pittsburgh MSA 2022:2	1,014	522	619	2,155
Total Pittsburgh MSA 2023:2	809	501	603	1,913
% Change	-20.2%	-4.0%	-2.6%	-11.2%

New construction of single-family homes fell again during the first half of 2023. Source: Pittsburgh Homebuilding Report.

Those levels were in contrast with the number of daily visitors to Downtown, which has recovered more closely to pre-pandemic levels. In May there were 48,461 visitors daily, which was 89 percent of the average number in January 2020.

Employers have begun to increase the incentives and pressure to get employees to the office more regularly, if not full-time. While an improvement in the daily office occupancy would boost vitality in Downtown, it would be unlikely to alter the direction of the trend in office construction. The flight to quality, which was being driven by talent attraction prior to the pandemic, has changed the dynamics of the Downtown office market. A decade ago, tenant relocation was stunted by the lack of available contiguous space. Today, roughly seven of ten leases are for new space rather than renewal in place. That means somewhere between four and five million square feet of tenant improvements annually while these market dynamics exist, which is a dramatic increase in office construction opportunities.

Opportunities for construction in commercial real estate, especially in speculative new construction, will be limited while interest rates stay elevated. The Pittsburgh market was already cyclically rotating towards institutional and public construction as the primary drivers for demand. Healthcare and college spending will be more cautious but at high levels for the coming year. Public investment in infrastructure will be higher through 2024. Municipal spending will be higher in 2023 due to the grants from the CARES Act and Inflation Reduction Act. And while capital spending on K-12 is still a fraction of what it was in the 1990s, several $100 million-plus projects are in the pipeline for bidding this year.

Construction activity will be lower than the boom years, like 2007, 2018, and 2021; however, the pipeline of projects should support construction above $4.5 billion in the seven-county region for the full year. With escalation leveling off and interest rates at or near the cyclical top, demand for construction should be strong for the next 18 to 24 months.

NATIONAL MARKET UPDATE

After 15 months of monetary policy tightening, the slowdown of the U.S. economy appears to have been accomplished. Now, the arc of inflation will determine whether that slowdown is sufficient to reset the economy to its pre-pandemic footing.

Several significant economic signals are pointing to the desired slowdown in economic demand. Despite an increase in on-shoring, U.S. manufacturing activity has progressively slowed for the past year. Credit has tightened significantly. Consumer loan delinquency continues to rise. Bankruptcies have increased. The index of leading economic indicators – a comparison of 22 varied forward-looking metrics – declined for the 13th consecutive month in April, a phenomenon that has not occurred since 2009.

In its announcement of a 25 basis-point hike to the Fed Funds rate on May 3, the Federal Open Markets Committee (FOMC) of the Federal Reserve made a distinct shift in direction, removing all wording that suggested that the FOMC saw further rate hikes essential in its battle to bring inflation back to its desired two percent range. In his press conference following the FOMC meetings, Fed Chair Jerome Powell clarified that rate hikes were not foreclosed from consideration, but rather that the desired restrictive effect on the economy had been achieved. In June, the Fed backed up that sentiment by unanimously voting against a hike to the Fed Funds rate.

Powell's comments in May were not a declaration that inflation had been tamed. In fact, he took the occasion to note that some inflationary factors remained stubbornly high. However, Powell did assure the markets that the Fed was prepared to let the impact of the five-percentage point increase since March 2022 play out fully. His more conservative tone following the June 14 meeting, which included the mention of two potential hikes if needed in 2023, were seen as managing expectations instead of providing a forecast.

One reason that the Fed could pause comfortably was the evidence of credit tightening that will act as a further restriction on economic growth. The FOMC was privy to the second quarter Senior Loan Officer Opinion Survey report (SLOOS) that was published on May 8. In the SLOOS report, lenders confirmed that the higher interest rates had significantly dulled demand for commercial and industrial loans, residential loans, and commercial real estate loans since the end of 2022. Of more significance, the combination of higher rates and the failure of several major banks since March had tightened lending conditions to the point that much of the remaining demand would not be met. According to the Fed's SLOOS report:

"Banks reported having tightened all the terms surveyed on all categories of [commercial real estate] loans. For construction and land development loans, major net shares of banks widened the spread on loan rates, lowered loan-to-value ratios, and increased debt service coverage ratios; significant shares of banks decreased maximum loan size and market areas covered; a moderate net share of banks shortened the length of interest-only payment periods, and a modest net share of banks decreased maximum loan maturity."

The implications of the dramatic decrease in lending appetite will be felt over the coming six-to-nine months, as businesses find it more difficult to access credit for expansion and operations. For construction, this will shrink demand from owner-occupiers and from commercial real estate owner/developers. Economists estimate this will have the same effect as another one percent hike in interest rates.

Pausing further rate hikes will allow the lag in cause and effect to unfold throughout the remainder of 2023. There is ample evidence that some of the factors driving inflation have just begun to deflate. Gasoline prices, for example, typically peak on Memorial Day but fell throughout May 2023. Housing inflation, one of the more stubborn drivers of higher prices during this cycle, appears to have peaked during the first quarter and has begun falling. The Council of Economic Advisors is forecasting that housing inflation will retract to pre-pandemic levels by early 2024. The latter is important because housing inflation was 2.6 percent in March, or more than half the 5.0 percent core consumer

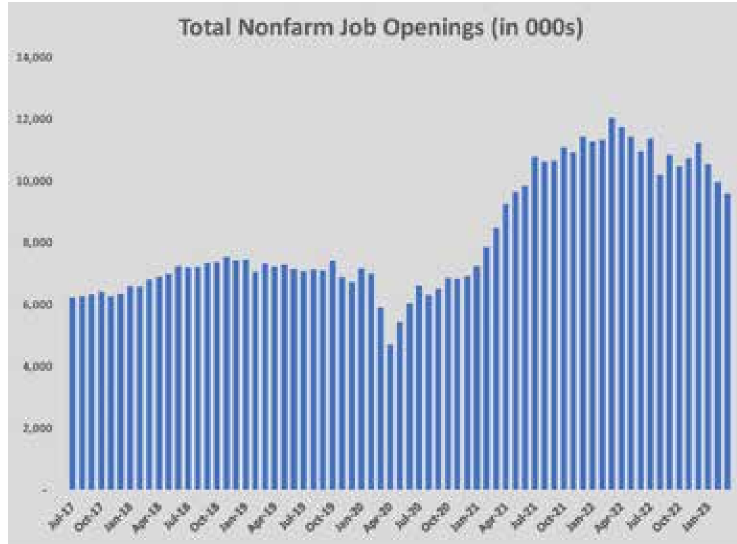
The growth in personal domestic final purchases grew nearly three times as fast as the overall economy in the first quarter. Source: Bureau of Economic Analysis.

price inflation rate reported by the Bureau of Labor Statistics on May 10.

That report on March's inflation demonstrated how the makeup of inflation had shifted. Energy costs fell from February to March (and further since), the price of food was just over one percent higher, and the price of goods (excluding energy and food) was essentially flat.

A more positive report on inflation's path is certainly welcome and will be more impactful if similar data appears for May and June. Assuming the current data reflects a true turning point in the inflation cycle and price increases fall back further, there will be little or no impact on the construction activity in 2023. A recession that begins earlier than expected this year could lead to a more dovish Fed in the fourth quarter; however, even if the year ends with the Fed Funds rate as low as 4.25 percent, neither banks nor developers will reverse course. A more accommodative Federal Reserve will ease the headwinds to commercial development, but with an expectation that rates will be cut by 200 basis points before settling in, it will be into 2024 before significant new activity occurs.

That outlook for monetary policy is supportive for multi-family development, which continues unabated through spring. The May 17 report on April housing starts showed a second consecutive decline in apartment permits; however, the decline was slight and at the cyclically high level of 561,000 units on an annual basis. Construction starts for multi-family

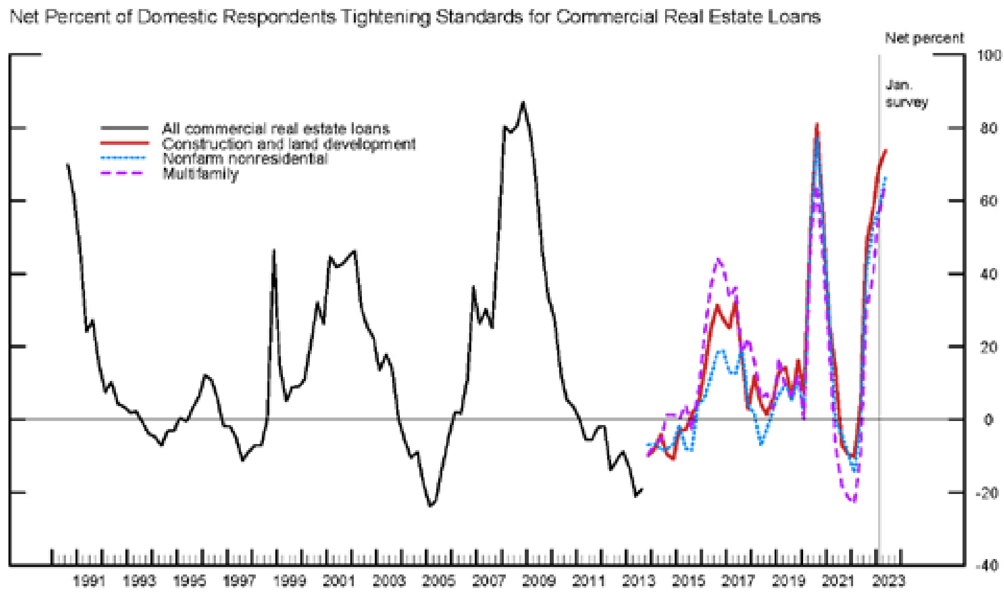


The number of open job listings has fallen by nearly 20 percent since January 2023. Source: Bureau of Labor Statistics, Federal Reserve Bank of St. Louis.

Rates and inventory have become correlated. While the inventory of existing homes for sale has been shrinking for five years or more due to demographic trends, that trend is exacerbated by the unfavorable trade in mortgage rates that most existing home sellers would face in today's market. Only 18 percent of existing homeowners had a mortgage with a rate above five percent at the end of 2022. More than 60 percent had a rate below four percent. That means that six homeowners in 10 would see an increase of at least two percentage points. This increased borrowing cost is perceived to be temporary, an incentive to wait another year or so to sell and move up.

ticked higher from March to April, reaching a 565,000-unit pace. Mortgage rates remain higher than in recent years and the inventory of homes continued to shrink, pushing demand for apartments higher. The appetite for lending remains strong for apartments and the outlook for long-term rates suggests that finding permanent financing will be easier when construction is completed on current developments.

Thus far, construction of new homes has not been the relief valve for tight inventory. Starts for single-family homes increased 1.6 percent from March to April, to 846,000 homes on an annualized basis, but that level was 28.1 percent lower than April 2022. The trend in new single-family construction is positive, however, with permits rising 3.1 percent and completions declining 6.5 percent.



Three banks in four have tightened lending standards since January. Source: Federal Reserve Senior Loan Officer Opinion Survey, April 2023.

Demand for new homes is being supported by the strong job market, which drives new household formations. Employers added 339,000 jobs in May. Unemployment was higher at 3.7 percent. The slowdown in general economic activity is paring back the disparity between job openings and unemployed persons. The ratio of open positions to unemployed peaked at nearly two-to-one in the second quarter of 2022. Since then, openings have fallen by more than 1.8 million to 10.1 million (although openings increased in May). That decline seems attributed mostly to employers judging that long-posted expansion positions were not going to be filled, rather than companies paring back hiring plans.

There were several indicators of softening below the headline job growth. The number of unemployed persons jumped by 440,000 in May, the largest increase since the lockdown ended in 2020. Average hours worked weekly fell to 34.3, also the lowest since the end of the lockdown. Declining hours typically precede layoffs. And average hourly earnings slipped to 0.3 percent, a 3.6 percent annual pace compared to a 5.9 percent pace in May 2022. The report on May activity showed that employment and wage growth were higher for workers earning less.

Low unemployment and higher wage growth for low-income positions has kept personal consumption steady. April's consumer spending jumped 0.5 percent from March, exceeding expectations. Like with the strong labor market, solid personal consumption is expected to cushion whatever downturn occurs.

The second estimate of first quarter gross domestic product (GDP) growth was issued by the Bureau of Economic Analysis on May 25. On the surface the 1.3 percent growth rate is a relief for those hoping for signals that will allow the Fed to pause its rate hikes. Underneath the headline number the data showed continued resilience in the face of higher prices. The biggest drag on GDP was the decline in inventory investment, a sign that businesses were depleting stock in anticipation of a slowdown later this year.

Leading indicators of economic activity have declined for 13 months. Source: Organization for Economic Co-operation and Development.

A data point that is gaining favor as a more reliable reading on economic health is personal domestic final purchasing (PDFP), which backs out the volatile inventory investment and net exports categories, and government spending. PDFP grew at a 2.9 percent annualized pace during the first quarter. Personal consumption grew at a 2.5 percent pace, higher than the average 1.5 percent pace of consumption from 2011 to 2019. Nonresidential private fixed investment was slightly positive but lower than the previous quarter. Residential private fixed investment was negative but higher than the previous quarter. Personal savings improved, going from a rate of 4.0 percent in the fourth quarter to 4.8 percent in the first quarter.

Data on how households are faring is more mixed. A second economic metric, gross domestic income (GDI), measures the total of all income sources, including wages, profits, interest, taxes, and rents. GDI has been negative in each of the past two quarters, falling 2.3 percent in the first quarter following a 3.4 percent decline in the fourth quarter of 2022. Spending and income must eventually be equal. To the extent that the six-month decline in GDI is not a result of the decline in GDP during the first half of 2022, there will be less income to fuel spending as 2023 unfolds.

Few economists would have predicted that the U.S. economy would have been as resilient as it currently appears to be following a five-percentage point increase in prime rates in 12 months. The incremental weaknesses that have begun to appear in multiple segments of the economy are likely to worsen as the second quarter unfolds. If unemployment grows by only one percentage point and consumers continue to boost savings (and also deleverage debt), the battle with inflation may not result in the direst outcomes, even if a "soft landing" does not occur. BG

WHAT'S IT **COST?**

The cost escalation environment that the market has been enduring since spring 2021 has been sustained by two factors: severe disruption in a supply chain that has lingered since demand soared following the rollout of vaccines; and a macroeconomic boost from government actions that grew the supply of money. From all available data, the two-year trend for inflation has been reversed significantly and the outlook has improved because both inflationary factors have reversed.

At the macroeconomic level, consumers and businesses have burned through the excess savings built during the 2021-2022 period and incomes are growing at pre-pandemic rates again. The impact of the year-long five percentage point increase in interest rates is showing up in the market. Going forward into the third quarter, tightening measures by the U.S. Treasury will end, bringing liquidity down further as banks and investors shift cash to Treasury bonds that will be floated to pay the U.S. debt. These factors, especially the latter, have pushed the money supply down by $1 trillion since July 2022, with another $1 trillion-plus decline expected by the fourth quarter.

There will be recessionary downward pressures on price and wage growth – even if there is no formal recession – during the second half of 2023. This should cement the downward trend in inflation. The open question is whether that trend will accelerate to bring inflation down to the two percent goal in 2024, an outcome that still seems unlikely.

For construction, a lasting reversal in the macroeconomic inflation trend is a good thing; however, complete normalization of the supply chain will be required before cost escalation settles in at the three percent rate – plus or minus – again. The June 14 report on May's producer price indexes (PPI) was further evidence that the trend towards normalization continues.

Producer prices for nonresidential construction fell by 0.6 percent from April to May, double the 0.3 percent decline of the overall PPI. Prices for new nonresidential buildings were 0.1 percent higher than one month earlier and 11.6 percent higher than a year earlier. That is half the annual inflation rate that existed in September 2022.

While there remain categories of materials that are priced higher by double digits compared to a year ago, few are currently on an annual pace that is more than five percent. For the most part, materials that have seen high PPI increases this year are those used in bridge and highway construction, like cement, concrete products, asphalt, and steel. (The latter is expecting the upward trend to reverse after the second quarter.) Products associated with residential construction were softer. Lumber prices in May were 31.4 percent lower year-over-year. Weaker global demand for oil and fuel is pushing prices lower, despite attempts to pinch production. That trend has a multiplying effect on construction prices, both for derivative materials and for transportation, which impacts construction more than most industries.

PERCENTAGE CHANGES IN COSTS	May 2023 compared to		
Consumer, Producer & Construction Prices	**1 mo.**	**3 mo.**	**1 yr.**
Consumer price index (CPI-U)	0.3	1.1	4.0
Producer price index (PPI) for final demand	(0.3)	0.0	1.1
PPI for final demand construction	0.2	0.0	10.9
PPI for new nonresidential buildings	0.1	(0.1)	11.6
Costs by Construction Types/Subcontractors			
New warehouse construction	0.4	0.0	7.6
New school construction	0.0	(0.3)	10.9
New office construction	0.1	0.5	14.6
New industrial building construction	0.0	(0.8)	10.4
New health care building construction	0.0	(0.2)	11.9
Concrete contractors, nonresidential	(0.2)	(0.7)	3.6
Roofing contractors, nonresidential	0.0	3.1	18.5
Electrical contractors, nonresidential	0.1	(2.9)	11.2
Plumbing contractors, nonresidential	0.9	1.6	10.0
Construction wages and benefits	N/A	1.3	4.9
Architectural services	0.0	0.9	1.9
Costs for Specific Construction Inputs			
#2 diesel fuel	(6.2)	(16.7)	(38.3)
Asphalt paving mixtures and blocks	(1.5)	(6.9)	4.9
Cement	0.1	0.4	13.6
Concrete products	0.8	2.0	12.5
Brick and structural clay tile	0.2	0.9	9.2
Plastic construction products	(0.7)	(0.8)	(1.6)
Flat glass	(1.1)	(1.1)	8.0
Gypsum products	(1.1)	(1.5)	4.0
Lumber and plywood	0.0	(1.9)	(31.4)
Architectural coatings	0.0	0.0	3.7
Steel mill products	5.2	9.9	(18.9)
Copper and brass mill shapes	(2.1)	(2.9)	(5.5)
Aluminum mill shapes	0.0	(1.7)	(15.2)
Fabricated structural metal	(0.5)	1.5	(2.6)
Iron and steel scrap	(7.8)	(0.7)	(20.4)
Source Bureau of Labor Statistics, Updated June 14, 2023			
Compiled by Ken Simonson, AGC Chief Economist			

The recently completed Children's Hospital is one of a handful of major capital projects resulting from WVUM's long-term expansion. Photo by Adam Warner.

Healthcare Market Update

Healthcare is one of the backbones of the Pittsburgh economy and a solid foundation of the Pittsburgh construction market. Nearly $7 billion has been invested in new hospitals, clinics, and major renovations in metropolitan Pittsburgh during the past decade. A hospital, the new UPMC Heart and Transplant Hospital at Presbyterian, is one of the region's two billion-dollar projects under construction.

Hospitals are among the largest employers in any town. They attract investment and are among the largest contributors to community organizations. In Pittsburgh that is especially true, even though detractors claim that its healthcare giants could do more. Beyond providing medical care, Pittsburgh's healthcare systems are among the world's leaders in research, advancing the outcomes of patients suffering from ailments like cancer and heart disease that claim millions of lives each year.

Those advanced clinical and research capabilities provide a constant source of demand for new and upgraded facilities.

Changes in how healthcare is being delivered are creating new realities for hospitals and doctors that will change medical facilities. As the industry slows to digest the major facility construction of the past ten years, how will the healthcare industry's emerging trends drive design and construction in the coming decade?

The Macroeconomic Issues

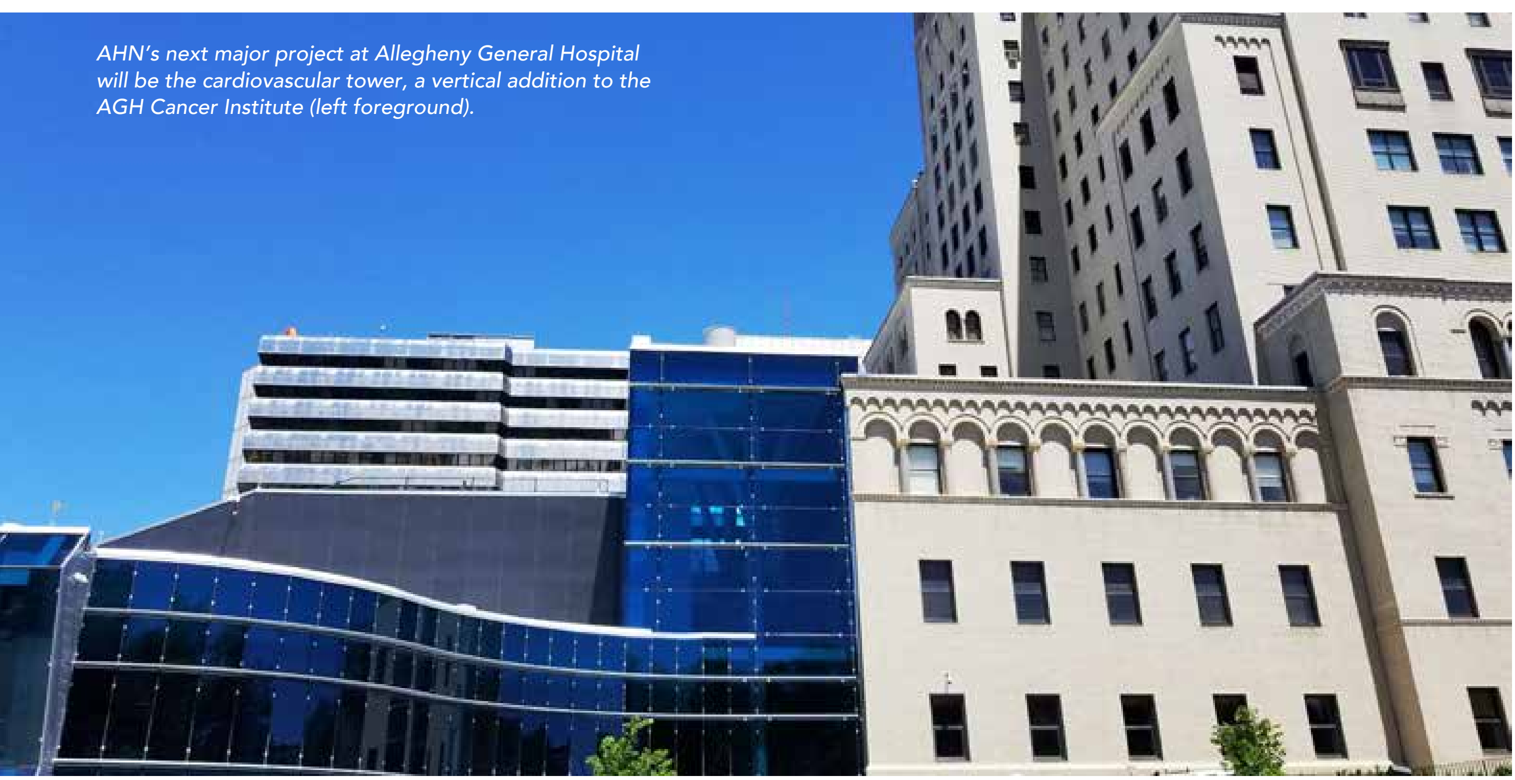
The predominant macroeconomic healthcare trend of the past 20 years has been the consolidation of healthcare systems because of the steep and steady increase in costs. In Pittsburgh, that trend has resulted in the region's two dominant systems – UPMC and Allegheny Health Network (AHN) – becoming acquirers instead of the acquired. While independent hospitals still exist, even in Western PA, most small towns west of the Susquehanna River in Pennsylvania have become part of the UPMC or AHN networks. In many parts of the U.S., and in some of the most rural parts of Pennsylvania, there was little for a larger system to consolidate or acquire.

Consolidation was a response to the ongoing give-and-take between providers and insurers. The Affordable Care Act (ACA), which passed in 2010, transformed the landscape. Its passage, coming as the country was beginning to recover from the Great Recession, froze healthcare construction as healthcare systems worked to understand how they would be reimbursed. The ACA marked a distinct change in direction from the developing insurance trend that was rewarding the best outcomes. That was itself a shift away from reimbursing procedures, which has often been cited as a root cause of higher costs.

ACA greatly expanded the number of insured persons, injecting a significant increase in demand for healthcare services. At the same time, ACA acted to put a ceiling on what providers could be reimbursed. Moreover, ACA expanded access to Medicaid. Medicaid and Medicare, which had rapidly expanding enrollment due to demographics, set the market for healthcare revenues. Healthcare providers had to readjust their spending until there was a dependable track record of revenue expectations in the mid-2010s.

By the late 2010s, the healthcare business model that emerged was one that would profoundly affect facilities. To control costs, the U.S. healthcare systems looked to push more care away from large, centralized hospitals. Advances in technology allowed more surgery and invasive procedures to be safely done in outpatient settings. That drove construction and medical equipment innovations that well-capitalized providers could afford, but that also widened the financial gap between healthcare systems, increasing consolidation.

A trend that is hand in glove with the consolidation trend is the shortage of caregivers. For doctors, the problem is a



AHN's next major project at Allegheny General Hospital will be the cardiovascular tower, a vertical addition to the AGH Cancer Institute (left foreground).

demographic cliff. The number of doctors in the U.S. grew by 19.8 percent from 2010 to 2020, according to the census of the Federation of State Medical Boards. That growth rate was nearly triple the rate of population growth in the U.S. during the same period, but it was not enough to outrun the double barrel impact of aging demographics.

On the demand side of the equation, the population is expected to grow by roughly 25 million by 2030. The number of people over the age of 65, and who will require more care, will increase by nearly that same amount during the decade. On the supply side, a similarly disproportionate number of doctors will be over 65. The Association of American Medical Colleges estimates that 35 percent of the doctors practicing in 2020 will be of retirement age in five years.

During this decade, the nursing shortage is predicted to worsen. More than 1.1 million nurses are expected to retire by 2030. That is 25 percent of the nursing workforce. Those retirements, and the current workforce, are not distributed equally. California is expected to face a crisis by 2030 without any intervention, falling more than 43 percent short of nursing demand. Pennsylvania is not among the states facing the worst shortages, but 41 percent of hospitals in West Virginia report a shortage of nurses. That is fourth worst in the U.S.

Like other professions, nursing is experiencing a demographic problem that is compounding job-related turnover issues. The average age of the 4.2 million nurses in the U.S. is 52. In 2022, the turnover rate for nurses was 25.9 percent.

To meet the challenge of attracting and retaining nurses and doctors, hospitals will have to respond in a variety of ways. Compensation will likely increase. There will be increased flexibility in scheduling. Telehealth and traveling nursing will offer alternatives to clinical settings that will help retain nurses. Recruitment must increase, but current nursing education is struggling with inadequate funding, faculty, and facilities. In 2022, nursing programs turned away 91,000 potential students, an increase of 13.75 percent from the previous year.

It should not be a surprise that the COVID-19 pandemic had an exacerbating effect on the caregiver shortage. Hospitals were the point of the spear in tackling the pandemic, often facing terrible overcrowding of emergency and acute care facilities, and overworking of caregivers. The hospitals in metropolitan Pittsburgh rarely faced the first issue, even in the most infectious surges of the virus's spread; however, virtually no hospital or medical practice of any sort has escaped the impact of the latter.

The extreme stress of dealing with the pandemic has been a straw that broke the camel's back for many healthcare professionals, leaving providers with staffing shortages that have not been remedied. While the emergency phase of the pandemic has passed, the emergency for healthcare providers is ongoing.

The caregiver shortage has accelerated the ongoing evaluation of facilities to match staffing and demand. Heritage

Source: Tall Timber Group

Valley Health System's decision to reorganize its services, announced by CEO Norm Mitry on June 8, is an example of healthcare adapting to the lower levels of staffing. Heritage Valley chose to reduce the number of patient beds at its Kennedy facility (the former Ohio Valley Hospital south of McKees Rocks) from 120 beds to 77. Heritage Valley closed the intensive care unit at Kennedy and will only perform surgeries there that have admissions of less than one day.

John Schrott, president of IKM Inc., says that the conditions at Heritage Valley are not limited to that system in Western PA.

"In this region there are more beds licensed than are necessary. The question is whether those beds are in the right location and provide the right experience level for the consumer," Schrott says. "The consumer continues to get more power in the selection process but that is countered by the insurers who are funneling care to their respective facilities."

Whether it is a response to costs, demographics, or caregiver supply, healthcare providers are in the process of shifting services and procedures away from centralized facilities into the communities. That strategy was evident in AHN's capital investments during the last five years, when it built five neighborhood hospitals and a regional hospital in Wexford. Improvements in technology are also enabling decentralization of care. And while UPMC is in the midst of building its flagship hospital through the middle of the decade, it is simultaneously pushing more of its capital spending closer to where its patients live.

Hospitals have mostly worked through the impact of COVID-19. The pandemic froze procedures (and therefore revenues) for much of 2020. Lower revenues and higher costs associated with treating significantly more and sicker patients dealt a blow to the finances of every hospital. Those that were able to create revenues in excess of expenses saw much smaller numbers, and most hospitals experienced deeper shortfalls of revenues to expenses. Government aid and the rollout of vaccines in 2021 helped most systems back to pre-pandemic financial health by 2022; however, the pandemic drove high increases in costs of labor and of supplies and equipment. For healthcare systems struggling prior to 2020, COVID-19 created challenges that made their situations worse.

The Facilities Response

COVID-19 drove home the need for healthcare facilities to be as flexible and resilient as possible. Dealing with the extraordinary stress of the pandemic's multiple surges, each causing significantly more illness than the previous, reinforced the need for healthcare providers to provide an environment that is calming and promotes healing. Moving past the pandemic emergency, hospitals are making design choices that continue the pre-pandemic trend towards fostering wellness for patients and caregivers.

Those decisions include maximizing the amount of natural light and providing patients with views of nature and beauty. More thought is given to separating the clinical and patient accommodations from the office and business operations. Designers look for opportunities to optimize ventilation and minimize noise. Attention is being given to spaces for the caregivers to separate from the stress of treating patients.

The pandemic shone a light on the inadequate treatment of mental health. COVID-19 raised anxiety and stress levels for many people. During the worst months of the public health emergency, hospitals could not prioritize behavioral health or substance abuse patients because of the surge of COVID patients. Healthcare providers and insurers have responded.

"We have seen an uptick in behavioral health facilities. I think COVID put a spotlight on the deficiencies in the system, the quality and amount of care," says Gretchen Kurzawa, senior project manager and healthcare studio leader at LGA Partners. "Typically, behavioral health is a breakeven business for the hospitals but it's under the overall philosophy of care. It is a community service that is necessary. We have done more drug rehabilitation and other behavioral health facilities."

Roger Altmeyer, vice president of community development at UPMC, explains that COVID-19 had a serendipitous influence on how projects are planned and built.

"When the governor stopped work back in March of 2020, and then immediately decided that hospitals were an essential business, we had to plan the construction strategies in a way that minimized contact with patients and staff," he recalls. "We had to prepare work plans that told how we were getting to the different areas within the hospital, what people were working in the space, what restrooms they were using, where they were taking their breaks and lunch. Even though we are sort of post-COVID, we have maintained that process. It's good for the project team to think about how they are going to tackle a job and document it for us in a way that we can share it with our hospital teams."

The influence of the major macroeconomic healthcare trends can be seen in the kinds of projects that are being designed and constructed. The most obvious seems to be the redistribution of services from major central facilities to decentralized facilities. Improvements in anesthesia and surgery have increased the number of procedures that can be done on an outpatient basis, further increasing demand for decentralized medicine.

"A trend we've been seeing is hospital systems are pulling things out of the hospitals," Kurzawa says. "There are two ways of thinking about this. UPMC is about centers of excellence and specialty care. They put their doctors and specialists in one location. AHN has kind of done the opposite and moved into the communities with the smaller neighborhood hospitals. Some of the feedback they've gotten is that the wait times in the ERs are minimal."

Kurzawa shared her own recent experience when she suffered a burst appendix. She says that she was being treated by doctors within five minutes.

AHN built four new "mini hospitals" during the last five years, in addition to the new AHN Wexford Hospital, which opened in 2021. The healthcare system has also invested in other community healthcare centers, opening health and wellness centers in North Fayette Township, Uniontown, Seneca Valley (at the Steamfitters Local 449 training complex), the AHN Montour Health + Sports Medicine Facility, and an expanded Laube Cancer Center in Kittanning during the past six months. This decentralization reduces the operating costs of large urban hospitals but requires capital projects to move services into multiple locations.

"The predominant trend is the continued move from inpatient services at a broad level to being only inpatient services for very acute patients. The other non-acute services are being pushed towards outpatient settings," says David Wells, principal at RM Creative. "If you are doing new inpatient units, those units must be acuity adaptable. For instance, you can go from a med-surg unit to an intensive care unit. We have to make sure we're designing for that level of flexibility. Procedures that used to happen and require an overnight stay are more on an outpatient basis. That is absolutely creating demand for more outpatient space."

Wells cited the recently completed AHN North Fayette Health and Wellness Pavilion, a $70 million investment to convert the former 69,000 square foot Main Event entertainment complex. AHN offers a broad range of services, which were typically provided in a hospital setting, at a suburban shopping center. As more care is moved to outpatient settings, hospitals will require construction to adapt to how those facilities are being used.

"Large urban hospitals will be where the sickest patients go," predicts Schrott. "There will continue to need to be renovation of those facilities to accommodate the increased acuity levels of the patients. That will put a burden on those aging facilities."

Kurzawa notes that moving services, like imaging, from hospitals to outpatient facilities has the additional advantage of being less expensive to build and operate.

"The cost of building the imaging room in a hospital versus an outpatient center is dramatically different because of the ICRA requirements and security risk assessments that are going on in a hospital," she says. "Hospitals have much more complex systems. We're starting to see interest from the hospitals in pulling services like that out of the hospitals and into the communities."

Not all the emerging trends are costly to the healthcare systems. Wells points out that more healthcare services are being offered by local drug stores since the pandemic began. Schrott says that telemedicine, which he expects to boom in the coming years, may have little impact on the physical plant.

"Several years ago, we thought we had to build special rooms, with light controls and special audio features. Then we discovered during the pandemic that our iPhones work pretty well for that purpose," he says.

The push to provide more care in outpatient or non-acute settings coincides with the consolidation trend, which has led to large well-capitalized systems acquiring the facilities of regional and rural hospitals. The same principles of increasing the acuity and types of services in decentralized locations apply but, in a small town or rural area, the result is a facility that has a cluster of services to reduce the need for patients to travel.

"The trend is towards more regional care hubs or outpatient care facilities that put multifaceted services in one building," says Elizabeth Cronin, senior associate at DRAW Collective. "These outpatient facilities will have several physician practices, outpatient imaging services, physical therapy, and same day surgery services so that a patient can go to a central hub for all sorts of well care. The goal is to put specialists in one location rather than sending a patient to multiple facilities."

Cronin noted that the topic was widely discussed at the April Hospital and Healthsystem Association of Pennsylvania's annual summit in Harrisburg. Administrators spoke of the need to consolidate resources into a single location to improve the quality of care delivered in small towns and rural areas.

"It's more a consolidation of resources rather than drawing away from hospitals. Hospitals aren't going away but, for things that can be done on an outpatient basis, it makes sense to try to consolidate those resources in one building so that both the patient and the provider are not working with multiple facilities," Cronin says. "It's better not to have patients and providers traveling all over an extended area.".

In smaller cities like Altoona, Erie, and Johnstown, the acquisition of local hospitals by regional or national healthcare systems has meant new construction of outpatient facilities and significant renovations to the legacy hospital facilities. For the acquirer, the extent of renovations necessary can be a surprise.

"When you integrate with a hospital that is looking for a merger partner, the reality is that in most cases a lot of facilities have lapsed. You can't get a good enough sense during a due diligence to do the type of assessment of the facilities and equipment that you might if you were given more time," says Altmeyer. "These assessments have to be done in 30 to 45 days before you close. We're doing a lot of infrastructure projects. We're dealing with a lot of deferred maintenance, which is where our approved monies are going."

West Virginia University Medicine (WVUM) has also grown by expansion and acquisition, but its CEO, Albert Wright, says that the focus is on bringing consistent healthcare experiences to patients in the Mountaineer State.

"A lot of what has been driving us over the last few years is keeping people in the state and making sure we're meeting the care demands of people in West Virginia," Wright says. "During the last decade we doubled the size of our academic medical center here in Morgantown. We recruited a net 1,000 new physicians. We have also created a healthcare system that ranges from Wheeling in the north to Princeton in the south, Parkersburg out west, and Martinsburg in the east. That's about 25 hospitals. We've added to the depth and breadth of our capabilities to take care of patients here in West Virginia."

"We are upwards of a $5 billion dollar healthcare system spread out over a rural state. As we add to the breadth and depth of our capabilities, facilities expansion comes with that," Wright continues. "Everywhere you look in our healthcare system right now we have replacement facilities or additions happening."

What's in the Pipeline?

WVUM is gearing up for a number of major projects during the balance of the decade. The health system recently approved $155 million to backfill the space in Ruby Hospital that was formerly occupied by WVUM's Children's Hospital. Wright says the planning is underway for the next major project at Ruby Hospital, which is expected to be a cancer institute. Among the enabling projects for that will be the $200 million eye institute. WVUM also jointly purchased the former Mylan plant in Morgantown, with an eye towards developing life science research and manufacturing. Plans are in the works for a $100 millionplus regional cancer center in Wheeling. PJ

AHN's McCandless facility was one of four neighborhood hospitals developed for the health system during the past five years.

Dick has been hired for the $65 million Ruby Hospital 2-4-6 and POC 6 Master Plan renovations.

"We're also having conversations about new patient care towers in Martinsburg, Charleston, and Parkersburg. You'll see some expansion or replacement of older facilities that give us updated hospitals with private beds and the amenities that you'd expect in 2025," Wright says. "Now that we have the footprint in place, we have to bring our facilities up to speed to what medicine looks like today. It's kind of like rebuilding the plane while you're flying it."

UPMC has its flagship Heart and Transplant Hospital underway in the heart of Oakland. The project will be completed in 2026 and Altmeyer says that it will get much of UPMC's attention during construction. The previously announced UPMC Shadyside and Hillman Cancer Center expansion is on hold until mid-decade. Likewise, the expansion of Children's Hospital and the major renovation of Altoona Hospital, both of which were programmed at more than $100 million, are on hold. The Altoona Hospital project is a good example of the dilemma hospitals face as they expand their footprints.

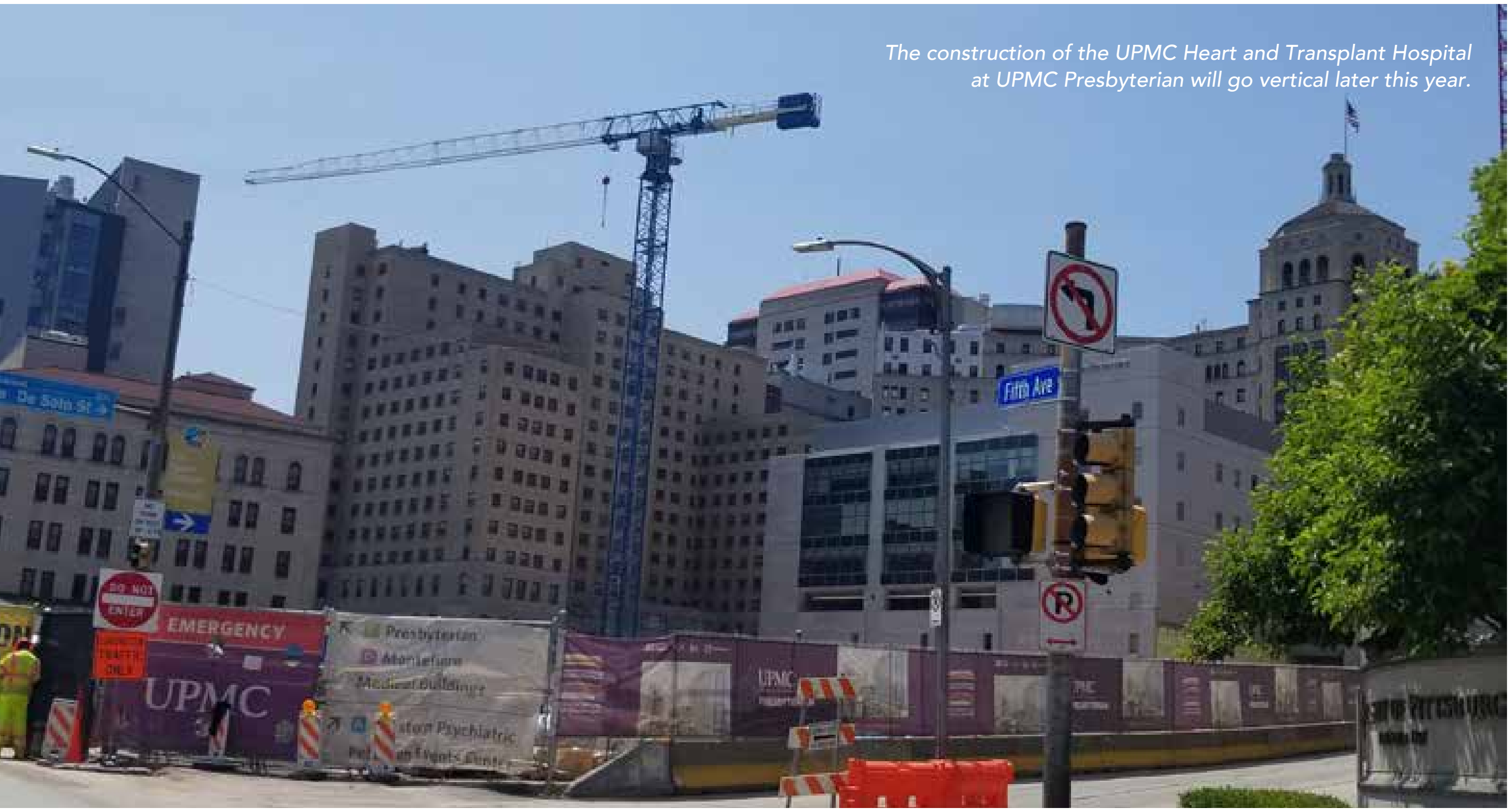
"Altoona Hospital is the biggest provider in that area, and it needs those upgrades. But their priorities are being considered amongst all our other priorities," says Altmeyer. "When a system gets as big as ours and the capital is limited, you have to pick your spots. We must look at what's absolutely necessary on these various campuses. The priorities of those campuses have to be matched against what the priorities are system-wide."

AHN recently presented its updated institutional master plan for Allegheny General Hospital to Pittsburgh Planning Commission. In the new iteration of the master plan was the long-awaited $300 million cardiovascular tower, referred to as the Sandusky Tower in the presentation to the city. The updated plan also calls for an 8-story Hemlock Tower at James and Hemlock streets, and a 9-story James E North Avenue Tower.

AHN's vice president of facilities and real estate, Chuck DiBello, explains that the major projects being contemplated are still in the early stages of planning. No timeline was provided for construction of the Sandusky Tower, or the $140 million AHN Canonsburg Hospital proposed for northern Washington County.

Independence Health System, the entity that is the merger of Excela and Butler Hospital, will be working through the integration of the two healthcare systems before moving forward with any major new capital programs, including the proposed bed tower addition at Greensburg Hospital.

Healthcare construction is in something of a lull in 2023, as the region's hospital systems and insurers evaluate the



The construction of the UPMC Heart and Transplant Hospital at UPMC Presbyterian will go vertical later this year.

landscape. Construction will still top $300 million in 2023, not counting the work put in place at UPMC Presbyterian. While there is caution about what the healthcare facilities landscape will look like later this decade, it is worth remembering how different today's market looks from what was envisioned in late 2017, when UPMC announced its $2 billion investment in three specialty hospitals.

Five years ago, the announcement of the Vision Institute, Heart and Transplant Hospital, and Hillman Cancer Center expansion upped the ante on what had previously been in the pipeline at UPMC. A month earlier, AHN announced it was investing $700 million to build neighborhood hospitals and a major new hospital in Wexford. While much of that construction has come to fruition, the Hillman project has been on the back burner and its scope will likely be very different from what it was originally when it goes forward. With Independence Health System working through its merger and the region's two major systems seemingly slowing down, healthcare construction may be in a lean season in Western PA. At the same time, WVUM is looking at $500 million or so in construction in planning the next phase of its master plan.

Healthcare is a foundational element of the regional economy. It is an industry that is constantly evolving, and its evolution means construction. History has shown that lulls in activity are temporary. You need only look at the master plans of the hospitals to see what the next boom will look like. BG

UPMC Vision and Rehabilitation Institute at Mercy opened in May 2023.

AHN Forbes hybrid operating room.
Photo courtesy Volpatt Construction.

PROJECT PROFILE

AHN FORBES REGIONAL HOSPITAL RADIOLOGY

Just before the 2022 holiday season, Volpatt Construction wrapped up an intense $8 million upgrade of four radiology suites at Allegheny Health Network's (AHN) Forbes Regional Hospital. The project involved replacing equipment and renovating the hospital's mammography, CT scanning, chest radiography (rad/chest), and gamma radiography suites.

Few construction projects are as complex as renovating occupied hospital spaces. In addition to the difficulties associated with working in any occupied building, construction in a hospital is made more difficult by healthcare-specific issues – such as infectious control, patient security, and HIPAA compliance, to name a few – that add significant complexity and cost.

This additional complexity makes phasing and sequencing the work critical to project success, but creating that sequencing is often dictated by the needs of the patients and caregivers, rather than the efficiency of the project schedule. Radiology projects are a good example of the type of project where the construction schedule is a slave to the equipment.

"When that equipment order is placed, we get a delivery date, and we have to take it on that date. You can't store sensitive equipment and you can expect someone to hold that kind of equipment in a warehouse because of moisture and heat. When those units are delivered, we have to be ready to accept them," says Bob Cook, Allegheny Health Network's project manager.

Cook explains that the equipment-driven schedule influenced the preconstruction process, including when and how the construction manager was procured. Beyond being ready to accept delivery, AHN needed to have the construction team in a position to allow the equipment installers to do their jobs as expected.

"Siemens, or Philips, or whoever the manufacturer is, has an installation team's hours already scheduled. When you take delivery, those teams are there to install," Cook says. "If you delay delivery, you could be waiting for installation indefinitely."

AHN programmed the upgrade to the radiology suites as part of its ongoing modernization of Forbes Regional Hospital's Monroeville campus. Stantec was hired to design the project and procurement was done nearly a year ahead of construction.

"We had already ordered the equipment. Volpatt was selected because of the work they have done previously in the hospital. They did the hybrid operating room and the Cath lab," Cook recalls. "We had good experiences with them in the past and they had done an excellent job for us."

"We were awarded the construction management contract and then we went through the process with AHN and Stantec through design development," says Perry Casnick, project engineer at Volpatt Construction. "We developed a guaranteed maximum price (GMP) for each project. We also competitively bid on the general trades package and were successful on those."

The design process spanned some of the worst of the supply chain disruption in 2021-2022. Having the long lead time ahead of construction allowed the team to navigate several issues that impacted the equipment selection, both for the radiology and key related equipment.

"The new regulations that were in place for 2022 break imaging rooms into different classes. We had to determine what types of procedures were being done in each room," says John Reddick, senior associate for Stantec. "In some imaging rooms you can go in and get an X-ray and walk out. But there are other procedures that require injection with a dye or intravenous and that bumps it into a higher class.

"We had to make sure we were addressing the HVAC, the air changes in the room, and the medical gases because the more you do to the patient, the more invasive it is, the more risks are involved. There have to be appropriate clearances around the table and there are other requirements for the various classes. The lab rooms were Class 1. The Cath lab ended up being Class 3, which is almost like an operating room. We ran the gamut."

Even with the long lead time, there were still issues that arose from the supply chain disruptions that the construction team had to navigate.

"The CT had the most equipment that we purchased. It had a chiller and isolation panels that we had issues with when the project began," Casnick recalls. "We worked with the hospital team and vendors to find a chiller that would work because the designed chiller wasn't available for three months. We spent a lot of time digging into the manufacturing of the isolation panels. We set up the pickup of panels from a Siemens plant in Georgia. We coordinated with them and had transportation on location to ship panels overnight directly to the hospital to meet the schedule. We also had lead time issues with flooring because it was static dissipative and with doors, especially the lead line doors."

All the participants in the project emphasized that there was a higher level of coordination necessary for the radiology upgrades than normal, even for a hospital.

Hospital projects almost always require more complicated coordination efforts. Specialty contractors have the usual coordination needed between trades and suppliers but, for construction managers or general contractors, the level of coordination with the client has additional layers. The project management team typically needs to interact with a unit or department head, but the "customer" for the project also includes the doctors, nurses, and technicians who work in the area, which often have different levels of coordination from each other. Ultimately, the construction done must also be coordinated with the hospital's customer, the patient. All of these factors were present in the Forbes radiology projects; however, for Volpatt Construction, the coordination was multiplied by having multiple specialty contractors performing the same trade in different phases.

Casnick explains that this was a function of the procurement process, which was a transparent hard bid for each of the four suites.

"During the GMP process, everything was competitively bid and there was transparency with the owner on who had the low bid," Casnick says. "Obviously, it would have been easier to keep track of with the same subcontractor on all projects, but it became mixed up because different companies were low on different projects based upon their bid. It was a lot to keep straight."

Asked how that was accomplished, Casnick laughs, "Lots of coffee and early mornings."

"We maintained a list of all of the subcontractors involved in each project at the site for the superintendent and foreman to keep straight," he continues. "Work started in the CT first and the next three suites followed shortly thereafter. Towards the end of the year, there was work underway in all four areas. There were a lot of the same players but there were four sets of contractors on each job. For AHN, there is a person leading all of radiology but there are different units and so we coordinated with four different end users and customers because we were in their space."

None of the spaces renovated were especially large areas, a reality that further stressed the dynamics of the job site and schedule.

"In the hospitals there is no swing space available where you can put job boxes and mobilize. It was big part of our field superintendent's job to keep straight who was in what room," Casnick says. "The rad/chest and the gamma rooms were not as large as the CT and mammo, so they were much harder to coordinate. On any given day you couldn't have more than two trades in there or they were on top of each other. It was also a challenge to make room for material and tools. Everyone wants to have job boxes but that was impossible."

It is no surprise that team members heralded communication and cooperation as the keys to getting through the project despite its challenges.

"Ray Volpatt and Perry Casnick were good communicators. They didn't hesitate to call when they were questions, and we worked things out together," says Reddick. "Anytime you work in a hospital it's always a challenge from an infection control standpoint. Volpatt did a good job of coordinating with Bob Cook and the infection control person in the hospital to minimize those potential risks."

For Ray Volpatt Jr., communication was a bit more of a challenge. On August 2, 2022, just as construction was getting underway on

"On any given day you couldn't have more than two trades in there or they were on top of each other. It was also a challenge to make room for material and tools. Everyone wants to have job boxes but that was impossible."

the CT rooms, Volpatt was hospitalized for two weeks with an infection. He spent the following six weeks recovering at home.

"I couldn't visit the job site, but I attended every meeting virtually. Matt Schohn, our superintendent, and Perry did all the work," Volpatt recalls. "I was in my basement in a recliner, but they are the ones that did the work. I only interjected when needed and that was rare."

"He was laid up, but he participated in calls and was available. And his people do an excellent job," says Cook.

Casnick and Reddick gave Cook high marks as the conduit between the construction project and the end users, whose work often took higher priority than the construction team's.

"Bob Cook was very inclusive pulling everyone in on the project," says Reddick.

"Bob was extremely involved and an advocate for us. He gave us opportunities to get the job done on time," Casnick agrees. "If there were obstacles or conflicts with scheduling with the user groups, he helped us navigate that and gave us priority to clear a path for us."

Casnick notes that while all the areas that were renovated experienced some shutdowns, there was pressure to limit the downtime that drove phasing, especially in the CT scan, which had two procedure rooms separated by a control room. The renovations were sequenced so that scans continued, even as the control room was under construction. There were also labs adjacent to part of the construction area that were sensitive to noise and vibration. The procedures in the labs were not delayed, so construction worked around the procedure schedule.

"The main challenge is always working in a facility that is open 24 hours a day, seven days a week. The hospital relies on such vital services - whether it's the CT, X-ray, or mammography - to treat patients," says Cook. "The biggest challenges are always timeline, working in an environment that is constantly operational for patient care, and getting the services back up so we don't delay care."

Volpatt Construction and its team navigated the patchwork schedule, starting with the CT scan in August and wrapping up the final rooms before the end of the year.

"The project was successful because of the coordination that started from the top," says Redick. "Our charge was to get it done by Christmas and they pulled it off."

"It was successful because we had a good team. I've known John Reddick for years and his team is excellent. And Perry and Volpatt were excellent. There are always going to be issues and problems that pop up but success comes down to communication and working through the problems. As long as you have people that are willing to listen, think outside the box, and work through the problems, you'll be successful." BG

PROJECT TEAM

Volpatt Construction Corp.	Construction Manager
Allegheny Health Network	Owner
Stantec	Architect/Engineer
Allegheny Installations Co. Inc.	Floor Leveling - Mammography
Davis Fetch Corporation	Doors
Fox-Cluss Glass Company Inc.	Glass & Glazing
GBL Construction LLC	Floor Leveling - CT, Gamma, and Rad/Chest
Hoff Enterprises Inc.	Casework - CT and Rad/Chest
Johnson Controls Fire Protection	Fire Protection
Keystone Electrical Systems	Electrical
Keystone Metals Inc.	Structural Steel
McKamish Inc.	HVAC/Plumbing - CT and Mammography
Patrinos Painting & Construction	Painting
Ruthrauff Sauer LLC	HVAC/Plumbing - Gamma Camera
Schlaegle Design Build Associates	Casework - Mammography
SSM Industries Inc.	HVAC/Plumbing - Rad/Chest
Tech 2000 Woodworks	Casework - Gamma Camera
Thomarios Pittsburgh	Painting - Mammography
Tri-State Flooring	Flooring

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leadership
and advocacy

WHEN OSHA COMES KNOCKING

BY WILLIAM S. MYERS

Construction contractors are a special target for enforcement by the Occupational Safety and Health Administration (OSHA), and that starts with the inspection. This article discusses how to plan for an inspection, and then how to conduct, conclude, and follow up to make the best of your dealings with OSHA from the inspection—with a focus on practicalities.

A Few Points About OSHA and You

First, OSHA is the federal agency within the Department of Labor charged with regulating and enforcing workplace safety in the vast majority of worksites in America. OSHA has approved twenty-two "State Plan States" to handle this function, so if you are building in one of those states, "OSHA" is going to be a state agency. However, for the most part, the principles discussed in this article apply to both federal OSHA and approved State Plan agencies.

Second, OSHA is among the best government agencies I have dealt with in many years of law practice. With few exceptions, I have found them to be competent, professional, and even courteous. However, there is a reason they carry badges. OSHA is an enforcement agency. Its inspectors are not your friends, they are not your safety consultants, and they are not looking to improve your safety program. They are there to find violations and build evidence to support the citations and penalties they fully expect to impose and advertise—it is what they do.

Third, focusing on the inspection itself, I would be remiss if I did not point out that the best way to neutralize the risks of an OSHA inspection, and to turn back citations when issued, is to build a good safety program that is run by good safety people. That is a two-pronged approach that will fail if you have only one of those prongs.

Fourth, you have an involuntary and ongoing regulatory relationship with OSHA, so it is best to make it courteous and cooperative as well. However, absent extraordinary circumstances, when OSHA inspectors are on your jobsite, they are there with your consent and only insofar as you consent. While you may not interfere with an appropriate inspection, you most certainly should be actively involved to guide the process and keep it within the bounds of your agreement. More on that below.

BEFORE THE INSPECTION—PREPARING

Inspection Chiefs

Designate a representative for OSHA inspections at each worksite, along with one or more alternates to assist and to fill in if the first is absent. Also, give it a name that suits the responsibility, such as "inspection chief." The point is, there should be one person in charge of all aspects of an OSHA inspection, and it should be clear to everyone who that is and what that means.

A good candidate is the site safety manager, but whoever is selected, he or she must have adequate experience to step up immediately to manage the inspection and be able to drop everything at a moment's notice to do that. The inspection chief should be thoroughly trained in this role and have detailed familiarity with the worksite and the contractors.

If feasible, the inspection chief should have an assistant, preferably a fully-trained alternate who will accompany and assist throughout the inspection. This assistant should be prepared to help with or handle the notes, photographs, and videos described below, so the inspection chief can focus on guiding the inspection.

Training, Tools, Facilities

Perhaps the simplest way to train the inspection chief and others is to develop a detailed inspection checklist that can serve as a one-stop tool for training, planning, "day-of" action plan, and post-inspection follow-up.

The inspection chief should prepare a notebook or device suitable for carrying along and taking notes throughout an inspection. He should also have camera equipment at the ready with a full charge and working flash to take photographs and video, and he should be trained to use them to get quality results in tense situations.

Designate a room for the opening conference, closing conference, employee interviews, and where the inspector can review documents or wait to begin the inspection. This can be difficult on smaller projects, but, if at all possible, find a room in an office trailer or other facility that is properly equipped and can be used on short notice without interruption. This can be critical for an orderly inspection and for controlling a difficult inspector.

Required Records and Other Contractors

Make sure all required notices and records are posted and maintained for the site and are available on short notice. Find out if the current OSHA poster is up and ask if the log summaries are posted and certified (when that is required).

If you have subcontractors, include them in the preparations, and encourage them to follow similar preparation and inspection protocols. Your interests may not always align with theirs, but at this stage they do, so try to cooperate with them to the extent feasible.

DURING THE INSPECTION—MANAGING

Initial Contact

When the OSHA inspector arrives, the inspection chief should be notified immediately. If he is not immediately available, the inspector should be ushered into the designated room and asked to wait briefly for the inspection chief's arrival.

The inspection chief should greet the inspector, note the time of his or her arrival and review his or her credentials carefully. At this stage, or perhaps during the opening conference, the company must decide whether to allow the inspection without a search warrant. Whether to demand a warrant is a subject for a different article, but it is highly inadvisable to do so without consulting legal counsel. This article assumes a warrant is not demanded.

The union representative for affected employees must be notified and allowed to participate, including in the opening conference. Alert other contractors if their work areas or employees are implicated. All these things take time, and they should be done expeditiously, but they illustrate from the start the value of the designated room where the inspector can wait during this time.

Opening Conference

The first formal part of an inspection is the opening conference. If the inspector does not explain this at the beginning, ask him to identify the scope of the inspection, and specifically what areas, equipment, processes, and employees he wishes to inspect and why—and about how long it will take. The inspection chief should talk through all of that and come to an understanding. If the inspection is based on a complaint or accident, it should be limited to directly related areas.

Advise the inspector that if he wishes to interview employees, they must be scheduled to minimize work disruption. Offer to provide personal protective equipment for the inspector as needed. If applicable, inform the inspector of any trade secrets and request confidential treatment. Take notes of everything the inspector says at the opening conference. Listen and be courteous, and do not volunteer or acknowledge awareness of potential problems. Do not discuss prior safety issues at the worksite, even if they have been remedied.

One or more managers should walk the jobsite during this meeting to advise employees of the impending inspection, ensure they are wearing PPE and are complying with safety rules, and correct obvious safety issues. Finally, think through the best route from the opening conference to the inspection locations, considering what the inspector will see along the way.

The Walk-Through Inspection

The inspection chief should always accompany the inspector and gently guide the process to stay within the agreement. The inspector may expand that for "plain view" violations, but beyond that, it should be kept to the agreed scope. If the inspector becomes unreasonable in this, the inspection chief may ask the inspector to return to the designated room while the inspection chief consults with site management or legal counsel.

Answer the inspector's questions courteously but provide only what is needed to explain a job or process. Do not volunteer information and do not admit or debate. If the inspector points out a problem, fix it immediately if feasible, but do so without discussing it except to clarify how he wants it fixed. Make note of comments by the inspector and comments or allegations by the union.

Do not demonstrate work tasks for the inspector. If one is being performed in an ordinary course, the inspector may observe and record it, but do not allow him to direct employees to do things, and do not assist him by directing employees to perform tasks as a demonstration.

OSHA is an enforcement agency. Its inspectors are not your friends, they are not your safety consultants, and they are not looking to improve your safety program. They are there to find violations and build evidence to support the citations and penalties they fully expect to impose and advertise—it is what they do.

Finally, take the same photographs and videos as the inspector, from the same position and angle, so you end up with the same evidence. Make notes about the location and the subject of each photograph and video. This is critical for evaluating citations, which is usually months later, because OSHA will not share its evidence at that juncture.

Employee Interviews

OSHA inspectors may interview non-supervisors privately, but they may not interfere with operations. Schedule all employee interviews in advance and in the designated room. Do not allow "stop and talk" interviews during the walkaround that last more than a few minutes, but note the name, time, location, and comments associated with any conversations that are allowed.

Advise the employees they have the right to a representative in the interview, assure them they are not in trouble, and they should be truthful, but also alert them that OSHA likely will ask them to sign a statement prepared by OSHA. The employees are not obligated to sign anything, but they should get a copy of anything they sign. Note the name, time, and duration of interviews, and do not question employees afterward without further guidance.

Finally, do not allow supervisor interviews without a company representative, and the supervisor should not sign anything offered up by OSHA.

Records Requests

If the inspector asks for documents other than injury logs, politely ask him or her to make the request in an email. There are legal issues with producing documents, and making this simple request puts them off for another day, when more time and legal counsel are available.

Closing Conference

The closing conference may occur the same day or later, but it is the last formal part of an inspection. Listen closely and make notes of the exact nature of each alleged violation and the cited standard number. Do not agree or disagree or debate, and do not volunteer information about the alleged violations or any other safety issues at the project. The inspector has significant influence on issuing citations, so be courteous and do not exhibit hostility.

The inspector usually asks the employer to propose corrective measures and agree on an abatement date. Do not do this but turn it around to ask the inspector what corrective measures he or she thinks are appropriate and make a note of them.

AFTER THE INSPECTION—REPORTING

As soon as the inspector leaves, type out all inspection notes in narrative form. That discipline forces the inspection chief to fill out the details while events are still fresh. The narrative and notes should be addressed to the company's legal counsel. Also, promptly develop and transfer all photographs and video to portable media. Then review, label, and catalog all of them, giving the time, location, and a description of what is portrayed in each.

If OSHA contacts the inspection chief or others at any time after the inspection, politely refer him to the appropriate official or legal counsel without discussing the substance of the case. BG

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FINANCIAL PERSPECTIVE

ESOPS AS AN EXIT STRATEGY FOR CONSTRUCTION COMPANIES .

BY LUCAS A. RIHELY, CPA AND CAMERON ZANDIER, CPA, MST

Operating a construction company requires significant time and sacrifice and often the owners are so heavily involved in the day-to-day business that few ask themselves "What's next?" in a timeframe that allows for proper planning. As a business owner planning for retirement, you must determine if exiting your business is possible financially. Is it the right time to move on to the next phase of life? Will the sale of the business generate enough money for you to retire? Will you need to alter your current financial lifestyle after retirement? How long do you plan on staying with the business post-sale and what role do you want to have? These are all questions you must ask before you make the next move to exit your business as you can then assemble the right professional team to help you maximize your transferable value and identify your options and opportunities.

Exiting your Business

Deciding how and when to move on from a business proves to be one of the many obstacles business owners must tackle. There is no one-size-fits-all approach, which makes a succession plan complicated for many businesses in the construction industry. One major key to success is to plan ahead. A five-year planning period is ideal but may not be possible for everyone. Generally, the earlier you contact a financial professional, the better off you will be.

The value of the business is an important aspect of a possible exit as it represents the potential post-sale cash flow available to the owner. The value of a business is affected by many factors, including:

- Past financial performance
- Key employees under contract
- Key clients under contract, including backlog
- Concentration of clients or industries

It is important to work with a business valuation professional to review your business and determine its value. This step is critical for you to evaluate whether the business value can convert to an income stream sufficient to support your life plans following the sale.

There are three broad categories of a business exit: selling externally, selling internally, or liquidation. A third-party sale of a business is possible but is harder to execute in the construction industry due to several risks, including the cyclical nature and low barriers of entry, depending on the field. Transferring a business to a dependent or family member may be the goal for most family run businesses. Although, families may not be interested in taking on the entire workload that comes with managing a company. Another popular route is to engage in management buyouts. This may be beneficial for both parties if managers decide to be owners instead of employees. An increasingly popular strategy in the industry is to establish an Employee Stock Ownership Plan (ESOP). ESOPs allow employees to own company stock while also allowing the original business owner to retain control.

What is an Employee Stock Ownership Plan (ESOP)?

An ESOP is a qualified retirement plan that gives employees ownership interest in the company through their participation in the plan. These plans are highly structured retirement vehicles that can provide benefits to both the owner and employees. In establishing the plan, the owner can retain as much control of the company as they see fit while also enabling employees to hold some interest in the business. As a result, the company can continue operating under its established quality and traditions while providing a benefit to employees that encourages success at all levels.

ESOPs come with their share of pros and cons. Some important advantages of an ESOP are:

- Owners can retain control of the company as they see fit;
- Establishes a ready market for company stock;
- Employees feel more valued and have a direct interest tied to the success of the company;
- Vesting provisions may incentivize key management or work crews to remain with the company;
- Allows for several tax deductions and benefits for the business.

ESOPs do have some disadvantages that need to be evaluated before establishing the plan. These include:

- The need for ongoing professional costs of business valuation, administration, and trustee fees;
- ESOPs are constrained to the fair market value of the company stock, as determined by the valuation professionals for a financial buyer, which may be less than the price that an owner might receive from a strategic buyer;
- ESOPs often involve seller notes;
- The plan may require outside financing to acquire stock;
- Effects on bonding and licensing requirements need to be considered.

An ESOP is a qualified retirement plan that gives employees ownership interest in the company through their participation in the plan. These plans are highly structured retirement vehicles that can provide benefits to both the owner and employees.

Tax Matters for an ESOP

Because ESOPs invest in company stock, employers that are qualified to sponsor an ESOP are generally limited to incorporated entities taxed under Subchapters C or S of the Internal Revenue Code (IRC). As such, entities that are partnerships are not eligible to sponsor an ESOP, nor are limited liability companies (LLCs) though the Internal Revenue Service has privately ruled in at least one instance that an LLC was permitted to establish an ESOP with its membership units. If your entity is an LLC and you are considering an ESOP, it is strongly recommended to confirm its eligibility to do so.

From the owner's perspective, a sale of company stock to an ESOP would be considered a sale of a capital asset and would be taxed at the preferential long-term capital gain rates, assuming that the holding period of the stock was one year or longer. The timing of the gain recognition can be managed by selling tranches of stock over time or by selling stock in exchange for a promissory note and recognizing the gain using the installment sale method over the term of the note. The latter scenario is a common arrangement in ESOPs. If the sponsoring employer is a C Corporation, owners may have additional tax benefits under IRC §1202 and §1042. Under §1202, sellers may exclude some or all of the gain on the sale of "qualified small business stock" assuming that the criteria under this code section is met. Under §1042, the owner is able to defer gain on the sale of the stock to the ESOP by reinvesting the proceeds into qualified replacement property, as defined under the code section. This latter strategy often works best for owners who will not be working for the company following the sale and who do not need the proceeds for immediate liquidity.

With regard to the employer, the tax benefits of ESOPs may provide the company with greater cash flow than it otherwise would have. For example, in a situation where an S Corporation is wholly owned by an ESOP, its profits are not subject to income tax as the ESOP is tax-exempt. Without the need to make distributions to its shareholders for tax payments, more cash is left in the company for operations or debt service. It should be noted that for S corporations still subject to the built-in-gains tax, there could be associated tax ramifications when assets are sold, emphasizing the need to involve a tax professional in the planning process as early as possible. For C Corporations, the company may deduct dividends paid on employer securities held by an ESOP, provided that the dividends paid are either: (1) paid in cash directly, or through the ESOP, to ESOP participants or their beneficiaries, (2) reinvested in employer securities, or (3) used to repay an ESOP loan. The employer also receives a tax deduction for contributions to an ESOP up to 25 percent of participants' compensation. This includes contributions paid to an ESOP to repay the principal on a loan that the ESOP used to acquire the company stock. For C Corporations, contributions made to pay interest on such a loan may be deductible even if it's in excess of the 25 percent participant compensation limit.

Other Considerations

It is common for ESOP transactions to involve a significant amount of leverage relative to the total value of the business. Because of this, care must be taken during the planning phase to understand the impact that the ESOP has on the balance sheet of the corporation. This is especially important if the company is subject to any net worth requirements or debt covenants in its bonding, licensing, or borrowing activities.

Partner with Professionals

It's important to note that exiting a business that has been under your leadership is not an easy task done alone. No matter what exit strategy you choose, you should always engage professionals in the fields of accounting, legal, and banking. Specifically for ESOPs, advisors are available that can layout the entire strategy. ESOPs may not be beneficial for every business owner but should be considered because of the many advantages it can provide to both you as an owner and your employees. Planning an exit from your company ahead of time could help you save money and increase the value of your business. Speak to your advisors today if you plan on exiting your company in the next five years. BG

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MANAGEMENT PERSPECTIVE

IN THE BUSINESS OF HEALTHCARE, DESIGN MATTERS .

BY JOHN SCHROTT, AIA, ACHA, EDAC & TAMI GREENE, AIA, NCARB

As we emerge from the COVID cloud, it has become clear that our region's healthcare institutions are struggling from a business perspective. Supply chain disruptions, the cost of protecting employees and patients, the acceleration of the demographic shift into retirement, and consequent labor shortages have all had a profound impact on the bottom line of hospitals and health systems. Kaufman Hall, an industry management consulting firm, reported that more than half of the nation's hospitals ended 2022 with negative operating margins and that the expense pressures are unlikely to recede in 2023. Curiously, despite those factors, we see our local systems continue to build. The reasoning lies in economics. In order to fulfill their mission, institutions must deliver care that meets the demands of the consumer in effective and efficient ways. Oftentimes the existing physical environment does not support the processes and protocols that are necessary to achieve those ends. It is imperative that we, as architects, understand the business pressures within this industry and provide the valuable tools we possess to help drive solutions that support success. The issues are numerous and intertwined: site of care shifting to an outpatient basis, patients as consumers exercising their purchasing power, the evolution into an experience-based economy, tightening reimbursements, an aging workforce, a diminishing pipeline of labor, technology integration, and advancing care methodologies, to name a few. While these seem daunting, architects are first and foremost problem solvers, and adept at developing solutions once the problem and its root derivation are understood.

Inpatient Beds

In a 2021 study by AdvisorSmith of the 109 largest US Metro areas, Pittsburgh ranks 11th in the number of licensed beds per 1000 people at 3.3. The national average is 2.4. Even considering that our demographics skew older, this indicates an excess of inpatient beds in the Pittsburgh region. Yet health systems continue to increase that number with the construction of new facilities. The cause of this is an overdue readjustment of bed and nursing unit types to support current industry needs. Hospitals are finding that existing inpatient units are not comparable to new builds in terms of patient satisfaction or staff efficiency. Additionally, as care is increasingly moved to an outpatient setting, the inpatient census becomes more medically intensive, demanding step down and ICU beds which have greater square footage needs than the typical acute care bed. The old beds cannot support health systems' efforts to attract patients, deliver efficient care, or expand business. As private patient rooms become more common and sought-after, semi-private rooms are far less appealing to consumers. The majority of patients do not want the added anxiety of sharing a room with a stranger where there is less control over the environment in an already stressful time.

Efficiency of nursing unit layouts has advanced beyond what old units can support from a supply, technology, and care delivery standpoint. Even recently renovated units cannot compare with brand-new, purpose-built facilities. Nurses are faced with longer distances of travel, and existing infrastructure is often insufficient to serve the optimal number of private patient rooms. These multifaceted issues are significant but not insurmountable. A thorough, reasoned design discussion can evaluate these concerns and establish a solution. The trend to expand relevant bed types will likely continue until our region's bed facilities and capacity align with demand.

Shifting Site of Care

Services that have traditionally been performed on an inpatient basis are continuing to shift towards outpatient care. This is furthered by the evolution of care processes with less invasive treatment protocols, consumer preferences, and insurance and Medicare reimbursements. In this transition, hospitals must comply with the Pennsylvania Department of Health mandate of separating inpatients and outpatients, which can be highly difficult to accommodate within the parameters of an existing facility. Patients are undergoing significant surgeries and treatments, like joint replacements and cardiology procedures, more frequently in an outpatient setting. As a result, acute care inpatient beds and procedure spaces are decreasing in demand. Hospitals have responded with the construction of new outpatient facilities that are more efficient, more focused on patient and staff experience, located closer to the consumer, in compliance with current regulatory requirements, and better suited to the current needs of the market. These state-of-the-art facilities are designed from the ground up with a strong focus on the business aspect of healthcare, and ultimately prove more beneficial to health systems than attempting to reinvent existing facilities. The migration of site of care shows no sign of abating and is critical to the strategy and financial viability of health systems. It also demands strong design and planning skills to organize facilities that address and support the business needs of each healthcare institution.

The Experience Economy

Society continues to evolve into an experience-based economy, and the healthcare industry, from design through care delivery, is influenced by this movement as well. Patients are savvy customers in this market and increasingly catered to as such. When patients are faced with the choice of where to receive care, they are now likely to consider factors beyond just the physician or cutting-edge technology, such as whether the facility offers a comfortable environment, convenient services, and quicker treatment. Healthcare workers, as the backbone of the business, also set the tone for the patient's experience. Morale is highly influenced by the professional environment, including the design of the built space. Understanding the workflow of every position is key to creating a workplace where job satisfaction can flourish, which is critical to recruiting and retaining staff members.

Patient Experience – Appealing to patients with superior care experience is an increasingly important factor in promoting business growth. When you find yourself requiring medical care, often the only thing you have control over is where you seek treatment. As patients shop around for healthcare services, the level of convenience, comfort, and efficiency all come into play.

A patient's loved ones are often an integral part of the care plan. Providing for patients' needs also means providing for the needs of their family and friends. The presence of loved ones in the healthcare setting conveys additional support to the patient in terms of emotional strength, tracking medical information, and observing any unexpected changes. Particularly in the inpatient setting, private rooms with overnight accommodation allow loved ones to participate in the care and be present for any updates and discussions concerning the patient. This is even possible in an ambulatory surgery setting: if pre- and post-surgery rooms are all fully enclosed, single-bed, large enough to accommodate visitors, and of sufficient quantity, the family can use the space as a home base during their loved one's procedure.

Facilities with the flexibility to customize the experience for the preferences of each patient will appeal to a wider range of customers. While patients and caregivers may prefer to remain in private rooms post-surgery, a café also offers the opportunity to grab a drink and a snack for a change of pace. Family waiting rooms with comfortable seating and natural light and vistas provide the opportunity to read a book or do some work on a laptop or tablet while a patient has a procedure. Outside amenities can enhance the experience as well, allowing family members to enjoy their coffee and take a breath of fresh air. These simple options give patients and visitors a sense of control during an often-unnerving time.

The anxiety that patients feel cannot be eliminated, but there are ways that the healthcare environment can reduce stress. By mapping the patient's journey from arrival through discharge, architects can determine what points are most stressful and implement mitigating strategies. One example is the initial approach to the facility. Many patients drive to their appointments, making the first thought upon arrival what to do with their vehicle. As a strategy for stress mitigation, valet parking can be incorporated just outside the main lobby to reduce patient worries. Positive distraction is also a powerful tool for calming anxious minds. Views of nature through large windows and attractive artwork interspersed throughout a facility are simple solutions that make a big difference.

Any conveniences introduced to a facility will go far in making the patient's experience more pleasant. Added services like meds-to-beds reduce the responsibility on patients to organize their treatment plan. Prescriptions are delivered immediately via the internal pharmacy, so an extra stop isn't necessary on the way home. Similarly, the physical layout of the facility has an impact on convenience and patient efficiency as they attend appointments and procedures. By analyzing the most-utilized services and locating those near the entrance, patients arriving are saved from a longer journey through the facility each visit. In this one-stop shop model, patients become familiar with the facility as they return for other outpatient needs.

Staff Experience – The healthcare industry has recently been plagued with a shortage of workers, beginning with physicians and nurses and now trickling down to affect the service side of the industry. As hospitals continue to struggle with this shortage, a primary concern is recruitment and retention of staff to maintain operations. Just as patients will compare hospitals to receive care, staff members can often choose where they wish to work. When planning renovations or constructing new facilities, hospitals can enhance the staff experience with amenities and process changes that support the needs of healthcare workers. Facilities that embrace these strategies are more attractive to prospective employees and more likely to promote long-term job satisfaction.

Despite its unique setting, the healthcare environment serves as a workplace for nurses, physicians, administrators, and more. As such, there are aspects of workplace design that can also be successfully applied to staff spaces in healthcare facilities. For example, collaborative areas are a key part of corporate offices that encourage the sharing of ideas and camaraderie between workers. This is a type of space that is missing from many older hospital facilities but becoming more common in breakroom design. Collaborative space contributes to a calmer "backstage" environment for healthcare workers. Off-unit areas for respite and education are crucial to maintaining a low-stress atmosphere among staff by giving them the room to unwind and recharge. This atmosphere of calm ultimately transfers to patients and families, creating the optimal setting for the healing process to occur.

Staff efficiency plays a huge role in creating convenience for patients and is instrumental in supporting staff in their day-to-day work. Maximizing efficiency means starting from the ground up, which is one reason that new construction is often favored over renovation. This can be illustrated through a state-of-the-art Procedural Platform design. Arranging a series of same-sized ORs in a horseshoe or donut layout with shared sterile processing embedded in the middle creates a high level of efficiency. Studies have shown that this approach can reduce the turnover time between cases to around 20 minutes. The quicker turnover improves staff efficiency and enables more cases to be scheduled each day. Additionally, new ORs can be right sized to afford more flexibility for a wider variety of cases, easing block scheduling and increasing utilization.

Facility Maintenance

Upkeep of facilities receives perhaps the most consistent attention because it often cannot be ignored. It is necessary for hospitals to divert capital to update technology, replace equipment, or renovate aging utilities just to keep facilities running. While mundane, maintenance of these systems is vital to supporting patient experience, staff experience, and the business as a whole. Physical infrastructure often determines the limit to how efficient a facility can be. Facility maintenance is an unavoidable investment, and updated, energy-saving systems can reduce overall costs.

Even the most basic facility functions can be leveraged to benefit the business. Many old facilities employ outdated systems that sacrifice potential energy savings and tax incentives. However, new constructions can be designed to integrate energy savings throughout a facility. Whether building an entire central utility plant to maximize energy efficiency, or installing LED lights in clinical spaces, these choices add up and give back over time. Energy efficiency is the environmentally responsible decision, and also fiscally responsible – less energy usage means less cost.

Air flow filters directly impact patient recovery by regulating the spread of infection. If a patient is admitted for a case, discharged, and then readmitted due to infection, the hospital is not reimbursed for the readmission. Therefore, it is in the patients' and hospital's best interest to minimize infection through the use and upkeep of HEPA filters. Where older facilities may be challenged to install the appropriate HEPA filters, this infrastructure is standard in new construction.

Why It Matters

All of this goes toward creating an ideal environment for healing, and design makes a difference. In 1984, Roger Ulrich of Texas A&M published findings on the effect of the built environment on the healing process. Since that time, innumerable other studies have found the same correlation. For example, it has been shown that requests for medication and length of stay are decreased when a patient is in a single room with a calming view. From a financial perspective, the resulting reduction in average length of stay supports a better return on investment, as hospitals are reimbursed by diagnostic related group and not by number of days in the facility. This is why it often makes more fiscal sense for hospitals to build new, optimized facilities from the ground up instead of sinking resources into renovating insufficient structures.

Hospitals are businesses and must attract customers just like any other industry. As architects, we play a critical and valuable role in advancing the healthcare business by using our training and collaborative problem-solving skillsets to design efficient facilities. To be the best partner, we must support a stronger return on investment by understanding the issues surrounding this industry, challenging ourselves and our clients to explore solutions that evolve care delivery, and creating a superior experience for all who intersect with the design. BG

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SIX REAL ESTATE RECOMMENDATIONS FOR REVITALIZING DOWNTOWNS

Editor's note: The Brookings Institution published a research paper, Myths About Converting Offices into Housing - and What Can Really Revitalize Downtowns, on April 27, 2023, which disputed five of the main arguments supporting widespread conversion of office buildings to multi-family properties. Authors Tracy Hadden Loh, Egon Terplan, and DW Rowlands use data on long-term vacancy rates, government tax revenues, housing supply, and the relationship of housing to office in downtown areas to debunk the assumption that office-to-residential conversion is the key to revitalizing troubled central business districts. They held that there are still many ways to advance the conversation about office conversions to incorporate other ideas and considerations that can better address the challenges cities face. The research recommended six actions leaders should take, with advice on how to tailor these actions to specific city contexts. The following is an excerpt from that research, reprinted with the permission of The Brookings Institution. The original research can be viewed at https://www.brookings.edu/research.

Six Real Estate Recommendations for Revitalizing Downtowns

1. Make it easier to build new housing on vacant and underutilized lots in downtowns and surrounding neighborhoods.

While the economics of office-to-residential conversions are not positive in many cases, adding housing in and around downtown remains a key strategy for cities. As noted above, office demand is closely tied to housing demand, so new construction will face more market challenges in and near downtowns with high vacancies. Therefore, it makes sense for cities to do everything they can from a regulatory perspective to make it easier to build new housing for all income levels. In downtowns, regulatory relief for building on vacant and underutilized lots could ultimately produce more new housing than conversion. As a start, cities should make sure that existing zoning allows for housing as-of-right within the downtown.

2. Provide tax incentives for conversions only when they are also available for new construction.

If cities are considering tax incentives for housing, they should only provide them for both conversions and new construction. Prioritizing new construction—and then making sure there is a clear need and fiscal justification for additional production, including conversion, downtown or elsewhere—helps cities understand how to find the "Goldilocks" amount and type of incentives to facilitate conversions, how they should be targeted, and what public interests conversion serves and thus should be structured into the incentives. Incentives for new construction should be carefully structured to avoid using them to tear down and replace existing historic assets.

3. Only consider public funding for conversions in the form of forgone tax revenues, not direct subsidy, and make sure any subsidies are tied to public benefits.

Cities should also clearly distinguish between tax abatements (a form of subsidy that requires no expenditure on the public side and is financed by forgoing tax revenue that would not otherwise exist) and direct subsidy of any other kind.

Cities should not invest limited direct subsidy resources into subsidizing office conversions. In the near term, direct subsidies for conversion might inadvertently subsidize a property owner who is sitting on the sidelines and has yet to reprice their property or rents to better match changed market conditions.

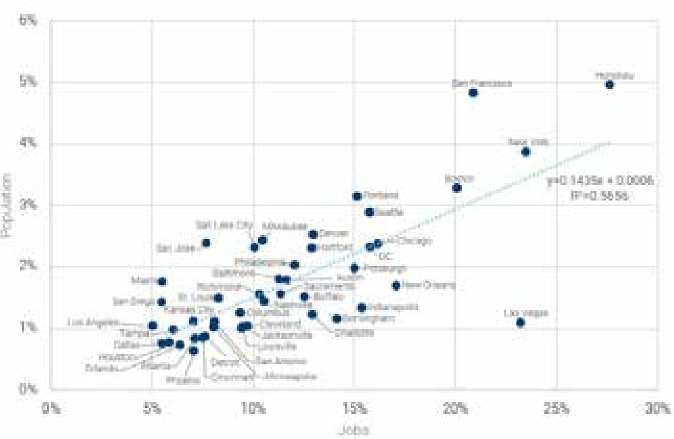
Instead, in cases where it makes sense, cities should use place- or project-specific foregone tax revenue, such as tax abatements or tax-increment financing, to facilitate conversion. They should also incentivize the production of affordable housing as part of the deal to make downtowns more inclusive. The city of Chicago's LaSalle Reimagined structure is a great example of this.

Additionally, most real estate investment trusts (REITs) are not able to avail themselves of tax credits. Since REITs own perhaps 10% of all American commercial real estate, in order for tax incentives to be effective, there may need to be changes to local and state law to enable such incentives to function. Cities and states may need to structure any abatements and credits so that REITs can access them, such as by making the tax credit refundable.

FIGURE 1

Housing strengthens demand for offices rather than replacing it

Regional shares of population and jobs, top 45 US downtowns by size (jobs), 2019



Source: Brookings analysis of 2019 LEHD Survey and 2020 Census

Brookings Metro

4. Identify opportunities for office conversions in all districts, not just downtown.

Surplus, dated, and obsolete office space is not only found in downtowns—it exists throughout metropolitan regions. From the perspective of the city confronting obsolete offices, converting offices located outside of the strongest job centers and consolidating jobs to the remaining centers makes more sense. For this reason, local or federal incentives for office conversion should not exclusively target downtowns.

5. Make it easier to build new buildings and change existing ones.

The key for cities' recovery is flexibility. It's fine to make it easier to convert office buildings to residential uses, but why not just make it easier to convert any building (like an old warehouse) to another use (such as to entertainment, co-working, advanced manufacturing, or experiential retail)?

Cities should also make it easier to build a new building or to open and grow a new business. Streamlining reviews or making the permitting process more transparent while reducing unnecessary fees can make a real difference.

In an age in which the pace of economic and demographic change is faster than ever, there are also other kinds of complimentary solutions related to how the built environment is constructed, regulated, and managed. These solutions are needed across downtowns, suburbs, and rural areas, and should increase flexibility, ease of adaptation, and, therefore, resilience. Examples include zoning reform (to ease conversions; add bonus entitlements to incentivize conversions; and eliminate requirements for residential buildings to include commercial space), promoting the use of Open Building design approaches in commercial construction that ease adaptive reuse, and land value taxes. Some cities have also suggested imposing vacancy taxes as a way to tax a bad (vacant) space, generate revenue, and accelerate the pace of transition.

Tax incentives and subsidies for conversion should also be available to all kinds of commercial real estate. The lack of flexibility in the built environment is a systematic problem, not limited to office buildings, downtowns, or urban areas. Many communities have dead shopping malls, which are great candidates for conversion to housing and mixed-use environments. And while cities consider offering their own incentives and subsidies, the federal government should also consider offering a tax credit that would be available in both urban and rural areas, as rural areas have the same need to adapt to a changing economy.

6. Leverage downtowns' locational advantages for a range of other strategies to revitalize them.

Housing and adaptive reuse is only one part of the downtown revitalization toolkit. If cities want to invest in the long-term success of their downtowns, they should focus their resources and attention on improving overall quality of life and emphasizing downtowns as a place of destinations and economic activity. These critical considerations for downtown revitalization include:

- Ensuring the ongoing economic role of downtowns in anchoring a productive and innovative economy, including capturing new industries and uses while supporting and growing new talent (i.e., finding ways to fill vacant office space with economic activities). This could include economic development in the form of investing in the workforce and in new high-growth industries that will create jobs and generate demand for office space.
- Prioritizing downtown as a place of diverse destinations (arts, entertainment, work, health care, retail, etc.) that draw visitors, residents, and workers from across the city and region. This could include encouraging the location of higher education and other education facilities downtown and creating and promoting experiences for visitors (such as festivals and major activations).
- Undertaking adaptations necessary to improve downtown livability, especially in public safety, governance, transportation, and placemaking. This could include preventing crime with proven solutions that keep communities safe, creating and managing high-quality public spaces, improving conditions for pedestrians and cyclists, strengthening transit infrastructure and operations, and creating hyperlocal governance capacity in downtowns and neighborhoods.

Conclusion

In sum, office-to-residential conversion is an option in some circumstances, but cities need to be smart about it. In addition, conversions are not a substitute for what cities need to do in order to make downtowns attractive as destinations and make sure that the opportunities and amenities that downtowns offer are accessible to all kinds of residents.

Cities need an "all-hands-on-deck" strategy to revitalize downtowns. Rushing to reduce the current challenge of office vacancy with a one-size-fits-all solution of office-to-residential conversion will create its own set of problems. This is a critical moment to recognize the unique benefits of centrally located, economically productive, and dense downtowns as job centers, social and activity destinations, as well as places for living. The task ahead is to find creative ways to ensure their ongoing vitality and relevance. BG

Tracy Hadden Loh is a fellow at Brookings Metro, Anne T. and Robert M. Bass Center for Transformative Placemaking. Egon Terplan is senior fellow at Institute for Transportation Studies at University of California-Berkeley. DW Rowlands is a research assistant at Brookings Metro.

Master Builders' Association Building Excellence Awards

Entries for this year's awards competition are due Monday, Septemer 11, 2023

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Building Momentum

INDUSTRY & COMMUNITY NEWS

(From left) Trent Knight and Rachel Halbedl from Goettle, Lorraine Cooper from Skyline Steel, and Goettle's Ralph Pagone at the MBA Young Constructors golf outing on May 15. The event raised $2,500 for the ACE Mentor Program of Western PA

(From left) Mascaro Construction's Rick Bowers, Amanda Presto, Trevor J. Salopek, and Adam Scassa.

(From left) Nick Anthony from JLL, Burchick Construction's Dave Meuschke, Joe Wardman, and Karl Borgman.

(From left) Alex Moxie, Dara Collins, and David Morrison from PJ Dick.

(From left) PJ Dick's Wes Erskine, Bill Hartle, Dom Matarazzo, and Brooke Waterkotte from Easley and Rivers.

(From left) Chris Pless and Dan Delisio from NEXT Architecture, John Nusser from ITS, and Greg Heddaeus from Carl Walker Construction.

(From left) Derrick Tillman from Bridging the Gap, Rycon's Joe Tavella, and Juan Williams from Williams Bridge and Iron at the May 11 30th Annual NAIOP Pittsburgh Awards Banquet. Photo by Nala Marketing.

(From left) Aaron Roach from Hill Carnes Engineering, Nate Babyak from Providence Engineering, and Cameron Watters from Dick Building Co. Photo by Nala Marketing.

Module's Brian Gaudio (left) and Jason Robick (right) flank Lucia Sanchez Madrigal from PJ Dick. Photo by Nala Marketing.

The MBA's Lance Harrell (left), with Turner Construction's Patriece Thompson, and Aaron Reed from Reed Building Supply (right). Photo by Nala Marketing.

(From left) Amber Koriath from Desmone Architects, Tom Sabol from AM Group, Desmone's Tom Frank, and PJ Dick's Chris Cooper. Photo by Nala Marketing.

(From left) Steve Mazza from Eastern Atlantic States Council of Carpenters, Adam Cummins from PJ Dick-Trumbull-Lindy, Huntington Bank's Sean O'Brien and Chris Barrett. Photo by Nala Marketing.

(From left) Bill Ramsey from Easley and Rivers, Ron Gessinger from Rocky Bleier Construction Group, and E&R's Neal Rivers at the American Subcontractors Association's networking event at the Rivers Casino. Photo by Emily Fowler.

(From left) PJ Dick's Eric Pascucci, Mike Toole and Joyce Chapman from Allegheny Installations, and Andy Vater from A.J. Vater & Sons. Photo by Emily Fowler.

(From left) DiMarco Construction's Matt Bowers and Domenic DiMarco, Seubert's Matt Leone, and Phil DiMarco. Photo by Emily Fowler.

(From left) BDO's Janelle Merlo, Marc Felezzola from Babst Calland, and Lynn Cunningham.

Jennifer Odom from Westfield Surety and Seubert's Jay Black at the ASA Networking Event.

(From left) Kristen Nehnevajsa, Amanda Martin, Yarua Milano, and Kayla Moyer from Easley & Rivers at the ASA Networking Event.

(From left) McKamish Inc.'s Dave Wingertsahn, Jim Syan, and Tom Farr.

(From left) Paul Martin from Allegheny Construction Group, Liberty Insurance's Kevin Heher, and Mackin Engineering's Zach Olawski and Jennifer Knight.

(From left) Steve Mazza from EAS Carpenters, PenTrust's Jamey Noland and Tyler Noland, and Newmark's Kevin Spence at the NAIOP Golf Outing on June 5.

LLI Engineering's Jamie White (left) and David McKamish at the NAIOP Golf Outing.

AWARDS & CONTRACTS

Shannon Construction is the construction manager-agency for Commonwealth Charter Academy's $7 million Mount Pocono location in Monroe County, PA. Strada Architecture LLC is the architect for the 30,000 square foot renovation.

PA System of Higher Education awarded a contract for general trades to **Shannon Construction** for the renovations to Vincent Science Center labs at Slippery Rock University. LGA Partners is the architect.

Shannon Construction is the general contractor for the $2.7 million renovation of Chitwood Hall at West Virginia University. The architect for the 20,000 square foot renovation is Desmone Architects.

AIMS Construction was awarded the contract for the $3 million St. Clair Hospital Professional Office Building First Floor Renovation in Mount Lebanon. The architect is MCF Architects.

PJ Dick is providing general construction services for Jeni's Ice Cream in South Side Works. The interior tenant improvement is within the existing 1,798 square foot tenant space and includes new interior partitions, new restrooms, millwork, interior doors, new finishes, equipment, and new MEP equipment.

PJ Dick is the CM-Agent of Phase IV of the University of Pittsburgh Hillman Library renovations. The final phase includes the renovation of the 70,000 square foot ground floor. The renovation includes new finishes, furniture, and reconfigurations to support new library programs and services; mechanical system upgrades; abatement of asbestos fireproofing; new efficient building lighting systems; distribution of power and wireless signal; and replacement of all single-pane windows. The project also includes a three-story grand entrance, handicapped access to the facility, a new elevator connecting all floors, and a monumental new stair from the ground floor to the second floor. Exterior work includes the addition of window bays on each floor, cleaning of the existing stone, and renovating and replacing the first-floor terrace as well as the multi-level roof of the fourth floor and penthouse. The architect is GBBN Architects.

PJ Dick began preconstruction services for Astrobotic's 50,000 square foot renovation of an existing vacant five story concrete and steel building on Pittsburgh's North Side. The project includes core and shell improvements, an elevator and stair tower addition, and interior offices and electronics labs. The scope also includes tech incubator space, a cafe, and a roof top terrace.

Massaro Corporation was awarded the Penn State University - Jeffrey Field Soccer Complex Renovation and Addition, and the Indoor Practice Air Supported Structure via a negotiated process. The project cost for the combined athletic facilities is approximately $29 million. Populous and Crawford Architects are the architects respectively.

Form Factory 1 is Form Energy's first high-volume battery manufacturing facility located in Weirton, WV at the site of the former Weirton Steel plant. **Massaro Corporation** is the construction manager at-risk.

Conemaugh Meyersdale Medical Center, Patient Room Improvements project was awarded to **Massaro Corporation**. Stengle Hill is the architect of the 5,700 square foot renovation project. The improvement project has an estimated construction cost of $1.7 million.

DGS PA State Police, Greensburg DNA Lab was awarded to **Massaro Corporation**. The 41,683 square foot new project has an estimated construction value of $18 million. The architect of record is DRS architects.

The Auberle Foundation Third Floor Renovation project was awarded to **Massaro Corporation**. LGA is the architect of record.

The Johnstown Flood Museum was awarded to **Massaro Corporation**. Springboard Design is the architect of record.

Massaro Corporation was awarded the renovation/addition of the Covestro Building Two project, which has an estimated construction value of $10.6 million. IKM Architects is the architect of the 8,500 square foot project.

Atlantic Aviation awarded **Massaro Corporation** the Customs and Boarder Protection Renovation project. EOS studio arc is the architect of the 500 square foot renovation.

Massaro Corporation was awarded the Waterline System Upgrade and new Water Pump House at the Penn State University Beaver Campus. The engineer for the $1.5 million project is Gannett Fleming.

Carnegie Mellon University selected **Jendoco Construction Corp.** as construction manager for its $9.5 million Margaret Morrison Street Neighborhood Commons. Bohlin Cywinski Jackson is the architect for the residence hall infill addition and renovation.

Jendoco Construction Corp. is the construction manager for Allegheny General Hospital's $13 million EP Lab/Cath Lab renovation. Stantec is the architect.

Rycon's Special Projects Group is the general contractor for the $3 million, fast-track renovation of three Robert Morris University residence halls' laundry and restrooms.

In Brooklyn Park, MN, **Rycon's** Special Projects Group is constructing a new $3.7 million, 14,900 square foot indoor gun range.

Rycon's Special Project's Group is the construction manager responsible for renovating two JCPenney locations in Glendale, AZ and San Jose, CA.

Dick's Sporting Goods selected **Rycon's** Special Projects Group to renovate two Golf Galaxy stores in Glendale, AZ and Towson, MD as well as a footwear department at a store in St. Peters, MO.

A $1 million renovation of a Starbucks location in McCandless, PA will be handled by **Rycon's** Special Projects Group.

University of Pittsburgh awarded a contract to **Volpatt Construction** for the Scaife Freezer Farm. The project was designed by McKim and Creed.

Volpatt Construction was selected as general contractor for the Redeeming Grace Church renovations in Bethel Park. The architect is LGA Partners.

Volpatt Construction is the successful contractor on $1 million Pitt Chevron Hall renovations. CJL Engineering is the project engineer.

UPMC awarded **Volpatt Construction** a contract for UPMC St. Margaret Hospital Omnicell. The architect is CPL Architects.

A. Martini & Co. was the successful general contractor for the $1.2 million Chase Bank in Verona. The project includes an extensive renovation of a previous bank building. The architecture firm for this space is David Allan Youse Architects.

A. Martini & Co. recently completed the buildout of the base building amenities suite and the tenant space for RareMed Solutions at 200 Industry Drive. The architect was Design 3 Architecture for both spaces.

A. Martini & Co. was selected to be the CM/GC for the JCC - J & R Family Park Monroeville. This project includes construction of a Neurodiverse Building, swimming pool improvements, renovation of the dining hall, and construction of a new Shade Pavilion. Rothschild Doyno Collaborative is the architect for this project.

A. Martini & Co. was recently selected to perform the demolition project on the 16th floor of Oxford Center for Shorenstein.

Landau Building Company is delivering construction management services to Fox Chapel Racquet Club's multi-phased renovation project of the main clubhouse.

WVU Medicine awarded the University Town Centre Phase II Expansion to **Landau Building Company**. As general contractor, Landau will oversee the new two-story, 60,000 square foot addition to the existing three-story building. The architect is Perkins & Will. Valley Engineering is the engineer of record.

University of Pittsburgh selected **Turner Construction** for its Alumni Hall Renovations. The project involves renovation of 15,700 square feet in Alumni Hall on floors seven and eight. Work includes an 800-seat auditorium, a reception lobby, and a back corridor. Perkins Eastman is the architect.

FACES & NEW PLACES

PJ Dick Inc. announced that **Eric Pascucci** was promoted to president. Prior to assuming this role, Pascucci served as executive vice president, director of **PJ Dick's** Estimating and Preconstruction Department, and project executive for **PJ Dick's** Special Projects Group. Pascucci is a graduate of Clarion University, where he earned a master's degree in business administration and a bachelor's degree in real estate investment. He succeeds **Jeff Turconi**, who has been appointed to **PJ Dick** – Trumbull – The Lindy Group's Board of Directors and will continue in an executive oversight role for the AECOM/Hunt/**PJ Dick** Joint Venture on the $1.4 billion Pittsburgh International Airport Terminal Modernization, and the Whiting Turner/**PJ Dick** Joint Venture on the $800 million UPMC Presbyterian Tower.

Ben Brands joins **PJ Dick** as a project superintendent at the Pittsburgh Airport Terminal Modernization project.

Project Manager **Ron Barranger** joined **PJ Dick's** Pittsburgh Airport Terminal Modernization Program team with more than 20 years of construction management experience.

Site Safety Manager **Alex Chovan** joined **PJ Dick**. He is a graduate of Indiana University of Pennsylvania with a BS in safety, health, and environmental applied sciences as well as a BA in geography and regional planning.

Chelsea Burton joined **PJ Dick** as a site safety manager. She graduated with a BS in safety, health, and environmental applied sciences from Indiana University of Pennsylvania in 2021 and spent two years with a large general contractor in Virginia.

Mosites Construction hired **Darrin Smith** as project engineer. Smith is a recent graduate of Youngstown State University with a Bachelor of Science degree in Mechanical Engineering.

Scott Cessar has been named CEO of **Eckert Seamans**. **Tim Grieco** has replaced Cessar as head of the Construction Practice Group. **Chris Opalinski** continues as head of the Litigation Division.

AIMS Construction announced that **Brad Guenther** joined the company as assistant superintendent.

Josh Hardaway was hired earlier this year to serve as a project engineer at **Massaro Corporation**. Josh graduated from California University of Pennsylvania and has been in the construction industry since 2020. He is ICRA and OSHA 8-hour certified.

Kattie Gutt was hired as the administrative assistant to the estimating/precon department at **Massaro Corporation**. Katie graduated from Robert Morris University with a degree in business administration, and a minor in supply chain.

Marc DelRosso joined **Massaro** as a senior preconstruction manager in April of this year. Marc worked for Massaro in 1998 as a project engineer and worked for a large regional architect for the past 25 years.

Anthony Didiano has been hired as a project engineer. Anthony graduated from Point Park University and has been in construction since 2018. Anthony brings with him valued experience with concrete project management.

Jonah Dusi has been in the industry since 2008 and recently joined **Massaro CM Services** as a site superintendent.

Erin Summers joined **Massaro** as a project cost accountant. Her knowledge covers a broad set of skills that will assist with many aspects of the lifecycle of a construction project.

Kara Seebacher joined **Mascaro** as an HSE Manager on April 24.

On May 8, **Heather Sabala** joined **Mascaro** as a union payroll accountant. She has over 25 years of construction accounting experience which includes oversight of union payroll, accounts receivable, and job costing.

Mike Mackowick joined **Mascaro** as a carpenter foreman on May 8. He has been involved in the construction industry in various capacities since he was 15.

Julia Mascaro completed her internship at **Mascaro** and joined the Marketing Department full-time as the marketing coordinator on May 8.

On May 22, **Erica Teichman** joined **Mascaro** as a health safety and environmental (HSE) manager. She is a recent graduate from Slippery Rock University with a B.S. in Safety Management.

Tommy Hovanic joined **Mascaro** as a project engineer on May 22. He is a recent graduate from Penn State University-Harrisburg with a degree in Structural Design and Construction Engineering Technology and a Construction Management concentration.

Dominic Vaccarello joined **Mascaro** on June 5 as a project engineer. He previously interned with Mascaro for two rotations.

On June 5, **Drew Koczur** joined **Mascaro's** surveying team.

Carpenter foreman **Thomas Busby** joined **Mascaro** on June 5.

Greyson Nolder, surveyor at **Mascaro**, recently passed the Ohio Professional Land Surveyors exam.

Adrianna Corrales has joined **Rycon** Pittsburgh's Building Group as assistant project manager.

Brian Davis, University of Pittsburgh alumnus with four years' experience, joins **Rycon** Pittsburgh's Special Projects Group as assistant project manager.

Rycon Pittsburgh's Building Group welcomed **Lydia Fink**, Slippery Rock University alumna, as estimating coordinator.

Melissa Holtz was promoted to accounts payable team lead within **Rycon** Pittsburgh's accounting department.

Volpatt Construction announced that **James Huber** has been promoted to director of operations and project management. Over the past 14 years, Jim has worked on multiple high-profile projects for owners that include Carnegie Mellon University, University of Pittsburgh, UPMC, AHN, The Diocese of Pittsburgh, and The Diocese of Greensburg.

Burchick Construction announced that **Diego M. Williams-Wölfin** joined the firm as assistant project manager. Williams-Wölfin is an engineering graduate of Georgia Institute of Technology.

AWARDS & CONTRACTS

(CONTINUED FROM PAGE 64)

DiMarco Construction was the successful general contractor on the new $9.4 million municipal center for West Deer Township. DiMarco Construction will handle general trades construction for the new 5,000 square foot facility. The architect is HHSDR Architects & Engineers.

G. M. McCrossin Inc. is the successful bidder on the Monument Water Authority Treatment Plant renovations outside Beech Creek, Clinton County, PA. The engineer is Herbert Rowland & Grubic Inc.

Carl Walker Construction is the contractor for the new $35 million, 909-car Block E Parking Garage in the Lower Hill District, being developed by Buccini Pollin Group. Desmone Architects is the architect for the 310,000 square foot new garage, which will be located adjacent to the new Live Nation entertainment venue.

G.E.M. Building Contractors, an **E & G Development, Inc.** company, is the successful bidder on the $1.5 million Bus Wash Facility Improvements for the New Castle Area Transit Authority. The project was designed by Johnson Mirmiran & Thompson.

Shaler Area School District awarded **Caliber Contracting Services** a contract for renovations to the Titan Stadium Press Box. The architect is HHSDR Architects & Engineers.

MARCH OF DIMES

13th Annual Pittsburgh Transportation, Building, & Construction Awards Luncheon

March of Dimes will present the **13th Annual Pittsburgh Transportation, Building, & Construction Awards Luncheon** to honor the leaders and projects from both the public and private sectors of the transportation, building, and construction industries.

When

Tuesday, September 12, 2023

Where

The Westin Pittsburgh
1000 Penn Avenue, Pittsburgh, PA 15222

2023 Honorees

Frontline Worker of the Year
Jason Malatak, Director of Risk Management, Mosites Construction Company

Local Labor Leader of the Year
Thomas McIntyre, Business Manager/Financial Secretary, IBEW Local Union 5

Industry Leader of the Year
Will Pickering, CEO, Pittsburgh Water & Sewer Authority (PWSA)

Building Project of the Year
Second Avenue Commons-Owner: Second Avenue Commons

Transportation Road Project of the Year
McLaughlin Run Road Roundabout-Owner: PennDOT District 11-0

Transportation Bridge Project of the Year
Fern Hollow Bridge Replacement-Owner: City of Pittsburgh & Project Manager/Oversight: PennDOT District 11-0

To learn more, please contact **Barbara Roth** at **broth@marchofdimes.org, 412-506-8611** or visit **marchofdimes.org/events/pittsburghtbc.**

March of Dimes believes in a world where every mom and baby is healthy regardless of wealth, race, gender, or geography. The U.S. remains among the most dangerous developed nations for childbirth, especially for families of color. Through research, programs, and advocacy, our supporters enable us to be there for parents throughout their pregnancies.

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Sunbelt Rentals, Inc.
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Triumph Modular
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Zurich NA Construction

CLOSING OUT

BreakingGround asked Kelly Noel, vice president of corporate real estate and construction at UPMC, and Gloria Kreps, vice president of public relations at UPMC, about the larger role a healthcare system plays in a community like Pittsburgh.

BG: What role does the healthcare system play in the vitality of a region?

UPMC: The vibrancy of the Pittsburgh region – as well as the communities we serve throughout the commonwealth is essential to the mission of UPMC. UPMC has long been committed to being a great neighbor, a trusted resource for health care, and a creator of well-paying jobs.

BG: In what ways do the healthcare systems that exist in Pittsburgh serve to improve the regional economy and standard of living?

UPMC: We are proud of our leadership as a key economic engine for the region, with tens of thousands of employees choosing to work and live in western Pennsylvania. We've led the way in increasing our minimum starting wages for entry-level positions to $18 an hour by January 2025 at UPMC's Pittsburgh hospitals -- the first health care employer in the state to make this commitment.

BG: How does the healthcare environment in Pittsburgh compare to other major cities where you have worked or are familiar with?

NOEL: Though healthcare is at the foundation of many communities, UPMC is uniquely positioned not only as an academic medical center but also with patients coming from across the United States and even the globe to access life changing medical care, treatments, and clinical trials.

In nearly every interaction I have across Pittsburgh there is a tie to healthcare, from patients, to vendors and suppliers, and the thousands of various partners that we/UPMC interact with every day ensure that world class health care is provided every day. We also have a unique focus on positive contributions and improving the overall wellness of the communities we serve. While this has recently become a focus for many health systems, it has been an established effort at UPMC for decades.

BG: Why is there so much construction going on in the hospitals in metropolitan Pittsburgh?

UPMC: At UPMC, our UPMC Mercy Pavilion and UPMC Presbyterian projects enable us to continue to offer some of the finest patient-centered care in the world – in vision, physical rehabilitation, transplantation and in a full complement of advanced medical specialties. These facilities are also where we will continue to conduct transformative research to advance our capabilities in caring for our patients.

We are excited about the economic potential these facilities bring, helping us continue to attract patients from this region and patients who will travel here.

It is important to note that we are building for greatness here at UPMC. There are hundreds of other projects of various scale going on concurrently across our footprint—brick by brick, physician by physician, and patient by patient. We've not only built these wonderful facilities – we are also building the health care of the future.

BG: Can the healthcare systems play a role in attracting people and talent to a region?

UPMC: We continue to attract the finest clinicians, researchers, educators, and industry partners from around the country and around the world to UPMC and to our academic partner, the University of Pittsburgh. Additionally, patients travel from the region, across the nation and across the world for the advanced care UPMC provides.

BG: Besides providing medicine and therapy, how do healthcare systems add value to the communities they serve?

UPMC: UPMC contributes a significant share of the region's charity care and one quarter of the hospital charity care across the Commonwealth.

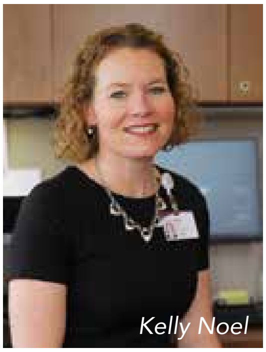
UPMC provided $1.5 billion in community benefits during Fiscal Year 2021, which includes $473 million for community health and wellness programs and charitable contributions.

UPMC provides nearly half of all funding for hospital-sponsored community health improvement programs statewide. From neighborhood clinics and support groups to free medical equipment and transportation, UPMC provides more than 3,000 free and subsidized programs.

UPMC contributes more than half of all hospital-funded research in Pennsylvania, directly investing $367 million in 2021. These investments advance medical research and help attract top-notch physicians and scientists to our communities.

Efforts to support our communities focus on addressing social needs, include:

- Improving affordability and access to housing for our members and communities
- Creating access to opportunities for employment and workforce development at UPMC
- Making meaningful member connections to community resources
- Improving care coordination for individuals with intellectual and developmental disabilities
- Addressing the unique needs of our diverse patients and Health Plan members.



Kelly Noel