Breaking Ground

THE MAGAZINE OF THE MASTER BUILDERS' ASSOCIATION OF WESTERN PENNSYLVANIA

JANUARY/FEBRUARY 2020

THE BIG PICTURE
HOW LONG CAN IT LAST?

MBA

大成 DENTONS
cohen& grigsby
BINGHAM GREENEBAUM DOLL LLP BGD
Cohen & Grigsby is joining with Dentons and Bingham Greenebaum, connecting you to top-tier legal talent, coast to coast and around the world.
Find out more at dentons.com/goldenspike

Contents 2020

PUBLISHER
Tall Timber Group
www.talltimbergroup.com

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

PRODUCTION
Carson Publishing, Inc.
Kevin J. Gordon

ART DIRECTOR
Carson Publishing, Inc.

GRAPHIC DESIGN
321Blink

CONTRIBUTING EDITOR
Anna Burd

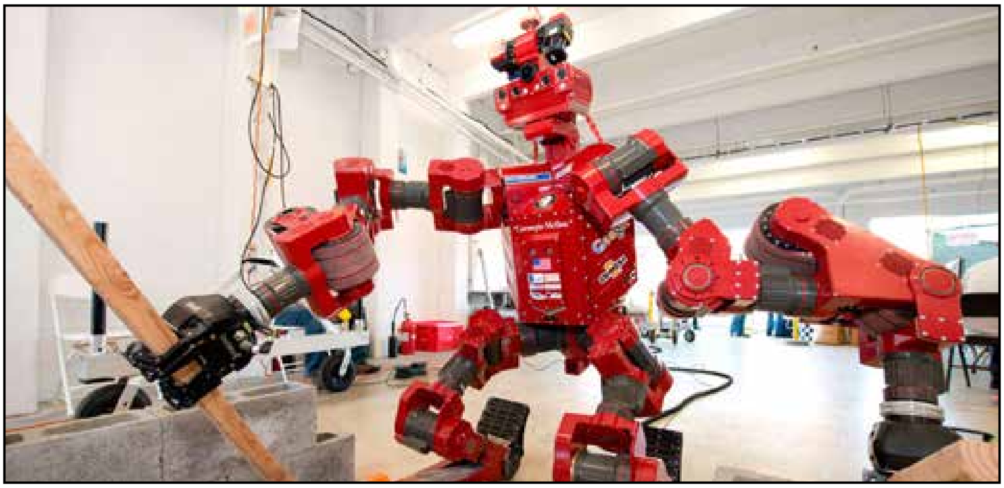
CONTRIBUTING PHOTOGRAPHY
Autumn Harris
Edward Rieker Photography
Master Builders Association
Ed Massery Photography
Allegheny Health Network
JLL
Christian Baker
NAIOP Pittsburgh
Allegheny Conference on Economic Development

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

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

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

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



MBA

PUBLISHER'S NOTE

Mayor Bill Peduto ruffled a few feathers when he spoke out against the petrochemical industry growing in Western PA at the October 30 Climate Action Summit. There were few surprises in response. Gas industry proponents thought the comments were ill-advised. Environmental groups applauded them. Pro business advocates like the Allegheny Conference on Community Development, and chambers of commerce in Washington and Beaver accentuated the positives that have come from the development of the natural gas deposits in the region.

Peduto's comments were completely in character. He's long been an advocate for the environment, and he doesn't mind ruffling feathers. Peduto is willing to be an agitator for a sustainable Pittsburgh.

His stance against the oil and gas industry is also consistent. He was on council when the fracking ban was passed in the city and has offered no apologies to those who insist that Peduto's public positions are the reason that none of the oil and gas companies have moved into the Central Business District.

Those who took issue with Peduto were on the side of the jobs created and economic gains the gas industry has brought to this region. That's not a thin argument. For all the chest thumping done about Pittsburgh's new economy, it was the Marcellus Shale play that provided the soft landing when the financial crisis hit. It's not a coincidence that the job growth of the early 2010s stalled when the oil price cratered in mid-2014. Among those defending the industry were leaders who took the position that the issue is not a binary "jobs or environment" choice.

I think that's a tough argument, but one worth making. Intentionally or not, Mayor Peduto may have started a civic (and civil) conversation about the rebirth of heavy industry in Western PA. It's a topic that is controversial and messy, but it's a conversation that should take place.

The binary argument, that you can either have a clean environment or a robust petrochemical industry, but not both, has a lot of historical backing. Pittsburgh is known as a steel town, but the chemical industry also had a large presence in the Tri-state area. Anyone over the age of 55 can tell you what this part of the world looked like in the 1960s and 1970s. It was not a garden spot. Heavy industry produced goods and jobs, but it also polluted the environment. It's not liberal fearmongering to express concerns that revitalization of one heavy industry could be bad for the environment. As if to make that point, the Keystone Pipeline leaked 338,000 gallons of oil in North Dakota at roughly the same time Peduto was issuing his warning.

It's also true that the oil and gas industry has become a much better environmental citizen. At considerable cost, oil and gas companies have invested to prevent environmental disasters and day-in day-out damage. Those companies also have the highest safety standards going. Even with extraordinary efforts to clean up, the industry is a dirty one. There will be spills. There will be explosions. There will be air and noise pollution. Just to be clear, the process of extraction involves exploding layers of rock to let the oil and gas burst out under enormous pressure. It's almost impossible to control the physics of that 100 percent of the time.

Being a manufacturing hub has always required a level of compromise between economic gains and environmental losses. I think we're kidding ourselves to say otherwise. Manufacturing impacts the environment more than not manufacturing. We're also kidding ourselves to believe that there can be a booming economy without environmental impact. Human existence requires the exploitation of the Earth's resources. Even if Pittsburgh's economy were to be based entirely on innovation and technology without manufacturing, the realities of economic growth mean there will need to be more homes, more energy consumed, more people, more of everything.

It's a question of how much environmental damage we're willing to tolerate while accepting the benefits of exploiting the natural resources that lay beneath Western PA. One hundred years ago, hungry steelworkers accepted smoky skies to put food on the table. That isn't necessary today.

We're now at the point where it's possible to exploit and renew resources. We can use fewer resources. We can continue to renew more. It is Pittsburgh's good fortune that some of its economic growth is coming from businesses that are trying to solve the problem of sustaining the Earth while society thrives. The environmental compromise we make to accept three ethane crackers and a thriving chemical industry will be a much better one than the compromises made to build a thriving steel industry. The compromise of today can be diminished further over time if the leaders and residents of Western PA are vigilant in pressing manufacturers to improve and if better manufacturing technology emerges. That's on us. But chasing manufacturing away won't eliminate the environmental threat of economic growth. The compromise will just be different.

Bill Peduto is just the mayor of Pittsburgh. He can't keep PTT from building in Ohio, or Exxon Mobil from building in Beaver County, let alone stop hundreds of other companies from making stuff here as a result of the economic resources. He can't even stop them from building within the city limits if the council doesn't agree. He's a civic leader expressing a strong conviction. Even if you disagree with the conviction, isn't it refreshing to have an elected official take a potentially unpopular position based upon conviction?

The mayor is just talking. Let's keep the conversation going. And let's be honest about it.

Jeff Burd


Industry Intelligence. Focused Legal Perspective.
HIGH-YIELDING RESULTS.

REGIONAL MARKET UPDATE

Dollar Bank®
Since 1855

The start of the fourth quarter saw the short-term economic outlook for Western PA dim slightly, as data on employment and unemployment showed the U.S. economy outperforming Pittsburgh.

Metropolitan Pittsburgh's seasonally adjusted unemployment rate stood at 4.1 percent in October, unchanged from October 2018, according to data from the Pennsylvania Department of Labor and Industry. The national unemployment rate last month was 3.6 percent. During the past year, the number of people in the labor force expanded by 5,100 people and the number of unemployed increased by 100. October also marked the first month in more than three years that the region lost jobs. The consensus of regional economists is that 2019 employment gains will be muted at best, flat in the worst case scenario. The expectation is that job growth will be less than 5,000 for the full year.

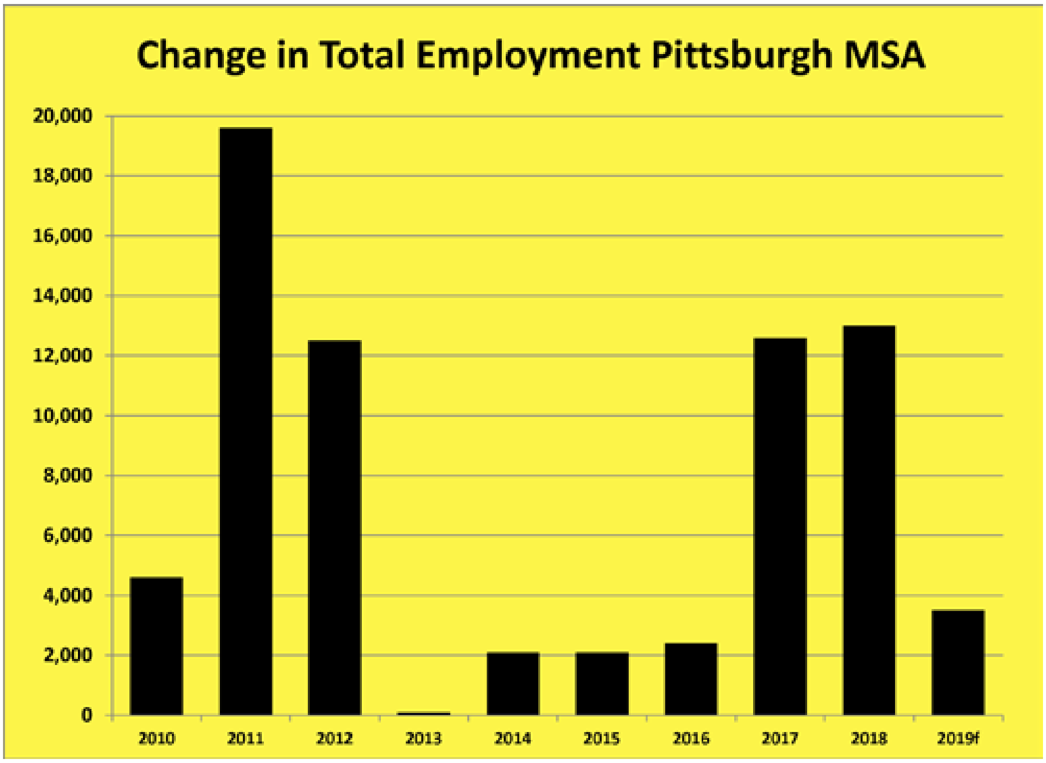
That forecast may end up being too pessimistic by the time government data is revised in early spring of 2020, but it reflects the prevailing trend. One reason the net growth numbers are lower is the expansion of the labor force, which had been declining for years. The tight labor market had also been blamed for low growth but the unemployment rate, although low, suggests that there is slack that could be absorbed. The conclusion is that Pittsburgh area employers, particularly those outside Allegheny and Butler County, aren't expanding at the same pace as the rest of the country.

A mid-December report from the Bureau of Economic Analysis (BEA) showed economic output in metropolitan Pittsburgh rebounded last year. After declining in 2016 and growing only 1.7 percent in 2017, Pittsburgh's gross domestic product (GDP) was 3.0 percent higher in 2018, outpacing GDP growth for both Pennsylvania (2.6 percent) and the U.S. (2.9 percent).

Like the Pittsburgh economy, the regional construction industry experienced a late fall lull of activity, but there was a burst of contracting or work starts in the fourth quarter that boosted volume. Nearly one billion dollars in starts occurred in the fourth quarter, bringing the estimated full year total to $4.72 billion. That's down three percent from 2018.

A breakdown of the starts by building type reveals that the work is generally following the fortunes of the economic drivers influencing the region.

Construction of healthcare facilities led the way with more than $800 million started, including the Vision and Rehabilitation



A slowdown in the pace of hiring since late summer depressed the expected total job growth for 2019. Source: Bureau of Labor Statistics, Federal Reserve Bank of Cleveland.

Construction activity in the fourth quarter was stronger than expected, making for a strong start to 2020. Source: Tall Timber Group.

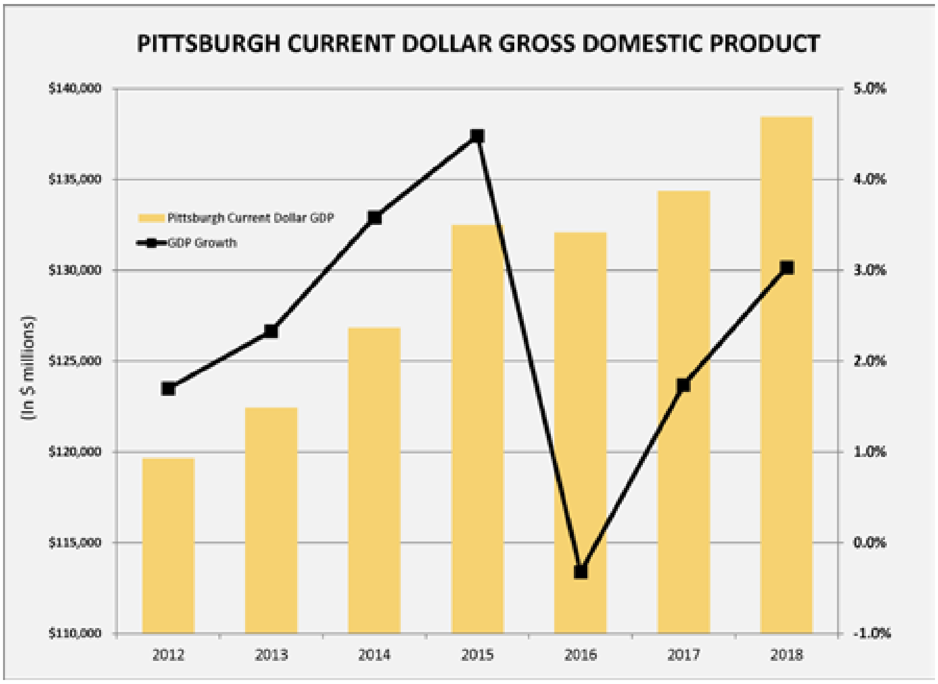
Hospital at UPMC Mercy. Office construction totaled nearly $500 million. Industrial construction, including manufacturing facilities but excluding the Shell Franklin project, reached $360 million. College/university projects and private multi-family housing rounded out the top five categories, at slightly more than and less than $300 million respectively.

The outlook is for these same five segments to lead construction activity in 2020 as well, although the order will likely change. Construction of college/university facilities should top $600 million in 2020, with private multi-family forecasted to be in the same range. Healthcare volume will slip with no new hospitals expected to get started in 2020; however, construction should still top $300 million. The size of the office and industrial construction market in 2020 will depend largely on how speculative the development community is.

Both office and industrial usage is on the rise in Pittsburgh. The latter is being driven by logistics expansion and energy-related businesses. Amazon is in the market for another 200,000 square feet nearer the city limits and has looked at a site for another massive fulfillment center. Logistics is behind the spec development of warehouses in Clinton Commerce Park, Westgate Business Park, and Jackson Distribution Center. According to Newmark Knight Frank, the vacancy rate for industrial properties dipped to 6.4 percent as winter began. Absorption of industrial space topped 162,000 square feet, net, for the third quarter, the seventh consecutive quarter of positive absorption.

Fundamentals of the office market are slightly softer, with more vacant space, especially in the Downtown market. The data from JLL showed the vacancy rate overall for office buildings at 17.1 percent, up from 16.6 percent a year earlier. Much of the softening can be attributed to large vacancies in the 525 William Penn Place and One Oxford Centre buildings, both older buildings in the process of re-branding.

Despite the fundamentals, the office market in Pittsburgh is the most likely to experience a surprise boom in 2020. There was an unusually high volume of spec office projects in the pipeline at the end of 2019, most of which were in the Strip District and Oakland submarkets. Both of these markets have seen rents increase rapidly in recent years. In Oakland, the lack of available space – essentially zero Class A office – is pushing rents to record levels. Recent leases cracked the $50 per square foot level. Four spec offices, totaling about



After lagging U.S. GDP growth in 2016-2017, Pittsburgh outpaced the U.S. economy with three percent growth in 2018. Source: Bureau of Economic Analysis.

900,000 square feet, have been proposed within three blocks of each other at the western end of the Forbes/ Fifth corridor. With university research and spinoffs growing, demand for at least some of this space will ensure that new buildings fill up as quickly as constructed. Likewise, demand from technology companies has made the Strip District the most dynamic office submarket at the moment. New construction at 3 Crossings and District 15 has filled up immediately and rents are reported to be at or above $40 per square feet. With the approval of Oxford Development's next phase at 3 Crossings and Burns & Scalo Real Estate assuming a lead role on District 15 Beta, construction of half million square feet of new space is likely by summer.

Several other developers, most from outside Pittsburgh, have

Tall Timber Group's preliminary forecast for construction in 2020 expects that construction volume will finally top $5 billion in the coming year.

additional office projects in the pipeline in the Strip. These developments, including new buildings from Rugby Realty/Al. Neyer and JMC Holdings, propose as much as 1.5 million square feet. It's unlikely that any more than 400,000 square feet of these will get underway in 2020, but the projects will be entitled should more demand emerge.

This year represents the peak year of employment for the construction forces building the Shell Franklin plant in Potter Township. With 5,000 or more workers on site throughout 2020, most observers of the industry are expecting that the long-awaited final investment decision will be made on PTT/Daelim's proposed ethane cracker in Dilles Bottom, OH. Hundreds of millions of dollars have been invested in demolition, cleanup, and site preparation, which is ongoing. The capacity – now at 1.7 trillion pounds per year – of the plant has increased significantly since it was first announced. According to PTT, however, no schedule exists for making the final decision. Moreover, none of the final due diligence that accompanied the Shell project – surveying labor for availability, for example – has been occurring. It appears unlikely that the PTT project will get underway in 2020, let alone have a significant impact on regional construction.

Tall Timber Group's preliminary forecast for construction in 2020 expects that construction volume will finally top $5 billion in the coming year. The combination of three billion-dollar projects – Shell's cracker, US Steel Edgar Thompson Works upgrade, and Pittsburgh International Airport's terminal – will be a $2.5 billion head start towards that number. Activity in the apartment and college/university markets should add another $1 billion or more. Even if election year politics create heightened uncertainty or an economic downturn in 2020, the fundamentals of the Pittsburgh market are strong enough to maintain better-than-average results for the mainstream of the construction market.

The forecast for 2020 does not look that different from what was expected of 2019. Indecision on the part of owners, who may not have been well prepared for the higher construction costs, delayed enough projects that business development was fitful for most firms. The backlog of projects, many of which are not dependent upon cyclical needs, has built to the point that a record 2020 is almost a certainty. BG

NATIONAL MARKET UPDATE

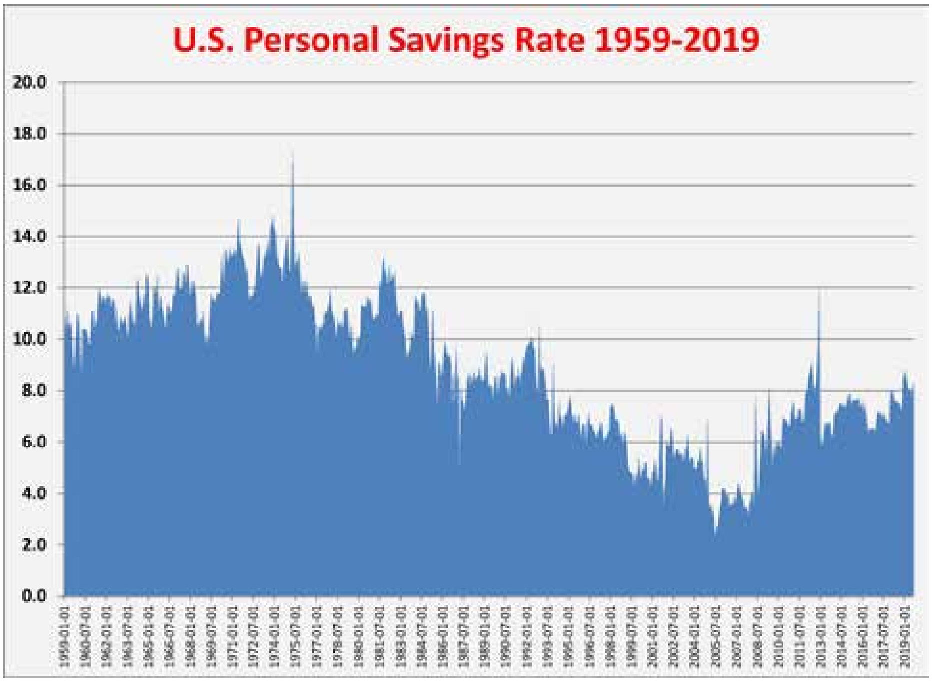
Each year, as the holidays approach, construction economists roll out their forecasts for the coming year. As 2019 winds down, the construction industry's experts are fairly uniform in their predictions about 2020.

The chief economists for Associated General Contractors (AGC), the American Institute of Architects (AIA) and ConstructConnect discussed the outlook for 2020 in a webinar on October 23. AGC's Ken Simonson predicted that construction spending would increase one to five perecent from 2019 to 2020, with a range of zero to four percent for private nonresidential and public construction. ConstructConnect's Alex Carrick predicted that the value of construction starts would slip 1.6 percent in 2020. Carrick sees nonresidential building starts up 0.9 percent. AIA's Kermit Baker noted that the Architecture Billings Index has slowed this year to breakeven or lower for all practice specialties, an indication that design activity is slowing. Baker pointed out that design activity is a historically solid indicator of construction activity 12 months out.

Dodge Data & Analytics released its 2020 Dodge Construction Outlook on October 31. Richard Branch, Dodge's chief economist, pointed to easing economic growth, growing trade tensions and a shortage of skilled workers as the basis for a forecast of one percent decline for 2019 and a four percent drop in 2020. Dodge predicts that residential construction will decline at twice the rate of nonresidential and non-building construction.

The final data points for construction in 2019 are bearing out the predictions of slowing activity. Total construction spending remained both flat and high in November, with $1.29 trillion in starts on a seasonally-adjusted annualized basis. Spending since January 2018 has fluctuated in a range of 2.5 percent, with $33 billion separating the record high of $1.318 trillion in July 2018 from the low point of the past 24 months. Unpacking the nonresidential data, you see opportunities for higher levels of activity in 2020. Contracting volume in the public sector continues to increase, breaking out of the longer term trend. Federal spending on nonresidential construction is less than seven percent of the total public construction investment. Even a modest increase in federal spending could make up for the pullback in private construction.

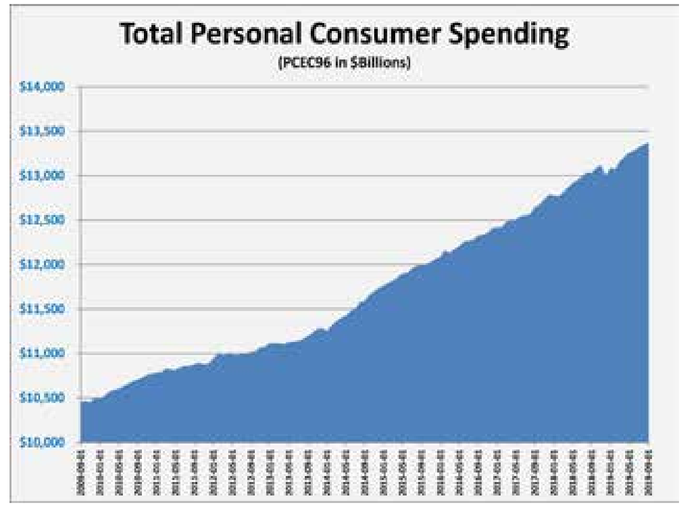
Housing construction is likewise range bound, although with slightly more volatility. October's 1,314,000 new housing units started was nearly identical to the 1,325,000 starts in October of 2016. New housing construction has fluctuated by less than 200,000 units during the past three years, with the majority of the months falling between 1.2 and 1.3 million units.



Consumers are saving at a higher rate while spending at a healthy clip. Source: Federal Reserve Bank of St. Louis.

Most economists have pinned the slowing construction activity on short-term economic conditions but there are some key macro-trends worth studying that are indicators and influencers of the U.S. construction market.

One trend that is hidden in the steady construction market data nationally is the composition of the construction projects that have started. While construction volume is down three percent, plus or minus, compared to 2018, there are an unusual number of construction projects over $1 billion. Removing these projects from the mix reveals that construction of all other projects is actually down 15 percent year-over-year. A significant share of that overall weakness is attributable to structural changes in the U.S. economy.



Source: Bureau of Economic Analysis

Source: Bureau of Economic Analysis

Long-term trends that are going to influence construction in the next decade include the demographic makeup, lifestyle changes, and population growth.

The aging of the Baby Boomers is having an expected impact on construction of facilities that serve older people. The size of the now over-55 generation is driving construction of healthcare facilities, senior living, hospitality, and acute care services like memory care. Less obvious is the impact of Baby Boomers on market sectors like the housing market. While the downsizing of this huge generation is driving elderly residential options, the greatest share of the Baby Boomer generation is aging in place. Because of improvements in healthcare and more awareness of healthy lifestyle choices, Baby Boomers are able to maintain their family home for longer. Relocation for economic reasons has also slowed. During a given year in the 1960s, 20 percent of Americans moved to a new home. Now that rate is ten percent. These trends are having a significant impact on the inventory of existing homes for sale, which, in turn, is having a significant impact on the home ownership rate of young adults.

Younger Americans, the so-called Millennial and Gen Z generations, are the second major long-term demographic driver. Aside from the lower home ownership rates, Millennials have weaker balance sheets on average than previous generations. That is influencing residential construction and, if debt ratios don't improve, could have an impact on lifestyle choices and retirement plans for these Americans 30 years hence.

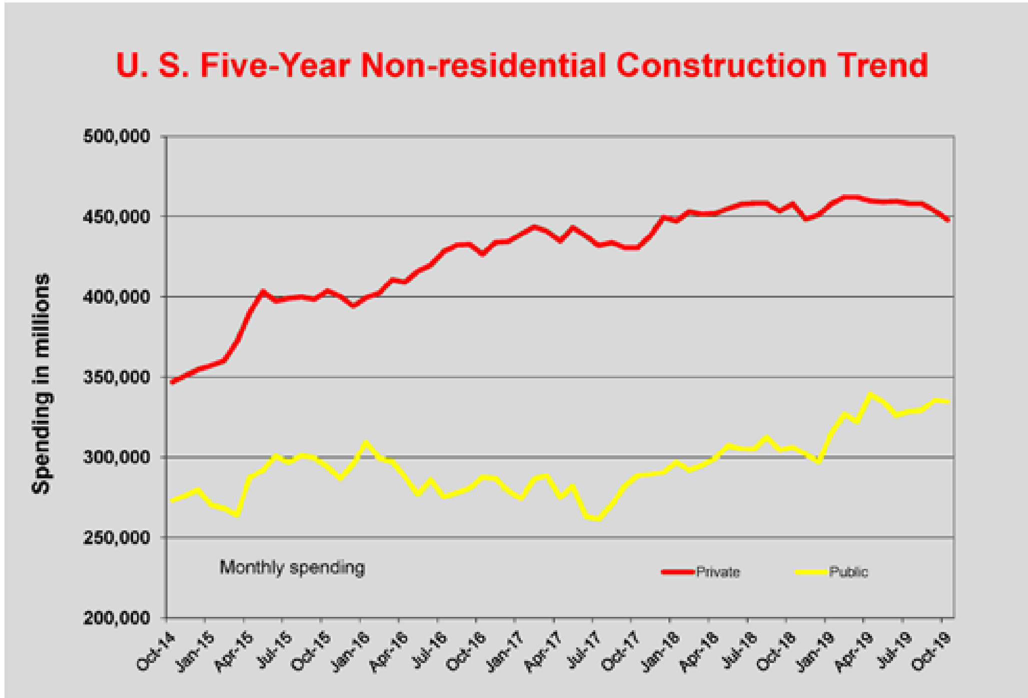
Somewhat related to the financial health of young adults is the slowing birth rate, which is contributing to population growth that has slowed dramatically. Numbers of immigrants and refugees have plunged since 2017. As a result, U.S. population is growing at a rate unseen since the Great Depression, at 0.6 percent. This low rate, should it continue, will mean that U.S. population will decline in the 2030s, as Boomers begin to die at a faster rate. Low population growth means lower demand for products and services. It can also lead to lower productivity, even if the per capita productivity increases. A continuation of this trend will lead to a major adjustment in the physical plants of public schools and higher education. It's also likely to alter the political landscape dramatically.

Construction generally follows the rhythm of the business cycle. Occasionally, there are long-term shifts in the business and social environment that alter the landscape, regardless of whether the business climate is good or bad. One or more of the shifts described above are likely to have an impact that outlasts any single business cycle.

The current business cycle continues to show strength that defies the predictions of a downturn. While gross domestic product (GDP) growth has settled back into the range of two percent, few economists see output slowing from there and most of the rest of the world is seeing flat or declining GDP growth. Even the emerging Asian markets – especially China and India – have slowed from the hyper-growth of mid-decade. Forecasts for China's economy in 2020 have GDP growth falling to five percent or less.

U.S. unemployment has likely bottomed out at the 3.5 percent level. The number of unemployed persons – 5.8 million – remains significantly less than the 7.1 million jobs open. The expected pressure that should result from such a tight labor market has not materialized; however, weekly wages are rising at an annual rate of more than three percent. That is twice the rate of inflation at the moment. Job creation had slowed during the third quarter but 266,000 new positions were added in November, and the previous months employment gains were revised upward again. The monthly average of 180,000 new jobs in 2019 is unexpectedly high.

Strong hiring is one of the metrics that suggest that U.S. businesses are still bullish on the economy. There are others, like flattening profit margins and falling investment, which indicate that businesses are becoming more cautious. This caution highlights the growing bifurcation between how business and consumers are reacting to the economic news.



Private nonresidential spending remains level at cyclical highs and public spending has grown by almost 20 percent during the past two years. Source: U. S. Census Bureau.

Two years out from the Tax Cut and Jobs Act of 2017, it's clear that the business impact of the legislation was overstated. Cyclical factors, like slowing global markets, have had a bigger influence on capital investment plans. This has put a pinch on manufacturing in the U.S. at a time when trade tensions have already caused problems. The prospects for heightened business investment in 2020 are not good either. Business cycle concerns have not abated and the uncertainty of presidential election politics is going to be an additional incentive for business owners to keep their wallets in their pockets.

Consumers, on the other hand, have shown only a small reaction to the geopolitical events that are making businesses more cautious. Individuals saw a fairly small financial impact from the tax cuts but have responded much more optimistically than businesses. Even without a big tax reduction, and with wages growing modestly, consumers are still in a strong position to keep the economy going. That is evidenced by the steady pace of consumer spending, even as consumer sentiment waffles.

The Conference Board Consumer Confidence Index® decreased in November for the fourth consecutive month. Lynn Franco, senior director of economic indicators at The Conference Board, predicts that the softening sentiment will keep GDP growth in the two percent range through the fourth quarter. Franco also believes, however, that the November reading bodes well for holiday season spending.

Data on consumer spending reinforces that opinion. Personal consumption neared the $13.5 trillion annual rate, growing by two percent or more each month in spite of dampened consumer sentiment.

The consumer's balance sheet is also a source of strength going into 2020. While there are categories of debt that are troubling – notably student and automobile loans – individuals are generally paying their bills. Delinquency on residential mortgages dipped to 3.7 percent in the third quarter, the lowest rate since the beginning of 1995. Wage growth has crept to three percent while inflation has fallen back to about half that rate. And the personal savings rate is approaching nine percent. That's higher than at any time since 1993, and four times the 2.2 percent savings rate of 2005. Higher savings can drag consumption down, but that is not the case today. Moreover, consumers have been saving at a higher rate in this decade than the previous two decades, suggesting that they are in a better position to weather an economic downturn. The open question is still whether that will be necessary. BG

WHAT'S IT **COST?**

The December 12 report from the Bureau of Labor Statistics (BLS) confirmed the prevailing trend of falling commodity prices and higher labor costs. Beyond the headline inflation rates for consumers and producers, the forward-looking takeaway from the November data is that construction costs have stabilized and look to remain stable but will remain about four percent higher than during the same time in 2019.

It is also worth noting that many of the major product categories - especially those like #2 diesel fuel, drywall, lumber, cement, and steel – have experienced reverses in the long-term trends during the past 90 days. Much of the stabilization in construction inflation has come from the steep declines in energy and steel prices. Both have rebounded from cyclical bottoms. The price of diesel has increased by 7.6 percent since August and steel products were down only 4.1 percent during that period, compared to more than 15 percent from one year ago.

The PPI for nonresidential construction overall was at 3.7 percent. That was down significantly from the 5.6 percent rate of inflation in October. November's lower rate confirms the expectations that year-over-year inflation would begin to slow as the mid-2018 spike faded.

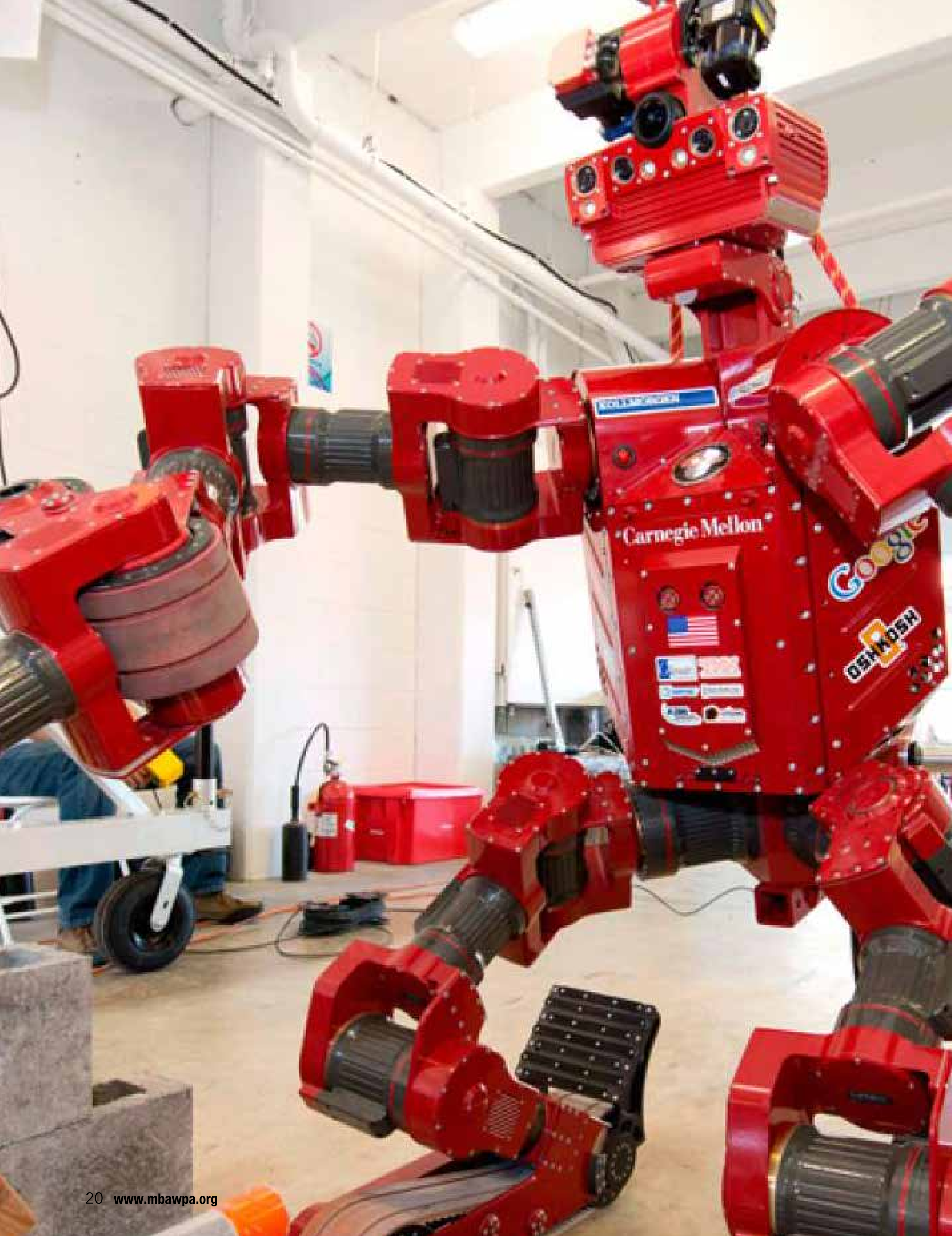
With wages increasing three percent year-over-year and productivity declining due to short labor, prices for construction put in place climbed higher than the overall rate of inflation (CPI at 2.1 percent) and that of producer prices (at 1.1 percent). PPIs for building types ranged from 3.0 percent for offices construction to 4.6 percent for warehouses. PPIs for specialty contractors were higher, ranging from 3.5 percent for electrical contractors to 4.6 percent for concrete contractors.

Year-over-year prices were held in check primarily by declining costs for energy (down 9.3 percent) and primary metals. Within the energy category, PPI for #2 diesel fuel plunged 15.6 percent and asphalt fell 16.1 percent. PPI for iron and steel scrap dropped 35.2 percent; aluminum mill shapes declined 5.8 percent; copper base scrap fell by 8.2 percent.

PERCENTAGE CHANGES IN COSTS Consumer, Producer & Construction Prices	Nov 2019 compared to 1 mo.	 3 mo.	 1 yr.
Consumer price index (CPI-U)	(0.1)	0.3	2.1
Producer price index (PPI) for final demand	(0.4)	(0.0)	1.1
PPI for final demand construction	0.0	0.5	3.7
PPI for new nonresidential buildings	(0.1)	0.6	3.7
Costs by Construction Types/Subcontractors			
New warehouse construction	(0.2)	0.9	4.6
New school construction	(0.2)	0.4	4.6
New office construction	0.3	0.3	3.0
New industrial building construction	0.0	0.9	4.2
New health care building construction	(0.2)	0.7	3.1
Concrete contractors, nonresidential	0.1	0.1	4.5
Roofing contractors, nonresidential	0.1	1.2	3.8
Electrical contractors, nonresidential	0.2	(0.1)	3.5
Plumbing contractors, nonresidential	0.0	0.1	3.6
Construction wages and benefits	N/A	1.5	3.7
Architectural services	0.0	(0.6)	(1.2)
Costs for Specific Construction Inputs			
#2 diesel fuel	1.2	7.6	(15.6)
Asphalt paving mixtures and blocks	(1.9)	(2.6)	(1.0)
Cement	(0.5)	(0.5)	2.1
Concrete products	(0.4)	(0.9)	3.0
Brick and structural clay tile	0.0	0.1	2.2
Plastic construction products	(0.2)	(0.4)	0.0
Flat glass	0.4	(0.2)	1.3
Gypsum products	0.0	0.2	(4.8)
Lumber and plywood	0.3	1.0	(2.1)
Architectural coatings	0.9	1.1	3.8
Steel mill products	(1.9)	(4.1)	(15.1)
Copper and brass mill shapes	0.7	(0.3)	0.8
Aluminum mill shapes	(1.4)	(2.6)	(5.8)
Fabricated structural metal	(1.6)	(7.2)	(2.7)
Iron and steel scrap	8.2	(19.5)	(35.2)
Source Bureau of Labor Statistics, Updated December 12, 2019 *Compiled by Ken Simonson, AGC Chief Economist*			

Fees for architectural services fell 1.2 percent, reflecting slowing demand in the third quarter. Engineering services rose by 2.2 percent.

BLS data on the producer price index (PPI) for various materials is confirmed by other construction inflation resources. Turner Construction's Cost Index showed that inflation slowed in the third quarter of 2019, continuing a trend of lessening inflation in each of the past four quarters. Turner found costs climbed 1.13 percent from the second quarter to the third and an increase of 5.1 percent compared to the third quarter of 2018. BG


KOLLMORGEN
Carnegie Mellon
Google
OSHKOSH

THE BIG PICTURE

HOW LONG CAN IT LAST

As booms go, this one leaves a bit to be desired. By mid-2019, with the Shell Franklin project at full labor utilization, the Pittsburgh construction market was supposed to be bigger than ever. That characterization has been true for many firms. But, compared to the high points of the last two cycles, the current tide hasn't lifted all boats.

The Plan B boom of the late 1990s saw a boom in school construction, the high point of the retail big box boom, and the construction of two professional sports stadiums and a convention center. All those waves peaked at roughly the same time as the new millennium dawned. Half dozen years later, the construction industry filled up on new hospitals, major college projects, a hockey arena, and a couple of dozen $100 million projects over a three-year period.

The hangover that followed the Plan B wave did much damage. Construction companies shut their doors. Contractors that came to Pittsburgh to take a piece of the big pie limped back to the towns from whence they came. In 2009, the fallout was different. Contractors has profitable backlogs when the financial crisis hit, and most pared back early in the recession. The downturn was much tougher on architects and engineers. The Marcellus Shale buildup helped soften the blow, but construction took about five years to really bounce back. When it did, the market came back with mega projects and a booming private sector.

This current cycle still hasn't hit its peak, in terms of regional construction, but the underlying economy has begun to slow enough to make people start thinking about the next downturn. Some form of hiccup, be it stagnation or an actual recession, is likely to occur during the next year or two. Because of a series of factors, there is reason to ask not when a recession may occur but if it will affect Pittsburgh.

Only a foolish economist would suggest that any one region or city could be immune to the business cycle. Recessions become self-fulfilling as slowing demand leads to layoffs, which lead to even slower demand. The world's economy is so interconnected in 2019 that one region's pain is felt by every other. And yet, in each of the last few recessions there were parts of the world and parts of the U.S. that missed the negative impact. The oil crises of the 1970s sparked an economic boom in Texas and the Middle East. The dot.com bubble recession barely laid a glove on the southeastern states in the U.S. Even during the financial crisis, which was an economic nuclear bomb, there were regions where the effects were mild. Pittsburgh was one of those.

What happens in these lucky places? Sometimes the cause of the economic disruption is an imbalance in supply and demand that is favorable to certain regions, like with the oil crisis in the 1970s or the spiking prices of oil and gas in 2007-2008. Sometimes there are winners in a zero-sum economic shift. When heavy manufacturing collapsed in the U.S. in the early-to-mid-1980s, the emigration from the Northeast and Midwest was a boon to the economies of southern and southwestern states. Sometimes it's just good luck. And occasionally the wise long-term planning of a region's leaders brings about an economic base that is resilient enough to mitigate or avoid the damage from an economic slowdown.

Pittsburgh's leaders have worked hard to make the last scenario one that explains how this region could possibly see economic growth while the rest of the nation slows. The investment in the five industry clusters called out in the Mehrabian report in 1993 has paid dividends. If, when the U.S. economy does hit a bump in the road in 2021 or 2022, Pittsburgh remains relatively unscathed it will be because of that investment and a combination of all the above. There are a lot of green lights for the Pittsburgh economy.

How long can it last? Assuming the construction market really does boom as expected, it's not inconceivable to see a path to continued robust construction demand all the way to 2030.

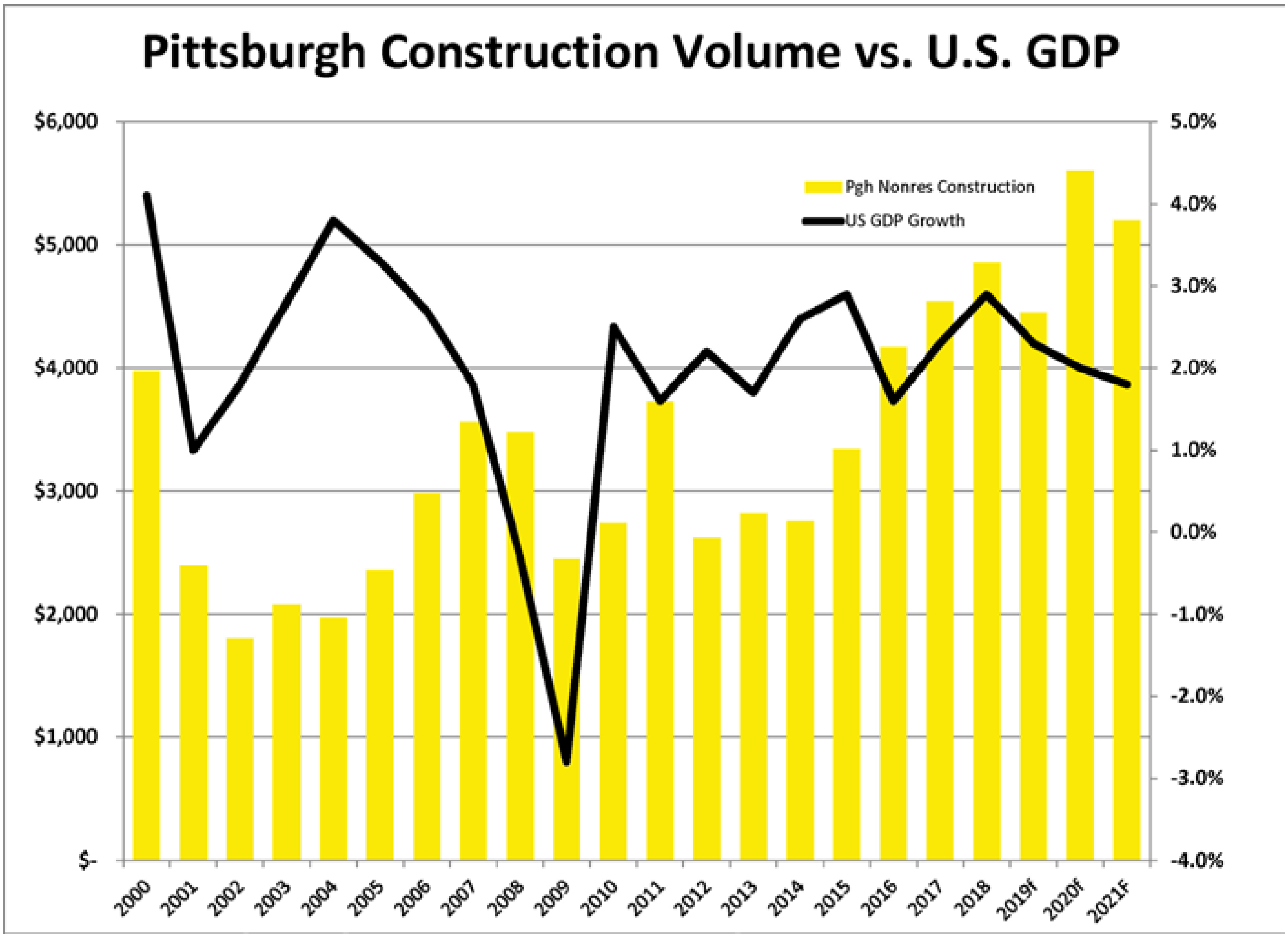
What Happens Next? - The Path to 2022

To a large degree, the high volume of construction is virtually baked into the market during the next three years, if not a bit longer. Construction of major projects, several topping one billion dollars, will put a floor under the construction industry in 2020 and 2021 that assures $4 billion in activity. Assuming that the more discretionary projects roll out as planned – primarily the construction of the UPMC Heart and Transplant Hospital at Presbyterian – the $4 billion level will be met or exceeded in 2022 as well. The question worth examining is how much of the rest of the market will remain robust, especially in the face of an economic downturn.

The pipeline of work in Western PA – and the extended Tri-state area – is at a high level. It can be argued that the volume of construction, and the number of monumental projects, has not been this high since the 1960s. As 2020 begins, the market is already at a very strong place. Virtually everyone who wants to work in construction is working. The coming year will be the first full year of peak workforce at the region's largest project the Shell Franklin plant in Monaca. Shell's project is a massive one, consuming at least three times the workforce that any of the other mega projects will consume. Shell Franklin will remain at peak labor consumption into 2021. At that point, it will be but one of three billion-dollar projects under construction.

It's worth reviewing the monumental work that is in the backlog in greater Pittsburgh.

Earlier in 2019, the first of UPMC's mega projects got underway. The $450 million Vision and Rehabilitation Hospital at UPMC Mercy is nowhere near its peak employment stretch but the project is the next biggest job in Pittsburgh. Concerned about available labor, UPMC slowed the progress on its largest project in the pipeline, the $750 million UPMC Heart and Transplant Hospital. Design is scheduled to re-start in the third quarter of 2020, with construction



Construction activity in Pittsburgh is expected to remain at elevated levels through at least 2021, even as U.S. GDP is forecasted to decline.

beginning a year later. The delay in the project created a few headaches, as the PJ Dick/Whiting-Turner team had begun with major specialty contractors in advance of the original schedule. By this time, however, the project will fit nicely into a 2021-to-2024 timeline.

That same timeline applies to the $1.1 billion Terminal Modernization Program (TMP) at the Pittsburgh International Airport. The Airport Authority's TMP project has already begun, with enabling packages in excess of $15 million out to bid or under contract. The TMP project has two major components, and the construction management teams for each – PJ Dick/Hunt and Turner Construction – have lined up multiple bid packages ranging from a few million dollars to $100 million. In all, roughly $500 million in contracts are expected to bid by the end of 2020.

The third mega project barreling towards construction in 2020 is the US Steel modernization of the Edgar Thompson Works in Braddock. The $1 billion-plus investment is split between two sites. US Steel will build a $900 new continuous casting and rolling operation at the Thompson Works and a $250 million cogeneration plant at its Clairton Coke Works. Early subgrade packages have gone out to bid and the first of the construction packages are expected to bid in the first half of 2020.

It's extraordinary to have multiple billion-dollar projects going at the same time. The Pittsburgh construction market is also seeing a significant uptick in projects over $100 million. During the mid-2000s boom, it was the six or seven $100 million-plus projects that broadened the market and allowed contractors of all sizes to have plenty of work. By 2021, there could be that many projects over $100 million underway on Pitt's campus alone. Those projects will hardly be the only ones of that size.

The major projects run the gamut of property type and ownership. The list on page 35 illustrates the breadth of the market and underscores how little of the construction boom is owed to public investment in construction.

As happened from 2013 to 2016, multi-family construction will gain in share over the next three years. (See page 62 for more details.) According to the plans of those developing the projects in the pipeline, the lion's share of these new apartments and condos will be under construction and completed by the end of 2021. That pipeline is nearly 4,000 units strong and overwhelmingly located within the central core of Pittsburgh. At current cost levels, construction of those units will approach $800 million. That's an extraordinary level of activity that will contribute to the booming construction economy.

Commercial real estate, which has been a primary driver of construction since the recession ended, should be running out of steam as the economy slows. That still may be the case during the next couple of years but real estate users in both office and industrial space are still driving more demand. Most of that development will be in the areas targeted as "innovation districts."

Demand for office space in Oakland has outstripped supply for more than a decade. The most recent new office products delivered into the Oakland market leased prior to the completion of construction, and at top of market rents. In the Strip District, there was limited supply in the office market, but offices built over the past four years have leased nearly as quickly as those in Oakland. The common thread in all these developments is the tie to the universities' innovation commercialization. In the next year construction should begin on 2.2 million square feet of office space in the Strip District, including new construction at 3 Crossings, 1501 Penn Avenue, District 15 Beta, and the Brickworks at 21st & Smallman. In Oakland developers have proposed at least three major new office/research buildings along Forbes and Fifth Avenue totaling roughly 725,000 square feet.

Industrial demand continues to expand due to advances in logistics/fulfillment. Amazon's new million-square-foot distribution center has attracted the most headlines, but the online shopping giant is but one of dozens using robotics and better analytics to improve delivery. Pittsburgh was formerly limited as to its suitability as a major distribution hub. As online retailing has grown, overnight and same day delivery are becoming normal, which necessitates bringing fulfillment much closer to the consumer.

The outlook is solid enough that it's difficult to identify things that could go wrong enough to derail another few years of $4 billion to $5 billion in construction. Building much more than those levels of construction is unlikely, given the limits of the workforce in Western PA. In fact, a general economic downturn could end up benefitting Pittsburgh if only because it might free up more traveling workers from slower markets. Leaders here aren't rooting for that.

"I try to look out three to five years. We believe that the next three years are going to be pretty strong," says James Kunz, business manager for International union of Operating Engineers, Local 66. "We set a record this year with just over nine million-man hours. We tend to average about seven million-man hours. In 2018 we did eight million. We think that 2020 will be as good as 2019 and 2021 looks pretty good. There are a couple of variables. If Exxon/Mobil decides it wants to build another cracker in the region that makes a big difference. If the ethane storage facility and, potentially, the natural gas storage facility are built so that we have an Appalachian hub that would make a big difference."

Photo by Massery Photography

Activity in the less-populous counties outside of Allegheny County tends to have less impact on the total construction volume in the region. There have been periods where the activity levels are unusually high or there was an exceptionally large project – like Westmoreland County in the mid-late-1990s or Washington County since 2005 – and those counties made a larger impact. In recent years, the lion's share of construction has been closer to the center of Pittsburgh. There is reason to believe that construction activity is about to pick up significantly beyond the suburbs again.

In Westmoreland County, several large projects are underway that will boost construction volume in 2019 and 2020. Beyond the new Live! Casino and the Elliott Group's testing facility in Jeannette, preparations for growing demand for industrial and commercial space are underway.

"The perception that we have more activity is very accurate. Over the past few years we've been investing enormous capital in key sites," says Jason Rigone, executive director of Westmoreland County Industrial Development Corporation (WCIDC).

Rigone points out that the past year or two have seen an uptick in activity following five years of planning and investment in the first half of the decade. Last year's announcement of WCIDC's $14 million Commerce Crossings of Westmoreland, along I-70 in South Huntingdon Township, was the first of a wave of opportunities for industrial construction.

"We marketed about 23 acres of property in 2019, which is an average year. Those deals were highlighted by the Elliott Group's new facility at the Jeannette Glass property," says Rigone. "For 2020 we have 83 acres under agreement. That could transition into almost 750,000 square feet of space being built in the county. We think 2020 can turn out to be a record year in terms of transactions investment."

> **"We marketed about 23 acres of property in 2019, which is an average year," says Rigone. "For 2020 we have 83 acres under agreement. That could transition into almost 750,000 square feet of space being built in the county. We think 2020 can turn out to be a record year in terms of transactions investment."**

The Westmoreland County Economic Growth Connection, which handles business financing in the county as a private nonprofit has reported that its activity is at a 10-year high.

Beaver County has seen a pickup in construction that is directly attributable to the construction of Shell's Franklin Plant in Potter Township. As the completion of that monumental project draws nearer, the first signs of the ripple effect from the cracker are appearing.

Washington County has had a bifurcated economy for generations. Eastern Washington County, the Mon Valley, was driven by coal. Western Washington was focused on coal. After the steel industry's relocation in the 1980s, the bifurcation continued, but with the western and northern portions of the county behaving more like suburban bedroom communities. Suburban sprawl created a housing boom in Peters, Cecil, and North Strabane. The region's biggest suburban office park, Southpointe, brought more jobs and construction to Washington County after 1994. In the Mon Valley, however, these new economic drivers weren't impactful. That's changing.

Ben Brown, CEO of the Mon Valley Alliance (MVA), says that the MVA has been marketing the Alta Vista Business Park in Fallowfield Township to renewed success. The MVA subdivided two parcels in the original plan, which has created opportunities to sell those lots in addition to several others. Brown says 2020 will be very busy.

"We should have five buildings rising in Alta Vista in 2020, which will essentially double the size of the park," Brown says.

"We sold a lot last year to Apex North America. They are working through their financing, which was just approved. That will be about 100,000 square foot facility. Earlier in 2019, in February, we sold lot 10B to Frontier Railroad Services, which is based in New Stanton. That will be a smaller facility for Alta Vista, about 20,000 square feet with a 2 acre yard. That site will be adjacent to the 35,000 square foot spec building that Mon Valley Alliance will put out to bid in February. Recently we sold a lot to Fratelli Partners. They are building a 50,000 square foot spec building."

MVA also has two other parcels under agreement that will yield large buildings, although Brown could not divulge the participants. The authority is performing due diligence for what will be a 100,000 square foot office and light manufacturing building. There is also an agreement with Suncap Property Group for a 20-acre site that will be home to a 240,000-to-250,000 square foot industrial building. That matches up to the size building that was on the streets earlier in 2019 for Komatsu Mining Corp.

The Path to 2030 - Fulfilling a Regional Vision

Unlike the past two building booms, which ended just as major global economic events triggered steep recessions, the current construction cycle does not appear to be running out of steam as the global economy is. Unless the direction of the economy changes, Pittsburgh's construction industry should have enough backlog to ride out a mild or moderate recession during the next three years. What follows that will depend largely upon how well the new drivers of the Pittsburgh economy have expanded.

Pittsburgh's future is now tied to the innovation that occurs in Southwestern PA. Much of that innovation is coming from research being done at three major recipients for grants – University of Pittsburgh, Carnegie Mellon University and UPMC. The innovation economy, as was detailed in a 2017 report by the Brookings Institute, thrives in an environment that fosters private investment in groundbreaking innovation. On a physical level, an innovation economy means the buildout of millions of square feet of commercial infrastructure. This version of Pittsburgh's economic future is not so different from one that was planned almost 30 years ago.

When Robert Mehrabian – then Carnegie Mellon University's president – chaired the study that produced the Regional Economic Revitalization Initiative, Pittsburgh had endured two decades of economic upheaval. During that period, Pittsburgh lost more manufacturing jobs (and people) and created fewer service sector jobs than any of the other 25 largest U.S. cities. The blueprint laid out in the white paper called for investing in five industry clusters that were drivers for future growth.

You can argue that those sectors – information technology, health sciences, advanced manufacturing, software, and financial services - haven't produced the magnitude of growth that was envisioned, but it's difficult to find fault with the selections.

It was a cluster that was not part of the Mehrabian report that sparked significant growth in the 2010s. What the regional leaders could not envision in 1993 was the role that energy would play in the Pittsburgh economy. Relying on extraction technologies that did not exist 25 years ago, the oil and gas industry has revolutionized global energy markets by unlocking resources, like the Marcellus and Utica plays, that were heretofore unreached.

Energy's job creation impact is a subject of debate. The Corbett administration quoted numbers as high as 250,000 jobs, but that figure included every industry that interacted with the gas industry, including the state regulators who reviewed permit applications. The figure that seems more accurate is closer to 30,000. That is a big difference of opinion. Lost in the debate is the fact that few, if any, other industries created 30,000 new jobs from 2010 to 2016.

In the fall of 2019, the role that energy will play in the future of Western PA came under scrutiny when Pittsburgh Mayor Bill Peduto offered the opinion that it would be better for

Photo by Ed Rieker

the region if no further development of petrochemical facilities occurred. Peduto's environmental concerns aside, the investments made and pending by the energy-related industries aren't expected to abate. In fact, without clustered investment and development, the Appalachian Basin would remain an isolated supply source with little benefit to the economy.

Tens of billions of dollars have already been invested in Pennsylvania, Ohio, and West Virginia. While global energy companies have walked away from major investments before, the potential for commercialization of the commodities in the Appalachian Basin is too significant to expect that will happen. The gas industry boomed at a critical time for Western PA, allowing for job creation that kept the Great Recession at bay. It appears the timing of the next wave of activity could be equally fortuitous.

"Every expert I've listened to at these energy conferences expects the natural gas industry to hold its own, not slow down a whole lot more," says Kunz. "They expect the industry to hold its own until about the end of 2023 or 2024 and, at that point, they expect there to be another surge. The unknown that I don't think we will see for another couple years is what the downstream benefits will be for manufacturing from having an ethane cracker operating here."

Dave Spigelmyer, president of the Marcellus Shale Coalition, acknowledges that the shale gas industry is mired in a slump, primarily as a result of its own success. The amount of gas and oil in the Appalachian Basin, coupled with advances in productivity, have led to a glut that has depressed prices. That, in turn, is depressing the industry's growth and capital spending. Spigelmyer notes that those difficult conditions for oil and gas producers have a corresponding upside for the regional economy.

"Where I see the huge opportunity is on the downstream manufacturing side and it's not just the Shell project," Spigelmyer says. "We have some of the most affordable energy on the planet right here in Pennsylvania. I think that will help drive some manufacturing back to Pennsylvania, projects like US Steel that no one thought was possible a few years ago. The longer-term economic lift comes from the revitalization of manufacturing in the region."

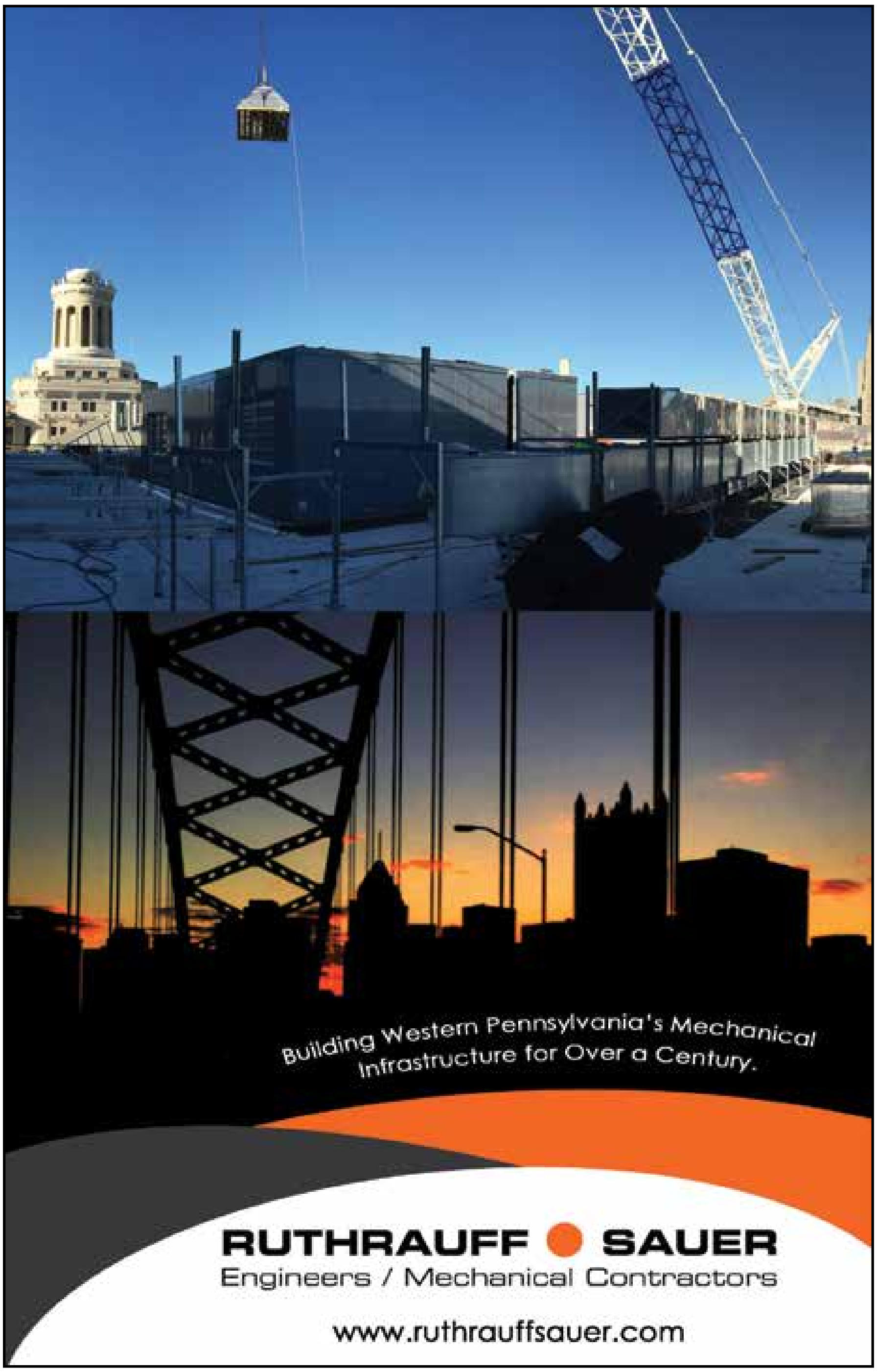
Spigelmyer also points to the 2016 McKinsey Energy study that found that the ethane supply in the Appalachian justified the construction of three-to-five crackers. While PTT continues to defer a final investment decision on its 1.7 trillion pound/year cracker in Dilles Bottom, OH – even as it has hired Bechtel as its engineering procurement construction entity – others are showing more interest. Shell has long signaled interest in adding to its capacity and Exxon Mobil was reported to be looking for sites in Beaver County, although it cancelled meetings this fall.

"I think there's a very strong possibility for there to be another cracker in Pennsylvania. I think that's highly likely in

the next two to three years because of the plentiful supply of ethane in Pennsylvania," suggests Spigelmyer. "The other big opportunity is the ethane storage facilities. Those are multiple billion-dollar investments."

Pittsburgh has seen much lower numbers of new jobs created in the emerging industries that are part of the mix of the future economy the Mehrabian report foretold. The job creation potential of those industries has been proven to be durable, however, and the unknown questions are how high the ceiling is, how durable the growth is, and when it will become the driving force for the regional economy.

"The opportunities are interesting, and it is kind of up to us. I think there could be enormous job creation related to autonomy, robotics, and artificial intelligence that would drive real estate, housing, and transportation," predicts Don Smith, CEO of RIDC of Southwestern PA. "Undoubtedly there is going to be huge job creation somewhere around these technologies. I could see autonomous vehicles easily multiplying its presence in Pittsburgh by three or five times or I could see a shrinking. It depends upon how we grow the cluster here to make this the place you must be in that industry."



The strategy behind building industry clusters is to create enough scale that talent and investment are compelled to follow. Scale assures people who take a job that there are other employers in that city looking for similar skills. Scale also reassures developers to build speculatively, with the knowledge that growth will reduce the risk that losing one tenant leaves them without prospects. A large enough industry cluster also attracts more and better support, like attorneys, accountants, and construction companies.

Pittsburgh had that kind of industry scale in the steel industry. Today, there is a growing sense of scale in the technologies emerging from Carnegie Mellon, UPMC, and, to an extent, University of Pittsburgh. The evidence of that scale can be seen at 3 Crossings, District 15, or the Murland Building in Oakland. These are speculative projects that filled at an accelerated pace because tech companies or university research that are growing rapidly.

RIDC's Mill 19 project is another spec building that has been rewarded by the growth of emerging technology. Another type of spec development is in the pipeline at Hazelwood Green. Between Mill 19 and the Monongahela River, Carnegie Mellon has taken an option on eight acres. The site is envisioned to be a campus of sorts supporting and growing the robotics research being done at the Advanced Robotics for Manufacturing Institute (ARM) located at Mill 19. What that campus will look like is anyone's guess.

Suzy Teele, head of marketing and communications for ARM, makes clear that the $250 million grant it received has a national or global focus. For now, it's clear that ARM won't be awarding grants to projects or companies for the purpose of building new buildings at Hazelwood Green. But at CMU, it's equally clear that the people responsible for planning aren't waiting to see what happens.

"We are just starting to answer the question of what that would look like. We're putting together a plan of action for how to attack that question," says Ralph Horgan, assistant vice president of Campus Planning and Facilities Development. "All of us would like to see something happen sooner rather than later but that's for the university to figure out what the vision is for that site. What do we need today and what do we need in the future that we don't even know we need today? What can we do today but, moreover, what are the big opportunities going forward that we should capture on this critical site?"

"We are going to take a crack at figuring out what we can and cannot do on that property," says Bob Reppe, senior director of planning and design. "We have a five-year window on the first parcel, but Ralph reminds us that five years is not that far away."

The person charged with being Pittsburgh's chief business attraction agent, Pittsburgh Regional Alliance president Mark Anthony Thomas, is also thinking about what big opportunities will be presented down the road. The Atlanta native spent time as an economic development officer in Los Angeles and New York before coming to Pittsburgh in July 2019.

Thomas recently experienced his first Pennsylvania Society meetings. He says that he heard about the saturation of talent and real estate in the coastal gateway cities and got feedback from people from other regions about his new hometown.

"Pittsburgh was cited as well-positioned as this oversaturation occurs in other places," Thomas says. "Where I think we are in a good position now on the commercial side is that we are in the conversations, but people don't know what Pittsburgh offers. They don't have a real-time vision of what Pittsburgh even looks like, even people who are well-traveled and make decisions that influence where companies go. I think if we can broadly expose people to the commercial opportunities we have here, that we will see growth. Our numbers show absorption of something like 100,000 square feet per quarter, which is low for a metropolitan area our size. If we can double that absorption rate, it puts us in the same place as our peer cities."

"On the industrial side, the trends tied to e-commerce are creating these ripple effects in logistics and fulfillment, intersecting areas with robotics and other new technologies," Thomas continues. "I want to better understand our freight infrastructure, the airport's cargo plan and how we become a hub for all the goods that have to be dispersed. I think we're well positioned for that."

Project	Developer
FNB Financial Center/Civic Arena Site	Buccini Pollin/Pittsburgh Penguins
ALCOSAN North End Plant Expansion	Allegheny County
AHN Cancer Institure Expansion	Allegheny Health Network
AGH Cardiovascular Tower	Allegheny Health Network
UPMC Shadyside Expansion	UPMC
CMU School of Computer Science	Carnegie Mellon University
CMU Skibo Hall/Highmark Center	Carnegie Mellon University
Uber Findlay Township Test Facilities	Uber Technologies
Victory Heights Central Utility Plant	University of Pittsburgh
Pitt Human Performance Center	University of Pittsburgh
Scaife Hall Expansion	University of Pittsburgh
Student Recreation Center/Mid-Campus Residence Hall	University of Pittsburgh
One Bigelow Square	University of Pittsburgh
Lower Campus Residence Halls	Walnut Capital/Buckingham Companies
Oakland Innovation Research Tower	Walnut Capital
UPMC Immune Transplant and Therapy Center	Wexford Science & Technology
1501 Penn Avenue	JMC Holdings
The Esplanade	Millcraft Investments
3 Crossings 2.0	Oxford Development Co.
Amazon Fulfillment Center, Chapman Westport	Hillwood Property Group

At least 20 projects of $100 million or more are starting or will be under construction within the next 24 months.

What Could Go Wrong?

How long can this market last? With a little luck, there is a path to 2030. Admittedly, much would have to go right in terms of innovation, labor, and politics. The 2020 election has the potential for elevating uncertainty, which is never good for business.

At the same time, much of the major construction being planned is not cyclical in nature. None of the billion projects is tied to the current business cycle. In the case of US Steel and Shell, the investments are being made for long-term strategic reasons. Neither the steel industry nor gas industry is in a positive environment.

Very little of what has been discussed in this article involves public spending. At some point, you would assume that Congress will figure out how to pass an infrastructure bill, or that the Pennsylvania legislature will fund K-12 and higher education construction again. And, should a national recession occur during the next couple years, economic stimulus would probably include some level of construction spending.

Even if the market conditions break just right, however, there are still factors that could tamp down construction spending. Some of those, like Pittsburgh's demographics and population, are structural in nature. Others, like regional policies, are tied to the powers that be. For that reason, there is room for individuals or governing bodies to foul up a good situation.

The population forecast from the Southwestern Pennsylvania Commission (SPC) paints a picture of the challenges facing Pittsburgh's economy. Over the next decade, SPC's forecast is for the population cohort over the age of 65 to grow from 243,776 to 291,973. During that same period the number of people in prime working years, 25 to 64, is expected to reach 673,000. That is not a great ratio of retirees to workers. The good news in the forecast is that through demographic progression alone, the number of people between the ages of 40 and 50 is expected to jump from 146,140 to 195,600, an increase of 33.8 percent. That forecast predated the 16 percent increase in Millennials.

"The city of Pittsburgh has clearly seen growth in the younger people," says Chris Briehm, regional economist with the Program of Urban and Regional Analysis at the University of Pittsburgh. "The fact about the younger generation in Pittsburgh that people tend to overlook is that about 40 percent of the people in that demographic group are enrolled in colleges and universities here.

Smith hits on a concern that has been raised repeatedly about the loss of a manufacturing base in Western PA. Trading blue collar jobs for white collar jobs in engineering and research has improved the regional economy in some ways but it has also left the region vulnerable to being limited in its innovation.

"The problem with just being an engineering center is that when things change engineers can be relocated. Seagate is a good example of a cluster of one in an industry that is centered in Silicon Valley or Asia. When there was a change in the company, they shut down the Pittsburgh office and moved," warns Smith.

"The next question everyone asks is, 'are they going stay in the city, have their kids and grow the population'. That's a hard question. There is not much evidence of that yet. Young professionals tend to come and go. The growth in young professionals has generated demand for housing stock that we didn't have here."

There are multiple efforts in place to attract workers and people from other parts of the U.S. and the world. Doubtless there will be others. Economists looking at the problem are skeptical about how effective such efforts will be in the face of the demographics of Pittsburgh. If the stagnant population cannot be shifted to a growth mode, the economic growth of the region is in doubt.

"Seventy percent of the regional economy is goods and services consumed locally. When you talk about GDP – the jobs devoted to the local economy – that probably goes to 80 percent," says Briehm. "That doesn't leave much room to make dramatic improvements."

Don Smith sees a shortfall in the efforts to support the companies that are relocating to Pittsburgh or growing out of the research being done at the universities. Smith believes the technologies are maturing into businesses that will require more than flexible space and a Foosball table.

"Increasingly those industries are going to be about engineering and deployment. We have a good engineering base. But there's no reason that those industries must be here," he says. "Other regions are investing in universities, in workforce training facilities, and improving the tax climate. It is not inevitable that Pittsburgh is going to be a major hub for innovation industries."

"When you talk about whoever wins in autonomous vehicles, the fact that we have multiple companies here is a real positive. You can move 1,000 jobs but 10,000 jobs is really hard to move. We should be working with all the companies that are here to see what we can do to bring other parts of those companies here so that Pittsburgh becomes an important location for them. It's critical that Pittsburgh become integral to the deployment of these new technologies. The creation of them is great and it creates really high paying jobs and leverages the universities and other assets we have here but ultimately the big payoff comes from the deployment of the technologies."

The deployment of the technologies that hold so much economic potential is one of the keys to extending the current construction boom. Hospitals, the airport modernization, ALCOSAN, US Steel, ethane crackers, and more than $1 billion in spending at Pitt and CMU are set to carry the construction market through several more years of volumes that exceed $4 billion. That's an extended boom of construction that would normally lead to a slowdown, but there are signs that construction could be as robust in 2025 as it is today.

To get there the complexion of Pittsburgh will have changed. One in three people in Pittsburgh will be over 65 by 2030. That will put a strain on the rest of the population to earn enough to pay for services and pensions for those who have retired. The best way to accomplish that will be to grow innovation into a job-creating machine. The stage is set for a 21st Century manufacturing revival and an explosion of highly creative professional workers. The outcome is not preordained. BG

Image courtesy JLL.

PROJECT PROFILE

420 BOULEVARD OF ALLIES

Commercial real estate isn't complicated, even if it is difficult. Properties are purchased or built. Tenants are secured and the building becomes occupied. The property provides stable income or is sold to someone looking for a stable income investment. And sometimes the building is sold before construction is completed, making the process a lot simpler.

Of course, developing commercial real estate isn't actually that simple, but when a property is sold before the upgrading begins – like what happened with 420 Boulevard of the Allies – the project does become less complicated.

M & J Wilkow Ltd. is a multigenerational family real estate business based in Chicago, IL. Wilkow began investing in the Pittsburgh market in 2012 with its acquisition of the Waterfront in Homestead. After acquiring the Federal Reserve Bank Building at 717 Grant Street in 2013, Wilkow added 420 Boulevard of the Allies to its Pittsburgh portfolio the following year. Marty Sweeney, Wilkow senior vice president and Pittsburgh market leader, explains that the financial difficulties of Education Management Corp. made for an opportunity to get a great asset at a great price. Deciding what came next was not as easy.

"We bought the building in 2014 from the Art Institute of Pittsburgh and then they leased it from us for three years. We knew that they were not going to be there long term and we started working with Dina Snyder [from Strada Architecture] on what to do with it," Sweeney recalls. "We looked at it for condos or residential apartments but the difficulty with that was the lack of parking we could offer. We thought maybe we could parlay the building into a hotel. It had good bones but it wasn't a great location for hotel. We decided to do multi tenant office building."

"The overall program was to create a core and shell building for potential multiple users or a single user that would find the building attractive," says Snyder. "We went in and gutted the building, made sure the elevators and the bathrooms were upgraded. The major construction done was the building systems and the amenity spaces."

M & J Wilkow had completed projects all over the country converting handsome historic structures to Class A modern creative offices. Its approach to adding value includes what Sweeney called "over-amentitizing" the building.

"There were amenity spaces built to make the building attractive for potential end users," explains Snyder. "Those included a fitness room and a large conferencing space so that individual office tenants didn't have to put that space inside their office. There was the addition of a rooftop patio and also a first floor community common space that could be used for multiple purposes, whether that was social events or break out work space. The second through the ninth floors were set up as warm dark shells so that a future tenant could go in."

Art Institute of Pittsburgh completed its lease term in mid-2017. The developer opted to delay the start of any construction until the Art Institute vacated, choosing to accelerate the process by having a contractor on board during design. A development partner, CenterSquare Investment Management, came on board when Wilkow decided to redevelop the building. Sweeney says the experience with other older buildings informed that choice. Wilkow began the selection of a contractor while the design was being developed.

"The key, frankly, is to get the building as empty as possible before you start converting it. If you work on it while it is partly occupied you can never really do the complete transformation," he says.

During the three years that followed the purchase of 420 Boulevard of the Allies, M & J Wilkow made additional purchases in Pittsburgh, including Penn Center East and 20 Stanwix Street. It developed a working relationship with Shannon Construction Co. from Dormont. Shannon had been involved in the redevelopment of both of those properties and Sweeney got Shannon's president, Ken Schultz, involved with 420 Boulevard of the Allies while the program was being considered.

"I walked the building for them to see what might need to be done if they kept it", recalls Schultz. "I did a property assessment for them."

Wilkow signed Shannon to a contract in June 2017, with the contractor kicking off demolition as soon as Education Management left the building. With Shannon and Strada working on the building, Wilkow was able to plan for marketing and leasing the building. Preparing for a renovation project, when the object is to prepare a shell for unknow tenants, proved to be one of the project's major challenges.

"Planning without specific tenants is a challenge. It's easier if you have tenants that already have specific uses and needs," explains Snider. "The challenge of this project was you were building core and shell amenities for what we thought the end user would be. We had to work very closely with the developer team and Shannon Construction to come up with what would be the right programmatic elements for the building without overbuilding it."

After the demolition and renovation was underway, fate took a hand in the process.

"We completely gutted the building from top to bottom and were building all of those amenities as we started the leasing program. We had letters of intent for five of the nine floors when

Image courtesy JLL.

the city approached us and made us the proverbial offer we couldn't refuse," jokes Sweeney.

"The biggest challenge was trying to figure out what the finish scheme would be for multi-tenant use but the owner ended up selling the building before we were completed so we didn't have to finalize that," recalls Rich Amberson, vice president of operations at Shannon.

"The challenges we faced after picking this route really had to do with the hidden dangers in completely renovating a building from the 1920s," says Sweeney. "How will the bones hold up? How will the new systems work in that old structure? But to be honest our biggest challenges related to getting our plans approved through the city."

The building had been renovated prior to Art Institute moving in, so there were some advantages to the 420 Boulevard building. The windows had been replaced and were in good shape. 420 Boulevard of the Allies is one of the few in Downtown with four exposed sides, giving great views throughout the floors. Dina Snider points out that the structure itself was an advantage over a more modern office.

"The historic nature of the building, being well built, gave it a good infrastructure. From a structural soundness standpoint, the building was in great shape. It is built like a tank," she says. "There were very sturdy columns and concrete floors, so what we did was just strip out what didn't need to be there and cleaned up the floors so that they could be prepared for new users."

The end user requirements for offices are different from that of an educational facility, and so most of the building's systems were replaced to work efficiently for office occupants.

"It was a very interesting project from the standpoint of size and working with an existing building that's almost 100 years old. There are unique things that come out of that," says Schultz. "Any time you're working in an old building you find things that you didn't know were there, like conduits buried in concrete and elevator shafts that need to be repaired. We dug up most of the basement floor to put plumbing in. We re-did all the sprinklers and the fire alarm system. We modified all the electrical distribution back to the panel box and put brand new HVAC systems in. We brought it up to current standards and put amenities in that draw tenants. Wilkow was really the first landlord to do that Downtown."

In addition to those amenities, the building's exterior was refreshed to draw attention to the property. M & J Wilkow contracted separately with Mariani & Richards Inc. to clean and restore the building's façade. Shannon installed architectural lighting that accents the ornate cornice work and illuminates the building. Along with a video wall on the ground floor, the exterior improvements made 420 Boulevard of the Allies stand out.

"Obviously it drew the attention of the City of Pittsburgh and three of its departments," laughs Schultz.

The sale of 420 Boulevard of the Allies to the city streamlined the project scope but it accelerated an already tight schedule. Nonetheless, Shannon turned the completed building over to the new landlord in late June 2018. It was a notable project for Shannon Construction in that the $8.3 million job was the largest individual project in the company's history. The working relationship Shannon has with Wilkow has grown to include more projects that size since the completion of the 420 Boulevard of the Allies building.

"It was a good project. I think it's a wonderful building and I'm glad that there are new users moving in," says Snider. "It will be great to see it occupied."

"I couldn't have been happier working with Shannon. They were a smaller shop at the time but because of that we got the full attention from Ken Schultz and Rich Amberson, who was the senior project manager," Sweeney says. "They were on that job on a daily basis. We had weekly calls and meetings and both Ken and Rich were on every one of those calls, which is very rare. It went as smoothly as any project I've ever worked on. Having done this in other markets, I was waiting for the other shoe to drop. You know, a six-month delay or cost overruns. None of that ever materialized. Shannon just performed marvelously."

Image courtesy JLL.

Image courtesy JLL.

Amberson gives Wilkow and Strada credit for that favorable outcome.

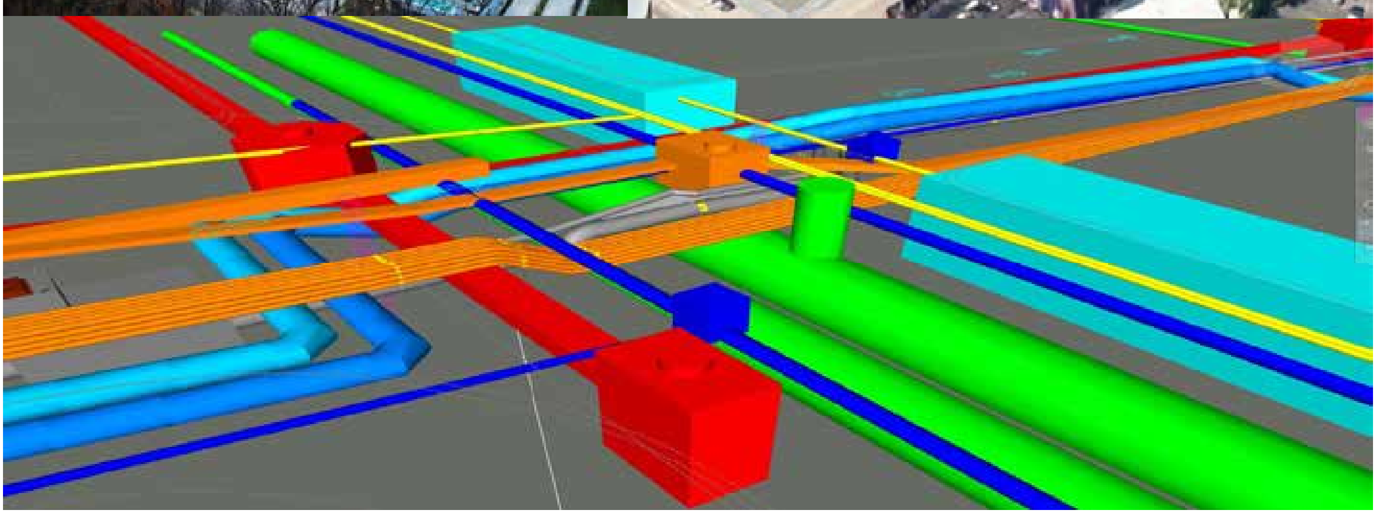
"It was very successful teaming with Strada, Wilkow and CenterSquare. They were just easy owners to deal with," he says. "When we encountered issues along the way, we brought it up at our weekly meetings and it was dealt with immediately. That kept the project on track."

"We try to team up with the owner. As I say to everyone in our office, if the owner wins, we win," Schultz says. "If we make it a win-win for both of us, it will propagate the relationship and we will do more of their work." BG

PROJECT TEAM

Shannon Construction Co. .... General Contractor
M & J Wilkow Limited .... Owner
Strada Architecture LLC .... Architect
M & J Electrical Contracting Inc. .... Electrical Contractor
Elk Air-Conditioning, Inc. .... HVAC Contractor
Mele Mechanical LLC .... Plumbing Contractor
Greer Tile Co. .... Ceramic Tile Contractor
Mendel Steel & Ornamental Iron .... Structural Steel
Southwest Aluminum & Glass Co. Inc. .... Glass & Glazing
HOFF Enterprises Inc. .... Millwork
Schultheis Roofing Inc. .... Roofing
Dan Taylor Interiors .... Flooring

W.G.TOMKO INCORPORATED CONTRACTORS



Committed to the Future

PLUMBING | HVAC | SHEET METAL | PRECONSTRUCTION SERVICES |
3D MODELING |SITE UTILITIES | OIL & GAS

Kalkreuth Roofing and Sheet Metal installed the green roof on the Tower at PNC Plaza.

FIRM PROFILE

KALKREUTH ROOFING AND SHEET METAL

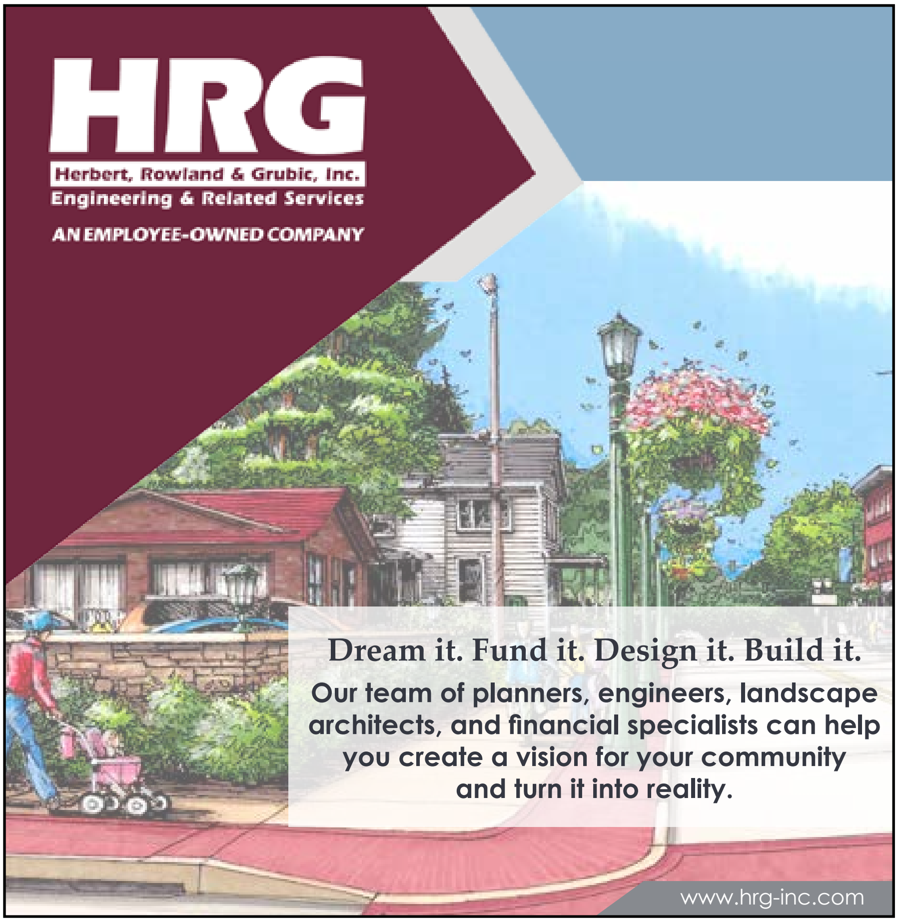
John Kalkreuth, chairman of Kalkreuth Roofing and Sheet Metal (KRSM), characterizes the growth of KRSM as a series of organic expansions that happened as the company battled to stay afloat in the competitive commercial construction industry. The results suggest a bit more strategy may have been involved.

In October, KRSM was ranked the fifth-largest roofing contractor nationally on Engineering New Record's Top 600 Specialty Contractors list. That marked the sixth consecutive year that the company was ranked in the top ten, an accomplishment that was certainly unexpected when Kalkreuth and Jim Hurley, the company's president, founded KRSM in 1984.

KRSM is the successor to John Kalkreuth's family business. Kalkreuth Brothers was founded by Kalkreuth's grandfather and great-uncle in 1920. Like most construction businesses in Wheeling at the time, Kalkreuth Brothers did the lion's share of its business working in the mills and factories that lined the Ohio River. That industrial experience created a resume that was strong in competence with metal fabrication and high-performance roofing. Those attributes were no match for the economic downturn of the early 1980s, however, when the loss of industry devastated the Ohio Valley.

"We were a small company - maybe 15 or 20 people - doing almost entirely industrial work up-and-down the valley," Kalkreuth recalls. "We couldn't recover from the industry collapse."

Kalkreuth had been working with his father at the time and, along with Jim Hurley, purchased the assets of Kalkreuth Brothers from the bank in 1984. When asked why he thought they could make a go of the roofing business at such a difficult time, Kalkreuth makes light of the strategy.



"Our plan was to break even, to make payroll, and to make the next payment to the bank. There were pretty simple goals back then," he laughs. "We didn't have much of a strategy, but we were limping along month to month."

"Our goal, we thought if we could do a million in sales that first year, we could make it," says Hurley. "After about nine months we had reason to question that. It was a tough time but we got through that first year."

Early on, KRSM won a U.S. Postal Service unit contract and was able to land a couple of major projects, one of which set the tone for the company's future path.

"The Steubenville Mall needed a new roof at a very opportune time for us. It was a very big job for us and helped keep us afloat," Kalkreuth says. "That was a successful project for us and then we picked up Oakland High School with Mellon Stuart Construction. The project manager for Mellon Stuart told us about a big mall project they had in Waldorf, MD for which they could not get a second roofing price. We gave them an estimate that included traveling, and a per diem rate. We were awarded that project and it was a successful job also. That was in 1986. It led to our opening a Maryland office."

The Frederick, MD office was the first of four remote offices, including Pittsburgh, Columbus, OH, and Lexington, KY. Throughout the 1980s and 1990s, KRSM followed its customers, some of which were among the largest in the country, to projects throughout the U.S.

"We learned how to travel. It's easy to say but hard to do," says Hurley. "Our team made a commitment to travel for work. It's not just our crews. John and I travel. Our whole management team travels."

"As we continued to grow, we got introduced to the larger construction managers in the region. They took us to different markets that we would not have gone," Kalkreuth says. "For example, with Dick Corporation we ended up in Inez, KY to build a prison. And we went with PJ Dick to Columbus, OH when they built Shottenstein Arena at Ohio State University."

The work in Columbus put KRSM in position to land COSi, the Columbus science museum, Mira Nova Towers high rise, and Nationwide Arena for the Blue Jackets. The construction manager for Nationwide Arena subsequently invited KRSM to bid the roofing and metal panels on a hospital project in Vermont. That led to additional work in New England. This model has driven KRSM's growth right up until today.

Nationwide Arena provided another turning point for KRSM. The scope of work included the domed roof and architectural metal panels, which KRSM subcontracted to a fabricator in Tennessee. That fabricator had difficulty matching the profiles and lines that the architect designed, leading KRSM to use its own fabrication shop to produce the material. When it was able to profitably fabricate the panels for the arena, KRSM discovered another line of business, one that had been contemplated by Kalkreuth and Hurley before.

In 1991, the two men founded East Coast Metal Systems as a solution to a labor dispute concerning its sheet metal workers. Hurley and Kalkreuth talked about using East Coast's capacity to do third-party fabrication but had not gone beyond planning for such an expansion. A decade later, East Coast began using its capabilities to fabricate custom architectural panels throughout the U.S. That business has grown to $15 million, operating from a new 60,000 square foot facility in Triadelphia, WV since August 2017.

Experience in industrial metal fabricating had been part of KRSM's competitive advantage in providing building envelope solutions. Changes in the roofing contracting segment of the industry accentuated that advantage. The growth of EPDM roofing lowered the barrier to entry in what had been a capital-intensive trade. That trend also made many traditional roofing and sheet metal contractors top-heavy with overhead, and precipitated consolidation in the industry. It also forced many traditional roofers to close their doors. KRSM tries to take advantage of that loss of expertise in the industry.

"We would take on projects that a lot of other companies would not do anymore, projects with high end metal, slate or tile," Kalkreuth explains. "These weren't foreign to us. We look for challenging projects that others might not take and, for us, that's the combination of roofing and architectural metalwork."

KRSM's revenues exceeded $125 million in

2017 and 2018. Between its five offices, there are 120 people on staff. Depending upon the season of the year, KRSM will run between 500 and 700 skilled tradespersons in the field.

Kalkreuth understands the challenges of attracting and retaining a large workforce to a company that is based in Wheeling, WV. Once an industrial stronghold, Wheeling does not have sufficient construction to keep a large skilled workforce busy. KRSM's response, to work in a multi-regional marketplace, means that superintendents and key workers travel frequently, some 50 weeks per year.

To compensate for that travel, KRSM fosters an environment that recognizes the accomplishments of the field crews and personnel. Moreover, KSRM promotes a work/life balance, which is difficult in an industry that requires long hours and intense seasonal work shifts. The owners have also maintained as many of the personal relationships with the staff as possible, a task that is challenging when crews are 500 to 700 strong.

"We keep good people because of the loyalty that John and Jim show to everyone in the organization. The people in the field still call them because they have personal relationships. My 14-year-old daughter will text with back-and-forth with John about her volleyball season. He knows more about what she's doing than I do," jokes Bill Lewis, vice president of internal operations. "I think that's what helps us retain good people and allows us to put a product on the street that differentiates us.

"John and Jim continue to wrestle with an ever-changing industry, working to keep up with new technology and the transition of workers from one generation to another while maintaining a small family business atmosphere. They are trying to translate values to productivity."

It's an approach that is especially effective in retaining younger workers. Haley Steed, KRSM's director of marketing and a self-described Millennial, says the atmosphere is appealing, but credits the owners' willingness to change as the key.

"My generation does want to do something that we are proud of. We don't just want to clock in and clock out every day," Steed says. "The people here get to build these beautiful buildings but they

John Kalkreuth

Jim Hurley

also get to work at a place that respects them and values them. What I was so impressed by was [John's and Jim's] willingness to adapt. That's very appealing to the younger generation."

Appealing to the younger generation of workers will be a key to KRSM's ability to maintain its business. Its management team believes KRSM's growth over the years has come because of its tradespersons.

"Whatever success we have had has come from our people. We have great people here," says Hurley. "Most of them have grown up through the company. We have a handful that has been successful coming from other companies but most have been developed from within."

"It's the skill set of our people in the field that has taken us where we are. We have people in the field that general contractors ask for when we are negotiating a project. Wheeling is like Pittsburgh in that we are blue collar rich," says Kalkreuth.

"It's also about relationships. It's about your customers knowing that if you need to put 20 people on a job, you can put 20 people on a job," he continues. "It's the banking relationships and the bonding company relationships. We've worked with the same companies for 30 years or more. The story is really about the people who have stuck with us and built this company in the little town of Wheeling through thick and thin. And believe me it hasn't always been great times. The people who have been with us forever through all the growth pains really make the difference." BG

Kalkreuth Roofing and Sheet Metal
53 14th Street
PO Drawer 6399
Wheeling, WV 26003
304-323-8540
www.krsm.net
hsteed@krsm.net

MANDATORY E-VERIFY EFFECTIVE OCTOBER 2020 FOR ALL PENNSYLVANIA CONSTRUCTION EMPLOYERS

BY LAUREN WYLIE AND ERIC KIMBEL

Many Pennsylvania construction companies began using E-Verify in 2009 for federally-funded projects, or, as required in 2013, for commonwealth-funded projects. On October 8, 2020, the Construction Industry Employee Verification Act (the "Act") mandates the use of E-Verify for all Pennsylvania construction industry employers. Failure to verify all new hires after that date can result in a Department of Labor and Industry investigation, an action by the Pennsylvania attorney general, and significant penalties, including suspension of Pennsylvania licenses and the company's corporate charters. Compliance efforts should be undertaken now to make certain of compliance in October.

The Purpose of the Act

The sponsors of the initial bill, Representatives Ryan MacKenzie (Republican, District 134) and John Galloway (Democratic, District 140), explained the purposes of the bill in their April 2019 memorandum to the House:

There are many unscrupulous employers who hire individuals not authorized to work in the U.S for their construction teams. These employers and their unfair business practices hurt workers by driving down wages, create an unlevel playing field for other employers to compete against, and deprive government of revenue that would be used to fund programs like unemployment compensation. The legislation is aimed at going after these dishonest employers and requires the use of the E-Verify system.

Pennsylvania Construction Industry Employers

The Act is broad and encompasses all Pennsylvania and non-Pennsylvania construction industry employers who transact business in the Commonwealth and have at least one employee. Construction industry is broadly defined as "[t]he industry which engages in the erection, reconstruction, demolition, alteration, modification, custom fabrication, building, assembling, site preparation and repair work or maintenance work done on real property or premises under a contract, including work for a public body or work paid for from public funds." Construction industry employers also include staffing agencies who supply workers to the construction industry.

Compliance with the Act

Every construction industry employer must use the federal E-Verify system to confirm that each employee hired on or after October 8, 2020 is not an unauthorized employee. An unauthorized employee is "[a]n individual who does not have the legal right or authorization under federal law to work in the United States." The Act does not appear to require E-Verification of employees who were employed prior to the effective date of October 8, 2020. However, it would be risky to not E-Verify all employees including those currently employed as of October 8, 2020.

Record of the E-Verification must be maintained through the term of employment for each employee, or for three years, whichever is longer. If an employer relies in good faith on the E-Verify results to decline employment, the employer has no liability if incorrect E-Verify information is the basis for not hiring the prospective employee.

How to use E-Verify

1. **Registration**
   In order to use the E-Verify system, an employer must register its company in the system providing various companies' identifying and background information at www.e-verify.gov.

2. **Access Method**
   An access method provides companies with different functions within E-Verify. The four access methods are employer, E-Verify employer agent, corporate administrator, and Web services. Through a series of questions, E-Verify will help determine which access method is correct

3. **Memorandum of Understanding (MOU)**
   Each company will be required to enter into an MOU which explains the company's obligations, including the Employer's responsibilities, Social Security Administration's (SSA) responsibilities, and Department of Homeland Security's (DHS) responsibilities. The MOU also provides instruction on how to refer an employee to SSA or DHS if a tentative non-confirmation notice is issued.

Operation of E-Verify

Once registered, an employer enters immigration information (I-9) from a newly hired employee into a government website (https://www.e-verify.gov/). This data is compared with information held in the SSA and DHS databases. If the data is valid the employee is authorized to work for the contractor. If the data triggers an issue in the databases, the employer receives a "tentative non-confirmation" notice that requires the employee to sort out whatever issue was flagged. If the employee cannot correct the issue, a final non-confirmation report is issued and the employee is not eligible to work for the contractor.

The Complaint Process in the Act

If a construction industry employer hires an unauthorized employee, it may be subject to a formal or informal complaint to the Department of Labor and Industry (DOLI). Pursuant to the Act, DOLI is to prepare a form complaint for submission of suspected violations. In addition to information about the alleged violation and non-compliant company, the form must identify by name the person completing the complaint. If such a complaint is submitted, it is mandatory for DOLI to investigate the alleged violation. The Act also provides for referral of alleged violations without the filing of a complaint. A non-complaint referral may be made anonymously. However, investigation of this type of referral by DOLI is discretionary.

Raids and Other Investigatory Tools

DOLI can investigate an allegedly non-compliant company by:

1. Entering and inspecting at any reasonable time the place of business or place of employment for purposes of examining and inspecting records that "in any way relate to compliance";

2. Copy all records deemed necessary and appropriate;

3. Require employer written statements regarding the work authorization verification process; and,

4. Interrogate persons to ascertain compliance with the Act.

There is no notice required in the Act for DOLI's on-site investigation and the only requirement is that it be "at any reasonable time". Thus, it is anticipated that DOLI can enter during any normal business hours to examine and investigate a complaint.

Upon investigation, DOLI is to verify the work authorization of the unauthorized workers with the federal government under the Immigration Reform Act. No Commonwealth agency, including DOLI, can make a determination concerning the authorization of the alleged unauthorized workers.

Notably, the Act provides anti-retaliation provisions to protect employees who participate in an investigation, hearing or inquiry, and/or who report a violation of the Act. If retaliation occurs, the employee may bring a civil action within three years, and may be entitled to treble damages, attorney's fees and costs of the action.

Consequences of a Violation

Upon first violation, DOLI shall issue a warning letter to the offending employer. Within 10 days, the employer must verify in writing that all unauthorized employees have been terminated. If the employer fails to provide this verification within 10 days, that failure to verify constitutes a second violation of the Act.

Upon a second violation of the Act, DOLI is required to refer the violation to the Pennsylvania attorney general for enforcement. The attorney general is then required to file an expedited action in the county where the violation occurred.

The court's determination of unauthorized employee status is limited to considering only evidence of the federal government's determination of status under the Immigration Reform Act. That determination creates a rebuttable presumption of status, but the court may request additional verification of the determination from the federal government.

If an employer can establish that it verified the status of the alleged unauthorized employee through E-Verify, there is a rebuttable presumption that the employer did not knowingly employ an unauthorized employee. Furthermore, if the employer can demonstrate that it has complied in good faith with the Immigration and Nationality Act, it can assert such compliance as an affirmative defense to the violation.

Mandatory Penalties upon Finding of a Violation

Upon determining a violation of the Act, the court is required to enter an order which includes the following:

1. The requirement that the employer terminate the employment of each unauthorized employee;

2. A three-year probationary period for the violating company at each location where the unauthorized employee(s) performed work. During the probationary period, the employer must file quarterly reports with DOLI on each new employee at the location(s) where the violation(s) occurred, and must not knowingly employ an unauthorized employee;

3. Within five business days of the order, the employer must verify to DOLI in writing that the employer has terminated all unauthorized employees in the commonwealth; and,

4. If the employer does not submit the verification of termination above, commonwealth agencies will suspend each license held by the employer until verification is provided.

Importantly, the agencies required to suspend licenses include the Pennsylvania Department of State who would be required to suspend an employer's corporate authorizations. Thus, if an employer operates during the suspension, it would be risking additional penalties from the Department of State, or other agencies. Further, the agencies are not prohibited from charging reinstatement fees upon expiration of the suspension.

The duration of the suspension is determined by the court based upon several factors including: the number of violations by the employer, the number of unauthorized employees, prior misconduct of the employer, harm from the violation, duration of the violation, any good faith compliance efforts, and the role of employer directors, officers or principals in the violation. Upon a second violation, the court may suspend licenses for up to 30 days. For third and subsequent violations, or if a violation occurs during probation, the court is required to order a suspension of licenses of not less than one year and can permanently revoke the violator's licenses.

General Contractor Protection for Subcontractor's Violation

The Act does not require general contractors to E-Verify its subcontractors' employees and provides protection to a general contractor if the general contractor complies with three requirements relating to its subcontracts and subcontractors. A general contractor will not be considered in violation of the Act if one its subcontractors has knowingly employed an unauthorized employee if the general contractor has:

1. Required subcontractor compliance with the Act in the subcontract;
2. Included a provision for termination of the subcontractor if the subcontractor violates the Act;
3. Obtained written verification from its subcontractor that the subcontractor is aware of the provisions of the Act and that the subcontractor is responsible for compliance.

General contractors should implement these provisions in their subcontracts early in 2020 to make sure they are in compliance by October 8, 2020 on all projects. This implementation should include an exhibit to the subcontract, executed upon signing of the subcontract, which sets for the above requirements and acknowledgments of the subcontractor. By definition, material suppliers are not considered subcontractors and general contractors should not be required to include such provisions in their purchase orders with material suppliers.

Conclusion

The Act carries serious consequences for knowingly hiring unauthorized employees in the construction industry. Upon a third violation, the suspension of licenses for a mandatory one-year term will likely cause the violator to become insolvent, or to otherwise cease doing business in the commonwealth. Every company should take the time to verify all current employees and all new hires beginning early in 2020 and implement policies to make certain of ongoing compliance with the Act.

[1] A copy of the MOU may be viewed at https://www.e-verify.gov/sites/default/files/everify/memos/MOUforEVerifyEmployer.pdf.

Lauren Wylie and Eric Kimbel are partners in the Pittsburgh office of Frost Brown Todd LLC. Lauren has more than 20 years' experience as in-house and outside counsel to federal government contractors, as well as construction and energy companies. She can be reached at lwylie@fbtlaw.com. Eric Kimbel has practiced construction law for the last 20 years regionally, nationally and internationally for construction, federal government contractors and energy clients. He can be reached at ekimbel@fbtlaw.com.

NAIOP

Save The Date!

2020 NAIOP Commercial Real Estate Development Association Pittsburgh Chapter Award

YOU + 900 CRE PROFESSIONALS + PARTY + AWARDS

= 27th ANNUAL BANQUET

DEVELOPMENT HAPPENS HERE

MARCH 5th, 2020 BEGINNING AT 5:15 P.M.

DAVID L. LAWRENCE CONVENTION CENTER

FOR ADDITIONAL INFORMATION PLEASE:

VISIT: WWW.**NAIOPPITTSBURGH.COM** OR CALL: **412.928.8303**

MAKE SURE TO USE THE HASHTAG **#CREPGH**

FACEBOOK.COM/**NAIOPPITTSBURGH**
TWITTER.COM/**NAIOPPITTSBURGH**
INSTAGRAM.COM/**NAIOPPITTSBURGH**

NAIOP
COMMERCIAL REAL ESTATE DEVELOPMENT ASSOCIATION
PITTSBURGH CHAPTER

DATA: THE 21ST CENTURY BUILDING MATERIAL

BY CHRIS KOSTY, CPA

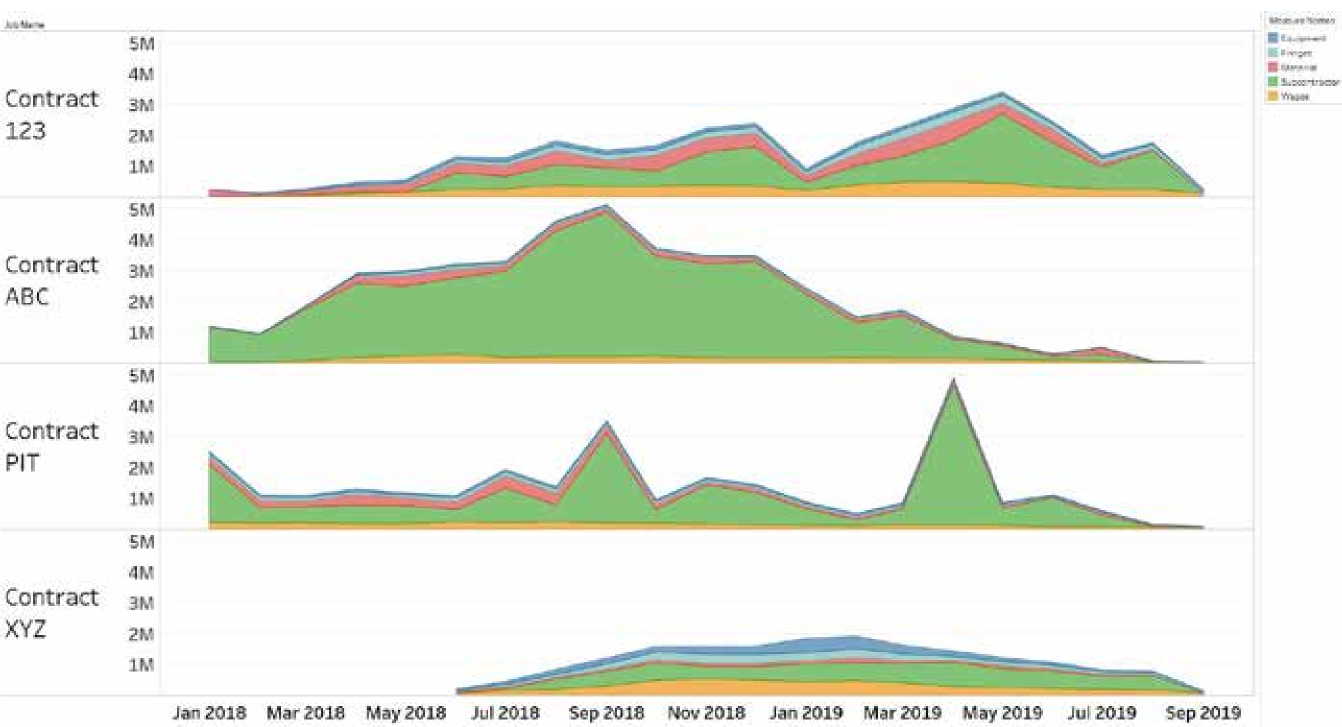
Building the Foundation

Design, bid, mobilize, build and operate. Taking a project from design all the way through close-out is complex, with many moving parts and a multitude of decisions being made along the way. As market competition increases and projected availability of skilled laborers decreases, margin for error of each decision throughout project duration tightens. Contractors will continue to look for a competitive edge, often implementing technology solutions into their processes, such as using GPS-equipped machinery and drones on job-sites. These advantages are designed to enhance oversight and gain efficiencies to optimize processes and help differentiate from the competition, but they're all driven by the same starting point: data.

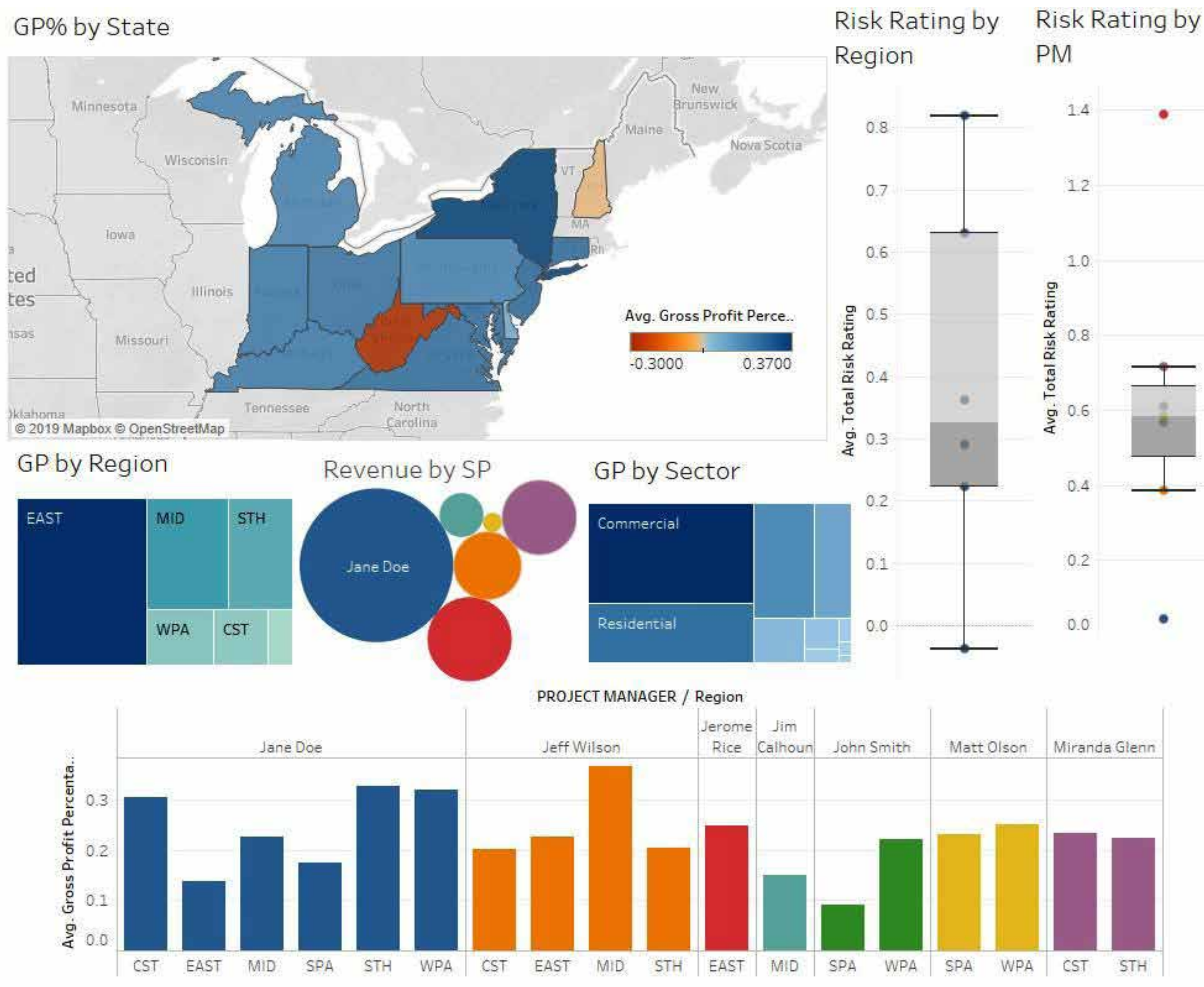
Over the past 15 years, there have been studies concluding that data is "the new oil" and is now the most valuable resource on earth. Like oil, data must first be discovered, extracted, and refined before its power can truly be harnessed. Similarly, data needs discovered, extracted, and refined in order to make meaningful use of it. This meaningful use of data is otherwise known as data analytics. Data analytics is the discovery, interpretation, and communication of meaningful patterns in data; and the process of applying those patterns towards effective decision making. Companies across the world and across all industries, including construction and real estate, are attempting to use the power of data to help become more efficient and profitable.

For a company to utilize data to its fullest potential, processes need to be established to facilitate and produce a data-ready environment. Just like all buildings, a data analytics program requires a strong foundation to be reliable. In this case, the foundation is a data warehouse. A primary purpose of a data warehouse is to accumulate data from a wide range of sources (or systems) and houses that data in one central location. The amount of data captured during the life-cycle of a project can be vast and reside within many different and disparate systems, and a data warehouse allows companies to combine and efficiently manage this data, and later extract the necessary data to perform analytics.

If a data warehouse is the foundation of a data analytics program, data capturing is the concrete and rebar holding the foundation together. The results and analysis derived from the data warehouse are only as accurate as the information entered. As the saying goes, "Garbage in, garbage out." Once the integrity and completeness of data is ensured, however, the insights gained are equal parts valuable and reliable.



Picture 1



Picture 2

Gaining Insights

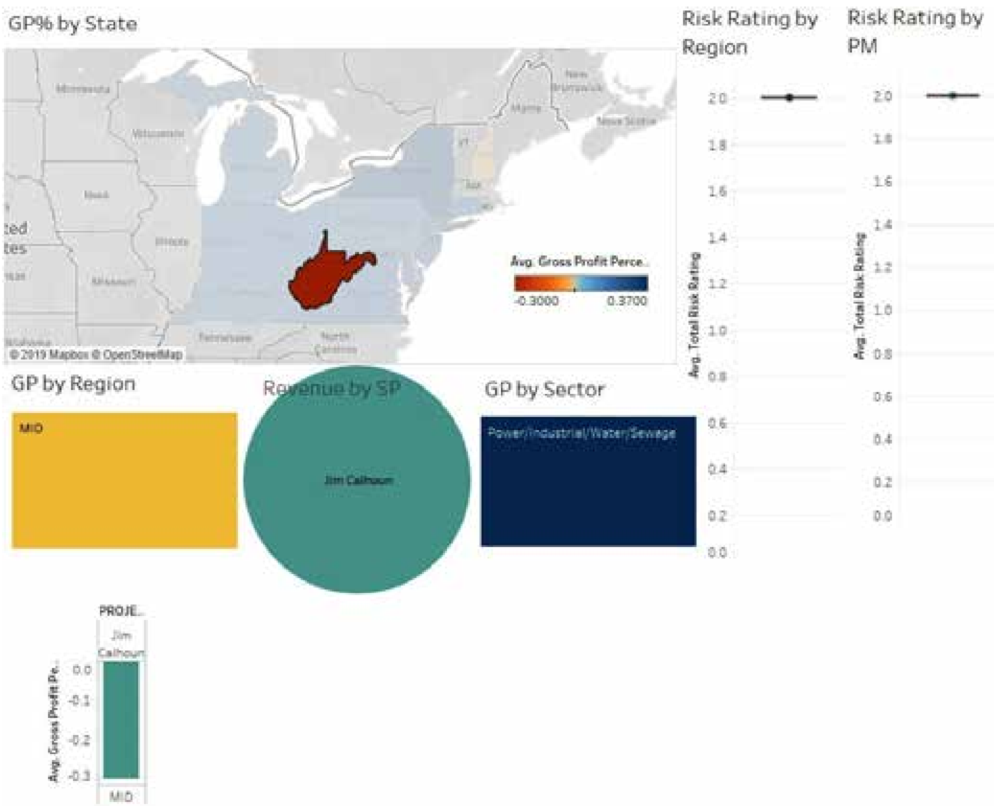
Data analytics have their rightful place in the construction industry for companies on each end of the 'data-readiness' spectrum. Although a data warehouse is advantageous for efficiencies and scalability, beginning your data analytics journey may not start with or even require one. By using the relational model for database management, companies can structure their data in a way to extract valuable insights without a data warehouse, albeit in a more cumbersome and labor intensive way.

Applying an analytically driven decision-making process for any company requires commitment, effort and creativity. A few questions to consider while establishing a path toward data analytics implementation: what key performance indicators (KPIs) or metrics are we currently utilizing on which to base decisions; how are we tracking and evaluating these inputs to ensure data is accurate and reliable; and are we focusing on the most relevant and impactful KPIs for the company? Discussing these questions with other stakeholders in your organization will help establish direction and answer the real question on everyone's mind, "Where do I even start?"

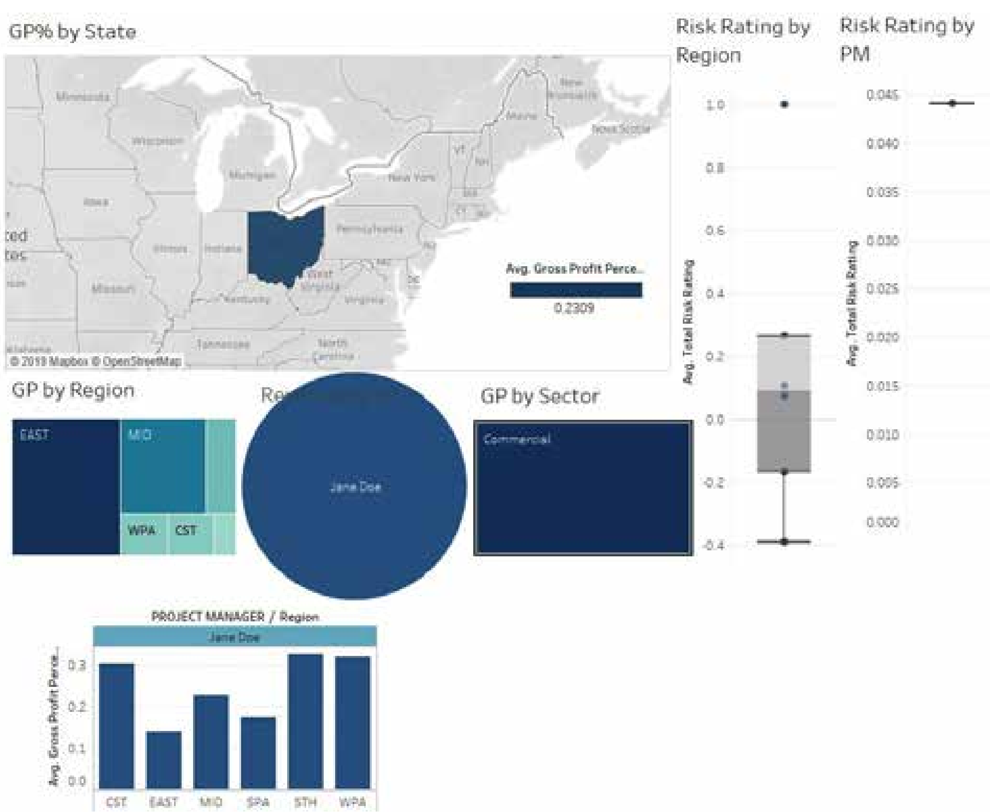
Insights into Action

Project oversight and risk mitigation are two major components of effective management at both the micro and macro levels for contractors. Schneider Downs, through our Automation and Data Analytics Process Team (ADAPT), offers solutions to contractors to tackle these particular issues, among other items, head on. For purposes of this article, we will discuss two areas of focus: (1) job cost timing and scope by individual job, and (2) risk management at the contract schedule level.

In an already competitive bidding environment, analytically assessing job costs and the timing of those costs historically can, among other things, aid in forecasting costs to complete during bidding, which can put your company in an advantageous position to become more profitable due to more accurate bids and less risk exposure. The challenge comes in attempting to gain actionable insights out of job cost detail reports, a potentially cumbersome and inefficient exercise. Trying to identify any abnormalities in scope and timing of those job costs would be challenging simply because of the sheer volume of transactional data provided in a 'data-dump' format out of your ERP system. Data visualization, a single



Picture 3



Picture 4

aspect of data analytics, is focused on displaying data using charts and graphs to gain insights and convey results.

Using either Tableau or Power BI, leading data visualization software, combined with nearly 64,000 individual job cost transactions across four separate projects, ADAPT can evaluate scope, timing and nature of job costs compared to other ongoing projects in an effort to identify trends or abnormalities (Picture 1). In doing so, we're able to see that over time, "Contract PIT" has produced some abnormal results and significant fluctuations in subcontractor costs (green shaded area). This is an example of descriptive analytics, which interprets historical data to better understand changes that have occurred. In this instance, data visualization has directed our attention to this particular job, within seconds, to investigate why the fluctuations occurred.

From this point, depending on the desired outcome, there are a few options on how to proceed. To evaluate past performance for project managers, descriptive analytics may be your final stop. If you intend to use this tool to monitor your jobs on an ongoing basis or in real time, you could develop prescriptive analytics on the back end to produce actionable recommendations to aid in addressing the identified issues. Another potential path is to use the historical data of job cost build up over time to develop a predictive analytic for use in forecasting and bidding by establishing expectations based on type of work, size of the job, owner/sub relationship, location, etc. Regardless of the desired path or outcome, generating insights using the untapped potential of your preexisting data is a success in and of itself, and a quick win on the route to running your business using data analytics.

Analyzing job costs as described above is a detailed look into individual job performance. For those of you in a role focused more on macro-level risk mitigation and oversight, the aforementioned analysis may be too granular. Using contract schedules to monitor job status and evaluate performance is expected, but it's certainly not a uniform process across the industry, or even at an individual company. Everybody analyzes a contract schedule in their own way, drawing on years of experience, a few key metrics and the ever-popular "gut feeling." For contractors of all sizes, it's challenging enough to continuously evaluate job performance in comparison to the entire portfolio of projects, let alone to do so in a timeframe that allows you to react to and get ahead of any negative trends.

Using an internally developed algorithm combined with certain user inputs based on matters of importance, ADAPT developed a tool used to evaluate and manage risk of each contract on the contract schedule within a matter of minutes. In doing so, attention is directed to projects requiring it the most, and valuable time is not wasted evaluating jobs that are within acceptable risk levels and do not require immediate attention. Using data to analyze a contract schedule makes the process more efficient, effective and uniform.

To take this analysis one step further, we can categorize and compare the contract schedule to other demographic information of the job. It's easy to lose out on the newfound insight and value in a spreadsheet full of numbers, but bringing the analysis to life using data visualization can provide a quick high-level overview and can even aid in developing expectations as discussed in the previous job cost analysis example. Using data visualization, ADAPT created a dashboard of a contract schedule (Picture 2). This particular dashboard utilizes various types of visualization, including heat maps, box and whisker plots, tree maps, bubble charts and bar graphs. Individually, each

By using the relational model for database management, companies can structure their data in a way to extract valuable insights without a data warehouse, albeit in a more cumbersome and labor intensive way.

chart provides its own value, but in harmony with one another, we are able to paint a clear picture of job performance and risk profile by various categories.

Having this dashboard at your disposal can provide benefits in many aspects of your job. For example, it could be utilized during project manager evaluations, or to evaluate strategic business decisions regarding new markets, determining which market sectors are more profitable than others. Layer this dashboard on top of a data warehouse, and you have a tool at your disposal that can update in real time automatically, without much user intervention or time wasted.

An added bonus is the dynamic nature of the dashboard; it has the ability to be filtered by any criteria, which then automatically updates for the new drilled-down look (Pictures 3 and 4). Using data analytics and dashboarding, a contract schedule containing over 150 jobs has been evaluated within a matter of minutes. Attention is drawn to the poor performances to investigate, as demonstrated by the state of West Virginia (Picture 3), as well as a success to be celebrated and mirrored, such as the performance in the 'Commercial' Sector (Picture 4).

Where to Start?

Whether you capture and store data in an Excel spreadsheet, an ERP system, or a data warehouse, data analytics have an important role in your operations. Building a proper data warehouse and a strong data analysis model provides the opportunity for data-driven decision making in an efficient and reliable manner, but it's not a requirement to begin laying the foundation for your data analytics at your company. Start small by evaluating historical data using visualization tools to begin establishing trends and identifying abnormalities. Integrating data analytics into preexisting processes is a shift in mindset, but producing and sharing the actionable insights derived from your data will help those around you adapt to change.

Chris Kosty is a certified public accountant and ADAPT senior analyst at Schneider Downs & Co., Inc. He can be reached at ckosty@schneiderdowns.com.

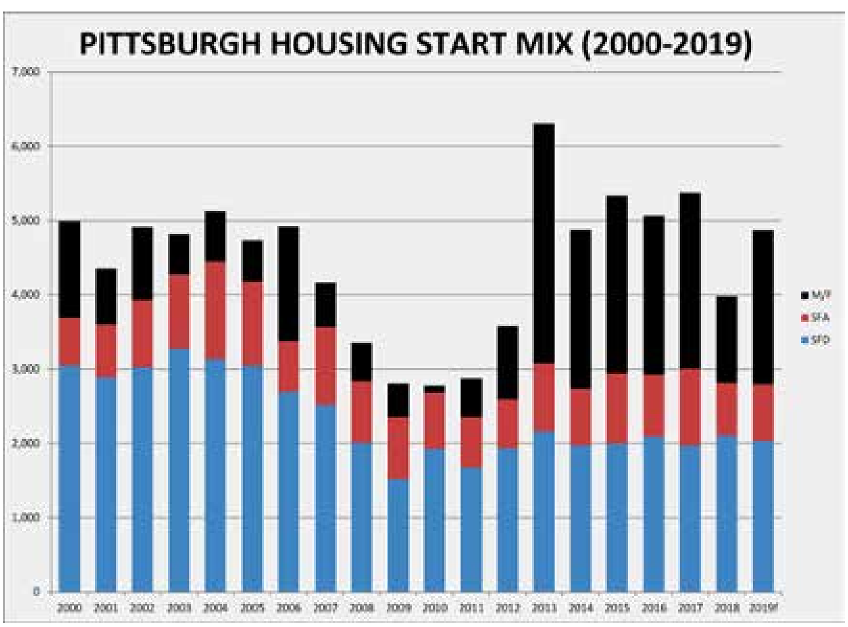
TREND TO WATCH

Another Wave of Apartment Construction is Underway

In 2017, as the apartment wave crested and ebbed, Lynn DeLorenzo found herself showing sites to several of her long-time clients in the apartment sector. DeLorenzo, partner in real estate service company TARQUINCoRE, is a self-described "dirt person" with decades of experience in multi-family development. As most observers were declaring the death of Pittsburgh's apartment boom, DeLorenzo saw the serious developers warming up for the next act.

"There is really no one answer but, if you look at Pittsburgh once the wave of apartments started, there was a need to replace product. I haven't quite figured out when that is going to stop," she says. "I think that is still a part of it because we have so much post-World War II housing spread out across the city."

Pittsburgh, with its stagnant population growth and established housing stock, had seen little new apartment construction between 1980 and 2013. There was a burst in the late 1990s, when investor and lender demand drove construction of a couple thousand units. That brief period included, there was an annual average of fewer than 680 new units built 1995 and 2013. Such a low level of deliveries made the spike in construction that began in 2013 more of a surprise. But a combination of factors created perfect conditions for new multi-family development. Some of those conditions are catalyzing development again.



The share of multi-family (M/F) starts in Pittsburgh has risen dramatically since 2013. Multi-family volume is roughly equal to single-family detached (SFD) homes and is more than triple the volume of single-family attached (SFA) homes. Source: Pittsburgh Homebuilding Report.

The Great Recession was exaggerated – if not created – by the crisis in U.S. home mortgages. The dramatic market correction and government regulations that followed the crisis made developing new single-family residential projects less feasible. Speculative home building ground to a halt. Millions of homeowners became renters because of foreclosure. And an emerging generation of future homeowners – the so-called Millennials – entered the market with much greater skepticism about the value of homeownership.

Apartments, on the other hand, offered a more affordable alternative to the traditional single-family home. Renting meant a short-term commitment. The decline in home values in many parts of the U.S. damaged the conventional wisdom that building equity beat paying a landlord. College debt limited millions of young person's balance sheets. Demand for apartments spiked and developers found that lenders were surprisingly willing to offer debt for multi-family projects. These apartment-friendly conditions drove the market throughout the decade. Even as lenders became more cautious a few years ago, apartments continue to reward owners with rent growth and great returns.

A funny thing happened as the apartment boom waned, both in Pittsburgh and across the country. The expected shift in direction of the pendulum of demand didn't materialize. The inventory of homes for sale is extremely low. New construction remains limited by low lot inventories. And the demographic support for renting is stronger than anticipated, from both Baby Boomers and Millennials.

It is the last factor that is proving to be the most influential in perpetuating the apartment development trend. Those pesky Millennials are proving to be more resistant to the dual trends of child rearing and suburban flight. College debt is choking mortgage demand. Aging Boomers aren't aging as fast as their predecessors, or at least aren't behaving in the same manner. Older homeowners are staying in their homes longer. Baby Boomers, who have built greater wealth than previous generations, have the means to downsize from the family home without downsizing their lifestyles. In many cases, that means renting an amenity-filled apartment in an urban setting. Americans aren't buying homes the way they did before 2009.

"I know the real estate agents will tell you that more people are looking to buy but there is still a higher share of the market choosing to rent. And it's not just Millennials," DeLorenzo says.

Regardless of the motive, buyers are behaving differently and the data shows that the structural issues facing the housing market are serious and the effects are boosting demand for apartments.

The average age of home buyers has been trending upward throughout this century and the housing crisis seems to have exaggerated that trend. According to the National Association of REALTORS 2019 Profile of Home Buyers, the average buyer in 2003 was 40 years old. Today that buyer is 47 on average. The average age of a move-up buyer has gone from 46 years old in 2003, to 52 years old in 2013, and now to 55. The average age of a first-time buyer has increased by five years in the past decade and is approaching 40 years old. That delay in buying is effectively adding five years to the pool of renters.

These demographic trends are holding up in Pittsburgh too. Given that the fastest-growing demographic cohort in Western PA is the under-35 group, the delay in home buying has supercharged the demand for apartments, even though the cost of a home in Western PA is significantly lower than in most major U.S. cities.

It's worth noting that "supercharged" is a relative term. Pittsburgh has averaged 1,249 multi-family units per year since 2000, but that number is skewed by the five-year stretch from 2013-2017 when 2,451 units were built per year. The average in all other years is only 762 units. Essentially, the difference between a big year and an average year in Pittsburgh is less than 1,700 units, or about six projects. It's also worth noting that a big year in Pittsburgh is an average month in the leading multi-family markets like Dallas, Houston, Atlanta, or New York City; in fact, in each of those cities this year there will likely be more apartment units started than the 24,989 built in metropolitan Pittsburgh since 2000.

The new construction surge of 2013-2017 is looking more like a new normal than an outlier to the trend. Based upon the data through November 2019, Pittsburgh Homebuilding Report forecasts that there will be roughly 2,000 units of new multi-family starts in 2020. Some 3,650 units of proposed new apartments or condos are currently going through municipal approvals to start construction during the first half of 2020. Some of these will not get underway as quickly as planned but the forecast for 2020 will be for between 2,600 and 3,000 new multi-family units.

Just as important to the multi-family trend is the fact that the construction of single-family detached homes is more than a decade into a trend of new construction that equals the number of apartments built. From 1995 until 2007, when the number of single-family homes built declined by 40 percent, there were 36,677 single-family detached units started, a 3.8-to-1 ratio compared to the number of multi-family units. Since 2008, the number of single-family homes started has slowed, with 23,444 units built. That's a 1.3-to-1 ratio. Since 2013, that ratio has been less than one-to-one.

As the population of the region has been getting older and younger at the same time, the supply of new construction has remained constant at about 5,000 units. The mix of housing product has changed dramatically. Developers are also encouraged by the dramatic shift in the mix of population too.

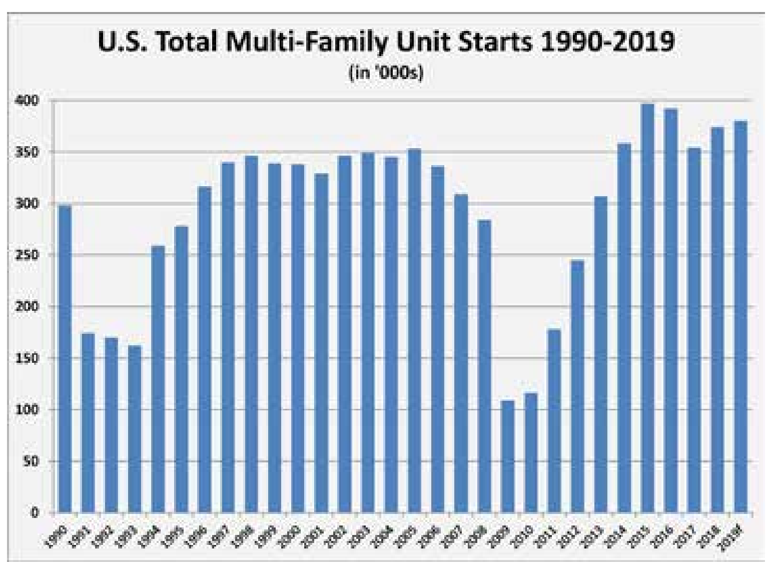
"We did quite a bit of research and looked at trends not just here in Pittsburgh but in other top tier secondary cities. Pittsburgh has become interwoven into the national fabric at this point. Whether it is Nashville or the boom that we've been seeing in Columbus, we're seeing similar trends to Pittsburgh," says Brandon Guy, principal at Steel Street Capital Partners, developers of 23rd and Railroad Apartments. That 220-unit development will feature 33 co-living units and styles of apartments that have heretofore been missing from the multi-family market in Pittsburgh.

"We scraped a lot of data from the American Community Survey. Pittsburgh's population numbers are stagnant so we decided to peel back the layers to see what is really happening here," Guy continues. "What we saw was a tremendous surge in the younger population, which is a reversal for Pittsburgh. In every market where we have seen that dynamic change in urban areas, we have seen a surge of jobs to help support that shortly thereafter."

That same change has become apparent to lenders, according to Nick Matt, senior managing director and co-head for HFF JLL in Pittsburgh.

"I was one of the people who asked how they were going to fill all the units that were built a few years ago. I didn't know where the people were coming from. I still don't have the answer to that question but I know the buildings are pretty full," Matt says. "I chalk it up to two factors when I talk to lenders. Number one would be the move from the suburbs into the city or the fringes. Secondly, although our demographics are still very anemic for job and population growth, I do think we are getting younger."

The demographics of the population shift – the exchange of a young higher-earning resident for an aging resident – create more economic activity. The spending of the over-65 (or over-80) population cohort becomes more diminished. The opposite is true of the under-35 crowd. And the fact that this dramatic shift in demographics is virtually confined to the city limits of Pittsburgh helps explain why the multi-family activity is similarly confined.



Apartment construction rebounded swiftly beginning in 2010 and has held at or above cyclical high levels for six years. Source: U.S. Census Bureau.

Project	Location	Developer	# Units
Oak Hill Apartments	Pittsburgh	Corcoran-Jennison Partners	120
3250 Liberty Avenue	Pittsburgh	RDC	334
Beatty Square Apartments/Senior Lofts	Pittsburgh	Walnut Capital/Midpoint/Corcoran-Jennison	260
Waterfront Apartments	Homestead	EPC Development	251
Watermark at Meeder	Cranberry Township	Watermark Residential	276
Riverfront Landing Phase 2	Pittsburgh	NRP Development	452
Connection at South Side Flats	Pittsburgh	TWG Development	280
23rd & Railroad Apartments	Pittsburgh	Steel Street Capital Partners	220
3 Crossings Phase 2	Pittsburgh	Oxford Development Co.	300
5803 Centre Avenue	Pittsburgh	Charles Street Development	150
Lower Hill District/Civic Arena	Pittsburgh	Intergen	288
Arsenal 201 Phase 2	Pittsburgh	Milhaus Ventures	343
City's Edge Apartments	Pittsburgh	Midpoint Group	110
Fifth & Dinwiddie Development	Pittsburgh	Bridging the Gap/HB Development	167
Perry View Apartments	Ross Township	Kossman Development	155
Marketplace Boulevard Apartments	Moon Township	Kossman Development	596
Shady Hill Center Apartments	Pittsburgh	Greystone Real Estate Partners	220
Total			4522

Paul Griffith, senior managing director and market leader for Newmark Knight Frank Advisory Services, observes that only two of the many apartment projects under construction or in development are occurring outside of an area that runs from the Point to the limits of East Liberty.

"Everything is happening in that triangle from 11th Street to 62nd Street, over to Bakery Square, down to South Side, and back to Downtown. Outside that area there's not much going on," Griffith explains. "One thing that we found was that, for the projects in the pipeline in the Golden Triangle area, the total number we're tracking is in the neighborhood of 6,000 units. That's down from a few years ago when it was 8,000 units. The future pipeline isn't as big and it seems like the projects in the pipeline are getting smaller."

Another change that is part of the trend to smaller projects is an increase in condominiums being developed. Millcraft Investments is developing the largest of these, the Lumiere in Downtown, but there is an uptick in smaller condo projects throughout the Downtown fringe and Strip District. Lynn DeLorenzo sees this trend as another logical result of the demographics.

"I think the biggest change to come is the switch to fee simple condominiums and townhouses for sale," she notes. "That change is drawing people back into the city. It is attracting a whole other group of people, like empty-nesters who, wanted to move back to the city but wanted to own not rent."

In selected neighborhoods this trend has already superheated property values. Griffith notes that appraisals done on condos and townhouses in the Strip District and Lawrenceville have been more conservative than the sales price growth.

"The condo market in Lawrenceville has gone crazy. The values and prices keep growing," Griffith says. "We did a study of properties over $500,000, comparing South Side to Lawrenceville and the numbers were amazing. The condo prices that are being asked are in the neighborhood of $400 per square foot and those prices are achievable. People coming from out of town see Lawrenceville as the hippest place in town and are willing to invest there."

Perhaps the most compelling metric validating the resurgent multi-family market is the financing environment. Lenders had become wary of more apartments as early as 2015-2016, but investors continued to seek out apartment opportunities. Griffith notes that the capitalization rates remain steady just above five percent. Nick Matt points out that the government-backed agencies, Fannie Mae and Freddie Mac, have been given free rein to lend $100 billion each over the coming five quarters, pumping more capital into the system.

"With regard to permanent financing, it's a vibrant market.The agencies are adding $20 billion dollars per quarter, so they have been more aggressive," says Matt. "We've also had activity in the commercial mortgage-backed securities (CMBS) market for deals where the agencies don't want to be as aggressive. CMBS lenders have pools of money that need to be used for multi-family. They have been doing higher-leverage, interest-only deals at great rates."

Market conditions like these are fuel for multi-family development. Supportive demographics, strong occupancy, increasing rents and values, and favorable investing and financing all point to a green light for new construction in 2020 and 2021. Pittsburgh's market size still acts as a constraint, as evidenced by the fact that the "boom" is quite small compared to markets of similar size. But for those looking for the end of the apartment development surge, conditions are too attractive to pass up.

"When the apartment market is that good, developers are going to keep developing apartments," DeLorenzo concludes. BG

FOR SALE
OFFICE/WAREHOUSE/YARD

CONTRACTORS
SERVICE COMPANIES

PROPERTY FEATURES:

- Centrally located 5 minutes from Parkway East. 12 Minutes from Downtown
- Open warehouse with loft and steel shelving. (3) 10 ' electric doors for front or rear access.
- Warehouse Ceiling - 14' to deck
- CAT VI cable
- Over 1 acre newly paved fenced parking lot and laydown area
- 9000 SQ. FT. Usable Space
- Over 1 ACRE Laydown
- 0.040 Aluminum Warehouse Roof
- New Office Roof
- New Heat Pumps/Boiler
- New Space Heaters
- Fenced. Security System

PRICED AT $880,000

- PRIVATE
- SECURE
- EQUIPMENT PARKING AREAS
- MOVE-IN CONDITION

Triple net lease currently generating >
$91,000 GAI. Ready for occupancy February 2021

976 FOREST AVE.
WEST HOMESTEAD, PA 15120

For questions or to visit the site, contact Paul Stricko

412.489.6001 • email: paul@pasllc.com

OSHA ALERT: HOW TO PREPARE FOR AN OSHA INSPECTION

BY JAMES STANLEY

Part I: Selecting a Company Representative

The most important step to take before an Occupational Safety and Health Administration (OSHA) inspection even takes place is selecting a company representative. The company representative is the individual charged with representing the company's interests during an OSHA inspection. The representative, ideally the Safety Director or someone in upper management, should be well-versed in OSHA standards applicable to the business, health and safety conditions of the workplace under inspection, location of required records to be kept under OSHA (such as OSHA 300 logs) and the company's health and safety program.

The company representative should accompany and supervise all aspects of OSHA's inspection. This can be accomplished by asking the OSHA inspector to wait for the arrival of the designated representative before starting the inspection. In most cases, OSHA inspectors are willing to wait a reasonable time, up to one hour, before proceeding. Where the inspector refuses to wait or where it is impossible for the representative to personally appear, designate a back-up to fill in. The designated representative can then supervise and monitor the inspection by telephone, giving instructions to the back-up until he or she arrives on site.

The company representative should monitor and supervise the inspection to the maximum extent possible. This includes:

- Attending the opening and closing conferences.
- Accompanying and recording all aspects of the walk-around inspection, including: areas of the workplace inspected, names of all employees and supervisors interviewed and identification of any photographs, measurements and samples taken. The representative's notes of the inspection should remain confidential.
- Photographing all areas of the facility inspected, making certain to take "side-by-side" photographs of all areas photographed or video-taped by OSHA.
- Responding to all document and other information requests by the OSHA inspector.
- Making sure that non-managerial employees are aware of their rights during an OSHA interview.
- Attending and assisting in all interviews of management employees.
- Keeping the inspection under control. The OSH Act provides that the inspection shall take place at "reasonable times and within reasonable limits." Within the exercise of good judgment, the representative should not allow the inspection to unreasonably interfere with work in progress or run beyond normal working hours. "Partial" inspections should not be allowed to unnecessarily expand into "wall-to-wall" inspections.
- Never admitting violations or unsafe practices but correcting observed violations as soon as the inspector departs.
- Consulting with the company's legal counsel about difficult or special problems, such as search warrants or subpoenas. As necessary, allow counsel to deal directly with the OSHA inspector.
- Being courteous and polite, but firmly exercising the company's legal rights.

In the case of catastrophic accidents, including as fatalities or accidents resulting in multiple serious injuries, special care must be taken when it comes to the designation of company representatives. OSHA citations resulting from fatality or catastrophe inspections can carry very significant penalties. Willful violations of OSHA standards resulting in death can carry criminal penalties. Because of the potential liability, added complexity and legal issues involved in a fatality or catastrophic accident, the company should insist that legal counsel be contacted immediately and, if at all possible, before OSHA is allowed to start its inspection or any information is provided.

An effective company representative is essential to the company's success in minimizing OSHA liability. What the representative says or does during an inspection -- and what they don't say or do -- can have a significant impact on how quickly and smoothly the inspection goes and the number and severity of citations issued. Good documentation of what happened during the inspection is essential to defending any citation issued. Without good documentation, especially photographs, the company and its attorneys may have no choice but to rely on OSHA's file and photographs instead.

Part II: The Opening Conference and Record Requests

The Opening Conference:

Most OSHA inspections start with an unannounced visit by a compliance officer and an Opening Conference. The purpose of an Opening Conference is to discuss what will happen during the inspection. Use the Opening Conference as an opportunity to start managing the inspection. Here are some tips:

- Identify your company representatives designated to supervise the inspection. Inform the inspector that he or she should coordinate all inspection activities through your representative, no one else.
- Don't be afraid to ask questions. Ask why your facility or worksite was chosen (employee complaint, referral by another agency, etc.). Ask to see a copy of the written complaint if there is one.
- Confirm with the inspector what he or she wants to see and do, and how long he or she expects to be at

your workplace. Be courteous, but keep the inspection moving towards completion.

- Reach an understanding that the inspection will be limited to the areas or conditions listed in the complaint or referral.
- Discuss any safety issues that may be encountered during the inspection, including personal protective equipment required by your company. Require the inspector to abide by all company safety rules.
- Take good notes of all matters discussed at the Opening Conference.

Records Requests

During the Opening Conference, or some time during the inspection, the inspector will ask to see certain records and documents. To avoid later misunderstandings, it is a good practice to have OSHA put these requests in writing or an email. Make sure you understand when and where OSHA wants the documents to be produced. As a general rule, do not volunteer documents not specifically requested.

Production of records not required by OSHA's standards is another matter. By complying with such requests, you are possibly helping the inspector to find and document violations, expand the investigation, or provide damaging evidence against your company. As to these documents, the better practice is to defer all requests until you have had a chance to look the documents over and/or review them with upper management or legal counsel. Objections may be made on the grounds that OSHA's request is overly burdensome (too much time and effort to comply), irrelevant to the investigation or legally protected from disclosure.

Part III: The Walk around Inspection

The actual inspection of the workplace is the most critical phase of OSHA's inspection. In many cases, all of OSHA's evidence as to whether a violation exists results from the efforts of the inspector during the walk around inspection. Here are points to remember when it comes to the walk around inspection:

- The law provides that a representative of the employer shall be given an opportunity to accompany the inspector. Always exercise this right.
- The law also provides that a representative authorized by the employees, usually a union representative, shall have the right to accompany the inspection.
- If the inspector wishes to inspect areas that are not related to the purpose of the inspection, the employer representative should inquire as to the reason for such an inspection.
- Caution should be exercised if the inspector attempts to videotape statements by employer representatives. Politely inform the inspector that you do not wish to be videotaped.
- The employer representative should take his or her own photographs and measurements either during or immediately after the OSHA inspection. Also, take good notes of what the inspector does during the inspection.
- In many cases, unsafe conditions are observed during the walk around inspection. If possible, the employer should always correct unsafe conditions observed during the inspection as soon as possible or after the inspector departs. In the event a citation is issued, this corrective action will demonstrate the employer's good faith and may result in a lower penalty.

Part IV: Employee and Supervisor Interviews

OSHA interviews are one of the most critical aspects of the inspection. An alarming number of citations are based on statements of employees or supervisors to the OSHA inspector during the inspection or formal interviews. Advance preparation for these interviews can lessen a company's liability.

Employee Interviews

The OSH Act gives employees the right to speak privately with OSHA. For that reason, employer representatives are generally not entitled to be present for non-supervisory interviews.

Even though employer representatives are not often present during employee interviews, they can and should take the following actions to prepare employees:

- Inform employees that they have the right to speak or not speak to OSHA.
- Inform employees they may request a representative, including a supervisor, a union representative, or an interpreter, to sit in on the interview.
- Put employees at ease and give them a "heads-up" as to what the OSHA inspector is likely to ask.
- Advise employees to tell the truth.
- Inform employees of their right to request that they not be tape-recorded and that they have the right to bring their own tape recorder.
- Conduct a voluntary debriefing of all employees interviewed by OSHA.

Supervisor Interviews

Interviews of management and supervisory employees are another matter. Unlike non-supervisory employees, the statements and admissions of a supervisor may legally bind the company. In responding to management interviews, the following guidelines should be observed:

- The employer's representative has the right to be present for supervisor or management interviews and should always exercise that right.
- Management witnesses should be prepared in advance as to possible subject areas during their interview, and the "do's and don'ts" for giving testimony, including just answering the questions, not volunteering, avoiding speculation and the importance of telling the truth.
- During the interview, or anytime during the inspection, avoid admitting violations or hazardous conditions.
- Supervisors also have the right not to be tape recorded, or to bring their own tape recorder.

- Signed statements are sometimes obtained by the inspector. Because these statements are drafted in the inspector's own words, counsel or the employer representative should make certain that the statements are correct in all respects before the witness is allowed to sign. Make sure that corrections are made as necessary.

Part V: The Closing Conference

Closing Conference

At the conclusion of the inspection, the inspector will hold a closing conference to discuss the observed violations. Here are some tips:

- Don't be afraid to ask questions: What specific standards are being cited? Why? What is the classification (serious, repeat, etc.)? How much is the penalty? Often, the inspector will not commit to the classification or the penalty, claiming that the final determination is up to his or her boss. It never hurts to ask.
- Attempts to argue or settle the citations with the inspector at the closing conference are usually unsuccessful. Instead, the inspector will encourage you to attend an informal settlement conference after receipt of the citations.
- Even if you agree with the proposed citations, avoid admitting violations or recognizing hazards. There may be defenses to the citations that you have not considered.
- Tell the inspector where to send the citations.
- Take good notes at the closing conference.

Typically citations are mailed to the employer several days after the closing conference. All citations must be issued within six months of the start of the inspection. BG

Jim Stanley is the President of FDRsafety, LLC. Jim spent 25 years at OSHA, culminating in his appointment as the Deputy Assistant Secretary of Labor in Washington DC. He can be reached at jstanley@FDRsafety.com

The Construction Industry Evening of Excellence

February 27, 2020

5 – 9 pm

Heinz Field East Club

The Master Builders' Association presents

The 2019 MBA Building Excellence Awards

Contact the MBA for Sponsorship Information.

The 2019 MBA Building Excellence Award winners will be announced.

For more information please visit

www.mbawpa.org, call 412.922.3912, or email info@mbawpa.org

INDUSTRY & COMMUNITY NEWS

The Clear Thoughts Foundation, co-founded by Babst Calland's Matt Jameson (center) and sister Hayley Jameson (second from right) raised $175,000 for dementia research at its November 2 Roll for a Reason event. Also pictured are (from left) CTF board members Dan Tarchick, co-founder Sharon Sippel, and Lisa Sevcik. Photo by Christian Baker.

TEDCO founder Ted Frantz (center) was honored with the Tink Bryan Award at the Builders Exchange's annual cocktail party on November 8. Pictured with Frantz (from left) are Tom Bryan from Bryan Concrete, Stephanie Schuler, James Frantz, Elisabeth Frantz, Leslie Frantz DeGrendel, and Del Walker from the PBX. Photo by Autumn Harris.

(From left) A. J. Vater's Andy Vater, John Morris from J. J. Morris & Sons, and Harris Masonry's Lee Harris. Photo by Autumn Harris.

PJ Dick's Alyssa Stonebraker and Casey McAndrew. Photo by Autumn Harris.

Eric Bayer from Ohio Valley Drywall Supply (left) with Alliance Drywall's Gene Brown. Photo by Autumn Harris.

Rich Yohe from Easley & Rivers (left) and Kim Yohe, with J.R. Reed from Reed Building Supply.

(From left) Adam Harris from Harris Masonry, Specified Systems' Bill Wilson, and Brendan Brown from BK Brown.

Representing Kalkreuth Roofing & Sheet Metal at the MBA Young Constructors Friendsgiving event are (from left) Tiffany Wildern from East Coast Metal Systems, Whitney Wack, Priscilla Wright, Payten Butler, Whitney Hajdukovich, and Liz Preston.

(From left) Joel Niecgroski from the KML Regional Council of Carpenters, Scotti Law's David Scotti, and McKamish's Bob Ward.

Volpatt's Jamison Vernallis (left) and Landau's Bethany Sidun.

(From left) Hillary Hambleton from Bluestone Communications, with Sam Reihs, Brandon Rupert, and Mike Innocenzi from Mosites Construction.

(From left) Clifton Larson Allens' Jenna Countouris, Kayla Oris, Nicole Shook, and Nick Latterner.

(From left) Gillian Lawhead from Pieper O'Brien Herr, Triad Engineering's Janet Scarcelli, Rachel Rzymek from DRS Architects , and IKM's Georgia Glass at the SMPS Pittsburgh holiday party.

Members of the A. Martini & Co. team volunteered with Play It Forward Pittsburgh, unpacking and sorting toys for its annual shop day. Pictured are (from left) Nikole Lopretto, Alli Martini, Mollie Martini, and Katie Stern.

Facility Support Services' Beth Cheberenchick (left) and Tammy DeMarco, with Desmone's Jim Ambrose (center).

MBA's Dave Daquelente (left) and MBA Young Constructors chair Brian Budny, from PJ Dick, with representatives from the Pittsburgh Penguins at the YC Friendsgiving Event.

Drew Parish from the Mario Lemieux Foundation (left) receives a $10,000 check from the MBA's Eric Starkowicz on behalf of the Young Constructors Committee, which raised the funds and toys at its Friendsgiving Event. Photo courtesy Allegheny Health Network.

(From left) Reed Building Supply's Davaughn Alston and Aaron Reed, and Quintin Kittle from QK Architecture.

(From left) Cheryl Sullivan, Kim Hyland and Sandy Wilson from Specified Systems, and Marthinsen & Salvitti's Bill Sullivan.

AWARDS & CONTRACTS

Independence Excavating Inc. was awarded the site package for the new Daycare Center at Dick's Sporting Good Headquarters for Rycon Construction

Walbridge has awarded the site package to **Independence Excavating Inc.** for the new Elliot Company manufacturing facility in Jeannette PA.

Independence Excavating Inc. has been awarded a waterline and fireline replacement package by Facilities Support Services LLC. for the National Energy Technology Laboratory

A. Martini & Co. recently completed the renovation of Mortgage Connect's offices in Cherrington Corporate Center. This 15,000 square foot office renovation was completed in collaboration with Design 3 Architects.

Blank Rome selected **A. Martini & Co.** as the general contractor for their office expansion project in the Union Trust Building. This 5,000 square foot project entails demolition of the new space and build-out of private office spaces. The architect for this project is NEXT Architecture.

Mascaro received a contract from the University of Pittsburgh for site improvements and infrastructure upgrades for the Bigelow Block Transformation.

Mascaro's client services group received a job order contract award from the University of Pittsburgh. The base term is one year with the option of extending the contract for two additional years.

Mascaro's client services group received a contract to improve the site entrance at AHN Jefferson Hospital.

Mascaro's client services group is renovating the interior of the church at St. Paul of the Cross Monastery.

Rycon's Building Group is the construction manager responsible for a multi-story building addition at Magee Women's Hospital to house three new emergency generators with shell space to house a future fourth generator. RM Creative is the architect.

Rycon's Building Group started renovation work on the Carnegie Library of Homestead. The scope includes a new elevator, building-wide fire alarm system, sprinkler updates, and electrical upgrades such as a new generator. MacLachlan, Cornelius & Filoni is the architect working with **Rycon.**

Rycon's Building Group is the preconstruction and construction manager for a new, $18.3 million medical office outpatient center in West Mifflin, PA. Work entails converting a former retail location into a 38,000 square foot outpatient surgery center. Stantec is the architect.

On the 8th floor of Liberty Center, **Rycon's** Special Projects Group demolished an existing space to fit-out 2,800 square feet of new office space for the U.S. Army Corps of Engineers. Desmone Architect is the architect.

Rycon's Special Projects Group began renovation work on a gaming development office. The 3,000 square foot space is anticipated to be completed January 2020.

Rycon's Special Projects Group is completing an office expansion for a high-tech autonomous company located in Pittsburgh's 3 Crossings Development. Work on the 4,500 square foot space is expected to be completed February 2020.

Rycon is working on an AutoNation Toyota car dealership in Buford, GA. The $5.8 million renovation encompasses 50,000 square feet and is anticipated for completion September 2020.

Work on a new $2 million car wash is underway by **Rycon** in Snellville, GA. The 5,600 square foot structure is a pre-engineered steel and glass tunnel car wash system.

In Holland, OH, **Rycon** was awarded the construction of a new Chase Bank. The $2.3 million project covers 3,500 square feet and is anticipated for completion June 2020. Within the past year, **Rycon** was chosen to complete new construction and renovation work on five other Chase Bank projects in Ohio and Florida.

Rycon was awarded the renovation of a surgery center in Raleigh, NC for Fresenius Medical Care. The $2.6 million job encompasses 11,500 square feet and is expected for completion June 2020.

Rycon is providing supplemental structural steel for five retail spaces in the east wing of CocoWalk, a popular open-air mall in Miami, FL. **Rycon** is also working on storefronts for three retail spaces in the development, as well as constructing space to a white box.

Rycon was selected to build a new speculative industrial warehouse located within Beacon Logistics, a high-tech Class A business park in Hialeah, FL. This 146,000 square foot building will be the second warehouse that **Rycon** has built in the business park within the last year.

Rycon is working on The Collection retail plaza in Brandon, FL. The project includes the demoltion of a former retail space, the construction of a new 124,000 square foot space, and façade work on a separate portion of the retail plaza.

In Philadelphia, PA, **Rycon** is working on renovations to Tiffany's Bakery within Suburban Station. Work is anticipated for completion by the end of 2019.

M & J Wilkow awarded **Shannon Construction** a contract for core and shell renovations to the former Macy's store at the Waterfront. The $7 million conversion to multi-tenant office building was designed by Strada Architecture LLC.

Shannon Construction was awarded an $8.5 million contract to build out the 65,000 square foot tenant space for Commonwealth Charter Academy at the former Macy's store in Homestead, PA. Strada Architecture LLC is the architect.

Facility Support Services LLC (FSS) was one of several selected contractors who were recently awarded the JOC contract with the University of Pittsburgh

FSS was awarded the $1.2M multi-phased Utility Infrastructure Upgrades - Potable Water and Fireline for the Department of Energy, National Energy Technology Lab in Pittsburgh.

FSS was selected by the University of Pittsburgh for the Scaife 9th Floor Suite 909 Rodent Quarantine Facility (DLAR) renovations.

University of Pittsburgh selected the **Turner Construction/Mosites Construction** team as construction managers for its $100 million Victory Heights Central Utility Plant. Construction is planned to begin in late 2020. Burns & McDonnell is the engineer.

Turner Construction was awarded a construction management contract for the $5 million Brain Institute Lab fitout at University of Pittsburgh Biomedical Science Tower 3. Louviere Stratton & Yokel LLC is the architect.

Massaro CM Services is the construction manager for the Plum Town Center, a $12 million new municipal government center for Plum Borough. Designstream Architectural Studio is the architect.

The National Aviary awarded a contract to **Jendoco Construction Co.** for its pavilion addition on the North Side. The architect for the 8,700 square foot, $4 million expansion is PWWG Architects.

PJ Dick Inc. Special Projects Group is the general contractor for Astrobotic's $7 million conversion of 1610 North Lincoln Avenue into its new headquarters. AE7 Architects is the architect for the 47,000 square foot renovation.

Action Housing Inc. selected **PJ Dick** as contractor for its $27 million 43-unit Flats on Forward apartments in Squirrel Hill. The mixed-use redevelopment of the former Squirrel Hill Theater site will include 35,000 square feet of office and retail. Bohlin Cywinski Jackson is the architect.

KPMG awarded a contract to **TEDCO Construction Corp.** for renovations to its offices on the 28th floor of One BNY|Mellon Centre. The architect is M Group Architects.

TEDCO Construction Corp. was the successful contractor on the Artificial Intelligence Maker Space at the Tepper Quadrangle at Carnegie Mellon University. The architect for the $600,000 renovation is Renaissance 3 Architects.

Janney Montgomery Scott selected **TEDCO Construction Corp.** to renovate its offices on the 22nd Floor of One PPG Place. The architect is The Design Alliance.

FACES & NEW PLACES

Rocky Bleier Construction Group welcomed **Donald "Dak" Bramer III** as project engineer. Bramer graduated from Fairmont State University with a degree in civil engineering.

Josh Foltz was promoted to project superintendent **Rocky Bleier Construction Group** and will oversee the MRI expansion at the VA Medical Center in Clarksburg, WV.

Seth Pearlman, P.E., D. GE, M.ASCE, President and CEO of **Menard Group USA**, has been selected by the Geo-Institute Board of Governors at the American Society of Civil Engineers to receive the 2020 Wallace Hayward Baker Award for Ingenious Innovation in the Field of Ground Modification.

Tim Frew joined **Mascaro** on October 14 as a project manager/superintendent for the buildings' group.

Corey Watts, who recently interned with **Mascaro**, joined the team on December 9 as a project engineer in the heavy-industrial group. Watts just concluded five years of active service in the U. S. Army and is a West Point graduate with a bachelor's degree in engineering.

Seth Beatty joins **Rycon's** Building Group as a project manager. He brings multiple years' experience to the company.

Rycon's Ft. Lauderdale office welcomes **Robert Buell** as an assistant project manager with two years' experience.

Yana Ilina was added to **Rycon's** Ft. Lauderdale office as an estimator. She brings four years' experience to the team.

In **Rycon's** Building Group, **Phil Linton** has been hired as a senior preconstruction manager. Linton has 30 years' experience in the AEC industry as well as expertise in estimating and supervision of health care, higher education, sports/entertainment, and large commercial projects. He is a graduate of Point Park University with a Bachelor of Science in Mechanical Engineering Technology and a Master of Business Administration.

Michael Luznar joins **Rycon's** Special Projects Group as a project manager with nine years' experience.

In **Rycon's** Casework & Millwork Division, **Ryan McCabe** has been hired as a senior project manager.

Rycon's Cleveland office welcomes **Jenny Mravec** as an administrative assistant and Melissa Retort as a project coordinator/engineer.

Ixa Santos joins **Rycon's** Ft. Lauderdale office as a staff accountant. She brings five years' experience to the company.

Adam Thomas has been hired as a senior project manager by **Rycon's** Atlanta office with 19 years' experience.

Independence Excavating Inc. added **Jason Sinay** to its project management and estimating teams in the Pittsburgh Region.

Joe Streczywilk has joined Independence Plumbing as a foreman.

MBA MEMBERSHIP

2020 MBA OFFICERS

President
Todd A. Dominick
Rycon Construction, Inc.

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

Treasurer
Michael R. Mascaro
Mascaro Construction Company, L.P.

Secretary/Executive Director
David D. Daquelente

2020 MBA BOARD OF DIRECTORS

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

Domenic P. Dozzi
Jendoco Construction Corporation

James T. Frantz
TEDCO Construction Corporation

Jeffrey C. Landau
Landau Building Company

Anthony F. Martini
A. Martini & Co.

Steven M. Massaro, Past President
Massaro Corporation

M. Dean Mosites
Mosites Construction Company

Jodi Rennie
Turner Construction Company

Clifford R. Rowe, Jr.
PJ Dick Incorporated

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

GENERAL CONTRACTORS

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

SPECIALTY CONTRACTORS

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

AFFILIATE MEMBERS

4CTechnologies
84 Lumber
ADMAR Construction Equipment & Supply
AE Works Ltd.
AEC Online Store LLC
Allegheny Medical
Alliant
American Contractors Insurance Group
AmeriServ Trust and Financial Services Company
AON Risk Services, Inc.
Arnett Carbis Toothman, LLP
Arthur J. Gallagher Risk Management Services, Inc.
ATC Group Services
Atlantic Engineering Services
Atlas Marketing
Atlas Wholesale Co., Inc.
Babst | Calland
Baker Tilly Virchow Krause, LLP
BDO USA, LLP
The Blue Book Building & Construction Network
Blumling & Gusky, LLP
Bon Tool Co.
Brashear Construction Consulting, Inc.
Bronder & Company, P.C.
Buchanan Ingersoll and Rooney, P.C.
Burns & Scalo Real Estate Services, Inc.
Burns White, LLC
Cadnetics
Case|Sabatini
CENTRIA
Chartwell Investment Partners
Chubb Group of Insurance Companies
Civil & Environmental Consultants, Inc.
Clark Hill PLC
Cleveland Brothers Equipment Co., Inc.
CliftonLarsonAllen LLP
Cohen & Grigsby, P.C.
Cohen, Seglias, Pallas, Greenhall & Furman
Computer Fellows, Inc.
Construction Insurance Consultants, Inc.
Crawford Consulting Services, Inc.
DesignGroup
Dickie, McCamey & Chilcote, P.C.
Dingess, Foster, Luciana, Davidson & Chleboski, LLP
Dollar Bank
DRS Architects
Eckert Seamans Cherin & Mellott
ECS Mid Atlantic, LLC
EPIC Insurance Brokers & Consultants
Farmers National Bank of Emlenton
FDR Safety, LLC
Foundation Building Materials
Frost Brown Todd, LLC
Gallaway Safety & Supply
The Garland Company
The Gateway Engineers, Inc.
GEM Global Search & Consulting Group, LLC
GPRS
Graystone Consulting Pittsburgh Cleveland
The Hartford Surety
Henderson Brothers, Inc.
Henry Rossi & Co., LLP
Highway Equipment Company
Hill, Barth & King, LLC
Huntington Insurance, Inc.
Huth Technologies LLC
Intertek - PSI
J. S. Held
Joe Safety
Karpinski Engineering
Langan Engineering & Environmental Services
Liberty Insurance Agency
Liberty Mutual Surety
Lockton Companies, LLC
Louis Plung & Company
Lytle EAP Partners/Lytle Testing Services, Inc.
Maiello, Brungo & Maiello
Marsh
McKim & Creed, Inc.
Metz Lewis Brodman Must O'Keefe LLC
Meyer Unkovic & Scott, LLP
Meyers Company
Michael Baker International
Mobile Air, Inc.
Mobile Medical Corporation
Multivista
NCI - Nursing Corps
Ohio Valley Drywall Supply
Old Republic Surety Company
Pac-Van, Inc.
Philadelphia Insurance Companies
Pietragallo Gordon Alfano Bosick & Raspanti, LLP
Pittsburgh Mobile Concrete, Inc.
Post & Schell, P.C.
Precision Laser & Instrument, Inc.
Providence Engineering Corporation
R.A. Smith National, Inc.
R.J. Bridges Corporation
Regional Industrial Development Corporation (RIDC)
The Rhodes Group
Risk Ergo
Rothman Gordon, P.C.
Rupp & Fiore Insurance Management, Inc.
Schneider Downs & Company, Inc.
Scotti Law Group
Seubert & Associates, Inc.
Signature Safety, LLC
Suburban Propane
Tarax Service Systems, Inc.
Tom Brown, Inc.
Travelers Bond & Financial Products
Tucker Arensberg, P.C.
UPMC Work Partners
USI Insurance Services
VEBH Architects, P.C.
Wilke & Associates, LLP
Williams Scotsman
Willis of Pennsylvania, Inc.
WNA Engineering, Inc.
Zilka and Associates, Inc. Architects
Zurich NA Construction

CLOSING OUT

BY MARK A. THOMAS, PRESIDENT, PITTSBURGH REGIONAL ALLIANCE

This new decade is critical for the Pittsburgh region. We must attract new residents, workers and jobs so our industries and communities thrive and establish a pace of growth that matches the ambitions and the assets of our region.

Being in the spotlight, the region has had no shortage of ideas and proposals for how we define and pursue shared vitality. Local and national entities have crafted compelling research outlining how we comprehensively grow the region's economy and population, improve our livability and environment, build world-class industries and ensure we're positioned for the next wave of investments. With that spotlight, comes great responsibility.

In my short time on the job here, I've come to believe it takes fresh perspectives to nudge an endearing culture of humility to celebrate the region's moment. What I've discovered is that each county is committed to diversifying their economies and unifying around the belief that our collective strengths are key to each individual county's objectives.

In December, the Allegheny Conference published Vision 2020-2030: Next is Now, which includes the PRA's plan for marketing our region. We looked at the broad economic themes and projections for the next decade to shape a strategy to grow in the areas where growth is anticipated. This is the context for what all metros in North America will aggressively pursue and market, especially the competitive ones. Key highlights include:

- The U.S. will serve as the top market for foreign direct investment with a growing percentage of investors (two-thirds) engaging at the local level for decisions. Manufacturing will serve as the top vertical.
- Major companies anticipate organic growth, with new alliances and collaborations driving their decisions.
- Global venture capital will continue to grow, with increasing investments in deep tech, retail, healthcare and software. Current trends show more than $100 billion investing in nearly 9,000 companies each year.
- Qualified Opportunity Zone funds raised more than $4.5 billion to date with next year serving as a prime deployment opportunity.

We want to position the 10 counties to get our rightful share. The PRA will work closely with you and our partners to:

- Leverage regional assets to catalyze interest and local job growth in high-growth areas. We will orient efforts toward those sectors of the economy that are projected to experience growth – proactively targeting companies that are forming, investing and expanding. This will evolve over the next decade.
- Position the region as the location of choice for fast-growing, deep-tech, research-driven investments such as advanced manufacturing, AI, energy and robotics. The region is home to the invention of cutting-edge industries, driven by our university and R&D assets. Across all 10 counties, investments are being made in technologies such as robotics and machine learning that are fueling growth across all sectors.
- Promote the region's industrial, logistics and production workforce capabilities to attract advanced manufacturing with a focus on downstream opportunities and foreign direct investment. We will fully leverage the region's strong industrial backbone – airport cargo facility; river, rail and freight infrastructure; available sites and buildings; and more – as well as our rich human and natural resources to encourage increased investment in advanced materials and manufacturing.

The PRA will also serve as the lead for the Allegheny Conference's talent attraction and retention efforts. Talent is a key driver of economic growth and success. The competition for talent is global and it is fierce. To achieve our goals, we need to focus on scaling talent attraction and retention. We will do this by:

- Partnering with the academic community and trades to proactively identify business attraction opportunities and develop initiatives to increase the talent pool in growth sectors.
- Developing content and programmatic interventions to equip businesses and employers with tools to attract new graduates, foreign and diverse talent and alumni of the region's post-secondary educational institutions.
- Attracting the leading organizations and companies that cultivate a vibrant and inclusive environment for professional talent and workers.

As developers and consultants, you need to be equipped with the best support to help you promote the region. That is a priority for us, and the PRA is:

- Launching a new site and new brand for the region. We understand that you are selling the region just as much as your own developments. We want to provide you with the resources to tell a compelling Pittsburgh story.
- Allocating more support for catalytic opportunities. We recognize that certain transformative opportunities may require a strong coalition of partners and the necessary tools to make them happen.
- Sending clear signals to the marketplace on specific advantages within our region. We will also help you position the areas for investment – and distinguish your community within the broad region – and for competitive investment.

A new decade has begun, and what's next is now. Let's get working on it together!

Mark Anthony Thomas

Bridging Pittsburgh Communities

WALNUT CAPITAL
THE BEST IN CITY LIVING
412.682.3810

Dollar Bank®
Since 1855
412.261.8810