Breaking Ground

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SAFETY CULTURE 2020

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PUBLISHER'S NOTE

It's still too early to tell. If you're looking for the COVID-19 edition of BreakingGround, prepare to be disappointed. I hope that as you read this you know much more about how the mitigation efforts have slowed the spread of the infections. I hope your business has restarted and the environment is safe again. But, as I write this, I have no intention of trying to predict if that will happen by May 15 or July 15, nor any desire to prognosticate generally about the impact on the economy or construction industry.

That said, the topic is unavoidable.

I could make the argument that the recession that will result from the pandemic has come at a time when we were prepared to respond. Pittsburgh was riding a high economically and the construction industry is coming off three or four good years. Backlogs were high and the outlook was very good for another few years. Construction companies and individuals had the opportunity to bank dry powder and save for a rainy day. And it is raining. On the other hand, the last few years have also been uneven, with several 60- to 90-day periods of owners' indecision that kept the Pittsburgh market too competitive. It looked like 2020 was going to be the year that made the struggles of the 2010s worth enduring. Now that prospect has evaporated in a few weeks.

Tall Timber Group isn't much of a group. I'm supremely fortunate to have little overhead. My friends who own construction businesses don't have that good fortune. Almost all of them are dealing with an overhead burden that forces them to make tough decisions. It's painful for them and it's painful to watch. It's also encouraging to see them doing what is necessary so that the industry gets through this together.

So how does that happen? The obvious answer is to get back to work. The challenge is to do that without reversing the remarkable progress being made to staunch the virus in Western PA. I'm not an opponent of the shelter at home we've done. I think the public officials and politicians in our region have done an excellent job of communicating and encouraging us. It would be great if everyone had enough money stashed away to ride out 90-120 days without income, but that's not the case. We're going to return to work. And construction looks like it will be the guinea pig.

Construction is a good place to test the waters for working in the time of a pandemic. The industry works on a job site-limited basis already. Each job site is its own universe, capable of being controlled for access and mobility. Construction projects have unique characteristics that would allow for public health officials to choose sites that offer the best chance of success or lower risk. Construction is also a well-paid profession with a higher-than-average economic multiplier. Some of that multiplying effect would be dampened by the fact that most other businesses are closed and unable to receive the benefit of the construction workers' wages, but that will be true of any industry that reopens. Most important of all factors, construction job sites have the potential to be closely managed. And because a construction project remains unfinished for most of the time it is active, a job site could be shut down effectively should an infection be detected in a worker.

Perhaps the most persuasive argument for restarting construction is the fact that the industry has not shut down in states that took the most proactive sheltering steps. Only three states have shut construction down and, with the exception of Washington, the states that have suppressed or mitigated the COVID-19 virus best have kept construction going.

I'm not a critic of Gov. Wolf's decisions thus far. From a purely economic point of view, allowing the rapid spread that was occurring in Philadelphia and the Poconos (thanks New York) to overtake the rest of Pennsylvania would have cost more jobs and many more lives. I accept the science behind his persistence and don't envy having to make his decisions to reverse mitigation. We're not going to know enough about COVID-19 to be certain when to reopen business, unless we wait for a vaccine. No one, not even the governor, is suggesting we wait for that. So, we must start somewhere.

If the COVID-19 virus is stopped by heat and humidity, as some research is suggesting, the May 1 re-boot of construction is well-timed. But there will be risks of a new wave of community spread until there is a therapy or vaccine, whether we return to work now or in November. There are inadequate testing and tracing resources to manage re-opening properly, so we should be prepared to take mitigation measures again to tamp down community spread outbreaks in the fall or winter. That will limit gatherings. More networking events and golf outings could be cancelled. We might have to shelter at home again for a while. Those risks are the price of re-opening without a vaccine. If those risks must be taken, construction is the right industry to take them.

Jeff Burd

REGIONAL MARKET UPDATE

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The shutdown of the construction industry for significant portions of March and April created an unusual line of demarcation for examining the regional economy. Because of the timing of the shelter at home order, much of the economic activity for the first quarter was able to be completed as normal and measured accordingly. This creates a situation where there will be reporting on the economy that is totally irrelevant, a status that will be exaggerated by the unseasonably warm January and February. There will be plenty of data showing the Pittsburgh construction and real estate markets getting off to a strong start. None of that momentum will have carried past March 13.

To that end, data from the Pittsburgh Homebuilding Report and Tall Timber Group research shows a first quarter that was off to a strong start.

Residential construction was set up to have more activity for single-family homes and a strong year for multi-family projects. Increased activity in land development in 2019 set the stage for more lot inventory. With the inventory of existing homes for sale still constrained to roughly three months supply (prior to COVID-19 mitigation), higher numbers of available lots increased the likelihood that new home construction would become the relief valve for the housing market. Municipal research shows that permits for new construction stopped in mid-March – typically the first busy month of the year – but that activity was above the level of 2019. Through that date there were 668 single-family permits issued in the Pittsburgh metropolitan market. Of those, 481 were traditional detached homes and 187 were townhouses or attached units. There were 528 units of multi-family started in the abbreviated first quarter.

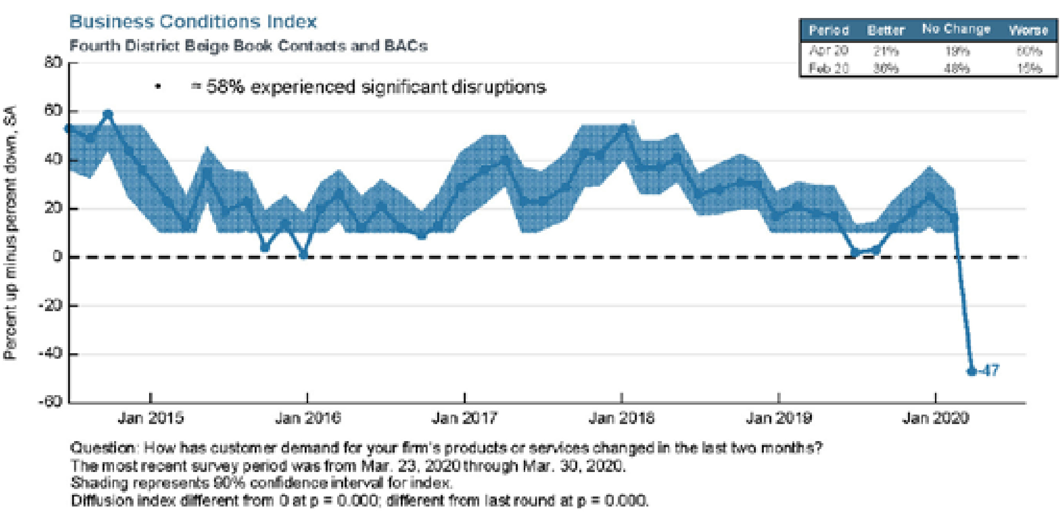
Permits for residential construction were 4.8 percent higher than in 2019 for single-family (31 units more in 2020) and up more than 200 percent for multi-family year-over-year. The total number of units started was 1,196, an increase of 48 percent compared to the first quarter of 2019.

Nonresidential/commercial construction volume was $1.17 billion from January 1 through the mid-March shutdown of most of the industry. That volume includes an estimate of the construction put-in-place at Shell's Franklin project, which suspended work March 18. Activity in the first quarter of 2020 was $210 million lower than the same period in 2019.

None of that data will be useful in predicting how the balance of 2020 will unfold, however. Even in the best of scenarios, the full measure of the pandemic's impact on the economy won't be understood in 2020. There are, however some broad early conclusions that can be made.

First is that the institutional and public construction segments will have a more visible path forward after therapeutic measures or a vaccine is developed to end the COVID-19 threat. Healthcare construction, which was one of the leading sectors of market, should return to its prior course. It's likely that the disruption of a public health crisis will alter the specific plans of each healthcare institution, but the demand for healthcare and the motives behind the capital programs in place should continue to be positive. Public construction was already at a cyclical low. The pandemic will strain public coffers further but the current level of public investment in construction was small. Pittsburgh International Airport's terminal modernization program stands out as a project that could see major disruption. The same is true for higher education projects.

Educational institution construction is likely to have a significant pause once there is a return to



The forward-looking sentiment of business owners fell by 45 percentage points during the last two weeks of March. Source Federal Reserve Bank of Cleveland Beige Book.

	#SFD	#SFA	M/F	Total
Total Pittsburgh MSA 2020:1	504	187	528	1219
Total Pittsburgh MSA 2019:1	495	142	171	808
% Change	1.8%	31.7%	208.8%	50.9%

Source Pittsburgh Homebuilding Report

normalcy. The broader economic impact of the pandemic may have a significant dampening effect on enrollments, which were already declining for many colleges. For University of Pittsburgh and Carnegie Mellon University, which each had ambitious capital programs underway, uncertainty about fall enrollment exacerbates the financial impact of refunding unused room and board for the spring semester. And, like the fallout from the financial crisis, the economic recovery from the virus outbreak is going to reduce the amount of charitable giving that colleges can expect for the next few years. Because of the breadth of its capital plan, Pitt may feel the biggest impact to its construction if enrollment and expansion do not return to normal in the fall. At minimum, some or all of the handful of $100 million-plus projects will be delayed.

One upside for institutional construction is the interest rate environment, which makes long-term borrowing and bond issuance very favorable. For institutions, public or private, which make the decision to proceed with capital investment, the cost of capital will be at all-time low levels.

The outlook for the strong commercial real estate market in Pittsburgh is less clear than the institutional or owner-occupier sector. Few things exemplified the uncertainty in commercial real estate as the information flow in April, when sources of information about commercial real estate were simultaneously broadcasting rosy data from the first quarter and cautionary predictions about the impact of the COVID-19 virus.

Pittsburgh's industrial real estate sector was the strongest of the commercial real estate markets at the end of 2019. The expansion of major logistics companies, like Amazon, UPS and FedEx Ground, were the tip of the sword for the rising demand for Class A distribution and fulfillment space. In its first quarter 2020 report, Newmark Knight Frank (NKF) listed the Class A vacancy rate at 3.7 percent, and overall occupancy at 94 percent. Absorption of industrial space was positive 170,000 square feet. NKF noted that the disruption from the COVID-19 outbreak was likely to make the prospects for absorption of the 1.5 million square feet of space under construction uncertain. But NKF's reports on the impact of the pandemic observed that much of the space under construction was for build-to-suit users; moreover, the reports noted that increased online shopping spurred by sheltering at home would be a boon to further expansion of logistics demand.

At the other end of the spectrum from industrial space, hotel and retail properties have been seriously damaged by the economic impact of mitigation of the virus' spread. These property types were already experiencing fundamental market problems. Steeply declining travel and in-person shopping is expected to accelerate problems for retailers and hoteliers. Store closings and hotel operator failures are expected.

The office market was also softening at the end of 2019. Vacancy rates have been rising slightly but steadily for several years. The move to working at home and risk of business failures resulting from mitigation measures will feed this trend. According to JLL's Pittsburgh Office Outlook report for the first quarter, the vacancy rate for Class A office was 16.3 percent. While rents were continuing to grow into the first quarter, the slumping economy and construction of 1.9 million square feet of new space will put downward pressure on rents starting in the second quarter.

Among the commercial real estate segments, the office market faces the most uncertainty. A recession will certainly douse demand for office space for the short term. There is much speculation about how office user habits will be changed by the experience of shelter at home. Speculation is a poor substitute for facts, however. CBRE looked at the characteristics of the office market that may be impacted by the changes caused by the pandemic and attempted to put the Pittsburgh market in perspective.

In its April 13 Pittsburgh Marketflash, CBRE reported that companies that were directly impacted by the COVID-19 outbreak (energy, transportation, distribution, logistics, wholesaling, warehousing/storage, hospitality, hotel, leisure, travel, fitness, airlines, manufacturers and companies that service aviation) leased less than ten percent of Pittsburgh office space. Conversely, Pittsburgh landlords had leases comprising nearly 15 percent of the office total from companies expected to see higher or stable demand going forward.

One major risk for commercial real estate is the potential loss of liquidity and capital. This will be particularly important to the Pittsburgh market, which has benefitted significantly from heightened investor interest in properties and projects. On the upside for Pittsburgh, the attraction of a city that has a steady economy will be greater when a recovery begins. The unknown is when that will be.

There are some specific areas of opportunity for the Pittsburgh region that could follow the end of COVID-19. Because Pittsburgh institutions are playing a role in the search for a vaccine or therapies for the virus, follow-on demand for facilities may come to Pittsburgh. The heightened demand for logistics space in the region will likely be boosted, especially if the shift towards ecommerce and online shopping for groceries and supplies is accelerated by the change in habits brought on by sheltering in place. Pittsburgh's excess capacity of cheap energy, river and rail access, and industrial infrastructure make the region a candidate for manufacturing facilities, should the predicted move of the supply chain back to the U.S. occur.

The projects that might arise from any of these trends are only potential opportunities at this point and would hardly offset what will be more negative byproducts of the economic damage caused by the COVID-19 pandemic. The May beginnings of a return to normalcy should yield some additional hints about the arc of the regional economy. It's likely that uncertainty will linger beyond that.

As an indicator of how regional businesses have responded,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the Federal Reserve Bank of Cleveland's Beige Book showed that most companies responded to the crisis during the first few weeks of mitigation. Released on April 9, the Beige Book survey of business owners reported that 60 percent of its respondents felt that business conditions would be worse in the coming 60 days, compared to 15 percent who responded that way in February. There were 21 percent of the respondents who replied that business would improve during the next 60 days, but representatives of the Fed felt that this group included owners who responded early in the cycle, rather than representing a segment of the business community that would see an uptick as the sheltering at home occurred.

Among the highlights of the survey:

- One-third of businesses with less than 500 employees believed they might not be viable if the conditions lasted longer than 90 days.
- One-third reported laying off workers temporarily. A total of 40 percent expected to do so during the April-May period.
- Ten percent reported permanent layoffs. The same share reported cutting employee's pay.
- 48 percent said they were delaying or cancelling planned capital expenditures.
- Three out of four expected to be able to operate under the current conditions for three months or more.

Mekeal Teshome, vice president and senior regional officer for the Federal Reserve Bank's Pittsburgh branch, cautioned that the responses covered only the period through March 30, noting that further deterioration in conditions into April were likely. Teshome reports that most of the businesses responding in late March had more optimistic outlook about the recession than they had in 2001 or 2008.

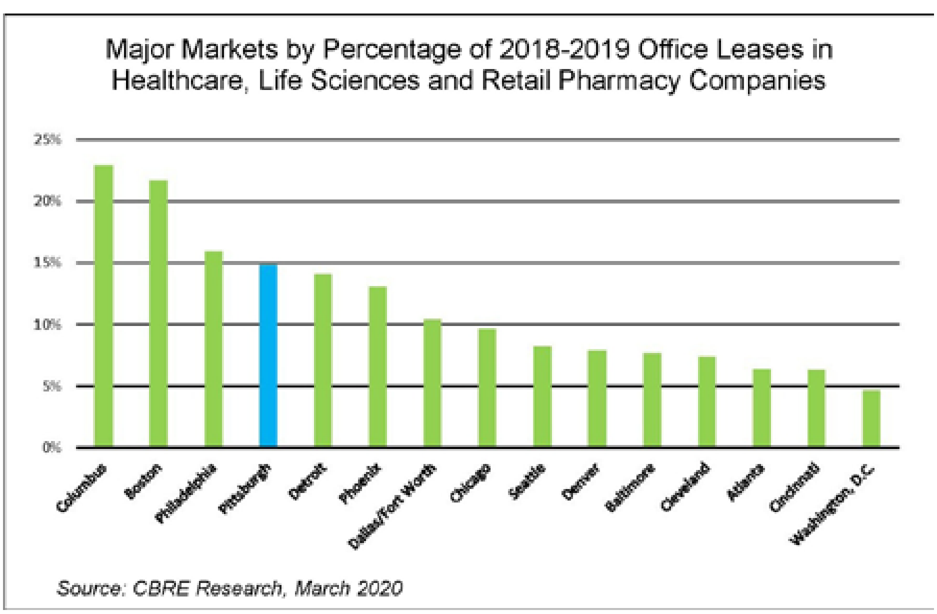
"What we are hearing from our contacts is that even though they have laid off workers, they intend to hire back as quickly as possible," he says. They are hanging on to employees through temporary layoffs. Some have reduced pay but only about ten percent have said they have reduced employment permanently. The desire to hire their employees quickly is a key difference between this and previous recessions.

"The key challenge is getting firms cash as quickly as possible. One thing that really concerns me is that a lot of the firms that we've talked to have said they only have enough cash to go about a month without assistance. With small businesses it's more like two weeks. Getting cash to those businesses quickly is the key."

Gus Faucher, chief economist for PNC Financial Services Group, noted that Pittsburgh had lower exposure to the downturn than regions with more reliance upon the segments hardest hit by social distancing measures. Cities with more GDP in travel, hospitality, leisure, employment services, and transportation are suffering higher numbers of job losses.

Based upon the best estimates of local labor leadership, construction employment was running at roughly 25 percent of capacity at the end of April. Healthcare projects, major infrastructure work, and some projects that were granted waivers allowed for that share of construction to proceed. Assuming that construction begins to ramp back up in May and June, questions will remain about how much construction can be accomplished after remobilization in 2020. It is unknown what portion of the workforce will be reluctant to return immediately to the jobsite. Likewise, it's impossible to gauge how project owners will respond to the economic damage. Low interest rates will be an incentive for owners and developers using debt to fund construction but the perception of risk will have changed dramatically in the course of two months. In the best case scenario the COVID-19 virus will reduce construction volume for 2020 by 20 percent. A decline of 25-to-30 percent is more likely.

Beyond the damage done to 2020, there is unexpected uncertainty about the outlook for Pittsburgh in 2021 and beyond. The prevailing trends coming into 2020 should not be changed by the pandemic. An economy built upon emerging technologies, education, healthcare, energy, and financial services will be stronger than less diverse economic foundations. The length of the transition to what becomes normal for Pittsburgh's economy will determine whether the booming construction market returns in 2021.



The Pittsburgh office market ranks fourth among major cities in concentration of industries expected to fare well after the end of the pandemic.

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NATIONAL MARKET UPDATE

February's construction totals, announced April 1, reflected the continued trend of higher spending due to warm weather. Total construction spending was $1.37 trillion, seasonally adjusted. February's data marked the end of a decade-long expansion trend. Data on construction spending in February was also no longer relevant by the time it was released.

At a time when business owners and construction industry leaders would be combing through data on the state of the economy during the first quarter of the year, the outbreak of the coronavirus COVID-19 in the U.S. rendered almost all metrics moot. From March 16 on, when most of the U.S. entered a shelter-at-home status, the trajectory of the economy decelerated rapidly. Although all but three states included construction as an "essential" industry, work slowed dramatically as a result of both pandemic mitigation and the economic damage that followed.

By April 1, the Association of General Contractors (AGC) was reporting that more than 40 percent of its contractor member respondents had seen one or more projects shut down due to the pandemic. The association was urging the federal government to commit to an infrastructure program that would help lessen the blow to the construction industry. AGC Chief Economist Kenneth Simonson notes that construction jobs lost have a multiplying effect.

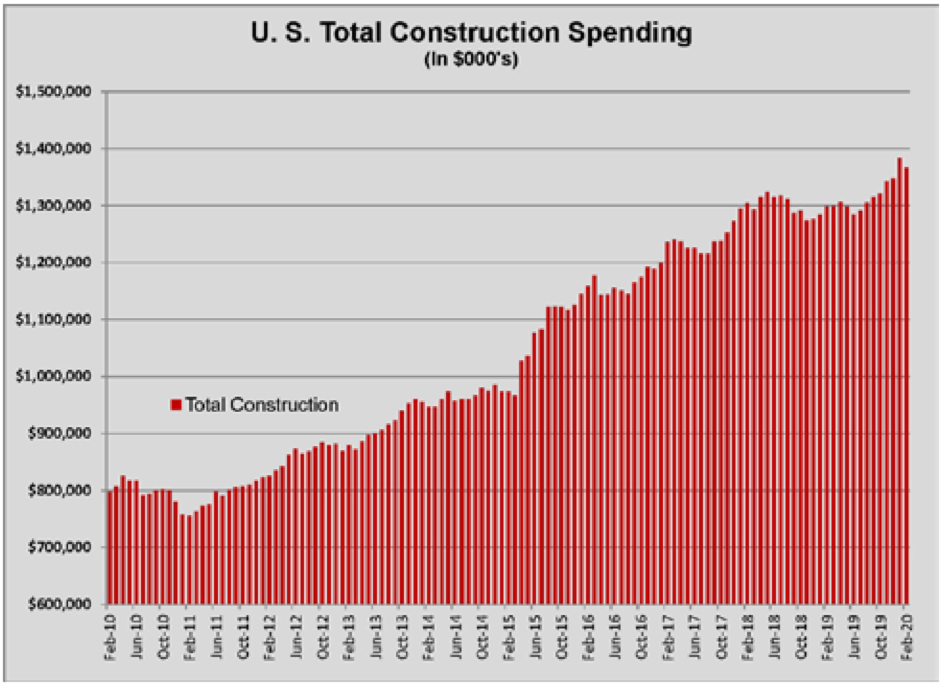
"When projects shut down, jobs are lost not only in construction but also in a host of other industries, ranging from quarries to manufacturers, and truckers to professional services," he says.

Advocating for infrastructure investment, Simonson also made the point that the government would be getting a better bang for the buck, saying that "Investing in infrastructure now will bring these jobs back sooner and will buy a lot more construction while fuel and materials costs are low."

A slowdown in project development also materialized by the end of April. Although the American Institute of Architects (AIA) reported that billings were up for the fifth consecutive month in February, responses from its members indicated that construction owners were cooling projects off quickly in the weeks that followed. That showed up in the AIA's Architectural Billings Index for March. Billings increased in March for just 33.3 percent of the firms, a 21-point decline from the previous month. Nearly 95 out of 100 reported that revenues would decline in April. Only one-third reported that projects were proceeding as expected. Those trends don't bode well for late summer and fall, regardless of the status of the pandemic.

Job losses were unprecedented in the first four weeks following the imposition of sheltering in place orders across most U.S. states. Employers involved in hospitality, retail, travel, and leisure were initially hardest hit but by mid-April unemployment has spread to most sectors. More than 26 million workers filed for first-time unemployment benefits during that period, pushing unemployment above 17 percent. These claims showed up in the April Employment Situation Summary, published by the Census Bureau on May 1.

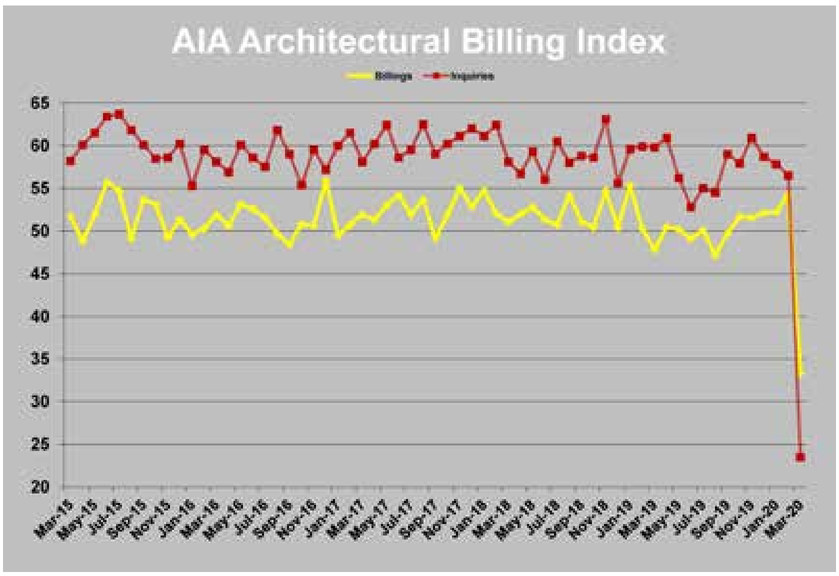
The first flurry of reports on the economy after the shelter in place took effect was not surprising. Retail sales in March declined by 8.7 percent, reflecting both the loss of employment and the limited opportunity to shop. Sales of new vehicles fell by 25 percent in March and are expected to drop more precipitously in April. American Airlines reported a 97 percent decline in traffic compared to the same period in 2019. It's anticipated that business spending will fall even further in spring, pushing the economy into technical



Source: U.S. Census Bureau

recession this summer. The lack of clear intelligence about the pandemic's impact makes judging the depth and length of the downturn impossible.

The expected recession comes on the heels of an extended expansion in the U.S. economy that stretches back to mid-2009. Although most descriptions of the economy prior to the pandemic make reference to strong fundamentals, the growth in GDP dating back to the third quarter of 2019 was coming almost entirely from the consumer. Consensus forecasts of GDP growth in 2020 were one percent lower than the forecasts for consumer spending growth. Business investment slowed after the second quarter of 2019. Trade wars and a strong U.S. dollar were drags on exports for manufacturers. The U.S. economy was not necessarily vulnerable coming into 2020 but it was less resilient than five years earlier.



Billings by AIA member firms continued strong while inquiries for new design work declined as expected in March. Source: American Institute of Architects.

As mitigation efforts slowed the spread of COVID-19 in April and relieved concerns about overstressing the nation's healthcare systems, the focus of the response to the pandemic shifted to when and how to begin economic recovery while the virus remains unchecked by therapy or vaccine.

Economists have generally agreed that the keys to a future recovery will be the successful backstopping of consumer finances and the protection of as many businesses as possible. The U.S. economy is not in recession as a result of underlying weakening demand and weakening employment. The COVID-19 virus created a simultaneous drop in demand and supply, halting most economic activity. While few expect a quick recovery, even in the case of a miraculous therapeutic or vaccine solution, the path to restoring gross domestic product to $20 trillion and higher runs through re-hiring the workers lost to the virus mitigation. And hiring depends upon businesses surviving until COVID-19 is no longer a public health threat.

The Federal Reserve Bank took decisive early measures to enhance the business environment and facilitate business survival. Since cutting rates to nearly zero March 5, the Fed has taken 14 other separate actions, including the reinstatement of policies last employed following the financial crisis. The Fed's programs include the purchasing of mortgage-backed securities, programs to ensure the liquidity of money market funds – a key breaking point in 2008 – and direct lending to consumers, securities firms, banks, major corporations, small businesses, and municipalities. The actions preemptively quelled many of the fears that stoked the financial crisis in Fall 2008 and provided mechanisms for the limited commercial activity – including the financing of real estate and construction projects – to proceed unimpaired.

Loretta Mester, the president of the Federal Reserve Bank of Cleveland (which serves the Pittsburgh market), describes the Fed's programs as a bridge to recovery. Mester's own journey through the COVID-19 crisis mirrors the nation's. As late as February 25, she was calling for stability in the Fed Funds rate at 1.25 to 1.75 percent. When the full scope of the economic fallout became clearer one week later, Mester and the Fed adjusted accordingly.

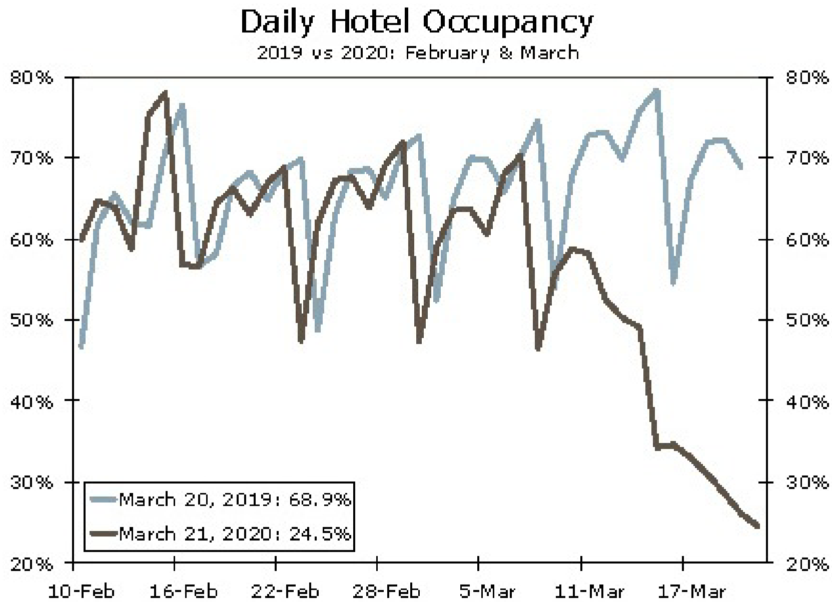
"What public policy needs to do, and this includes the Fed, is to help ensure that the shutdown in activity that is being felt doesn't cause lasting damage to the economy," Mester said during a virtual forum organized by the City Club of Cleveland. "And to make sure that we give aid and relief to the employees and workers and the businesses that are bearing the brunt of that shutdown."

One of the potential downstream impacts from the COVID-19 pandemic is the deterioration of liquidity in the financial markets. This has negative implications for commercial real estate. The direst forecasts for the financial markets have the loss of income and business failures leading to steep declines in rent and loan payments, resulting in a liquidity crisis for lenders. While the government and Federal Reserve Bank have taken measures that show a determination to prevent such a crisis from bringing financing to a halt, it is too early to assess how much liquidity from private investors has been lost. Given that much of the private equity and investment funds are in cash, it's possible that the pandemic will not have evaporated liquidity. The same may not be true for the will to deploy capital that was anxiously looking for a place to land just a few months ago.

"I have been telling my people that we will get to what is the new normal. Then a while later we'll get to another new normal, until we get to a point in 15 or 18 months where we get to whatever becomes the new normal going forward," says Paul Griffith, MAI, senior managing director and market leader for Newmark Knight Frank (NKF) Valuation and Advisory in Pittsburgh. "We need to get to the point again where we have willing buyers and willing sellers, operating from the point of view of their own self interests."

Griffith notes that the uncertainty of the economic damage from the virus mitigation has nearly wiped the market clean of buyers and sellers. He says that the number of small, often inexperienced investors bidding up commercial real estate is a hallmark of the end of business cycles. That was the case until the late winter. How much of that capital has been lost is an open question in spring.

As of May 1, the subject of reopening the U.S. economy was largely a political and ideological one. Neither the consumer nor worker has had time to respond to whatever lessening of mitigation has occurred regionally. Absent a vaccine or therapy for the COVID-19 virus, there remains an elevated risk of infection from a return to normal shopping and work activities. Surveys indicate that consumers are wary of such a return without confidence that they can be successfully treated for an infection. Early estimates of a gradual return to work show one-third of the workers laid off returning by July. That would still leave a significant unemployment problem; however, such a return would mark a dramatically quick rebound from the worst of the job losses. It would still leave unemployment above ten percent. Recovering from that point forward will be more gradual, until the point that a therapeutic response to COVID-19 is proven effective. BG



Hotel occupancy plummeted by two-thirds compared to March 2019.
Source: STR and Wells Fargo Economics.

WHAT'S IT **COST?**

Like with all data measuring the economy, the most recent reading on inflation from the Bureau of Labor Statistics (BLS) does not reflect the impact of the COVID-19 pandemic on producer prices. The April 10 BLS report on producer price indexes (PPI) covers the period ending March 10, 2020. While the virus outbreak had been detected widely by that date, only the areas hit early – primarily the West Coast states – had begun shelter at home mitigation efforts.

While the March report on PPI could have reflected price increases from the constriction of the Asian supply chain, the offsetting decline in demand kept prices level or lower. In fact, the shift in supply/demand dynamics that had the biggest impact in the February-to-March period was the oil production war between Russia and Saudi Arabia, which helped push energy prices down 6.7 percent. An agreement to pare back production to support pricing as the spring unfolds may not have a significant effect, since demand for oil, gas, diesel, and energy have all plummeted during the extended shelter at home decrees worldwide.

Declining energy prices pushed the PPI for final demand goods down one full percentage point from February to March. Final demand goods pricing rose 0.2 percent after removing the volatile energy and food categories. PPI for final demand services also rose 0.2 percent, as a tariff-related increase in trade services offset the decline in transportation costs. Overall, the PPI for final demand was 0.7 percent higher than in March 2019.

Based upon early input surveying, the global decline in demand for all goods and services in March and April (at minimum) should depress prices month-to-month and year-over-year until summer.

The steep decline in oil and energy prices pushed the PPI for final demand for construction to 3.7 percent. That level of inflation was matched for new nonresidential buildings. PPI for new nonresidential buildings fell 140 basis points from a year earlier, from 5.1 percent to 3.7 percent. The impact of the lower energy and transportation costs can be seen throughout the materials supply chain, as only concrete products – at 4.2 percent – experienced PPI growth of more than two percent year-over-year. Insomuch as the March data does not reflect the precipitous decline in global demand for materials, the outlook for the second quarter is for deflation across most categories.

Once business conditions begin to normalize, there will be random and intermittent price volatility as holes in the manufacturing and supply chain are discovered. Building products tied to Chinese manufacturing (especially of subcomponents) will experience shortages and excessive lead times. The severe decline in construction that will follow the pandemic-induced recession will result in competition that will simultaneously create significant downward pressure on pricing of finished goods. Construction companies and project owners will do well to heighten the due diligence of their estimating and procurement efforts to optimize the market conditions and ensure that products and materials arrive as planned. BG

PERCENTAGE CHANGES IN COSTS	March 2020 compared to		
Consumer, Producer & Construction Prices	1 mo.	3 mo.	1 yr.
Consumer price index (CPI-U)	0.3	0.6	2.3
Producer price index (PPI) for final demand	(0.1)	0.2	0.7
PPI for final demand construction	0.1	0.9	3.7
PPI for new nonresidential buildings	0.0	0.9	3.7
Costs by Construction Types/Subcontractors			
New warehouse construction	0.0	0.5	4.7
New school construction	0.1	1.2	4.7
New office construction	0.1	0.8	3.3
New industrial building construction	0.0	0.5	4.1
New health care building construction	(0.3)	1.1	2.9
Concrete contractors, nonresidential	0.1	0.8	3.7
Roofing contractors, nonresidential	0.9	1.2	3.5
Electrical contractors, nonresidential	0.2	0.7	3.7
Plumbing contractors, nonresidential	0.1	1.3	3.5
Construction wages and benefits	N/A	0.4	3.5
Architectural services	0.0	0.2	(1.7)
Costs for Specific Construction Inputs			
#2 diesel fuel	(11.6)	(26.8)	(28.3)
Asphalt paving mixtures and blocks	(1.9)	5.5	0.0
Cement	(0.2)	(0.5)	0.9
Concrete products	0.4	2.2	4.2
Brick and structural clay tile	0.0	0.4	1.5
Plastic construction products	1.4	1.8	0.9
Flat glass	0.4	1.1	1.8
Gypsum products	0.0	1.8	0.0
Lumber and plywood	3.3	5.5	1.9
Architectural coatings	(0.1)	0.1	1.6
Steel mill products	(1.3)	1.9	(11.5)
Copper and brass mill shapes	(1.8)	(3.6)	(7.9)
Aluminum mill shapes	(0.7)	(2.9)	(7.5)
Fabricated structural metal	(0.5)	(1.1)	(1.9)
Iron and steel scrap	3.2	9.2	(17.8)

Source Bureau of Labor Statistics, Updated April 12, 2020
Compiled by Ken Simonson, AGC Chief Economist

SAFETY CULTURE

2020

Construction has always been among the more dangerous ways to make a living. There are about 150,000 injuries on a construction site each year. Construction employs about six percent of all workers in the U.S., but 17 percent of the workplace fatalities occur in construction. (The share is 31 percent in the U.K.) That's the largest number of fatalities reported for any industry sector.

Any examination of how construction is accomplished explains the riskiness of the industry. The danger in construction is inherent. Buildings, bridges, and ditches are safe and sound when they are completed. Until that point, conditions are less than optimal. Moreover, many of the activities involved in bringing a construction project to completion are individually risky. Workers are often at heights that will injure or kill if they fall. Weather often creates risks that didn't exist the day before. The slightest lapse in concentration or discipline can result in catastrophe. If an office worker stays out too late the night before and is unfocused at work, productivity suffers. If an ironworker does the same thing, someone may die.

Lest anyone beat up construction too badly for its dangerous conditions, it's best to remember that workplace conditions in general were much riskier until relatively recently. The nation's workplace safety watchdog, the Occupational Safety and Health Administration (OSHA), was created by legislation signed by Richard Nixon in 1970 and the agency wasn't functional until 1972.

Over the past 50 years, the workplace has become safer. Construction has moved to make the jobsite safer in parallel with the rest of the nation. Over the past two decades, however, there has been a heightened focus on safety in the construction industry that is still peaking. Advances in technology and equipment, heightened emphasis by labor organizations, and awareness by construction project owners have pushed contractors and their workers to make safety a higher priority than it was in 1980. More companies have safety managers, many in executive roles. Contractors accepted that the costs of safety were the costs of doing business. Workers accepted that they might not get as much done in order to go home safely at the end of the day. OSHA kept an eye on and regulated construction sites.

All of those changes made construction safer. They did not make construction safe. Today's best-run construction companies, however, have proven that construction can become as safe as most other hands-on workplaces. Those companies have also discovered that safe construction projects are also profitable, often the most profitable. The 2010s marked the next leg up in safe construction performance. What made the difference was not tighter regulation or better safety equipment. The safest companies have the best safety culture.

In an industry that is struggling to attract sufficient skilled workers and pays a stiff price for an accident, creating an environment where workers feel valued and operate safely may be a major key to success in the 2020s.

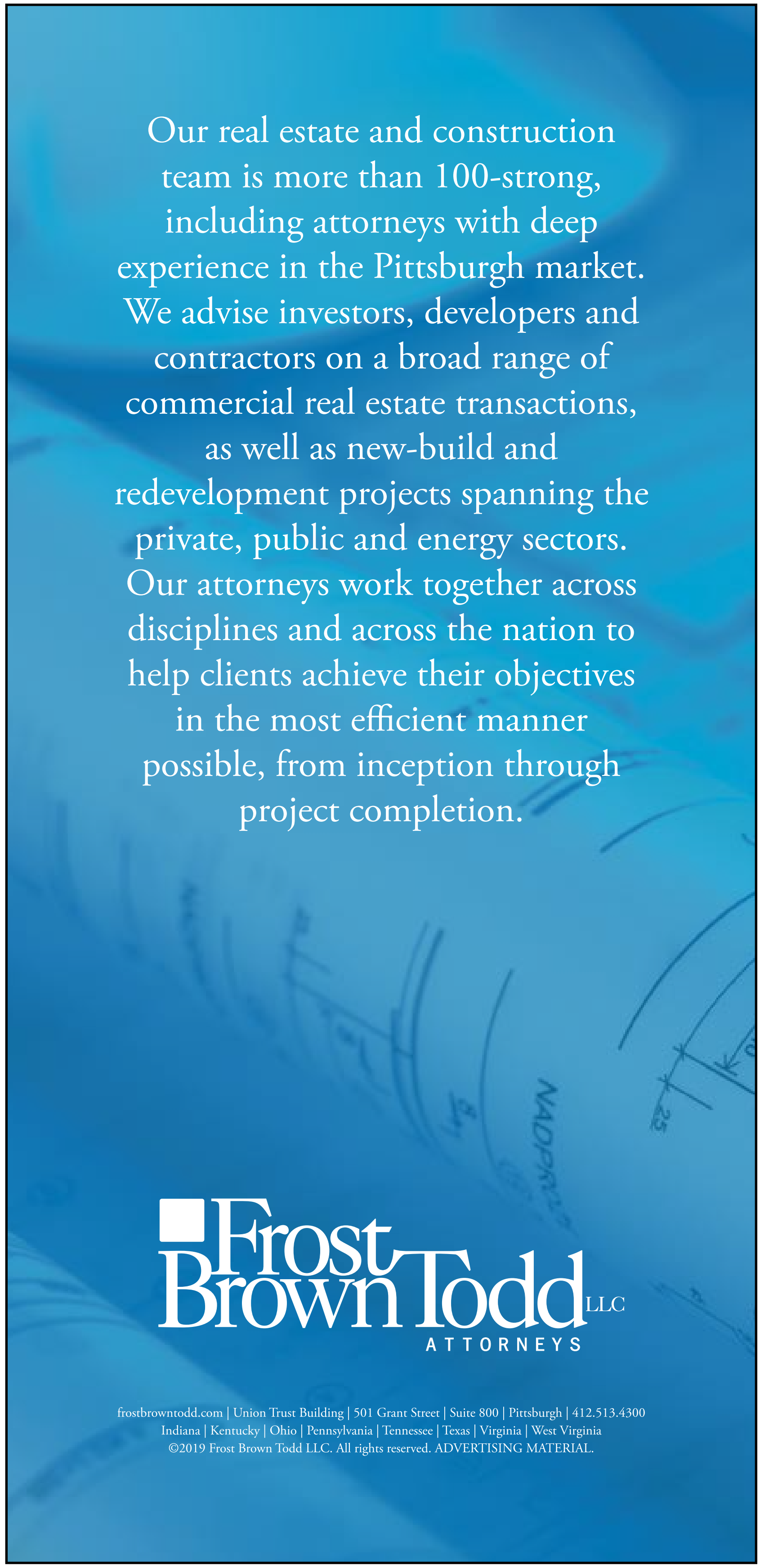
"Safety culture has come into focus because of the difficulty in attracting talent," explains Bob McCall, director of safety for the Master Builders' Association of Western PA. "It's become more important for the individual worker to have a strong feeling that the employer truly cares about their safety and is doing the right thing for them. A worker in the field can see right through you if you are not sincere."

How Dangerous is Construction?

Safety consultants will tell you that one of the most difficult attitudes they have to confront is the grudging acceptance that construction is inherently dangerous and that accidents are inevitable. While safety experts argue that the latter is false, the former is unfortunately true.

Without regard to what could or could not have been avoided, the data on construction workplace safety isn't pretty. Below are some of the highlights:

- One in five workplace deaths that occur in the U.S. annually is in construction.
- The leading causes of construction worker fatalities - falls, being struck by an object, electrocution, and being caught in something or between two objects – account for 58.6 percent of deaths.
- Construction sees non-fatal injury rates that are 71 percent higher than any other industry.
- The construction industry's spending on workers' compensation costs are 71 percent higher than all goods-producing industries combined, and 15 percent of total workers' compensation costs are spent on workers who were injured at a construction site.
- Work-related injuries have caused companies to lose 103,000,000 production days in 2018.
- Companies with 10 or fewer employees and those who are self-employed account for nearly half of all deaths on construction sites.
- Workers who are most likely to be injured while working in construction are



between the ages of 25 and 34.

- According to the Bureau of Labor Statistics, construction worker illnesses and injuries declined from 10.9 incidents per 100 workers in 1972 to 2.8 per 100 workers in 2017.

These numbers may seem to belie the narrative that construction is focused on safety but the reality is that the nature of construction is inherently riskier than most industries. Without a heightened focus on safety, this data would be much worse.

Construction job sites present many of the conditions that are most ripe for occupational accidents. Construction often presents opportunities for falls, confined spaces, heavy moving objects, exposure to the elements, and fatigue. Many of its tasks are repetitive, creating the potential for lapses in focus. At the same time, the progressive nature of construction means that the repetitive tasks are performed in an ever-changing environment. And, ultimately, construction is a profession that is constantly working in inconsistent conditions towards a consistent completion date. The progress towards that date, or lack thereof, is generally what determines how profitable the work will be. It is a recipe for accidents to occur.

"The work itself, the nature of what we do is unsafe for two main reasons," says James J. Ferry II, president of Ferry Electric Co. "We are building widgets and the widget is always different and the factory we build them in is always different. We don't have the advantage of being in a conventional controlled factory environment. That is aside from working with electricity or heavy objects."

"The second factor is that we have remote workers. It's much easier to influence the safety culture, much easier to communicate expectations in a centralized environment. Companies like ours, where 85 percent or so of the employees are remote, have a difficult time communicating that culture and those expectations and concerns for the employees. That presents challenges that most other businesses don't face."

"We work in an industry that is fraught with danger," says Dave Brogan, manager of the Pittsburgh operations for Bristol Environmental Inc. "We are constantly changing job sites. It's not like you walk into a house and there is a railing that is in the same place every time you walk in that house. A construction job site is constantly changing. There is dangerous machinery that is constantly moving. Your top priority has to be that your people and their health are important."

Brogan highlights some of the primary reasons why a construction job site is a safety risk. One of the factors that increase workplace safety is a consistent work environment. Construction sites promise the opposite. Crews change daily. Subcontractors are on site one week and gone the next. Heavy equipment is used and moved throughout the site. Workers are frequently exposed to conditions that were prepared or left behind by workers from another company. Without constant management, the safety conditions would be those of the worst performer.

Construction activities are also dangerous. It's necessary to work at unsafe heights. Much of construction is done outdoors, exposing workers to wind, cold or excessive heat, depending upon where the project is located and the season of the year. Specific work sites are cramped or below the ground. Construction is physically demanding. As might be expected, fatigue is an enemy of safety. Skilled workers in construction have to be physically prepared to do their jobs in some of the ways that professional athletes are.

"Soft tissue injuries are the number one cause of people missing work. These are construction athletes whether we like to admit it or not," says Fritz Leinenberger, senior risk control consultant at Willis Towers Watson. "Workers are traveling distances to work, getting out of their vehicles, and doing physical work without even warming up. 'Stretch and Flex' programs help them mitigate the risk of soft tissue injuries."

Injuries occur far more frequently than fatalities in construction and have more varied causes. The fatalities that do occur are more often than not caused by one of four accidents:

- Falls (33.5 percent of the fatalities in 2018)
- Struck by object (11.1 percent)
- Electrocutions (8.5 percent)
- Caught-in/between* (5.5 percent)

(*This category includes construction workers killed when caught-in or compressed by equipment or objects, and struck, caught, or crushed in collapsing structure, equipment, or material)

These specific risks exist individually in other lines of work but only construction has the presence of all four. As industry safety awareness has become more elevated over the past two decades, the risk of fatality from these main causes has not abated. Workers are unlikely to put themselves in positions that are vulnerable to fatality. The fatal accidents that occur are often the result of one act of carelessness, one incident of taking a risk for granted. Better equipment and more safety professionals have not eliminated fatalities. Experts believe that zero fatalities are a goal that will only be achieved by changing the culture of every organization and worker.

"Culture boils down to three words: attitude, beliefs, and behavior. If we can get those three things in line, we will have safer construction sites," says Leinenberger.

Safety and the Safety Culture

Construction safety has evolved rather recently. For all the data about construction site danger, OSHA only made full-body safety harnesses mandatory in 1998. Safety managers were the exception not the rule until the 2000s. Safety was not necessarily an afterthought until recently but the idea of creating a culture around safety has mainly gained traction within the past decade.

As the idea of culture has evolved, some common denominators have emerged as keys to a great safety culture. The company must demonstrate a commitment to safety above all else. There needs to be clear communication at all levels of the organization. The focus is safety not compliance. Good safety practices are uplifted and reinforced constantly. Problems are identified and corrected immediately, without regard to cost. Safe companies look for ways to prevent problems before they require remedy. Everyone in the company is expected to call out conditions that may be unsafe and leadership responds to

every concern. As much as anything else, good safety culture begins with committed leaders.

"It boils down to whether or not the firm has a value for safety," says Andrew Peters, senior vice president, chief safety officer, AECOM. "Are they really sincere or is it merely a priority for when it becomes important to someone like a client, an employee or OSHA? What we push is creating a value of safety around a culture of caring."

Peters has spent four decades working on construction workplace safety. With a few notable exceptions, he believes that all companies want to be safe. Getting an organization to the point of having a culture of caring means making safety personal for leadership.

"The formula for success is leadership involvement plus employee participation equals safety excellence. I've seen culture change at four different companies and it always starts at the top," he notes. "You can inspire a group of employees to have a safe environment but if their boss is not behind it, the whole culture can fall down in one sentence. You must redefine what safety means for leadership. For a lot of leaders, all they really know about is OSHA compliance. We do a lot of cultural leadership training. We talk about the impact on families when things go wrong. We ask them to think about having to go tell the wife and children of a worker who is injured on a job. They can feel how that would affect them and they begin to ask how to prevent that from happening. It's the leader's responsibility, not the safety directors."

To the extent that any organization has a culture, the message from the top of the organization carries much weight. To safety professionals in the construction industry, a clear strong message from the company owner and chief executive is where a positive safety culture begins.

"Culture has everything to do with the genuine caring of leadership, and I don't mean just from Jim Ferry. It has to come from leadership at all different levels. Those leaders are a proxy for the company," Ferry says. "The most difficult aspect of that is consistency over time. You have to have the right people and then develop the leadership skills in them to deliver a consistent message."

"Our business involves risk. Every day the men and women out in the field put themselves in situations where someone can get hurt, or worse. It's important to us that each and every person who shows up on the job site goes home in the exact same shape as they arrived," says Michael Mascaro, executive vice president for Mascaro Construction. "Their families also put faith in our organization to protect their loved ones. Those people make the organization go well. They are the ones that are fighting the elements and fighting delays, and they need all of the care in the world. We have a responsibility to make sure they're protected everywhere they go."

"Safety is our first core value. You can say safety is a priority but priorities change. We look at it as a value of who we are as a company," agrees Jake Ploeger, co-CEO of PJ Dick/Trumbull/Lindy Paving. "This epidemic is a perfect example of why safety is important. There are number of jobs that we have to work on right now. If we didn't have a good safety culture our workers wouldn't want to go to those jobs. It's important that employees know that they are going to a job site today that has a safe environment. We want to make sure that everyone goes home to their families safe each night."

For Alex Dick, president of Dick Building Company, the importance of safety for

The Safety Climate Assessment Tool (S-CAT) for Construction

Posted on October 22, 2019 by Linda M. Goldenhar, PhD

Organizational safety climate is defined as shared perceptions among employees regarding what is rewarded, expected, valued, and reinforced in the workplace with respect to safety (Zohar, 1980). It can positively influence employee safety knowledge, motivation, attitudes, and behaviors, as well as reduce injury outcomes (e.g., Clarke, 2010, Probst et al., 2008, Probst and Estrada, 2010, Zohar, 2010). Research reported in the Journal of Safety Research shows that the Safety Climate Assessment Tool (S-CAT) is a reliable and valid tool for construction companies to self-assess their safety climate. The article, summarized below, details the creation and evaluation of the S-CAT, the first rubric-based safety climate measure designed for the construction industry.

Despite advances to improve safety and health in the construction industry, construction remains one of the most hazardous industries. In 2016, construction represented less than seven percent of employment (Bureau of Labor Statistics, 2016), yet accounted for nearly 20 percent of all occupational fatalities (Bureau of Labor Statistics, 2016a). Employees face daily hazards that result in an experienced injury rate that is 44 percent higher than the national average (Bureau of Labor and Statistics, 2016).

There has been a shift away from reliance on lagging retrospective indicators, such as recordable incidence rates, toward a focus on leading indicators whose measurement can enable companies to proactively monitor and continually improve their safety environment. One such leading indicator that has been shown to reliably and consistently predict a variety of safety-related outcomes is organizational safety climate.

CPWR- The Center for Construction Research and Training and researchers at Washington State University partnered to develop the Safety Climate Assessment Tool (S-CAT). The S-CAT is a free online tool that provides construction companies of any size the opportunity to assess their organizational and job site safety climate. Users respond to 37 separate items across eight safety climate factors that were identified by construction industry subject matter experts participating in a Safety Climate/Culture workshop sponsored by CPWR and NIOSH.

construction workers first surfaced when he worked as a teenager at Dick Corporation.

"When I was involved at Dick Corp. in the late 1990s, I was extremely impressed at how strong the safety culture there was," Dick says. "That definitely made a lasting impression upon me and helped me to build what we've developed at Dick Building Company."

"My job is to help people understand that we have an obligation, not only to keep our people, our clients and our partners safe, but also workers who are moving on from our job to another contractor's job tomorrow," he continues. "That's true if it's a subcontractor or union carpenter. We have an opportunity to impact the safety of folks throughout Western Pennsylvania who are working on construction projects by doing our part in educating our workforce. That's the motivation we want to speak to the people in the field."

Clear communication of what the leadership believes is foundational to a strong safety culture. When leadership is effective at communication, it is apparent on every job site.

Safety Climate Factors*:

- Demonstrating management commitment
- Aligning and integrating safety as a value
- Ensuring accountability at all levels
- Improving site safety leadership
- Empowering and involving workers
- Improving communication
- Training at all levels
- Encouraging owner/client involvement

To evaluate whether the eight factors could reliably measure safety climate using the S-CAT, the researchers conducted factor analysis using data from close to 900 respondents. The results supported the hypothesized eight factor structure. To assess whether it was a valid measure that could help explain safety outcomes, researchers correlated company S-CAT scores with their recordable incident rates and found that the higher the S-CAT scores, the lower the recordable incident rate.

After completing the S-CAT, companies receive a tailored report providing detailed feedback on how their company's level of safety climate maturity compares to that of other companies that have completed the S-CAT. Companies can then use CPWR's safety climate workbook to find safety management intervention ideas to strengthen low-scoring indicators and retake the S-CAT at a later date to evaluate the effectiveness of implementing them.

**Source: Safety Climate Assessment Tools, CPWR*

Linda M. Goldenhar, PhD, is the Director of Research and Evaluation at CPWR – The Center for Construction Research and Training.

"We talk about safety a lot. It's more the people that I employ who take safety seriously," says Ray Volpatt Jr., CEO of Volpatt Construction. "They all understand they are working as a team and at the end of the day they all have families to go home to. They all want to make sure that everyone gets to go home to their family safe and healthy."

That daily reinforcement from project management and field supervision is a critical component of positive safety culture communication. The nature of the CEO's duties limits how often the message from the top gets to the worker on the front lines, even in small companies. On a daily basis, the company's culture of caring runs through the first lines of management.

"I've done a lot of perception surveys and the problem is often with middle management, the operations people, project managers, and superintendents," says Leinenberger. "People at the top usually buy in and the workers in the field buy in, but the people in middle management are the ones who have the pressure to generate revenues, to meet schedules, and to get projects completed."

"Leadership has to be willing to accept the consequences of giving people stop work authority," says Ploeger. "On our job sites anyone can stop work, without repercussion, if they see something they feel is unsafe. We put those people up on a pedestal. We make announcements every week about who exercised stop work authority. We point them out and say that it was a good thing. You must celebrate when you do things correctly."

The pressure to maintain progress is a constant counterweight to the efforts to promote safety, especially where safety means taking time to employ the proper methods or equipment. Employers that sincerely care about a safe work environment must be aware that its messages – and messengers – about productivity don't undermine the culture of safety first.

> *"Culture boils down to three words: attitude, beliefs, and behavior. If we can get those three things in line, we will have safer construction sites," says Leinenberger.*

"It is a giant trap. At 18 years old I got first-hand knowledge of what can happen when safety breaks down," agrees Brogan. "In 1978, when I worked for Jones and Laughlin in the coke ovens on Second Avenue, we were shown a safety video and one of the things on that video was to never put a shovel near a conveyor belt. After we saw the safety video, a foreman took me to the conveyor belt and told me to shovel coal onto it. When I reminded him about the safety video he told me to ignore it and do what I had to do. About three hours later my shovel got caught in the conveyor belt and smacked me in the head. I ended up at Eye and Ear Hospital on the company's dime."

In 2020, it's unlikely that a superintendent or project manager would direct a worker to countermand safety instructions. The hazard of mixed signals is more subtle. It's in the unintentional emphasis on productivity above safety or the look of inconvenience when a foreman is asked to stop a project to remedy a potential safety hazard. Sometimes that can be as simple as taking good safety practices for granted or ignoring available resources.

"If we are doing something that we are not accustomed to doing or needs a second set of eyes, we will use Bob McCall [from the Master Builders'] or our insurance company as a resource. All our superintendents understand that that is my expectation," says Volpatt. "The first things I see when I walk on a job site are the conditions. Is the site clean? Are there things on the floor that can be tripping hazards? I'm going to ask the superintendent if he checked with an outside resource to make sure we are doing things as safely as possible."

"It is a giant trap. At 18 years old I got first-hand knowledge of what can happen when safety breaks down,"

"It's important how we communicate on a job site. Historically about ten percent of the activities on a construction site are safety risks. That means 90 percent of the job site is being run safely. But we never talk about that as an industry," says Leinenberger. "It's so important to take a step back and talk about the good things people are doing. People like to know that the company supports the things they are doing well."

"We have gotten to the point now where it is a daily huddle on the job site. It used to be weekly 'toolbox talks' but now we sit down every day with the workers and it's a roundtable," says Brogan. "We discuss what we're planning

on doing that day and talk about what has changed on the job site. We review where we will meet if there is an issue. We seek out information from the workers on conditions they are concerned about. We breed that into the supervisors."

Taking an inventory of job site conditions offers opportunities to reinforce the safe actions of the workers and to identify what is safe versus what is compliant. Ray Volpatt tells a story about asking a superintendent about an opening where a two-step stairway had been demolished, which Volpatt saw as a potential tripping hazard. The opening required no action to be compliant but could still be hazardous. The superintendent directed that a railing be installed to prevent the opening from being used. It was an opportunity used to emphasize that safety can be a step up from compliance.

"While the rate of workplace fatalities has decreased substantially over four decades, the rate of decrease has slowed. To move to the next level, we need to move beyond compliance and truly address safety culture," notes Richard Mendelson, regional administrator, U.S. Department of Labor for Occupational Safety and Health. "An effective safety and health program addresses management commitment and employee involvement, worksite analysis, hazard identification and control, and employee training. Don't look at a safety and health program just as a way to meet the standard; think of it as a way to manage risk."

One aspect to a safety and health program that has changed in recent years is safety analytics. Well-run companies have always evaluated safety performance by analyzing accidents and incidents for lessons learned. Now, companies are looking at metrics and analyzing conditions to prevent accidents. It's a change in the indicators being observed.

"We have always tracked the number of injuries experienced, and we compare ourselves based upon that information. But that is a lagging indicator. That tells us what injuries have happened. That's a reactionary metric," explains McCall. "We track that two people were injured from getting dust or debris in their eyes, for example. We are beginning to track leading indicators. That would be observing ten workers without eye protection on a project. That's an indicator that there is a risk of having eye injuries. The risk can be avoided."

"Proactive companies are looking at leading indicators. Near-miss reports are an example of that," says Leinenberger. "A near-miss investigation is the same as an accident investigation in that it gets to the root cause, but behavior can be changed before there is an accident. The leading indicators from a near-miss or safety observation perspective can help identify problems before they happen, identify training needs before there are accidents."

Technology has become a better tool in accident prevention. The cumulative experiences logged in hundreds of thousands of incident reports are big data waiting to be analyzed. Artificial intelligence, like that employed by

Pittsburgh-based Predictive Solutions, gives employers the ability to analyze accident history to find common factors and conditions. In many cases, the analysis uncovers factors that were commonly present in incidents, even if they didn't cause the problem. Big data analysis can identify that certain types of accidents happen most commonly in mid-afternoon, suggesting that fatigue could have made the accident more likely. Supervisors can take corrective actions armed with such knowledge.

Safety professionals and executives agree about another common characteristic of a strong safety culture, which is the benefit of planning hazardous activities to the smallest detail. Safe job sites have well-planned activities. They also tend to be more profitable.

"Joe Franceschini and his people are so good at process," says Ploeger. "He's great at looking at a complex potential issue and breaking it down into easily digestible segments so that we have a plan that we can implement."

"Once a company adopts a safety culture, we find that they plan their work accordingly," notes Andy Peters. "Good companies are planning for safety and productivity on every project. Planning cuts down on time lost when you don't plan for safety. The old adage that a safe job makes money is true. We use it as a leading indicator. The projects that have the best safety record are usually the most profitable."

The research confirms that safety and profitability are compatible. Executives evangelizing about safety culture talk about people first but there are clear paybacks for investing in a culture that elevates safety as a value.

Safe working environments are more attractive to potential employees. An environment that shows the employer cares will draw top talent, which perhaps explains in part why safety culture has been uplifted during the past five years. Both OSHA and industry associations, like the Associated General Contractors, have done research validating the investment in safety. For example, the National Safety Council estimates that companies save $32,000 for each medically consulted injury that does not occur. Hospitalization costs are significantly higher. Job site injuries add up to six-to-nine percent of project costs, while safety programs cost 2.5 percent. And OSHA research shows that every dollar invested in safety saves four-to-six dollars in direct costs resulting from a workplace injury.

"Even executives who do not have safety as a value come to understand and appreciate its importance," notes Peters. "From the perspective of business development, the lack of a safe environment costs the corporation money. A fatality means that some of its clients will not do business with the company anymore. Being unsafe adds to insurance costs, which translates into higher bids."

"When we look at a client and they don't ask us for safety information, we ask why," says Mascaro. "We will usually get the response that they assume that everybody is safe. I'm still surprised when we get that kind of answer."

A poor safety record is more expensive for companies than the loss of business development opportunities. OSHA violations routinely run into the mid-five figures. Accidents are just as expensive and are multiplied by the impact on related costs. More than anything else, the biggest expense of being unsafe is the human cost.

"Spending a little money to put a railing up where it was not required by OSHA might prevent an injury that would cost $50,000 or $60,000 in lost time, pay, and medical bills. That would increase my experience modification rate and my workmen's compensation rates would go up. Is that the driving factor? No, but it is a factor," says Volpatt. "Think about what I would lose if one of my superintendents fell and was out for several months. It's about the people. The people make the company." BG

Photos by Bonjwing Photography

PROJECT PROFILE

FL. 2 RESTAURANT AT THE FAIRMONT

When the Fairmont opened in Pittsburgh in March 2010, its highly-rated restaurant, Habitat, quickly became one of the top eateries in Downtown. It is a testament to the vibrancy of the Golden Triangle that, seven years later, the hotel felt that it needed a new concept to stay in step with the rest of the Downtown food scene. In the summer of 2017, the Fairmont and its landlord PNC invested more than $2 million to renovate the restaurant and rebrand as fl. 2.

"Dining was changing in Pittsburgh, with all these great new restaurants opening in the city. The Fairmont is the leader in terms of hospitality in the city and we wanted to stay ahead of the curve and remain relevant," says Matthew Sterne, general manager at the time of the project. "We knew that we wanted to make a change to keep up with what was happening in the city."

"PNC and the Fairmont got together and decided upon their goals. The previous restaurant, Habitat, had done well but the Fairmont felt that they needed to up their game because of the way downtown was evolving" says Katie LaForest, associate and project architect for Moss Architects. "They decided they needed a showstopper so that when someone was leaving a wedding or an event, they were not going to just leave the building."

To bring the vision to life, Fairmont and PNC put together a large team of professionals. Moss Architects was the architect of record. They worked with the project designer, Lazaro Rosa-Violan Studio (LRV) from Barcelona, which was responsible for the restaurant design, down to the menus, fixtures, furniture, and equipment. Local consultants were brought in for the engineering disciplines. McKim & Creed (formerly Loftus Engineers) designed the structural, mechanical, and electrical systems. Studio I was the lighting designer. McFarland Kistler & Associates was the kitchen consultant. At PNC's urging, Allegheny Construction Group was engaged to provide preconstruction services during the design.

"LRV was the conceptual designer, right into design development. The project was handed over to us during design development," says LaForest. "During construction documents the roles were reversed, with LRV in a more consulting role."

Moss Architects was handed the task of adapting the developed design to U.S. and local codes, and detailing a highly-customized design to communicate LRV's intent to a group of bidding contractors. Allegheny Construction Group was one of the contractors invited to bid and was the successful contractor chosen to build the project. Right from the start, however, there were conditions that couldn't be anticipated in construction documents.

3 PNC Plaza was designed to have three distinct purposes. In addition to the Fairmont, the building is also home to The Residences, 28 condos located on ten floors above the hotel. On the Fifth Avenue side of the building is 326,000 square feet of office space. Less than a decade after construction was complete, 3 PNC Plaza wasn't the kind of building that Allegheny Construction Group, or the designers, thought would have unforeseen conditions. That assumption was incorrect.

"For some reason, there was difficulty locating as-built drawings. Because of the kind of hotel that the Fairmont is, there wasn't a lot of investigation done. What investigation was done was very limited," explains Kevin Shirey, superintendent for ACG. "When we got in there, we discovered that the entire cantilevered slab that the restaurant was located on was three inches out of level. Probably the biggest surprise we found during demolition was that there was an entire open floor above the bar ceiling. And, of course, right above that was the gym with treadmills and free weights. No one anticipated that."

The project had a number of challenges, particularly those of a logistical nature; however, the most daunting challenge had to be the separation of the construction from the ongoing operations of a 24/7 luxury hotel. As the name suggests, fl. 2 is located on the second level of the Fairmont, directly above the spacious lobby of the hotel. That second level is a mezzanine that is situated between what would normally be the second and third floors of building, meaning that the ceiling height of the lobby beneath the restaurant was more than 20 feet above the finished floor.

To keep the construction activities on the second level from interrupting or interacting with the Fairmont's guests and check in/check out activities, Allegheny erected a two-story scaffold structure that provided access to the area beneath fl. 2 and constructed a finished temporary structure that served to hide the scaffolding and the construction above it.

"The scaffolding was up in their lobby for about 30 percent of the project," Shirey says. "The original idea was to have a rolling scaffold with custom velvet drapes. We also entertained the idea of using a larger scissor lift, but that would have cracked the tile in the lobby. As a result we started talking about a fixed scaffold. Safeway Scaffold ended up building that behind the counter and then wrapping it in black plastic to be as professional looking as it could. That left them with a big black wall, but at least it was consistent and the staff could check people in-and-out."

Accommodating the hotel operations was a consistent challenge that began with the demolition. Shirey says that made the project more fun, especially because of the attitude of the hotel's general manager.

"We had to adapt the operation, obviously" recalls Sterne. "Our 24-hour room service continued and we had to move the restaurant service down into the lobby for three meals a day. Allegheny Construction was great to work with. They were very

sensitive to the fact that we were a luxury hotel and still in peak season. They rolled with our demands. If there was a big event or a particular time period that we had to be sensitive to they really worked with us."

"What was really unexpected until we started working there was that every celebrity who comes through Pittsburgh stays at the Fairmont. Our first week we were doing demolition and the restaurant on the floor below came to us and asked us to stop making noise. With that cavernous lobby the noise just echoed throughout the first floor," Shirey recalls. "Because they served breakfast, they told us that we could not make noise until 11:00. When I asked about lunch they told me that we needed to stop at 11:45 until 2:00. I immediately went to the general manager, Matthew Sterne, and we were able to work something out but we literally had a 'no noise' policy for two hours in the morning and about an hour and a half in the afternoon."

Maintaining a schedule while keeping a luxury hotel guests unimpaired proved to be a challenge that remained throughout the project. The key to navigating the maze of conflicts was daily communications and interaction throughout the day about the activities that might impact the hotel or the workers.

The communication was complicated by the fact that the fl. 2 project had more principal decision-makers than a "normal" Pittsburgh project. While Allegheny's client was the Fairmont, PNC was paying the bills. Many of the choices were made by an

architectural designer located six hours ahead of Pittsburgh but Moss Architects was responsible for construction administration. As the project unfolded, with differing conditions impacting the hotel and restaurant kitchen, Allegheny Construction Group's project team made daily communication with all stakeholders its highest priority.

"We had to rely on technology, which wasn't everyone's cup of tea. We had to have lessons for some of our people on how to use their iPads and iPhones," Shirey chuckles. "We had some people who didn't want anything to do with a Smartphone and now we were telling them they had to Facetime on an international conference call. Or we were going to send them a PDF of a drawing instead of a blueprint and had to teach them how to use iBooks. It made my job easier to use technology to our advantage but not everyone we worked with was prepared for that."

"With technology now there is a lot you can do from a distance," agrees LaForest. "We did a fair amount of conference calls and screen shares with the international team. I think they only came to Pittsburgh two or three times."

Technology also helped with what could have been a difficult submittal process. Although most of the materials and products selected for fl. 2 were sourced in the U.S., there were essential elements that were coming from Spain, Italy, and Egypt.

"Allegheny used Procore and everything ran through that," says LaForest. "There were some things that had to run through LRV, and some that went through PNC or the Fairmont, but I don't remember submittals being more challenging than any other project. Most of the items had already been approved during design by the international designers. It helped to be working with specialty contractors that understood how to do quality work."

Shirey recalls the submittals process as a bit more of a challenge.

"The submittals were difficult. We were in a design-build mentality. Submittals rolled in as the project went along," he says. "Even up to the final weeks, we weren't sure that everything that was coming in could get through customs and delivered on time. Moss Architects was a tremendous help. You would like to submit an RFI for everything but we didn't always have time for that. There were a lot of decisions made over the phone that we put into Procore later. "

The Admiral's Club, Pittsburgh International Airport

Lutheran SeniorLife, Overbrook Pointe

Pittsburh Eye Institute

Costs Sports Center, University of Pittsburgh

One example of submittals and products rolling in was the custom lighting, which was manufactured in Spain. Throughout the submittal and manufacturing process, the fl. 2 team was assured the lighting met local codes. Shirey says he was skeptical that it would meet U.S. codes or the demands of the City of Pittsburgh. When the light fixtures arrived, his concerns were confirmed.

"When those fixtures did arrive in the last few weeks they did not have an Underwriter's Laboratory (UL) sticker on them," Shirey says. "We had to send them to a UL fabricator in New York City to have them rewired and fitted. We went back-and-forth several times to get the issue resolved. Ultimately a representative from Underwriter's Laboratory came to the Fairmont and put a label on the light fixtures."

There were a number of other technical challenges that required creative solutions throughout the project.

The new bar at fl. 2 was a dramatic focal point of the design. Unforeseen conditions above and below the new bar added complexity to the construction. ACG had to cut and patch much more of the lobby floor than planned to add the plumbing, electrical, and drainage required by the bar. That two-story open space above the bar required a new design for the ceiling and a re-engineered structural solution hung from an additional 15 feet more than anyone anticipated. LaForest credits MetalFab Industries with their work on that.

"To structure that canopy so that it was held vertically and braced was difficult, especially because the gym is right above. There is a lot of metal up there above the ceiling," she laughs.

Another important design element for the restaurant was a custom marble fireplace that was installed between the seating and the kitchen. Venting the fireplace uncovered an unexpected problem.

"Nobody could tell us what was inside the exterior wall of the building. When we did our first exploratory cut we discovered a post- or pre-tensioning cable. We did not cut it but we thought it could be the worst case scenario," says Shirey. "We had a company come out and X-ray the entire wall to see where we could penetrate. We did the whole project in a very exploratory way. It reminded me of my old residential construction days."

Construction on the project ran from June through October of 2017, with the grand re-opening on October 27. Shirey notes that there were times that all 20 subcontractors were on the job site at the same time during the final few weeks, with more than 50 workers in close proximity. Despite the tight conditions, the project was completed safely with zero incidents. Both architect and general contractor give their client credit for the success of the fl. 2 construction.

"There was a real vision that PNC and the Fairmont had and they picked the right team," says LaForest. "When you have a client that gives you their goals, you have a real opportunity

to succeed. It was very collaborative. The project had one of the largest teams I've ever been involved with in terms of design collaboration. There were many people involved but everyone knew their role."

"When I look back, after the restaurant was completed, I don't think there was anything that I would change. I think that says a lot. So often when you have a vision and put it down on paper, everybody works towards making it a reality, but it doesn't always work out the way you envisioned. I would say with everybody's help – Moss Architects, Allegheny Construction, the designers, the Fairmont team – they came together to realize this amazing restaurant. It is beautiful. It hit the vision that we wanted," concludes Sterne, who moved on to become vice chancellor for business services at the University of Pittsburgh in February 2020. "For me, even since I've moved, that project is the vision and the benchmark against which my future projects will be measured in terms of quality vision and execution."

"I can't say enough about Matthew. He had a positive attitude and always took the approach that we could work something out. I think the people at the Fairmont are very fond of where they work and it shows. Guest satisfaction is really important to them," notes Shirey. "It was a collective effort from everybody involved. We had a great team of subcontractors. There were so many critical roles that we all played to get the project done."

PROJECT TEAM

Allegheny Construction Group .... General Contractor
Three PNC Hotel LLC... Owner
mossArchitects LLC...Architect
Lazaro Rosa-Violan Studio......................Design Consultant
McKim & Creed .....Structural/Mechanical/Electrical Engineer
K & I Sheet Metal, Inc. .... HVAC
Keystone Electrical Systems, Inc. .... Electrical
Sentry Mechanical Inc. ....Plumbing
Giffin Interior & Fixture ....Millwork/Casework/Specialties
Preferred Fire Protection.............................Fire Protection
Dan Taylor Interiors ....Carpeting
Tom Brown Inc....................................Hardwood Flooring
J. P. Phillips, Inc. ....Ceramic Tile
Lisanti Painting...Painting
Southwest Aluminum & Glass Co..............Glass & Glazing
Metalfab Industries ....Steel Erection
Brand Safway Industries...........................Scaffold Erection
Bova Corp...................................Food Service Equipment

FIRM PROFILE

FDR SAFETY

Fred Rine, founder and CEO of FDR Safety, acknowledges the irony of his self-employment in the safety consulting industry. In a business that advises others to avoid risks, an entrepreneurial safety consultant seems a mutually exclusive description.

"We are a profession that likes things to be black and white. We don't have a grey crayon in our box," jokes Rine.

In Rine's case, the urge to break off from a successful corporate safety career to start on his own was the result of a clear-eyed risk assessment that was inspired by his employer, logistics maverick Fred Smith of Federal Express.

"Fred was the one who hired me. He always taught us to think outside the box," Rine recalls. "In safety there are very few entrepreneurs. We don't like to color outside of the lines. But I was very blessed to be around a lot of entrepreneurs at FedEx. I took a risk but it was because safety is a staff function that does not produce revenue. I believed companies were going to take anything that didn't produce revenue, outsource it and pay only for what they needed. That didn't mean companies were going to de-emphasize safety but they were going to pay for safety management as they needed it."

Rine had been at Federal Express since 1984, developing a corporate safety program that expanded as the company grew to more than 200,000 employees during the dozen years he was employed there. It was during that part of his career that he refined his approach to safety management. Much of the

Fred Rine

Jim Stanley

Flavius Brown

resources in safety management were devoted to ensuring compliance with Occupational Safety and Health Administration (OSHA) and providing safety training. Rine discovered that success in safety management occurred where workers thought differently about working safely. He developed a program aimed at attitude, rather than behavior.

"Behavior-based safety was a big deal then. Behavior is what you do but your attitude is what you think," Rine explains. "I developed a program called Safety Awareness, which we now called Attitude-Based Safety Culture Training. Before you can change your behavior, you have to change your attitude. That was my whole philosophy. It's not a training session. It's a motivation session. We engage you; we challenge you."

"The program is based on ten words: time, comfort, value, family, have to, want to, and accountability," he continues. "When I started on my own I put those ten words on a wallet-sized card. That gave me something that was different from everyone else and that I could go out and promote. That was how I got on the map."

With an attitude-based program in hand, Rine launched FDR Safety in 1996. While he opened FDR Safety as a one-person shop, Rine jokes that it was good to have a customer to begin. That client, AK Steel was in desperate need of a safety consultant. The small steel maker had a reputation for high quality and productivity. AK Steel's plant in the Cincinnati area was among the most profitable in the world. It was also known for being the most dangerous plant in the steel industry.

"They were known as the most unsafe steel mill in the United States. When you kill ten people in four years, you deserve that reputation," he says. "I never will forget the CEO asked me if I could change the attitude of the workforce there. Not the behavior. Not the culture, but the attitude. He said they were the most profitable steel mill in the country but they were not very good at safety."

What FDR Safety introduced at AK Steel was an eight-hour program that focuses on the reasons workers behave in an unsafe manner. Although Rine was very familiar with the steel industry, the safety program didn't provide training on what the safe practices were. It focused instead on why workers wouldn't follow those safe practices.

"The philosophy behind safety awareness was changing the attitude of the worker from I have to be safe to I want to be safe," Rine explains. "It wasn't a training program. If I went into the steel mill at the time and asked a worker if he knew how to do his job safely the answer was yes. If they were doing something unsafe, they knew it. That's not a training failure; that's a decision-making failure."

"No one else had a program like the one Fred developed," says James Stanley, president of FDR Safety. "Everyone taught how to be safe. No one taught why to be safe. There was no Powerpoint, just Fred interacting with 30 workers and foremen for eight hours. It was so powerful that people really believed what he was saying. It worked so well that AK Steel put all of their 10,000 employees through it three times. They became the safest steel company in the world using the program that Fred developed."

The program Rine introduced to AK Steel has seen over 500,000 participants in the intervening 25 years. His company, FDR Safety, remains relatively small but provides a full spectrum of safety and occupational health services to corporations in a variety of industries across the globe. FDR's leaders are long-time safety leaders, with connections to private industry and government compliance.

Fred Rine is a Wheeling, WV native who graduated from West Virginia University in 1974 and began his career in safety management at Wheeling-Pittsburgh Steel Corporation in Steubenville, OH. In addition to his tenure at Federal Express, Rine also spent a year as vice president of the National Safety Council. During his time at Wheeling-Pittsburgh, Rine had the opportunity to meet Stanley, who would become his colleague.

"When I worked at Wheeling-Pittsburgh Steel, Jim Stanley was the OSHA compliance officer in Pittsburgh," Rine says. "At that time I went to safety class every Tuesday from 6:00 until 10:00 in the evening in Soldiers and Sailors Hall at Pitt. Jim Stanley was the instructor. He always tells me that he taught me everything he knows about safety. I tell him that he's right but that wasn't much."

The two men began crossing paths. Rine started working with AK Steel in October 1995 and Stanley joined AK Steel as vice president of safety in January 1996. The two maintained a close relationship as Rine grew FDR Safety and then Stanley joined FDR in 2004.

Jim Stanley started his career with Liberty Mutual Insurance in 1964, investigating accidents on the tough waterfront loading docks in Philadelphia.

"I became a safety manager by osmosis," he jokes. "Then in 1971, I was in the second class of OSHA compliance officers.

"The philosophy behind safety awareness was changing the attitude of the worker from I have to be safe to I want to be safe," Rine explains. "It wasn't a training program. If I went into the steel mill at the time and asked a worker if he knew how to do his job safely the answer was yes. If they were doing something unsafe, they knew it. That's not a training failure; that's a decision-making failure."

I'm probably one of the few people remaining in safety who was there at the beginning of the agency. Over the next 25 years I worked my way up through regional and national positions to the role of Deputy Assistant Secretary of Labor. From there I was hired by AK Steel, where I worked with Fred again."

Stanley's arrival brought expert witness services to FDR Safety's portfolio and spurred additional diversification of the services the company offered. Responding to frequent client requests, FDR Safety began sourcing project safety staffing, which grew into permanent staffing placement. With the addition of Flavius Brown, who had been a safety executive at Federal Express and Waste Management Inc., FDR deepened its training resources and programs. The company also offers a robust array of services to help corporations navigate their OSHA compliance and training. The relationships Rine and Stanley have built in their combined 90 years of safety management bring in client needs of all shapes and sizes.

The foundation of the company still rests on the attitude-based safety culture training that Fred Rine developed in 1995. Rine believes that's because it's the key to getting workers to adopt a safe working environment.

"Human beings are risk takers by nature. We take risks for two reasons: risk and comfort," Rine says. "Why would someone not follow safety procedures? To save time. Why would someone not wear safety apparel? Because it's uncomfortable. Have you ever had too much time on your hands? Or been too comfortable? Those are two very good rewards that, no matter how much of them I have today, I want more tomorrow. Those rewards will impact my behavior.

"I try to relate the behavior to values. If you ask what people value, most people will say they value their family, faith, and health. So how do you change your attitude from 'I have to be safe' to 'I want to be safe?' You make safety a value not a priority. I use the example of driving a car. People know how to drive their car safely. If you are driving over the speed limit it's not a training failure. It's a choice. We are trying to inspire you to ask if driving faster in your car is worth the damage you would cause your family if you were in a major accident. I tell people that the next time they want to take a risk to pick up their phone and call their kids for permission. Their kids would tell them to come home safe tonight." BG

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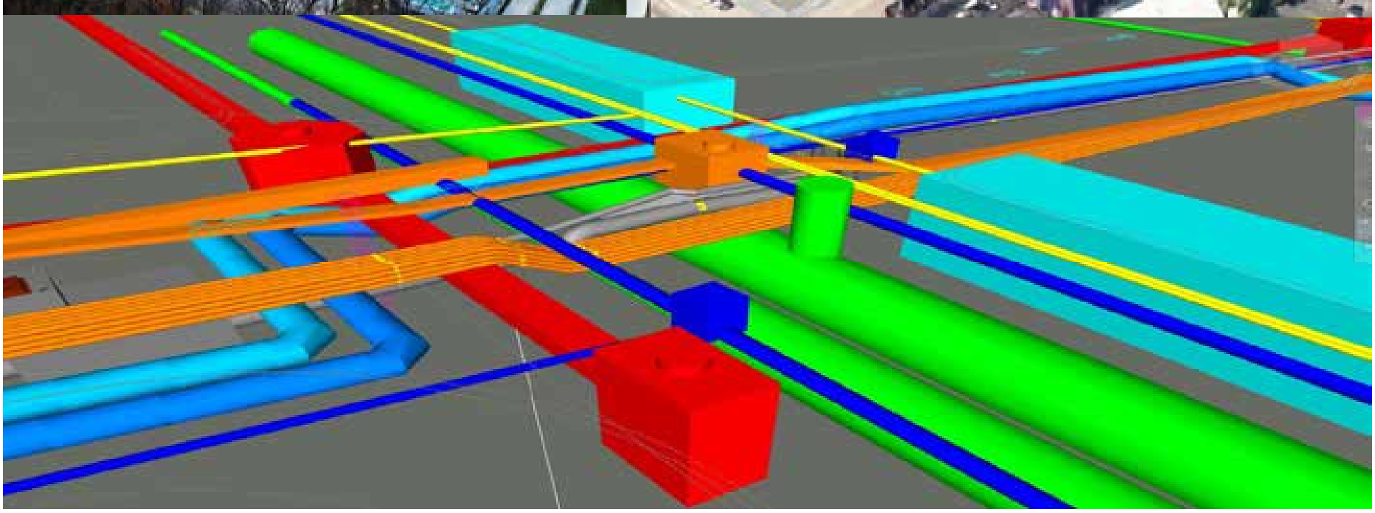

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LEGAL PERSPECTIVE

FORCE MAJEURE CONSIDERATIONS IN CONSTRUCTION CONTRACTS

BY DANNY P. CERRONE JR.

The declaration of a global pandemic in March 2020 and the subsequent directives and orders issued by the federal and state governments have significantly affected the construction industry. There are many questions and concerns surrounding these directives and orders, and many are specifically wondering about force majeure clauses in contracts and whether such clauses apply to impacts from COVID-19.

A force majeure clause relieves one party from performing a contractual obligation under certain circumstances that make performance impractical, impossible, or potentially illegal. Force majeure translates to "superior force." Such translation is a good indicator of when a force majeure clause comes into play: when superior, external forces affect a party's ability to successfully complete a contractual obligation in a complete and timely manner on a construction project. Generally, a force majeure event may exist if the event is unforeseeable and outside the contractor's control. COVID-19 appears to fit within such general description—although the difference between an epidemic and pandemic may be important to consider. Whether a court or arbitration panel agrees with such assessment will only be resolved as claims make their way through the dispute resolution process.

Force majeure translates to "superior force." Such translation is a good indicator of when a force majeure clause comes into play: when superior, external forces affect a party's ability to successfully complete a contractual obligation in a complete and timely manner on a construction project. Generally, a force majeure event may exist if the event is unforeseeable and outside the contractor's control. COVID-19 appears to fit within such general description—although the difference between an epidemic and pandemic may be important to consider.

Always consult the contract before taking any action. Consider these critical questions in planning near-term action and pondering long-term strategy and potential consequences:

1. Do the impacts from COVID-19 constitute a force majeure event under the contract?
2. Is epidemic, pandemic, or illness specifically identified in the contract?
3. If epidemic, pandemic, or illness is not specifically identified, does COVID-19 fall under some of the other event, such as an "act of God," "natural disaster," or something beyond a party's control?
4. What steps can be taken now to preserve rights?

Standard form construction contracts from the American Institute of Architects ("AIA") and ConsensusDocs do not have specific force majeure clauses. The AIA and ConsensusDocs contracts, however, contain excusable delay clauses that may apply to COVID-19. The relief offered in these contracts could potentially be a time extension and the opportunity to terminate the contract for either party.

The AIA A201-2017 standard General Conditions do not use the term "force majeure." However, Section 8.3.1 includes expansive language that may provide a basis for time extension, and may very well cover the impacts of COVID-19:

> If the Contractor is delayed at any time in the commencement or progress of the Work … (3) by labor disputes, fire, **unusual delay in deliveries, unavoidable casualties,** adverse weather conditions documented in accordance with Section 15.1.6.2, **or other causes beyond the Contractor's control;** … or (5) **by other causes that the Contractor asserts, and the Architect determines, justify delay**, then the Contract Time shall be extended for such reasonable time as the Architect may determine (emphasis added).

COVID-19 could fall into several of these categories in AIA A201-2017, such as "unusual delay in deliveries," "unavoidable casualties," and "other causes beyond the Contractor's control." In the event that COVID-19 falls within one of these categories, Article 14.1.1.2 potentially provides the contractor with the right to terminate the contract if the work is stopped for a period of thirty consecutive days, through no fault of the contractor for, "An act of government, such as declaration of national emergency, that requires all work to be stopped." A contractor may be able to terminate the contract based on a lengthy work stoppage required by government or other health order that prohibits construction or an order that has such effect. Similarly, an owner could invoke the suspension or termination for convenience clause. Article 14.3 provides that if the contract is suspended for convenience, a contractor would be entitled to an increased adjustment to the contract value, including profit. Article 14.4 provides that if the contract is terminated for convenience, the owner must pay the contractor for work properly executed. This includes costs incurred by reason of termination, costs attributable to termination of subcontracts, and any other, previously agreed upon, contractual termination fees.

The ConsensusDocs standard contract should grant contractors with relief from the impacts of COVID-19. Article 6.3 of the ConsensusDocs 200-2017, Standard Agreement between Owner and Contractor, identifies "epidemics," as an excusable delay and provides the contractor with the right to an equitable extension of time under the contract. Article 11.5 contemplates "national emergency or other governmental act," as a basis for the contractor to terminate and entitles the contractor to recover costs for executed work and for proven losses, costs, or expenses, including demobilization costs, plus overhead and profit on work not performed. Similarly, if the owner elects to invoke a termination for convenience, under Article 11.4, the contractor could still recover (a) payment for work performed to date, including overhead and profit, (b) demobilization costs and costs incurred from termination, but not overhead and profit on work not performed, (c) reasonable attorneys' fees and costs related to termination and (d) a premium — if initially agreed to by the parties.

Not all contracts are created equally, and it is important to fully understand your contractual rights as COVID-19 impacts continue to unfold. It is critical to follow the contractual requirements to invoke force majeure. Even if there is no timing requirement, it is better to communicate sooner rather than later, even if on a preliminary basis.

For companies that already have force majeure clauses in their typical contracts, it would still be wise to review such clauses to ensure they provide clear and adequate protections. Consider the inclusion of "epidemic," "pandemic," or "public health emergency," in the contracts. With proper attention to the upfront documents, you could be better protected in the future. BG

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DETERMINING CONSTRUCTION'S CORONAVIRUS RISK: A CHECKLIST FOR INDUSTRY LEADERS

BY JAMES CUNNINGHAM, CPA

The novel coronavirus (COVID-19) has upended the global economy in a way that has never before been seen in the modern world. The virus has implications well beyond health: Within a matter of weeks, millions of Americans filed for unemployment, sending the unemployment rate to levels not seen since the Great Depression, and economic projections are grim. Some estimates place job losses near 50 million and GDP contraction in the second quarter at up to 25%, even as state and federal governments enact emergency measures and businesses across industries comply with mandatory closures.

Beyond the immense impact the outbreak is having on public health, the pandemic poses unique challenges to businesses across industries. While the hospitality industry initially took the full force of the virus' initial effects, all sectors of the construction industry will be affected, to varying degrees, by the COVID-19 outbreak.

Ascertaining lost revenue and income stemming from these extraordinary circumstances is key to minimizing the financial consequences of this pandemic. As we all hope these extraordinary measures will flatten the curve, all construction companies need to prepare as if the spread will continue. To do that, industry leaders must take inventory of their exposure, discuss potential scenarios and develop a plan centered on communication and compassion.

Here are some key questions construction leaders need to ask to evaluate their risk profile and the corresponding action items to navigate the ongoing outbreak:

1. How prepared are we? What does "prepared" look like?

Conduct a daily business continuity risk assessment to evaluate the most current facts from reliable sources and identify potential internal operational, financial and market risks; determine direct and indirect impacts; and generate an action plan. Don't forget third-party vulnerabilities such as customers and suppliers — they should be assessed and incorporated into action plans as well.

Identify a response team to lead ongoing crisis management efforts that coordinate with appropriate federal, state and local authorities. These efforts should be clearly communicated, with regular updates making sure that affected parties fully understand the direction and intent of your initiatives, as well as what is required of them.

Clear and consistent communications—with internal and external stakeholders as well as their surrounding communities—about key protective measures they, your employees and clients, can take. Leveraging information from the World Health Organization's (WHO) or the Centers for Disease Control and Prevention's (CDC) dedicated public advice pages are good places to start.

2. Have we clearly communicated to our workforce what steps they should take and how they should respond to different scenarios identified?

Evaluate work-from-home arrangements and options for remote meetings and videoconferencing. Employees working remotely, meanwhile, will need secure remote access to necessary files and services, likely using a VPN, as well as collaboration tools including instant-messaging apps, project management platforms and shared documents.

Review remote working policies and guidelines. Remote workers should only use their work computers and not their personal computers, and managers should be trained on how to be virtual leaders by setting clear expectations and emphasizing regular communication.

Conduct a daily business continuity risk assessment to evaluate the most current facts from reliable sources and identify potential internal operational, financial and market risks; determine direct and indirect impacts; and generate an action plan.

Review policies for paid time off, sick leave and short-term disability. Employees should be reassured that they will not be penalized for taking sick leave. Policies for payment if the workplace is temporarily closed or employees are furloughed will also need to be reviewed and clarified.

3. What are our organization's capabilities, strengths and weaknesses, including across the supply chain? Which third-party risks do we have, and where are they concentrated?

Build scenario models to determine ways to mitigate any risks to your supply chain. Originating in China, the pandemic immediately disrupted the global supply chain, including building and raw materials imports to the U.S. However, as countries successfully contain the disease's contagion, supply chain disruptions appear to be decreasing. Map the parts of your supply chain that are going offline and coming back online, keeping in close communication with your vendors as events unfold.

Insulate your supply chain from disruption and create a backup plan. Identify ways to diversify your supply chain, if possible. Suppliers in countries affected by the pandemic could be supplemented, temporarily substituted or replaced by domestic sources.

4. What is our organization's coverage, and do we have funds to support this crisis?

Evaluate your leases and contracts. Identify the impact from any service or supply chain interruptions, lease abatements, loss mitigation and higher costs related to workforce disruption, debt covenants and others. Determine the extent to which your contractual language will mitigate the financial impacts of the outbreak.

Determine a strategy for enforcing legal rights. While it may well be within your purview to enforce your rights as laid out within your contracts, consider, as an expedient to what may be an overtaxed judicial system, whether leveraging any federal, state or local government assistance available may immediately mitigate the impact of COVID-19 on your business.

Establish milestones for recovery. Resources are likely going to be stretched thin for the foreseeable future. It is important to create realistic, incremental goals and hold all members accountable for steering the course to achieve them.

5. With developments unfolding as quickly as they are, how can this threat continue to evolve, and what scenarios do we need to consider for our company?

Regularly monitor announcements from federal, state and local governments, the WHO and the CDC to determine other potential impacts and regulatory changes that could be coming down the pike for your organization.

Establish various versions of your enterprise risk plan that can be adapted to help mitigate risk should other waves of the outbreak take place, taking into consideration their intersection with your places of business.

Consider accounting implications and total tax liability changes. Your total tax liability will be affected depending on your individual company circumstances and the actions taken by local and national governments.

Evaluate and take advantage of potential benefits from the CARES Act, including payroll credits and SBA forgivable loans.

Following this checklist can better enable you to make informed operational and strategic decisions while balancing the risks inherent to an infectious disease pandemic. Beyond that, you can use the intelligence gained from your self-evaluation to build your capabilities over time and support the business case for future investments in resiliency.

Jim Cunningham is a tax partner at BDO USA LLP. He can be reached at jcunningham@bdo.com.

CYBER CLAIMS: A GUIDE TO CALCULATING BUSINESS INTERRUPTION

BY PETER HAGEN, CPA AND TROY BATES

While cyber was incorporated in some general liability policies (GL) of the 1980s, the first cyber standalone policy was written in 1997 through AIG. Though groundbreaking, as it was the first to address cyber security, it was a third-party liability policy only.[1] According to Statista, standalone worldwide cyber policy premiums have grown from $2.5 billion in 2014 to over $7.5 billion in 2020.[2]

Business Interruption (BI) coverage is now being offered in a high percentage of standalone cyber insurance policies (cyber policies). One of the significant events in cyber insurance in recent years has been the addition of more meaningful business interruption insurance for cyber-related events. It is common to see standalone cyber coverage that either combines first-party business interruption coverage with data breach liability or includes only first-party business interruption. It generally covers partial or complete business interruption following a cyber-attack or technical failure.

This paper addresses the most common and material BI measurement issues and the importance of a technical evaluation of the incident.

Technical Evaluation of Cyber Claims

Just like with fire, water, and other physical damage losses, it is necessary to perform a technical evaluation of the incident and any compromised equipment to understand the scope of damages, impact, period of recovery, and identify any upgrades or betterments that are wrapped into claim submissions.

Why is a technical evaluation of a cyber claim important to the BI evaluation?

- To confirm the cause of the event or loss and so carriers can determine if a covered event occurred.
- To identify specific affected systems and impact to the business.
- To identify the proper corrective action and most efficient recovery timeline.
- To identify any upgrades of technical changes that may have been completed concurrently with the event recovery that may impact the period of recovery.

It is imperative for this information to be gathered at the onset of a loss evaluation so that insurance carriers can understand how the loss applies to their policies and also understand the total exposure. The technical evaluation and the BI can be analyzed concurrently with respective experts.

BI Measurement and Computation Issues

In this paper, business interruption is considered to equal the loss of net income plus continuing cost not earned. Cyber coverage, related to cyber risk, available in the marketplace is far from standard. There is a vast array of cyber products, each with its own terms and conditions, which may vary dramatically from insurer to insurer, even from policy to policy, underwritten by the same insurer.

There are many types of incidents and scenarios that are classified as a cyber claim. They can include:

- Ransomware
- Viruses / Malware
- Network Breaches
- Denial of Service
- Data Theft / Exfiltration
- Data Loss

With cyber claims, it's imperative to understand the important BI measurement and computational issues. Based on our research of a sampling of over 2,500 business interruption losses, the top three BI measurement issues between as claimed and as calculated, by issues in order of frequency, are:

1. Sales projections
2. Period of indemnity
3. Saved or avoided costs

Sales Projections

The first step for a forensic accountant in a BI computation is to determine the "But For" sales. "But For" the event, the sales would have been "X" amount. The policy wording is similar in many cyber policies when compared to property policies, but not identical. The common wording in cyber policies includes:

The policy goes on to state the insured shall not profit from favorable business conditions caused by the event (paraphrased).

With sales projections related to cyber, forensic accountants will be looking at the entire company, as opposed to just one particular location or region, which is usually the case with a fire or hurricane. An example of why this is important can be understood by comparing the different margins of an e-commerce company and brick and mortar store. In order to be most accurate, sales and margins need to be analyzed individually by business group.

Period of Indemnity

The focal point of determining the period of indemnity (POI) is usually the cyber technical experts working with the insured and claims adjuster that determine the POI. Accountants may have an ancillary role but are not the project lead.

Due consideration shall be given to the prior experience of the business and the insured business before the beginning of the security failure and to the probable business an insured

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- Warehouse Ceiling - 14ʻ to deck
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could have performed had no security failure occurred.

The POI denotes the time period for which indemnity or compensation is payable under a business interruption policy. The POI is one of the most critical components of quantifying the business interruption loss. A technical evaluation by a cyber technical expert is key to understanding how the incident will have an impact on the POI. All situations are unique and require technical expertise to evaluate. Some questions that must be answered are:

- What systems were confirmed to be affected?
- What were the specific functions of those systems?
- How do those functions impact the business?
- What was done to mitigate downtime or impact to the business during remediation?
- Whether there are technical alternatives to expedite recovery?
- What issues may have transpired during the recovery?
- What date was the remediation complete?

After a cyber event, it is common that upgrades or changes are made to systems and infrastructure to prevent a future incident. Identification of these costs and scopes are important because they may increase the claim value and period of recovery. Therefore, they may need to be adjusted. This can include:

- Purchase of additional hardware
- Changing software or security services
- Implementing redundancy or backup systems
- Moving systems to other locations / offsite
- Migrating systems to new software

In first-party BI losses, it is common to measure the POI based on a theoretical period of restoration. This is necessary when an insured decides to make improvements and betterments and not to rebuild. Cyber losses realize a similar scenario. Frequently the insured will choose to enhance their security network after a breach. The "beefing up" of the network may take additional time, which is not generally recoverable under the BI time period. This is an opportunity for a potential difference in opinion upon various experts/professionals as to how long it would have taken to "rebuild" as was.

Saved Costs

Saved (avoided) costs are required to be computed to determine the lost net income. Frequently, the most significant decision made by a business owner is whether they continue to pay non-productive employees during the outage period or have a layoff. The cyber BI coverage may or may not cover the cost of these employees. In traditional coverage, ordinary payroll is identified as non-essential payroll. This has largely been adopted by the insurance market to mean hourly payroll.

Conclusion

Completing both a technical and BI analysis related to a cyber loss is a combination of science and art.

This process includes:

- Confirming the cause of the event and extent of impact
- Identifying any upgrades
- Identifying the POI
- Computing lost sales
- Deducting saved costs

As simple as it may sound, each cyber claim will likely have a unique twist that is not comparable with prior events. Therefore, it is important to remember these three key points:

1. The cyber technical experts, the insured, and the claim personnel need to confirm the incident while identifying the specific impacts and exposures, technical issues affecting recovery, upgrades, and period of indemnity covered by the policy.
2. The CPAs determine the lost sales within the period of indemnity. When dealing with the same deck (financials) there should not be a wide variance difference in projections, with the exception of a new company and/or a new product.
3. Calculating saved (avoided) costs is a mechanical exercise combined with experience.

Seeking the assistance of cyber technical experts and a reputable accountant with knowledge and experience with cyber claims is key. Together, these experts will make the mechanics of the BI computation easier for all involved.

- Understanding the insured's business, understanding technical issues and impacts to the business, understanding recovery and proper corrective action, and understanding the business impacts and how it makes money.
- Only requesting the documentation necessary to support a claim without making a burdensome request.
- Getting a handle on potential exposure early in the process and managing expectations of both the carrier (reserves) and the insured (expected reimbursement).

Cyber coverage represents a new insurance market. Much like boiler and machinery plus employee practices liability insurance, cyber policies are here to stay. While BI is not a new concept, BI coverage within a standalone cyber policy is.

[1] 100 AIG Stories. The First to Tackle Cyber Risk. (2019) https://www.100.aig/stories/first-tackle-cyber-risk/

[2] Statisca.com 2020 Estimated Value of Cyber Insurance Premiums Written Worldwide from 2014 to 2020

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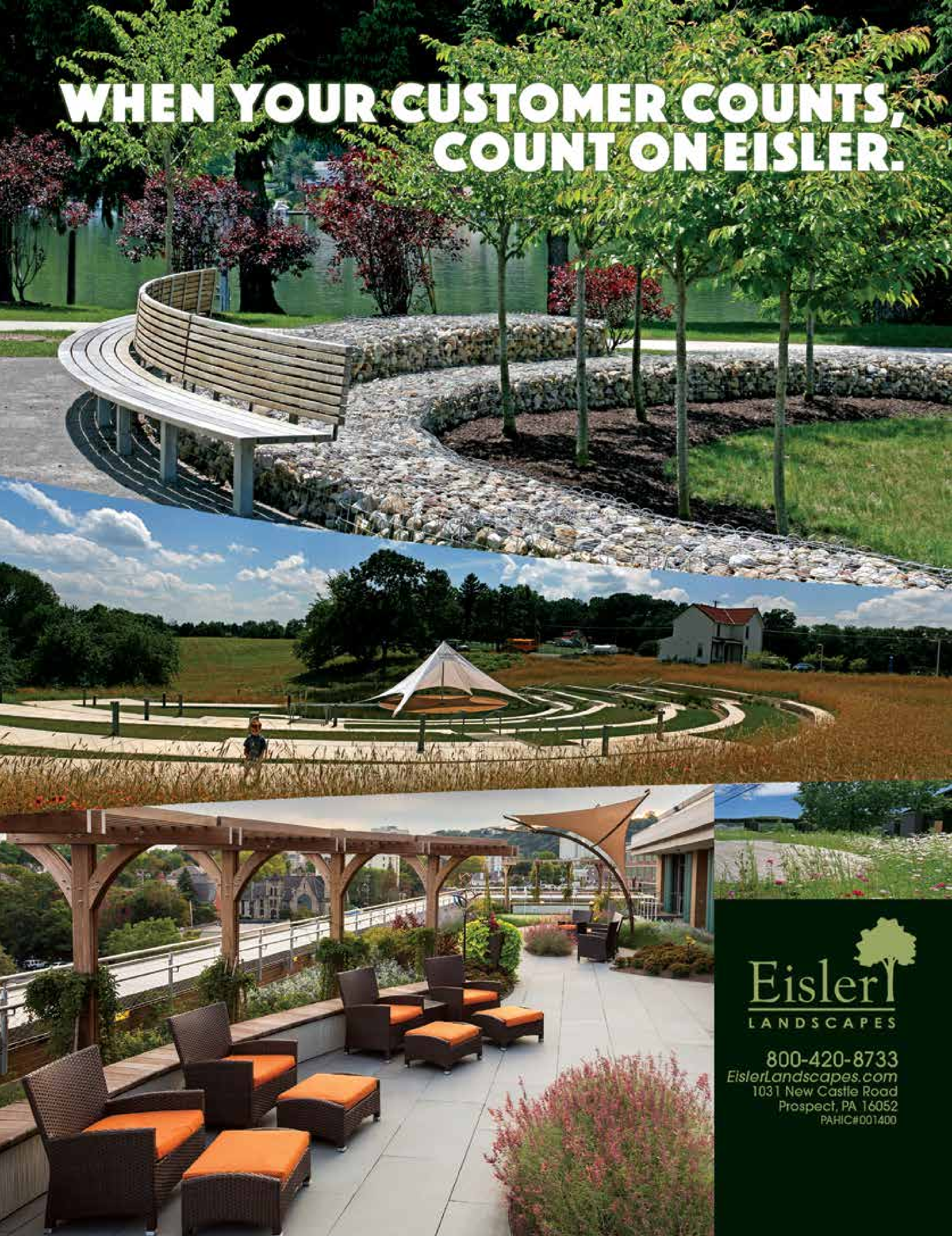
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MANAGEMENT PERSPECTIVE

CONSIDERATIONS FOR CONTRACTORS RETURNING TO WORK FOLLOWING THE COVID-19 PANDEMIC

BY JAMES R. MALL

Risk is something that construction firms are used to dealing with on a routine basis. As we entered 2020, the construction industry was facing a number of anticipated risks — skilled labor shortages, escalating tariffs and a looming presidential election in November. There were reasons for optimism, too, as the U.S. economy continued to grow at record-breaking speed, with a stretch of 113 months of employment gains — the longest expansion in American history. Then, everything changed.

An unexpected risk surfaced in the form of a global pandemic, the effects of which have negatively affected not only the construction industry, but national and global economies, as well. As the COVID-19 virus spread from China to Europe and finally to the U.S., the impact has been devastating, resulting in tens of thousands of deaths in our country alone.

The effect on construction projects was unprecedented. On March 19, 2020, Pennsylvania Gov. Tom Wolf, in order to contain the spread of the virus, signed an executive order which shuttered all "non-life sustaining" businesses in the commonwealth, including public and private construction firms. Work on the vast majority of construction projects came to a screeching halt, with only limited exceptions permitted for work on healthcare facilities, emergency repair work, and work for which a waiver was obtained — most by contractors supporting life-sustaining businesses. PennDOT also allowed a few "critical" projects to proceed on a limited basis.

Any permitted work, meanwhile, requires numerous safety measures, including social distancing to protect the safety of the workers. While it is difficult to predict with any degree of reasonable certainty how long the virus will last, the extent of its spread and what its full impact will be, it is clear that there will be a significant impact on the construction industry for the foreseeable future, at least until a vaccine is developed.

When construction does come back to some level of normalcy, contractors will be confronted with some unprecedented short-term and long-term realities. In addition to the challenges of project management, the following areas have been greatly impacted by the pandemic and will need to be addressed in order to mitigate potential harm to workers and construction projects.

Workplace Safety

Safety is always a primary concern of construction firms, given the high level of danger typically involved with projects. Now, in addition to physical danger, workers are feeling legitimate anxiety and insecurity related to the pandemic. Many workers have a sense of panic and are not only concerned about their own safety, but also the potential of contracting the virus and transmitting it to family members. Contractors will be required to follow recommended health and safety practices to ensure a safe work environment and standard protocols on job sites. The measures include the following:

- Tracking the number of workers who have been on the project site and have been tested positive for COVID-19;
- Regular cleaning and disinfection of common areas on the job site;
- Performing temperature checks on all individuals who enter the job site;
- Providing and maintaining handwashing stations and hand sanitizers at all portable restroom locations;
- Enforcing social distancing requirements, not only when work is being performed but during breaks and lunches;
- Requiring personal protective equipment (PPE) may be mandated by federal or state agencies charged with worker safety.

Implementing some or all of the above sanitation and infection control improvements could mean the difference between a project continuing to completion or being shut down. In practical terms, job safety plans typically designed to prevent physical injury of workers must now be amended to incorporate protection from this silent-but-deadly danger, COVID-19.

Material Delays

Once non-life sustaining businesses that were in lockdown return to work and production restarts, there is likely to be a massive strain on supply chains. As many commercial contractors or their suppliers rely on less costly Chinese-made goods and materials — conservative estimates claim nearly 30% of U.S. building product imports come from China — there is likely to be a rush on critical materials, resulting in shortages and potential project delays.

In part, this is because containment efforts by the Chinese government resulted in the shutdown of numerous factories supplying the U.S. construction industry. U.S. builders rely upon imported materials ranging from steel and stone to plumbing and lighting fixtures, and many companies may expect difficulty obtaining firm commitments for delivery of these products.

Contactors should begin to aggressively seek out alternative suppliers in the U.S. or in countries that have not been negatively impacted by supply chain disruptions. Contractors should look 30 to 60 days ahead to determine if there are materials presently off-site that might be in short supply once work resumes and consider expediting any material to the site. Shortages of crucial materials could be exacerbated if the government decides to authorize construction projects as part of a future stimulus package to rebuild the country's infrastructure.

Labor Constraints

As most of Western Pennsylvania was already challenged for workforce talent, the outbreak will only serve to diminish the labor pool. Project managers may lose access to workers because of mandatory quarantine, lack of childcare or eldercare, or illness due to workers contracting the virus. In fact, the employer paid leave requirements mandated by the Families First Coronavirus Response Act (FFCRA) are effective through Dec. 31, 2020, so even when it is "business as usual" once again, there will be new labor considerations and constraints.

An already existing lack of specialty trade contractors, such as mechanical, electrical and roofing specialists, could cause additional disruptions because they are not easily replaceable. If labor shortages prevent work from progressing, it may give the project owner a valid excuse to invoke a "termination for convenience" clause in order to locate and hire a contractor who can provide a sufficient labor force to complete the project in a timely manner.

Now that social distancing has become an integral part of the construction industry lexicon, technologies that allow for a reduced level of human interaction may be utilized, including remote and robotic drone inspection, 360-degree cameras, artificial intelligence and modular construction. While the construction industry does not lend itself to working from home, we can expect to see more remote and shift work, separated project offices, and isolation of trades working on a project.

Insurance Coverage

Most large construction projects contain a provision stating that "time is of the essence" and timely completion of projects in accordance with a previously agreed to schedule is critical to a project's success. Any delays or disruptions will usually result in damages to the contractor.

One way to mitigate the effects of delays caused by the shutdown or related complications is to seek recovery from existing insurance policies. There are a number of policies that may cover COVID-19 losses. Business interruption coverage is a common endorsement to a commercial property policy and may provide coverage depending on the terms of the policy and whether the impact of the virus constitutes an "occurrence."

Other coverages which may provide relief include builder's risk policies that cover losses resulting from damage or destruction of the contractor's work, workers compensation policies that cover sickness or disease suffered by workers, trade disruption insurance for firms with international suppliers, travel insurance for firms employing managers who travel frequently for business, as well as environmental policies, which may cover losses resulting from a pandemic.

Contractors should meet with their legal counsel and insurance brokers to ensure that all available policies are carefully reviewed and coverage appropriate for a post-pandemic world is obtained.

Legal Issues

While there is no dispute that the spread of COVID-19 was an unforeseeable event, contractors may still be contractually responsible for delays or cost overruns on existing projects. Thus, contractors are advised to scrutinize their contracts and consult with legal counsel to ascertain what contractual rights and duties exist for events caused by the virus' spread.

Attention should be focused on contractual provisions relating to schedules, substantial completion, delays, liquidated damages and force majeure provisions that allow work to be suspended or terminated when certain extenuating circumstances arise. Depending upon the jurisdiction and the contract language, force majeure may or may not be applicable to the current pandemic. Many contracts also contain notice provisions which need to be analyzed and complied with by forwarding all necessary notices to all applicable parties. Even if the applicable contract is silent as to whether a pandemic constitutes an unavoidable delay, there are certain common law remedies available to contractors, such as frustration of purpose, commercial impracticability and impossibility of performance, which may grant relief to contractors unable to obtain relief from contractual damages attributable to the pandemic.

Implementing some or all of the above sanitation and infection control improvements could mean the difference between a project continuing to completion or being shut down. In practical terms, job safety plans typically designed to prevent physical injury of workers must now be amended to incorporate protection from this silent-but-deadly danger, COVID-19.

If new contracts are being negotiated, contractors need to be sure to have provisions in the contract to shift the risk of damages for anticipated increases in material and equipment costs, and to equitably adjust the completion when such costs or delays are attributable to the pandemic.

In summary, the COVID-19 pandemic will change the way contractors perform work and manage projects in many diverse ways. It has been widely predicted that the U.S. and global economies will enter into a recession that will entail challenges to construction firms. Owners may defer or cancel scheduled projects due to financial uncertainty. There may be less demand for projects such as lodging and sports entertainment complexes. The impact may not be immediate since non-residential construction generally lags the overall economy by 12 to 15 months, but the full impact will be felt by contractors for years to come. Now is the time to prepare. BG

James R. Mall is a partner at Pittsburgh-based law firm Meyer, Unkovic & Scott. He serves as chair of the firm's Construction Law Group. He can be reached at jrm@muslaw.com.

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INDUSTRY & COMMUNITY NEWS

Architect Nicole Graycar from cd² (left), with Shawn Bell and Megan Corrie from Turner Construction at the NAIOP Awards Banquet.

Clayton Morris from Sampson Morris (left), with Mascaro's Alyssa Kunselman and Desmone's Tom Frank.

(From left) Linda Heininger from Piatt Sotheby's, Landau's Steve Bishop, Kevin Withers from Chapman Properties, and Jeffrey Landau.

(From left) Jason Hood, BDO's Ryan Broze, and Eric Starkowicz from the Master Builders' Association.

David Wells from RM Creative (left) and Kevin McNulty from Caliber Contracting.

Mascaro's Rick Bowers (left) and Marianne Karg from Mobile Medical.

Josh Hensler (left) and Trisha Lakshman from VEBH Architects.


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AWARDS & CONTRACTS

Pittsburgh Public Schools awarded a general construction contract to **Caliber Contracting Services** for the $1.6 million Greenfield K-8 Elementary School ADA Restroom Upgrades. HHSDR Architects & Engineers is the architect.

Pittsburgh Public Schools also awarded a general construction contract to **Caliber Contracting Services** for the Pittsburgh Miller School Comprehensive Repairs. McLean Architects is the architect.

Caliber Contracting Services was the successful general contractor on the $1.5 million Eberly Hall Veterinary Tech Space at California University of PA. MacLachlan Cornelius & Filoni Architects is the architect.

Construction is underway by **Carl Walker Construction** on the $11 million renovations to the 3500 Terrace Street Parking Garage for UPMC.

Facility Support Services was recently awarded a $3,288,000 contract with the U.S. Army Corps of Engineers Norfolk District to provide construction services on the renovation and repair of the historic Building 42 Bellwood Club – Aviation, Defense Logistics Agency in Chesterfield County, Richmond, VA.

U.S. Department of Energy awarded **PJ Dick** a contract for the $20 million Overhead Pipe Replacement at the Knolls Atomic Power Lab in Niskayuna, NY.

Rycon's Building Group was awarded two contracts totaling over $11.8 million for Dick's Sporting Goods/Golf Galaxy projects. Seritage Growth Properties is the Owner for the new 146,000 square foot conversion of a former Sears building at Belden Village Mall in Canton, OH. Similarly, Dick's Sporting Goods is the Owner for the 100,000 square feet fit-out at a former Sears location at Fair Oaks Mall in Fairfax, VA.

Also at Fair Oaks Mall, **Rycon's** Special Projects Group is providing $1.3 million in landlord work for Seritage Growth Properties in conjunction with the upcoming Dick's Sporting. Within the past year, Rycon has redeveloped the Sears at Fair Oaks Mall into four separate areas including Dave & Buster's, two additional restaurant spaces, and a new retail tenant area.

In Cranberry Township, **Rycon's** Special Projects Group is in the process of completing an 11,700 square foot, $2.2 million fit-out of an existing occupied shell space on the second floor at Magee-Women's Health at Lemieux Sports Complex. IKM is the architect.

Rycon's Special Projects Group will provide over $215,000 in renovations to five Starbuck locations throughout the state of PA: Exton, Limerick's Limerick Crossing, Bridgeville, Oakland, and Erie's Millcreek Mall.

Jones Lang LaSalle awarded **Rycon's** Special Projects group two new Chase Bank locations totaling $1.9 million. In Ross Township, PA, Rycon will convert a former Mattress Firm into the new 3,600 square foot bank branch. Similarly, an existing restaurant located just outside Carnegie Mellon University's campus will be converted into a two-story, 2,600 square foot branch. Within the last year, Rycon was chosen to complete new construction and renovation work on eight other Chase Bank projects in Florida, Ohio, and Pennsylvania.

Rycon's Special Projects Group is responsible for providing $315,000 in repairs and renovations to the Soldiers & Sailors Parking Garage at the University of Pittsburgh. Rycon is self-performing the concrete topping slab and trench drain concrete.

In Acworth, GA, work by **Rycon** began on a new $1.2 million, 6,000 square foot retail outparcel at Butler Creek Plaza. Philips Edison is the Owner and MaxDesign Group is the architect.

U-Haul selected **Rycon** to construct a new $5.8 million storage facility in College Park, GA. The 62,500 square foot project is scheduled for completion December 2020.

Rycon is responsible for the site work for a future Arby's location and additional outparcels in Canton, GA. The $800,000 project is located at Hickory Flat Village.

Rycon was selected by Blackburn Group to construct two new freestanding buildings, Tire Kingdom and Popeyes, concurrently totaling $2.4 million in Gulf Breeze, FL. Work will wrap up August 2020.

In Voorhees, NJ, **Rycon** was selected to build a new $4.4 million, 7,700 square foot birthing center to be located on the south side of the existing Virtua West Jersey Health System campus.

Office improvements are underway by **Rycon** for Communications Media, Inc. The $1.1 million project is located on the 29th floor of an occupied building in downtown Philadelphia and will be broken into three phases to minimize disruption.

Rycon and CSJM Architects are the design-builders responsible for the $1.3 million façade remodel and repair for American Strategic Insurance, part of Progressive Insurance Companies, in St. Petersburg, FL.

Rycon was awarded a 65,000 square foot new ground-up cannabis growing and processing facility for Holistic Industries in Michigan. A $3.7 million cannabis facility renovation for the same client is underway in Western PA by Rycon's Special Projects Group. J2H Partners is the architect on both projects.

At Tops Plaza in Lockport, NY, **Rycon** was awarded a $600,000 contract to fit-out an existing space formerly occupied by Rue21 into a new Five Below. The 9,000 square foot project has a three month schedule.

In Cleveland, OH, **Rycon** was selected to complete $1.9 million in repairs and preventative maintenance on a multi-level parking garage which serves PNC Center offices. Rycon recently renovated six entire floors of PNC Center as well as provided additional upgrades throughout the 35-story skyscraper totaling $19.2 million.

Mascaro received a contract from Allegheny Health Network for renovation and reconfiguration of space at the Peters Township Health & Wellness Pavilion for the Psychiatric & Behavior Health unit, formerly located at Caste Village.

Highmark issued a contract to **Mascaro** for fit-out of the 12th floor at Fifth Avenue Place for Highmark offices. Designstream LLC is the architect.

Volpatt Construction was awarded a contract for renovation of University of Pittsburgh Langley Hall. The $3 million renovation of classrooms, auditorium, café, and lobby was designed by GBBN Architects.

DiMarco Construction was the successful general contractor on the $2.75 million new Butler County Community College South Campus maintenance building. The architect is DPH Architects.

The PNC Financial Services Group awarded a contract to **A. Martini & Co.** for renovations of its Squirrel Hill branch. LGA Partners is the architect. **A. Martini & Co.** was also awarded a contract to renovate the PNC Sewickley branch office.

A. M. Higley Co. was the successful bidder on the $15.8 million new Aircraft Hangars at the North Central West Virginia Airport for the Benedum Airport Authority in Bridgeport, WV. The buildings were designed by the Thrasher Group.

Penn State University awarded a contract to **Shannon Construction** for classroom renovations at its Greater Allegheny Campus in McKeesport, PA. The architect is WAY architecture & design LLC.

Orchard Hill Church awarded a contract to **Burchick Construction Inc.** for renovations to its sanctuary in Franklin Park. The architect for the $2.4 million renovation is Avon Graf Architects.


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FACES & NEW PLACES

Facility Support Services relocated its offices to 4025 Alpha Drive Allison Park, PA 15101.

Rycon's Special Project Group added **Jason Wirick** as preconstruction manager. Jason holds a bachelor's degree from the College of Architecture and Urban Studies at Virginia Tech University and an MBA, with a focus on Corporate Sustainability from Duquesne University. He is both a WELL and LEED Accredited Professional.

At **Rycon, Lou Ferraro** and **Steve Kosmer** were promoted to executive vice president, Pittsburgh. Lou's expanded role consists of overseeing Rycon's safety/risk program, self-performed labor options, field operations, and Building Group which handles projects up to $200 million mixed-use developments. Likewise, Steve's new role consists of overseeing the business development/marketing department, the Casework & Millwork Division, and the Special Projects Group which typically handles fast-track, interior renovations under $5 million.

Promotions in **Rycon's** Building Group include **Nick Schafer** as project executive and Pat Stone as vice president of operations.

Within **Rycon's** Special Projects Group, **Brad Ridgeway** was recently promoted to senior project manager.

Bringing over 17 years' experience to **Rycon's** Casework & Millwork Division is **Lew Hess**. He was recently added to the team as a project manager.

Stewart Carlisle joined **Rycon's** Cleveland office as a senior estimator with over 27 years' experience. His diverse portfolio includes retail, industrial, office, education K-12, judicial, parks and recreation, and churches.

Rycon Cleveland added **Ryan Hamilton** as an estimator. He has three years' experience and is an alumnus of Ohio State University with a degree in Construction Management Systems.

Shannon Katruska, a recent Robert Morris University graduate, joined **Rycon's** Casework & Millwork Division as a draftsman.

New to **Rycon** Cleveland is project manager, **Frank Morel**. He is an alumnus from The Ohio State University with over 20 years' industry experience.

Joe Rooney joined **Rycon** Philadelphia as a Co-op. He is currently a student at Drexel University pursuing a degree in Construction Management.

Dana Salopek joined **Mascaro** on March 16 as the wellness coordinator. Dana has a master's degree in health, physical activity, and chronic diseases from the University of Pittsburgh, and is an ACE Certified Health Coach and NSCA Certified Personal Trainer.

Mascaro welcomed Surveyor **Jim Meyer** on March 16. Jim received an associate's degree in surveying engineering technology from The Pennsylvania State University and more than 13 years of construction industry experience.

COVID-19 JOBSITE PRACTICES

Visit MBA's COVID-19 Response website for up to date information.
www.mbawpa.org

EMPLOYERS

Social distancing:

Plan work for six feet of separation between workers.

Designate a Social-Distancing Officer (SDO).

Plan gatherings and breaks for groups of ten or less.

Clean and disinfect surfaces.

Ensure that you have adequate hand-washing stations.

Provide PPE to prevent transmission.

Restrict the number of jobsite visitors.

Screen visitors prior to arrival.

EMPLOYEES

Prevent transmission:

Stay home if you're sick or have symptoms.

Cover your cough.

Wash your hands often.

Avoid touching your face.

Avoid sharing transportation to and from the jobsite.

Wear PPE at all times to prevent transmission.

Immediately inform your employer of symptoms Or possible exposure to COVID-19.

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BE SMART – STAY SIX FEET APART

WASH YOUR HANDS

COVER YOUR MOUTH

AVOID TOUCHING EYES, NOSE, MOUTH

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CLOSING OUT

LEADERS IN RESPONSE AND RECOVERY: THE CONSTRUCTION INDUSTRY SAFETY & HEALTH PROFESSIONAL

BY KEVIN CANNON

When the magnitude of the COVID-19 pandemic became apparent, it took the world by surprise. We witnessed the adoption and implementation of drastic measures that most of us have never experienced before. State and local governments swiftly made decisions to protect the safety and health of the general public. Most of these measures involved identifying essential businesses that could remain operating while closing those that were deemed non-essential. Others included the suspension of large gatherings and the practice of social distancing.

Out of concern that construction projects nationwide would come to a halt, and millions of construction workers would be placed out of work, the Associated General Contractors of America (AGC) and our nationwide network of chapters, lobbied federal, state and local governments to recognize construction as an essential business. These efforts also included public statements of commitment to the safety and health of the men and women working on construction sites. They highlighted that the construction industry was well-positioned to adapt to the recommended practices being put forward. And with this success, the industry recognized that we had to get to work.

As one of the few segments of the economy that was permitted to continue operating, construction safety and health professionals met the challenge. Without sound knowledge about the disease and how it can be transmitted, safety teams across the country began to educate themselves on COVID-19 and explore ways to incorporate protective measures into their safety and health programs and implement them on jobsites. Many even played an integral role in convincing their state and local governments that the industry could operate safely to protect their workers and, as a result, the general public.

Construction contractors that were able to remain operating identified new ways of operating safely in accordance with the Centers for Disease Control and Prevention (CDC) and the Occupational Safety and Health Administration (OSHA) guidelines and recommendations. These new practices are designed to help prevent the kind of wide-spread workplace outbreaks that have been reported in other industry sectors, most recently meat and poultry processing.

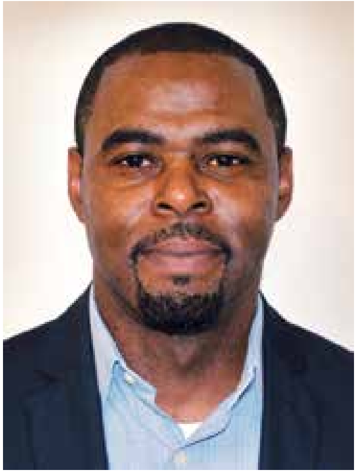
Construction safety and health professionals are skilled at protecting their workforce. Not only does it make good business sense, but it is the right thing to do. They have been implementing programs to comply with OSHA standards and regulations for decades. However, preventing the spread of COVID-19 on construction sites presents a unique challenge. COVID-19 is a hidden hazard. You cannot see, hear, smell or touch it.

The virus highlighted the importance of worker safety and health, and construction safety and health professionals responded by developing and implementing new jobsite policies. In addition to protecting workers from common hazards like moving equipment and falling from heights, these professionals had to figure out how to build while maintaining social distancing, discouraging the sharing of tools, establishing far more hand sanitizing stations and frequently disinfecting high-touch areas.

Additionally, they had to figure out how to stagger shifts and breaks. They understood that having every worker show up at the same time was a safety hazard and did not align with recognized best practices to prevent the spread of the disease. They adjusted schedules for different workers and trades to avoid bunching at project gates, and more important, to limit the number of people working in a single area of a project at a given time. Contractors also learned they needed to change break and lunch schedules to avoid crowded picnic tables and break areas. And because of the ongoing need for safety and health education and training, they looked to technology and other delivery methods to make sure that workers remained informed of jobsite hazards by conducting training and orientation remotely or in smaller groups.

All of these newly implemented measures provided workers with a peace of mind while also protecting their safety and health. As the saying goes, safety is not proprietary and construction safety and health professionals relied upon one another early in the industry's response to share best practices and innovative solutions to adapt the recommendations to fit the unique nature of the construction industry. In addition, hundreds of contractors and thousands of construction workers participated in nationwide and local stand downs to show the industry's commitment to be a part of the solution and a model for other industry sectors.

While the industry has temporarily changed in many ways due to the COVID-19 pandemic, one thing is for certain. The construction industry, and especially construction safety and health professionals, are well equipped to make the necessary adjustments to operations to ensure that projects continue, and worker safety and health remains a top priority. So, when the next crisis strikes, you can look to construction for an effective and well thought out response.



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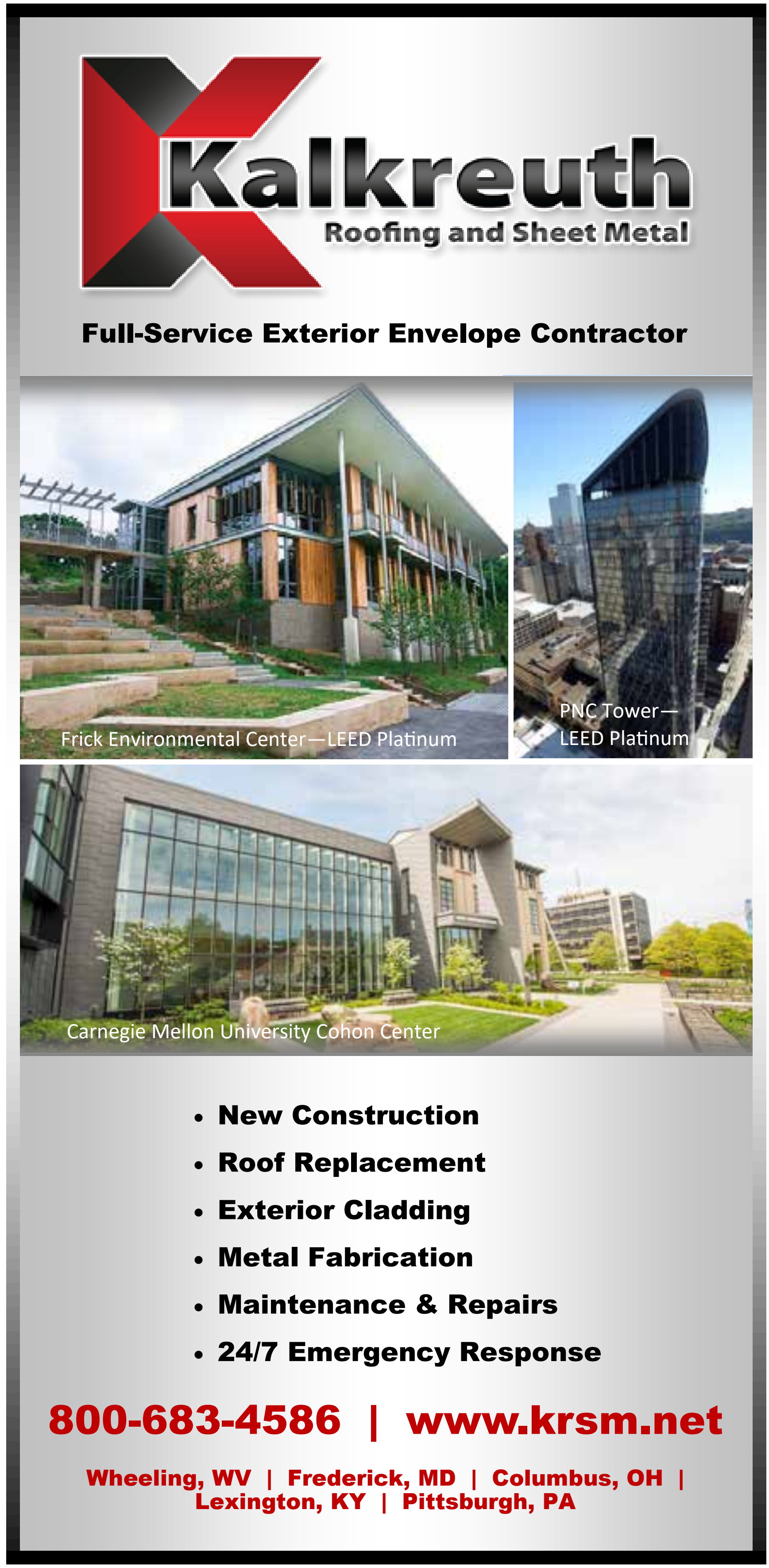

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