

Engineering Firm Leaders React to COVID-19 Pandemic



As COVID-19 concerns interrupt the day-to-day operations of many businesses across Indiana, companies are implementing new safety measures to combat the spread of the virus. Firm leaders are adapting to new methods of doing business by embracing web-based meeting technology, enforcing physical distancing, and more. A few of these leaders talked to *Building Excellence* about how their firms are taking measures to ensure a safe working environment.

What steps have you or your company taken to ensure the safety of your clients and employees amidst this global pandemic?

Andrew L. Bender, P.E., CEO and Vice President, VS Engineering

First and foremost, our response has been to understand and abide by the State and local guidance for office and field operations of our people. Being declared an essential business put us in the fortunate position of keeping our team fully engaged, but also the added burden of ensuring their safety. We continue to issue direct and frequent communications on best practices and personal protective equipment (PPE) and have PPE available as needed. Beyond the recommended restrictions and work from home, etc., we are stressing with our managers and team leaders the importance of working with your individual team members to find a workspace that is comfortable and efficient. This includes looking at extended work from home, alternating in-office time for staff in denser working areas, and generally ensuring employees feel safe enough to perform their jobs. Good management from our leaders starts with listening, pandemic or not.

Dan Dimond, P.E., President, R.E. Dimond and Associates

Immediately, we assured everyone that their safety was our primary concern. R.E. Dimond's leadership team formulated a work from home policy. Necessary telecommunication and software upgrades were made such as increased internet bandwidth, expanded use of virtual meeting platforms for production and team meetings, and internal business communication platforms for coordination of projects. Our leadership

team developed a communication plan to make sure our clients were up to date on the status of projects and employees shifted from in-person meetings with clients to virtual online meetings. We had a professional decontamination service company come in to sterilize our offices. We scheduled a deep office cleaning and made sure the few people who were still coming to the office had supplies to remain safe.

In this second phase, the leadership team introduced a gradual return to the office with 50 percent of our company working in office and the remaining 50 percent at home. We have established a maximum occupancy in shared spaces, a protocol for mask use, and incorporated safety signage. We host weekly virtual meetings with all employees to stay connected and delivered care packages to everyone that included masks, hand soap, and disinfectants.

Some of the recommended health and safety protocols were already in place, such as automatic plumbing fixtures with touchless operation. Other protocols have been improved. Surface sanitizing protocols have been established and clearly communicated, including highly trafficked entry and exit doors, office spaces, and company vehicles. We have also established a single point-of-contact in the event any employee or employee's family members happen to contract COVID-19.

In our office building, we have improved our indoor air quality through several enhancements to our HVAC systems. Fans have been set to run continuously, thereby moving more air and diluting contaminants.

We have upgraded the air filters in the equipment to MERV 13. We have also added ultraviolet light systems in these units, which aid in the reduction of biological buildup on internal surfaces and help reduce airborne microorganisms (including viruses) that get past the filters from being transmitted back to the office space. We have also ordered portable room air filtration units for various locations in the office.

Paul Hummel, P.E., President and Construction Director, Lawson Fisher Associates

At Lawson Fisher, we have gone to remote working to the extent possible. Our business typically has 35 to 40 people in the office on a normal working day, and we have cut that number down to about three to five people, most of which are working part-time in the office during the day. We have avoided hosting any client meetings in the office so we can avoid possible infection scenarios. We also have deliveries placed in an atrium thereby limiting the number of people entering our workspace within the building.

Shelby Swango, P.E., Central Business Development Director and Vice President, WSP Engineering

Our company has taken a conservative and measured approach to keeping our employees and clients safe. One of WSP's core pillars is maintaining the well-being of our staff, including both physical and mental well-being. For months – even

before the pandemic – staff has had access to exercise, meditation and mindfulness resources. WSP encouraged staff to work from home as soon as they were able prior to the stay-at-home orders, to stay at home if they are sick, and to be mindful of the health and safety to those around us.

Flexibility has always been a part of our culture, but it is stressed even more so as our team has to work with the added challenges of childcare, home schooling and taking care of family members. All travel must be approved by our sector president and is allowed only out of absolute necessity. Further, when we do start resumption of staff working at our offices again, moving back into the office will lag local relaxation of restrictions by two to four weeks and will be phased in very slowly.

There are numerous new procedures in place related to cleaning, wearing masks, number of people in close proximity, sharing food, etc., in order to keep everyone safe. Meetings will still be required to be virtual to the extent our clients will allow them. We will be discouraging non-WSP employees from entering our space until the threat of exposure is significantly reduced. We are also tracking all people coming in and out of our space to support any tracing efforts if required. We will resume with only a third of our occupancy in our offices and require the use of a self-assessment tool each day prior to coming to the office to help screen for symptoms and avoid having those who are potentially ill coming into the office.

How do you feel about the industry's response to the pandemic?

Bender

The onset of the pandemic and subsequent restrictions came swiftly and caused immediate disruptions. But after the first few days, the industry as a whole seemed to really coalesce around best practices and share approaches. The sharing was particularly noticeable in the openness and understanding exhibited from the engineering community, contracting community, and our clients. Everyone understands the importance and hurdles and the necessary patience to help each other through. I am lucky enough to sit on the American Council of Engineering Companies (ACEC) Indiana Board of Directors. In our ACEC Indiana Board and committee meetings, representatives from various firms share openly about the questions, approaches, and hassles that each are encountering. It's that openness that builds trust and allows for a response that ensures we take care of our people while taking care of our clients and communities.

Dimond

There has been an appropriate emphasis on attacking the predominant means of virus transmission – direct person-to-person contact and indirect contact via surfaces and proximity.

Airborne transmission over larger distances is not as well understood, and it will likely take a while to see a strong industry consensus on how best to handle this secondary route of transmission. We believe that common sense "preventative" measures such as what we have implemented at our office building will continue to gain wider acceptance. The American

Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) has formed a taskforce to help deploy ASHRAE's technical resources to address the challenges of the pandemic as it relates to the effects of heating, ventilation and air-conditioning systems on disease transmission in healthcare facilities, the workplace, home, public and recreational environments.

Hummel

I believe the industry has responded well to this situation. It is remarkable how the contracting community, clients, and consultants have jumped in with both feet leveraging available technology to keep our industry moving forward. Starting with policymakers, listing road and infrastructure construction "an essential activity" has been reinforced at every level of government here in Indiana. Hopefully this level of cooperation through the pandemic and sustaining construction operations and project development will continue over the long-term with improved cooperation throughout our industry.

Swango

The industry response has been great. We are fortunate that our industry has largely been prepared to work remotely. As an industry, we broadly work together through file share platforms. Our transportation clients were largely able to

keep pushing forward with projects, especially those concerning safety and maintenance improvements. They have also been able to take advantage of the lower traffic volumes to advance projects under construction, which not only saves money, but also makes it much safer for the construction workers by shutting down interstates completely. I appreciate that nearly everyone is taking the health risk seriously and are doing their part to keep us all safe.

Have you seen any positive changes take effect in the industry as a result of COVID-19?

Bender

There is definitely a greater awareness of washing our hands and maintaining good hygiene to keep our team healthy and working. I'm hopeful this results in less seasonal flu and other illnesses that can spread and impact our team.

Dimond

Remote work at home has been successful, we've noticed increased communication with team members and clients, and utilization rates are increasing because we haven't been meeting as frequently. Professionals of all industries are working

together with Best Practices. People have been more aware and conscious of time management and communicate more thoroughly, with better explanation and detail.

Hummel

I think as an industry, we've proven that we can handle this by working remotely. Before the pandemic, our employees, and myself in particular, were pretty inexperienced with using Microsoft Teams, and that technology has become the go-to platform for collaboration and meetings internally. The technology is there – we need to be vigilant in seeking it out to improve our industry.

Swango

I think there will be a cultural shift in terms of "old attitudes". Like how it was considered a badge of honor to show up to work no matter how sick you are, or the idea of being at the office before your boss arrives and only leaving after your boss leave, or the thought that working from home means you aren't working hard. Managers are going to have to understand that work is going to look a lot different now and should not think negatively of their staff for the new normal.

Staff should not come to work if they are sick, but should be able to work from

home; people are going to need to be able to efficiently work from home at various times of the day; show up to the office at flexible times to avoid queuing up at the elevator bank or avoid rush hour on the transit options, etc. This will force us to be much better communicators and coordinators. I believe these changes will allow for a better work-life balance without negatively impacting career advancement, especially for women who still largely are the caretakers of the family, even while working full time.

Will the current situation have lasting effects on the engineering profession? If so, what will they be?

Bender

I am very much from the traditional school of thinking when it comes to engineering office work environments. This generally means coming to the office each day and limiting work from home or out of the office. We have seen a general move in the industry over the last couple of years toward more flexible work environments and have been working with our team members to find the right balance – all the while our forward-looking team has been dragging me along to a new way of thinking. But the pandemic and restrictions have forced our overall industry to migrate to work from home and flexible arrangements. I think these arrangements will become more commonplace and necessary for attracting talent and will lead to the greater use of video conferencing across the industry.

Dimond

The profession will be focused on improving indoor air requirements; UVC lights, improved filter efficiency, and the review of air change requirements.

Building design will change. Social gathering spaces including theaters, stadiums, open offices, and churches will be viewed differently. Medical buildings including physicians and dental offices will be reconfigured with the addition of negative rooms and increased outdoor air requirements, which improve indoor air quality. The specification and use of touchless devices such as auto flush toilets, faucets and occupancy sensors will reduce physical contact helping keep buildings sanitary and mechanical systems and controls will provide increased ventilation.

Hummel

Yes, I think it will have lasting effect. As I know other firms are, we at Lawson Fisher are already looking at creating a formal remote-working policy for our employees. Engineering interns working toward licensure require four years working under a licensed engineer in order to sit for the Professional Engineers exam and we will be mindful of this as we craft our policy. With

remote working requiring a much more deliberate collaboration process, project managers and supervisors will need to add more management skills to their toolbox.

Technology upgrades will be looked at differently – with a focus on having greater flexibility and the ability to work from anywhere. Remote working was already a popular concept and the engineering profession has proven it can be done effectively, and firms will need to embrace it and offer it as a perk. However, there will be some positions that will not be well suited to remote working and that will be a challenge to work through.

Swango

The engineering field is all about innovation and problem solving. This will make us even more reliant on virtual meetings and electronic file creation and file sharing. We were already heading in that direction and this just made us a little better at it. We'll continue to evolve and improve our processes.

Our ability to work with people across the globe from our kitchen table at any time of the day will open the door to more people for whom an 8 to 5 job wasn't realistic due to their personal circumstance.

One detail I worry about the most about is our ability to continue to effectively mentor our junior engineers. Our managers and mentors will have to be extra creative and intentional with respect to developing the next generation of leaders. Another challenge to the restrictions on face-to-face interactions is our ability to interview and hire, but more importantly, on-board new employees. It is so important to get new people acclimated and connected to the team. This too will require us to be innovative and thoughtful in our hiring and onboarding processes.

What is the most critical message that you want your clients, employees, and other professionals to know during this time?

Bender

We must find a way to ensure our employees are kept safe from COVID-19 (as well as any other threat to their safety) while still moving forward with solving the engineering problems of our clients and communities. Our industry has shown there is a way to keep our teams safe and complete the essential services we provide.

Dimond

R.E. Dimond and Associates' first concern is the safety and well-being of our employees, clients and their families. We will get through this together. As a building systems consulting company, R.E. Dimond and Associates is displaying ingenuity, keeping up to date on best practices as we learn more about airborne transmissions. Our clients can continue to depend on us for expertise in meeting building goals for safety, energy, and operational efficiencies.

Hummel

Mine would probably be to stay positive. This is difficult for everyone and everything needs to be more deliberate. We are trying to be as responsive and respectful to our employees first, then to our clients. This is difficult to balance as we have staff on the absolute fringes of the spectrum, from "Why are we not in the office full-time?" to "I'm scared to go back if anybody else is there." This has been the most difficult part of the process because everybody handles stress and frustration differently. Some are frustrated because they don't feel that they are as productive as they could be, and that bothers them. We are working diligently to find a balance that demonstrates our respect to all our employees and follows the guidelines set forth by both government and medical officials. We will follow those guidelines and use our own judgement to phase people back in as has been recommended.

Clients know that we are here to serve them. Clients have been very understanding with some of our deadlines that have floated and that right now we are working just as hard, if not harder than ever. Despite the challenges we currently face, I think the most important message for industry professionals to remember is to remain positive and continue doing good work. The public relies on the work we produce, and we have to constantly continue to earn that trust.

Swango

Everyone has heard this before, but it is so true. Engineering companies like ours do not sell widgets. Our most important asset, our product, is the people we employ and the innovations and the solutions we bring to our clients and our communities. It is critical that the well-being of our staff is protected and nurtured. Happy, supported employ-

ees do great work. We are really driven to solve problems and help our clients and that will never change. We need to stay connected with our clients, even when face-to-face isn't an option. As engineers, a lot of us are uncomfortable with new communication protocols, but we can't afford to wait to communicate with our clients until the health risks diminish when we can once again meet with our clients in person. We are very appreciative when our clients allow us to have conversations and make introductions on video conferencing. We have to keep moving forward and we can't let this challenge set us back.