

From Eyeball to Reality:

How a Small Engineering Firm Prepared for a Pandemic

By Tricia Ruby, Ruby + Associates, Inc.

Sometimes you get lucky. It's hard to use that word at a time like this. Lucky. But that's how I'm feeling right now. Lucky our people are healthy. Lucky our family and friends are healthy. And lucky that our structural engineering firm, Ruby + Associates, is in a business that can be performed remotely. There is a saying, however: Luck favors the prepared. And Ruby being prepared to handle this crisis had nothing to do with luck. We were prepared. So let's rewind the clock a bit to 2017.

Even though we are a relatively small engineering firm at 45 people, Ruby has had a Board of Directors with two to three outside members since 2007. When I took over as CEO in 2011, I reformed the Board to fill gaps in my own experience, and to be surrounded by people who would challenge me and hold me accountable. Like a typical board, we meet four times per year, and focus on big-picture, forward-thinking strategies. Sometimes this yields board assignments for our internal team. In 2016, for example, we restructured the company to align our six services to ensure excellence in each one, and to promote internal leadership development – this was the result of a board assignment.

In 2017, the board assignment was to create an Emergency Preparedness Plan for every possible scenario. We created an internal team made up of HR, IT, and a Project Manager and thought through how we should approach different potential risks and then documented our plan. If something happens to me, we now have a plan for that. A power outage, we have a plan for that. A fire in the server room, we have a plan for that – I even forced our IT Specialist to go through a fire drill to ensure the plan worked. At the time I thought that was the most likely scenario. Some of the less-likely scenarios: a bomb threat, bioterrorism, blood borne pathogens. Yep, we have a plan for those. Also on the list was planning for a pandemic – and at the time I thought that was the most ridiculous scenario to consider. I couldn't believe we were even discussing it...I actually thought it was a waste of time. I rolled my eyes, but we created a plan for that anyway.

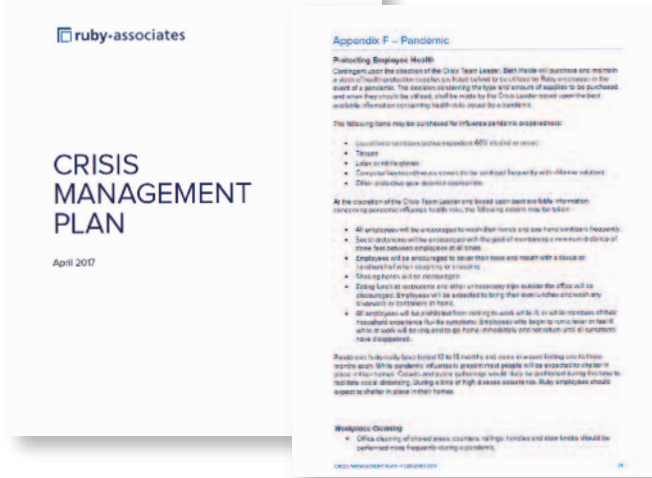
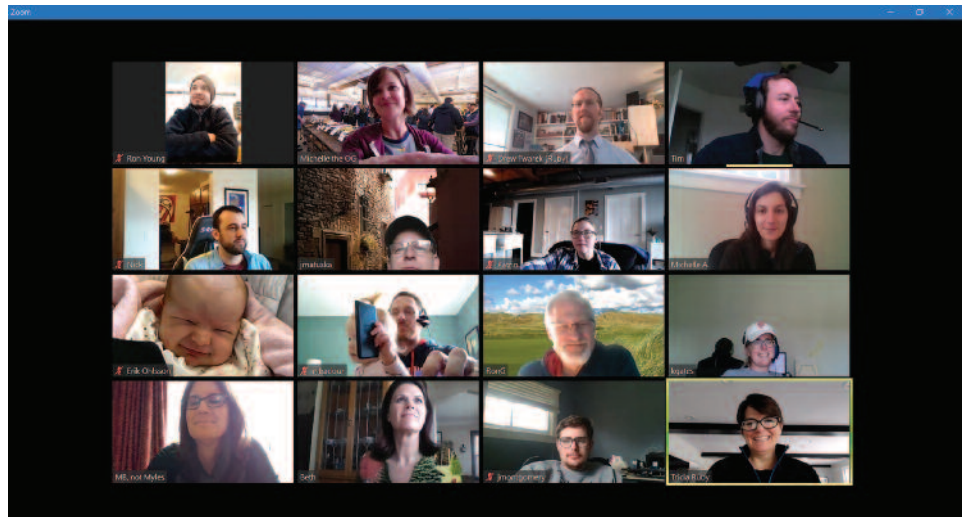
The benefit of all that planning was that it really informed and transformed our infrastructure spending from that day forward. In order to be prepared for many of those scenarios, our systems needed to look different. So over the next 18 months, we invested in technology, both hardware and software, that enabled our ability to stay operational should one of those unlikely events happen. We changed how we backed up our systems. We shifted our thinking related to software licenses. We improved our security and increased our ability to work from home. And we invested in technology that allowed for collaboration whether in person, or remotely.

In general, engineering and architecture work and client collaboration can be done remotely – we are truly fortunate given the stay home orders. Most firms I have talked to haven't missed a beat. Having the proper infrastructure and technology has been critical for survival.

In the spirit of transparency, I have to come clean. We created this plan for each of those worst-case scenarios – but I thought some of them were so ridiculous that I didn’t want to roll it out to our staff. We were having one of our busiest years – how was I to explain why we spent so much energy on a plan I thought we’d never use? So we created the plan, but only the few people involved in creating it and our management team knew about it. I think the most I ever spoke about it to our staff was just to say that we had a plan. Looking back on that effort now, I am so thankful for that board assignment, eyeroll and all – and for our Board in general. We have always gotten great value out of the external influence. Since they aren’t involved in the day-to-day operations, they are able to ask questions and challenge us to think bigger.

As unexpected as the COVID-19 pandemic has been, when Michigan got hit, we didn’t have to spend our energy wondering how we were going to operate – that had already been figured out. Our team was equipped with VPN licenses that allowed a smooth transition to remote work. Microsoft Teams had been purchased, tested and rolled out with a few internal teams in 2019, so it was ready for firm-wide deployment during our physical office closure as a proven communication and collaboration platform for Ruby’s engineers and administrative staff. We were able to quickly shift our energy on evaluating how our projects might be affected and how best we could support our clients.

As a structural engineering firm that supports the construction industry, understanding the pandemic’s potential effect on our clients and their projects was paramount. We created a Project Risk Assessment Matrix, which identified potential project delays due to a quarantine, plant shutdowns or halted construction sites. This visual tool was helpful for management in adjusting and assigning engineering resources related to “full-steam ahead” projects versus those projects with less likelihood of continuation during the pandemic. The Assessment Matrix was also public to the entire staff to maintain the transparency so important in our culture.



DURING THE PANDEMIC, RUBYS’ STAFF CONTINUED THEIR TRADITIONAL “FOUNDERS FRIDAY” 4PM HAPPY HOUR – BUT VIRTUALLY.

As of the writing of this article, expectations are that the construction industry will be released back to work very soon. So while we will continue to work from home, our clients are eager to get back to work, since construction can’t be done from a home office. We are evaluating how we can support them on-site, when requested, with proper site visit protocol, COVID screening and required PPE.

For the AEC firms that were unprepared for this pandemic, for what other disasters haven’t you prepared? Now is the time to evaluate and develop a plan. It seems that no scenario is inconceivable. Plan for the demise of the CEO or other key leader. Plan for a fire in your server room. Plan for an extended power outage. And most certainly, prepare for the one scenario that makes you roll your eyes. You won’t be sorry.



About the Author:

Tricia Ruby is President and CEO of Ruby+Associates, Inc. Structural Engineers, with offices in Bingham Farms and Grand Rapids. She is a member of the CAM Board of Directors, and was elected in 2019.