

The BLK3D Cuts Perfect Stone for Historical Façade Restoration in New York City

By Christopher Dollard | 09/23/2020

Jim McMahon, President of Structural Stone Concepts, didn't hesitate at all when asked why the BLK3D helps him so much in his work.

"This thing lets me sleep at night."

Jim is a stone supplier that specializes in historic stone façade preservation, and Structural Stone Concepts is the largest supplier that sources, measures, and provides stone to masons who restore historic buildings in New York City. He works with the New York Historic Preservation Office to replace limestone and granite façades on historic schools and other buildings throughout the city.

These façade renovations, with their decorative elements, must exactly match the originals and the measurements must always be right to preserve the buildings as they were originally built. Jim's projects are very expensive to complete, and one measurement error can cause a lot of problems down the line. He used to rely on manual measurement methods, like tape measures, cameras, and a pen and paper. Then he switched to the BLK3D.

But why does the BLK3D let Jim sleep at night?

"Because I know the measurements are right," he said. "I have millions of dollars invested in these projects. Before the BLK3D, this measurement process took three weeks and I wouldn't sleep from being so busy. I'd have to stay up all night working to get it done on time and to get it right."

Not anymore. "With the BLK3D, that process will take a few days," he said. "Now I can take a picture and send measurements from the BLK3D directly to my CAD guy and he has the drafts in my inbox the very next day so we can get to work."

While Jim's work is unique, he doesn't just work within his field of matching and producing stone for restoration. He often has to collaborate with other contractors on the job site. "Restoration guys, masons, builders, they need the BLK3D just as much as I do." And he's convinced that other trades can benefit by quickly capturing site conditions and documenting field data in the same way that he does with the BLK3D.

Serious stonework where the BLK3D does the heavy lifting

The BLK3D is designed to make measuring easier, faster, and more precise. It has taken the precision of Structural Stone Concept's work to a higher level, helped Jim to save time and money, and enabled him to stand out as a truly unique contractor that is dedicated to excellence in historical stonework.

But when Jim talks about his work being serious, it's not just how seriously he takes it. The city and state invest a great deal of time and money in precise historic preservation, and the BLK3D helps him be even more precise. "This is a historic landmark," Jim said about one recent project. "I have tolerances for some aspects of what we do, but I have certain things I can't do at all. The profile of the new stone has to exactly match the existing stone, and if that profile doesn't match, I have to eat \$150,000. But this machine makes sure I match that profile."

Now Jim doesn't have to eat costly mistakes. "Whoever said a picture is worth a thousand words is wrong; this picture from the BLK3D is worth \$5000," Jim said. "And every time you're wrong in this business, you remember it—the \$50,000 mistakes, those stick with you. But this machine prevents those expensive mistakes from happening."

That's what helps Jim win contracts and provide some of the best façade restoration that New York City can get. And it offers a degree of flexibility for him, too. "I need to travel to go check out the stone myself, before it's cut from the quarry, to make sure it's right. That means I'm off site and out of the office. But I can train one of my guys to use the BLK3D and let him take over measuring while I'm out finding the stone. And I still know the measurements are right."

Another benefit for Jim and his team is when the BLK3D picks up on measurements that he may not think he needs to get in the moment but end up being very important down the line. "Sometimes I'm only looking for wall width, but my CAD guy, because of the other measurements in the photos, he picks up the stone profiles! You need that to match existing stonework. I'm talking about radius, negative returns, draft, all sorts of stone stuff," he said.

"So I only need one dimension, but I gave him plenty with the BLK3D. That's so important down the line because have to match existing conditions. It's serious business, and the BLK3D is a serious machine that handles it all."



BLK3D

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BLK3D can speed up and improve work at busy urban construction sites

For one project that Jim is working on, there could be 15 different trades on site, and they all need to take precise measurements. "I'm not even the most important guy on the site," he said, "but I know the plumbing guy needs it, the steelwork guy needs it, the guy doing the windows definitely needs it!" He explains how other contractors will continue with manual measurements, make mistakes, and have to double back to fix them. As builders and contractors know, that costs a lot of money and time.

Before he had a BLK3D, Jim ran across those problems himself, or he'd be so busy that he'd have to hire someone else to document existing conditions. "You could be paying someone \$50 per hour for weeks to get it done," he said. "And they can make mistakes, too."

Or, like Jim, you can just go take a picture yourself with the BLK3D, pretty much anywhere you need to. And when safety or space is a concern, the BLK3D really shines.

"Any building project in any borough should have a BLK3D on site," Jim said. "Think about the guy working on, say, filling grout on the side of a bridge. He has to get good measurements, but he can't stop traffic to do it." Any of us who have been stuck in New York City traffic due to construction lane closures knows how much of a pain it can be, and Jim sees this as a solution both for safety and for accurate measurements.

"So," Jim said, "That bridge guy takes one picture without blocking a lane, without risking safety. Boom! The picture goes to his office, they check out the measurements and send it to CAD."

Jim also notes that sometimes it's just not possible to get into some spaces to measure if they're too high up or too complex. "Say I need to take measurements of second story windows but there's no space for scaffolding, there's no way to get up there," Jim said. "What do I do? Take a picture. Honestly, this thing is almost like taking a selfie. It's that easy."

The process is almost as easy as taking a selfie, or taking any other photo with a smartphone, but the BLK3D is way more than that. "I mean, it's a mini computer," Jim said. "For cross sections, details, dimensions, profile, gets it all. It's perfect."

The BLK3D also connects well to file transfer services and existing industry apps. In the shuffle of his work, manual measurements and drawings can be hard to track down. But the pictures aren't. "I can send these pictures with measurements to Google Drive, to Gmail, to OneDrive," Jim added, "and it can do a lot more than I'm doing with it!"

Jim also explained how BLK3D can roll with the punches of heavy construction. "It's really durable, a tremendous piece of equipment. I trust it on site. I'm working in tight spaces, on ladders and scaffolds. It keeps up with the hard work we do, and other people do too," Jim said, referring to construction work happening all over the city.

"Tunnel guys, bridge guys, civil engineers, they need this thing. It can really help pretty much anyone that needs to take accurate measurements and needs to do it fast," Jim said. "And it's instant! I need to know these measurements now, and with the BLK3D, it only takes one time to do it right and it's done."