



# SOLID EARTH CIVIL CONSTRUCTORS SAVES \$50,000 ON THEIR FIRST PROJECT WITH BLUEBEAM REVU



## CHALLENGE

An ultimatum from a large potential client pushed Solid Earth Civil Constructors to purchase, adopt and use Bluebeam® Revu® for digital estimation and bid submission. Before that, they had been doing estimation in a traditional, paper-based workflow, and they lacked the IT staff necessary to undergo the digital transformation for estimation, project delivery and communication.

## SOLUTION

Solid Earth Civil Constructors chose Bluebeam Revu to help the firm digitize the previously paper-based workflows for takeoffs and bid submission, and establish real-time mobile collaboration between the office and the field.

## BENEFITS

- The first time they used Revu for digital estimation, they caught a \$50,000 mistake on the project takeoff
- Bid submission capabilities have more than tripled, with more jobs bid in the first quarter of 2018 than in all of 2017
- Bluebeam Studio maximizes profitability margins by allowing real-time collaboration with field staff, which minimizes time spent in the office coordinating data—key for an SMB labor force
- Modernizing project workflows with Revu increases trust, communication and opportunities from clients like Trammell Crow, Kiewit, Bechtel and the US government, solidifying Solid Earth's designation as Equipment World's 2018 Contractor of the Year

"We've been able to immensely change the way the estimating goes for the company and have been able to produce so much more work for ourselves that we actually have to pick and choose what jobs we really want."

### Drake Carter

Project Manager/Estimator  
Solid Earth Civil Constructors

## Adapt or die

"I would describe the personality of our company as 'very dynamic,'" suggested Rae Peters, president and primary owner of Solid Earth Civil Constructors, a WMBE (Women/Minority Business Enterprise), EBE (Emerging Business Enterprise), SBE (Small Business Enterprise) and DBE (Disadvantaged Business Enterprise) based out of Pueblo, Colorado. "Changing with technology and being open and receptive—I think that's life. Change is very difficult, but we have to embrace it to be competitive." Rae's philosophy regarding change is a huge part of why Solid Earth has earned jobs and solid reputations with industry luminaries such as Kiewit and Bechtel, culminating in the firm being awarded Equipment World's 2018 Contractor of the Year.

Accolades aside, adapting to the changing industry and staying nimble has been key to the firm's success. "When you're 'old school,' you do things in an old school way and those ways don't work anymore," chimed in Solid Earth Co-Founder and Sr. Estimator Don Peters.

Don would soon learn the truth in that statement tenfold. During a bid presentation with residential giant Trammell Crow, Solid Earth was faced with a direct ultimatum for change that threatened the livelihood of their business. "They said, 'You have to have an estimating program and Bluebeam is what we use,'" explained Rae. "Don called me after this meeting and he said, 'I just got schooled. We have to do something.'" Three days later, the firm purchased Bluebeam Revu, the project efficiency and collaboration solution trusted by more than 1.3 million AEC professionals worldwide, which delivers enhanced PDF-based takeoff and workflow automation tools that span the entire project lifecycle.

"You can see whether or not it's a good job or a bad job. The cost efficiency, like the cost to work efficiency ratio is just through the roof."

### **Drake Carter**

Project Manager/Estimator  
Solid Earth Civil Constructors

## No IT staff, no problem?

Now that Solid Earth had purchased Revu, the next challenge was implementing it to address the estimation needs of the firm. "I've been estimating for over 30 years and so when I look at technology, it's extremely scary," disclosed Don. "I mean where do you start?" With no dedicated IT staff, and no background in technology, Don made a personnel change to help solve the dilemma of leveraging Revu. "I've always believed in using your resources. If you can't figure it out; well, you're only as good as your resources." Don pulled in Drake Carter, a field operator and supervisor for the firm who had taken some computer classes in high school. There was just one small problem: "Drake had never done a takeoff," recalled Don.



## The fruits of digital estimation

Having never seen Revu nor done a takeoff, Drake had his work cut out for him. "Don brought me in to learn the Bluebeam software, and within a day or so, I had gotten decently proficient at it," explained Drake. Encouraged, Don decided to put Drake's proficiency to the test and had him use Revu to digitally redo the Trammell Crow takeoff that he had previously done on paper. That way, Don could compare the results of the paper-based takeoff and the new digital takeoff using Revu. "I ended up finishing the takeoff that took Don two weeks in about a day," said Drake. The results floored Don. "I said, 'There's no way that you could have done that whole takeoff,' and he shows me the entire printout and all of his tabulations." An even better surprise was found in the tabulations.

"On one item, I had 15,000 lineal feet, but Don only had like 13,600 lineal feet, which would have been like a \$50,000 - \$60,000 hit to the company," said Drake. Astounded, Don took a second look at Drake's digital estimation, comparing it to his paper-based estimation. "We found an over \$50,000 mistake that I made because of the way I did the takeoff on a digitizer scale. The first job we did with Bluebeam [Revu], it paid for itself."



## Controlling profit margins and taking Revu to the field

Having seen the value of using Revu for digital takeoffs and bid submissions, Solid Earth began using Revu to address another problem: communicating with project partners and keeping core staff in the field. Labor is an increasingly difficult challenge for many firms, and for an SMB, keeping employees in the field is key to profitability. Rae elaborated, "Most of the bidding happens in the winter and early spring so our office is going crazy estimating at that time and then, when the jobs are set to start, we're having to pull people from the office. You can grow your business by adding more people and having more people bid, but the key is, do we have the staff in the field if we win that project?"



Using Revu to create quicker and more accurate bid packages allows Solid Earth to also keep Don and Drake in the field and focused on the execution of the job. "We can put out a proposal package in four to five hours, and we wouldn't have been able to do it by scale ruler and a digitizer. When you look at that in terms of proficiency and the amount of work, I look at my 2018 bid files and I bid more work by April in Revu than I did all of 2017 cumulatively," explained Don. "I can have Drake in the office to estimate a \$3 million job today on Revu, and I'll run the numbers. Tomorrow, he can be an excavator."

## Going mobile with Studio

With bid packages maximized, Drake began to explore Bluebeam Studio, the document management and collaboration tool built into Revu, to keep the field in touch with a single source of truth for project information. Longtime Solid Earth Superintendent Richard Lewis and Superintendent Matt Peters, Don and Rae's son, can receive project updates straight from Revu. "We've utilized tablets to communicate to our superintendents in the field with Bluebeam Studio from the office," said Don. "I can actively upload documents. I can make textbox changes. Cloud certain details that they need to be paying attention to, add dimensions, whatever it may be, so they can see changes in real time and implement them in the field without me even having to be there."

Carter also echoed the sentiments of efficiency within Revu and Studio. "In the field, Matt doesn't use paper plans. He uses his iPad® and he uses Revu because he can scroll in, he can look at the plans in better detail and he can evaluate the project at such a higher pace on the iPad. Same for me. Whenever I'm in doubt of some sort of detail, all I do is just go to the live plans in Bluebeam Studio, and go to the detail I want to see."

## The business impact of Bluebeam Revu

Harnessing the potential of Revu and Studio has allowed Solid Earth to flourish in their market. From saving \$50,000 - \$60,000 on their first digital bid package, to communicating with project clients and staff in the field with Bluebeam Studio, the Solid Earth team can continue their mission of being the best civil contractor in the Four Corners region. "Good enough isn't 'good enough,'" explained Rae, "It has to be right." That mentality permeates the projects of Solid Earth and keeps the firm competitive. Don also credits Bluebeam for helping the company take proper aim at the future. "This is what's helped us, and companies might use other estimating software; I don't know, and I don't care. I know for getting us where we need to be, Revu is the program we're using and that's where it's going to be forever."



## About Bluebeam

Bluebeam develops innovative technology solutions that set the standard in project efficiency and collaboration for architecture, engineering and construction professionals worldwide. Our award-winning PDF-based software, Bluebeam Revu, continues to serve as an industry-leading markup and collaboration solution that connects all projects and teams, increasing productivity while saving both time and money. Founded in Pasadena, California, Bluebeam has grown to include additional offices in the United States, Canada, United Kingdom, Denmark and Sweden.

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