

*"In the short time that we have been using Revit Structure, we have realized better coordination and quality within our drawings, which has directly translated to higher profitability and a competitive advantage for our firm."*

Gregg Kite  
Director of Production  
SCA Consulting Engineers

## Taking engineering to the next level.

SCA Consulting Engineers counts on Revit® Structure software to significantly boost structural design quality, finish projects faster, and dramatically exceed client expectations.

### Project Summary

SCA Consulting Engineers is an international leader in structural design and engineering services. Since 1983, the firm's more than 70 professionals have successfully completed thousands of projects in a variety of markets, including commercial, high-rise multifamily, industrial, financial, and health care. After many years of using AutoCAD® software as the firm's primary design tool, SCA leadership made a decision to research some of the new tools and technologies on the market. "It soon became clear that the adoption of building information modeling technology is the direction that our industry is heading," says Gregg Kite, Director of Production. "We decided that we'd prefer to be at the forefront of this dynamic shift rather than being forced to play catch-up with our competitors in the future." This is one reason why SCA adopted Revit Structure, a powerful design and documentation tool developed specifically for structural engineers.

"Once we learned that we could also export the Revit Structure model to a variety of structural

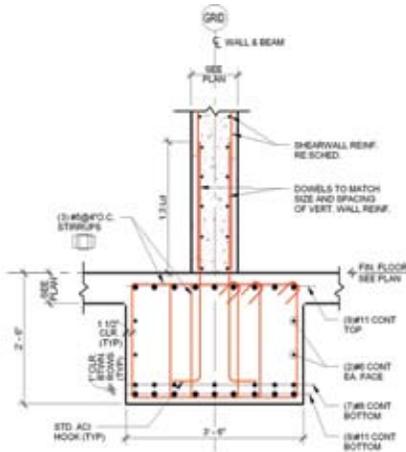
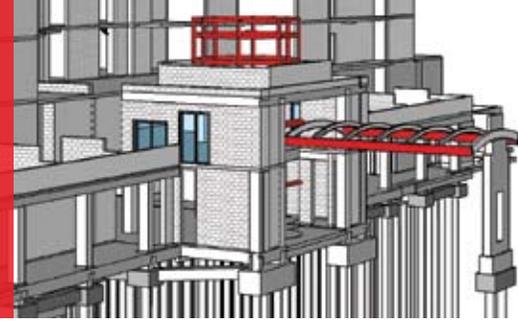
analysis programs, such as ETABS and RISA-3D, we were sold," says Kite. "The idea that one model could simultaneously be used by our engineering department to analyze a building and by our drafting department in the production of the construction documents was very attractive to our firm."

### The Challenge

Making such a significant change was not without its share of challenges, and SCA needed to be sure their engineers could be productive right from the start. "We were confident that adopting Revit Structure was the right choice," says Kite. "So it was worthwhile to take some of our most experienced and valuable staff off line while they underwent Revit training."

### Time-Consuming Changes

"Once they were up to speed with the basics, we still needed to apply their new skills to our existing workflows," says Kite. "For example, using traditional CAD tools, we typically receive preliminary architectural drawings that give us the information we need to get started on a project,



*“After researching it carefully, we concluded that failure to adopt Revit Structure would eventually be significantly more costly than implementation itself and that the benefits offered by Revit Structure far outweighed any initial disruptions to our existing workflow.”*

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but inevitably, we receive multiple updated versions of these drawings throughout the project. Managing these revisions over the life of a project can be a daunting task.”

### Project Deadlines

“It’s my job to make sure that these changes are tracked in the most efficient and accurate manner possible,” says Kite. “All while also meeting project deadlines and producing a set of drawings that meets our standards of quality and level of detail.”

### The Solution

SCA engaged Autodesk Consulting as a first step to helping ensure a smooth transition to the new software. “Once our focus group had completed this initial training, we were more convinced than ever that our decision to vigorously pursue BIM technology was a sound one,” says Kite.

### Get Up to Speed Quickly

One of the first projects that SCA completed using Revit Structure was the Sapphire Tower. This condominium project is a 33-story, cast-in-place concrete structure located in South Padre Island, Texas. “The architectural drawings were given to us in AutoCAD format,” says Kite, “but our team was able to complete the structural drawings using Revit Structure and export the model to ETABS where the structural analysis was performed.”

### Easily Make Changes

And because every drawing sheet, every 2D and 3D view, every detail, and every schedule is a direct representation of the same underlying building database, whenever a change is made to any part of the model, Revit Structure updates every corresponding view.

### Increase Accuracy

With Revit Structure, information is entered into the model and then that same information can be used for engineering, analysis, design, documentation, and coordination with the design team. “This capability has streamlined much of the tedious data entry previously required to complete

items such as wall and column reinforcing schedules,” says Kite. “It has also provided a level of accuracy in the drawings that is far superior to that in our old workflow.”

### Seamlessly Link to Third-Party Analysis Tools

Another of the firm’s recent projects is a 50-story residential tower, The Vue, in Charlotte, North Carolina. “We are modeling this project entirely in Revit Structure,” says Kite. “The ability to export the Revit model to the structural analysis software greatly minimizes duplication of effort because we can use the same model to produce construction documents and perform structural analysis. And our team can stay better coordinated throughout the design process.”

### The Result

“As we all know, clients never expect less and they always want more,” says Kite. “We believe that as we move forward with Revit Structure, we will be better positioned to exceed our clients’ expectations by delivering higher-quality designs in a shorter period of time.”

### Significant Competitive Advantage

“We’ve already been able to use Revit Structure to our advantage on some significant projects,” says Kite. “As our firm continues to grow, we are more excited about its potential every day and are happy with our decision to adopt the software in our design process.”

To learn more about Revit Structure, visit [www.autodesk.com/revitstructure](http://www.autodesk.com/revitstructure).