



Cary Kopczynski & Company,  
Inc. P.S.

Customer Success Story

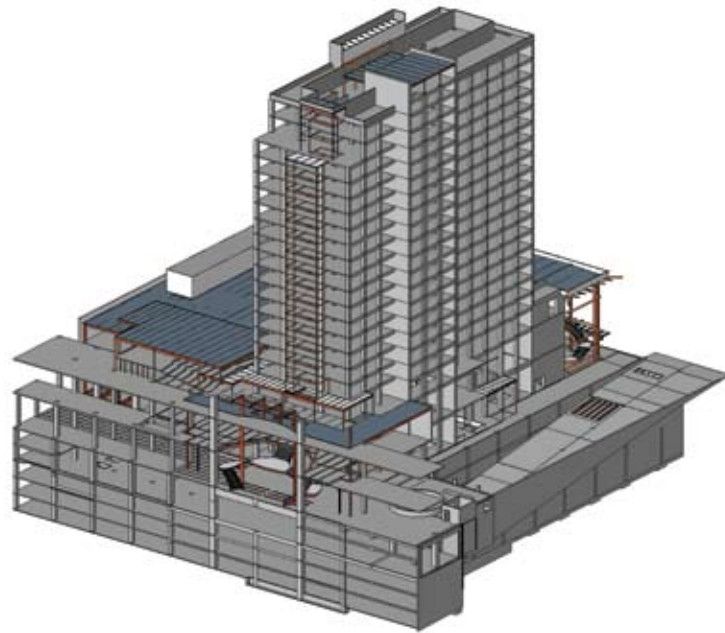
Revit® Structure  
Revit® Architecture

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—Justin Lopez  
Digital Production Team Leader  
Cary Kopczynski & Company,  
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# Buildable design with BIM.

With Revit® Structure software, CKC gains extraordinary insight, improves communication, and increases productivity by up to 15 percent.



## Company Profile

No matter what the project—or where it takes them—the engineers at Cary Kopczynski & Company, Inc. P.S. (CKC) are passionate about innovation and excellence. “Among our customers we have a reputation for using new technologies to create designs that are easy to work with—and very buildable,” says Joe Ferzli, Senior Associate at CKC. “Our main product lines are multifamily residential towers, hotels, offices, and parking structures, as well as mixed-use structures of all sizes and types.” Based in Bellevue, Washington, CKC serves clients throughout the Pacific Northwest and around the United States. Recently, the firm began investigating a wide variety of building information modeling (BIM) software products. “We wanted to find a way to add value to our documentation, while improving our overall efficiency and the quality of the product we deliver to the contractor for construction. Revit Structure was at the top of our list.”

## The Challenge

“For the past two decades, we’ve been a pioneer in the development of innovative techniques and materials that improve the constructability of concrete structures,” says Ferzli. “That’s our specialty. We knew that any new software we purchased had to help us continue to do that. We also believe in providing as much information as possible to our clients—from design development to the delivery of a final set of working documents. Our goal is to minimize confusion during construction—especially on projects with complex combinations of rebar, concrete, and columns.”

## Overcoming Limitation

“We were having trouble finding a software product that did everything we need it to do,” continues Ferzli. “In particular, we needed software that would automatically create elevations for us while we designed. That was very important.”

# Revit Structure software enables CKC engineers to update elevations as they design—accurately, and in real time.

## New Design Software

After conducting a careful search, CKC purchased Revit® Structure building information modeling software. This new software integrates a multimaterial physical model with an independently editable analytical model for efficient analysis, design, and documentation.

## A High-Profile Project

Soon afterward, the firm began its first major project with the new software—the 610,000-square-foot Bellevue Place Hyatt Expansion. “It’s a high-profile project in downtown Bellevue, Washington,” says Ferzli. “With a 20-story hotel tower, 509 stalls of underground parking, and a 100,000-square-foot ballroom and exhibit hall, this project was substantial.”

## A Diverse Team

“In fact, the Hyatt Expansion is believed to be the largest project ever done in the Northwest that involved close coordination between architects and contractors using Revit Architecture and structural engineers using Revit Structure,” says Ferzli. “Close communication was essential.”

## THE SOLUTION

CKC began implementation of Revit Structure during the design development stage. “We went through a traditional, three-day training with our reseller, IMAGINiT,” says Ferzli. “Then, as we worked, we brought in product experts from IMAGINiT and Autodesk Consulting for targeted,

one-on-one training as needed. That was very helpful.”

## Increase Productivity

CKC saw quick results from the new software’s parametric change management technology. “From a production standpoint, the main benefit was definitely Revit Structure software’s ability to update our elevations as we designed—accurately, and in real time,” says Justin Lopez, Digital Production Team Leader at CKC. “That helped increase our productivity by roughly 15 percent—even with the learning curve.”

## Include Your Entire Design Team

The software’s work-sharing capabilities also played a role in the productivity increase. “At one time, we had up to seven people working on the Hyatt Expansion model—all using Revit Structure,” says Lopez. “That was absolutely great. When they were done, we patched all of their work together and saved it to the central model, fully confident that the changes would be accurate—and that we wouldn’t have to spend time coordinating it in the end.”

## Add New Dimensions to Documentation

“These automatically produced 3D sections gave us extraordinary insight into our designs—and into what was missing from them,” says Ferzli. “That was particularly helpful for our contractors in the field. They’ve given the 3D sections great reviews.”

“Using Revit Structure we could show the project in phases—what’s new, what’s temporary, and what the finished project will look like. That was a tremendous advantage.”

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## Improve Understanding

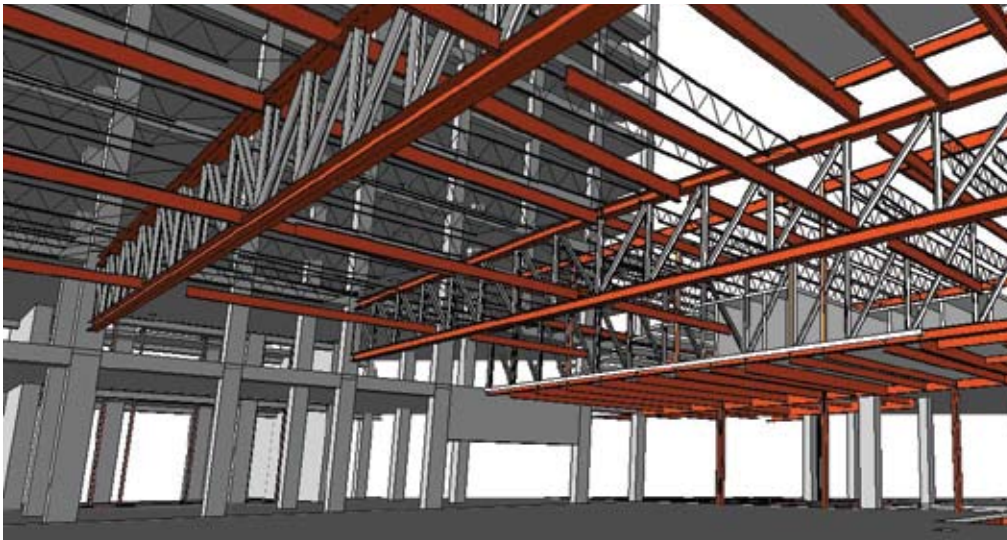
“Having an easy-to-view 3D model helped reduce misunderstandings among all of the consultants—from the MEP engineers and architects, to the contractor, and even the estimators,” says Ferzli. The improved clarity can also help design teams find errors long before they show up in the field or require costly redesign.

## Save Valuable Time

The software’s parametric change management technology had other benefits as well. “For example, when we were scheduling, Revit Structure automatically kept track of the page numbering,” says Ferzli. “Keeping in sequence on such a massive project is very important. It saved us a lot of time.”

## Link Analysis and Design

Revit Structure also enabled CKC to create bidirectional links between the model and some of the firm’s other engineering applications, such as the structural analysis program ETABS. “We now have a companywide link between the Revit model and our production and engineering departments,” says Ferzli. “As a result, our engineers didn’t have to re-create the geometry from scratch, and could jump right into analysis. That really helped fast-forward the design process.”



### Enter Data Once—Use It Forever

Some of the BIM software's advantages became fully apparent only when CKC began collaborating with the architectural firm on the Hyatt Expansion project, Sclater Partners. Because the architects were using Revit® Architecture software, they were able to use the Copy/Monitor tool to import the initial structural design data from the Revit Structure model to their architectural model.

### Keep Everyone Up to Date

"After initially using the Copy/Monitor tool, we just overlaid their architectural model over our structural one to see what was missing," says Ferzli. "That helped us see the big picture and understand clearly what didn't look right. It also made communication much easier."

### Give Builders Better Information

Revit Structure software's powerful visualization capabilities also enabled CKC to deliver much better information to GLY, the project's general contractor. "Because GLY was using Revit Architecture, its staff had ready access to our structural model," says Ferzli. "That helped them better understand the overall project, as well as how to sequence the construction. Using Revit Structure, we were able to discuss all that way ahead of the curve, instead of having to wait until the last minute."

### Impress Contractors

"Throughout the project, I gave three presentations to the general contractor's team," says Ferzli. "When they saw all that Revit Structure could do—especially with phasing—they thought it was great."



### Show Construction in Phases

"For example, during this expansion, the construction involved interfacing with the existing Hyatt hotel and an adjoining office tower," says Ferzli. "There was a lot of intertwined structure. The owners and developers wanted to avoid any unnecessary congestion during construction, and to minimize disruption of the building's existing occupants."

"Revit Structure helped us sort all that out by enabling us to show the project in phases—what's new, what's temporary, and what the finished project will look like," says Ferzli. "By showing the clients a walkthrough of how the construction would affect circulation, we helped them understand and accept the temporary restraints we had to put in place so they could approve the sequencing. That was a tremendous advantage."

### Quickly Make Last-Minute Changes

"At one point toward the end of the project, the architects made some fairly significant revisions to the model," says Ferzli. "If we'd been using AutoCAD software, we would have had to work with three separate drawings at once—the floor plan, the section, and the detail. But with Revit Structure, we simply imported the architectural model, used the Copy/Monitor tool to add the new features exactly where they were, and cut our sections almost immediately. There wasn't much to figure out, and it saved us significant time."





# Revit Structure gives CKC an edge over its competitors and significantly enhances its reputation among customers.

## The Result

“Using Revit Structure on the Hyatt Expansion project, we found that our structural engineers used the Revit structural model intensively at two major times,” says Ferzli. “First, when inputting information from Revit Architecture, and, second, during construction administration, when they needed to be able to quickly cut sections and respond to questions from field personnel. The bottom line is that we believe Revit Structure will help us reduce RFIs, as well as the amount of field support we have to perform. It adds tremendous clarity to the design process.”

## Unexpected Benefits

One unexpected consequence of the firm’s adoption of Revit Structure has been a dramatic increase in the skill levels of its drafters. “They typically don’t have the structural knowledge that our engineers do,” says Ferzli. “But when working with a model, their understanding of how to create a buildable structure increases exponentially.”

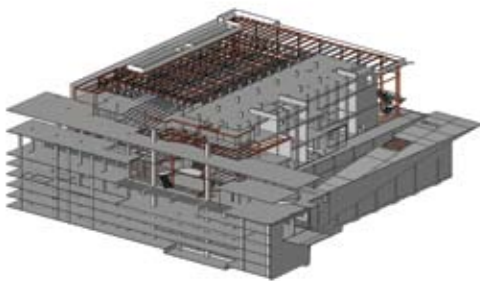
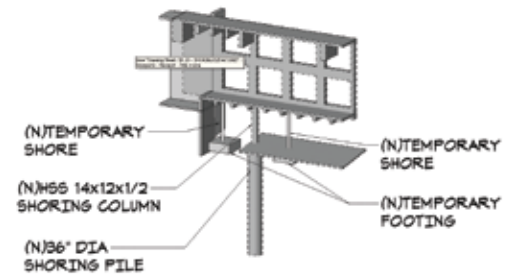
“They’re much more savvy, more interested in their work, and more excited about it too, because they see this massive model being built from scratch before their eyes,” continues Ferzli. “They take great pride in it.”

## A New Standard

Since implementing Revit Structure, CKC has completed the Hyatt Expansion project and has three more major projects under way. “We believe that Revit Structure will give us an edge over our competitors and significantly enhance our reputation among our customers.”

“As a result, we’ve begun to standardize on Revit Structure, and have a plan in place to transition completely over the next 1–2 years,” says Ferzli. “Our goal is to use Revit Structure on our tower and high-rise projects first, and eventually make the switch with our parking structure and other projects. We’re going to do it in an efficient way.”

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



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