THE SKY IS THE LIMIT WITH
VECTORWORKS ARCHITECT
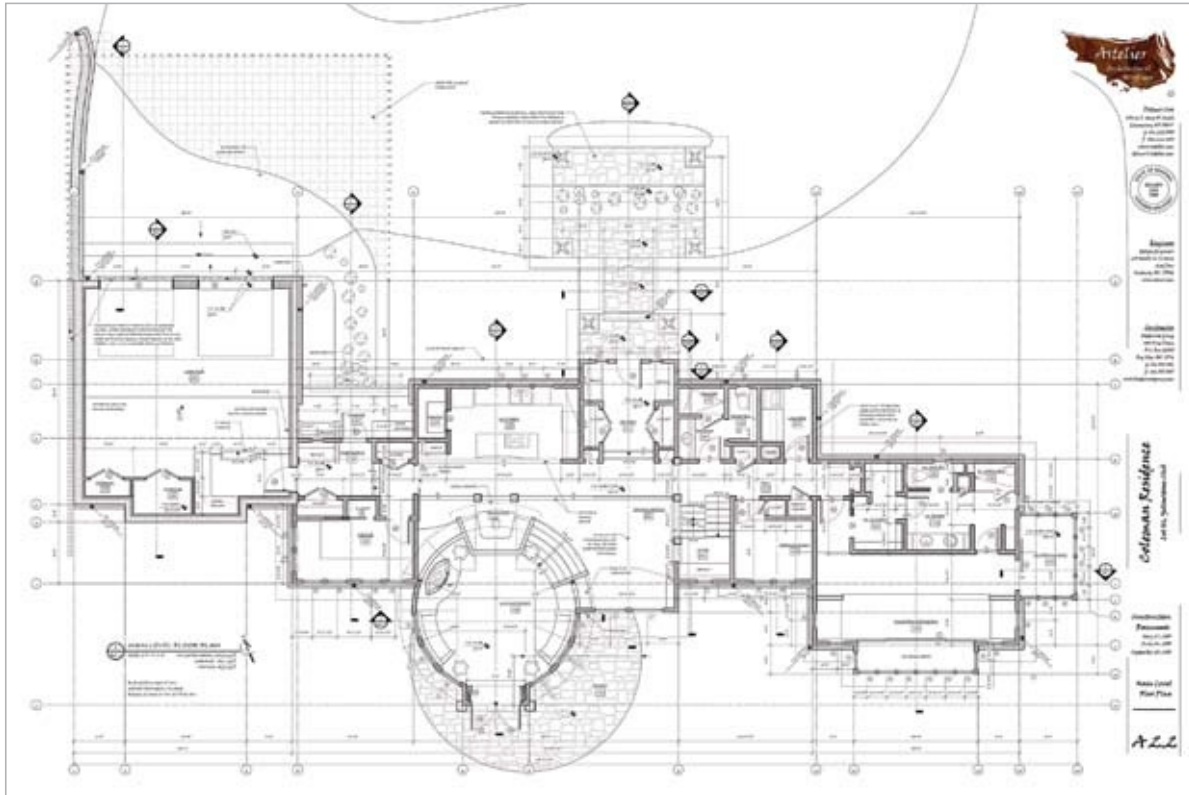
VECTORWORKS ARCHITECT IMAGE FILL AND SKETCH RENDERING MODE HELP MONTANA ARCHITECT GET THE GREEN LIGHT FOR NEW CONSTRUCTION IN AN EXCLUSIVE BIG SKY, MONTANA, RESORT.

Architect Delmer Cox, principal of Astelier Architectural Workshop, took a chance when he designed a home with contemporary elements, at his clients' request, to fit among the more rustic existing residences within The Yellowstone

Club, an exclusive members-only ski and golf resort in Big Sky, Montana. When the very conservative Architectural Review Committee (ARC) for the private resort community asked him to go back to the drawing board, Cox extensively redesigned the house—going through eight revisions in less than two weeks— to avoid extended debates on what should and should not be allowed. And the new sketch rendering mode in VectorWorks Architect came to his rescue.

He designed the 5,000 square-foot residence to incorporate mining and agrarian influences indigenous to the area, combining rustic, industrial elements with clean, contemporary lines. Cox came up with a compromise that responded to his client's wishes, yet also met ARC's strict requirements.

QUICK TURNAROUND
SECURES APPROVALS

"The committee's initial feedback was that the skewed axis of the original design produced roof forms that were too different from existing residences," explains Cox. "So, working with one committee member, I went through a number of fairly radical changes until both client and committee were happy. The ease of adaptation with VectorWorks Architect was a key factor in satisfying the committee's regulations and parameters, as well as my client's wishes."

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He continued, "While maintaining the modern industrial character of the interior structural detailing, I developed more community-compatible lines in the exterior form. One aspect that added some individual character in the adjusted design was a roof-top screened-in deck accessed off a new clerestory catwalk. Light, open metal frames support the catwalk and allow sunlight to filter down from the clerestory through the dining and kitchen areas. Natural light finds its way into the entry as well, which has its own cable and wood trusses."

At the same time, Cox had to communicate with engineers located several hundred miles away to ensure his revisions were feasible structurally.

"There were a couple of large catwalk trusses over the living areas, some bottom court cable trusses in the entry, and a variety of unconventional brackets that I needed to portray to an engineer a half a days' travel away," says Cox. "If I was limited to 2D drawings, it would have taken days to complete the extensive detailing and accompanying written explanations required. Modeling in 3D with VectorWorks allows me to put coherent, developed ideas down in a few hours—easily a quarter of the time typically required if I was working in 2D. And the component models made everything clear to the engineer. I could export files as DWG for AutoCAD and work easily with consultants to get the feedback I needed quickly. "

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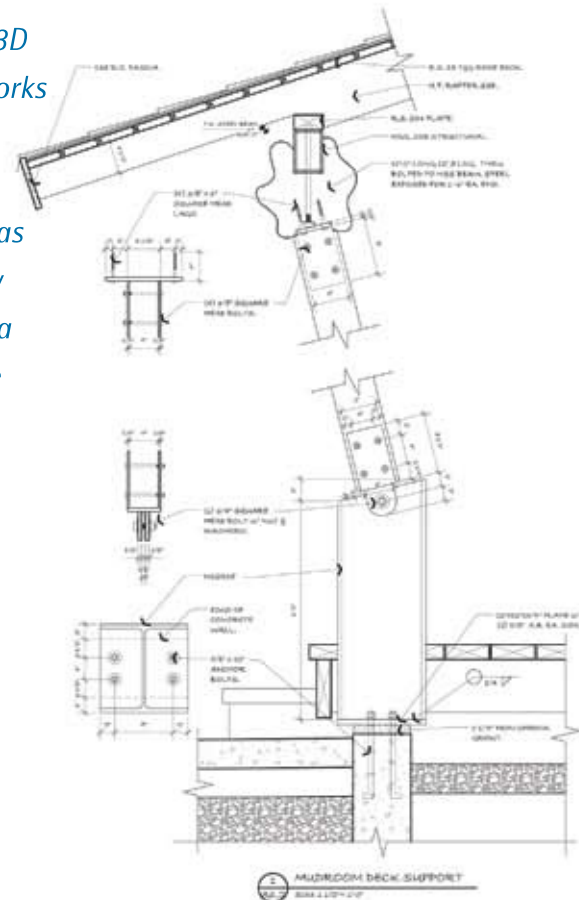
WORKGROUP REFERENCING REDUCES RISKS

Cox finds it easy to keep his files organized and updated using workgroup referencing, which came in handy when he did the electrical plan for the home. He keeps separate files for elevations, sections, plans, and so on and finds a number of benefits to this.

"Workgroup referencing helps keep file sizes lower, which goes hand in hand with risk management," he explains. "If a file gets corrupted, you lose less work, because your work is broken up into a number of smaller files.

"The great thing about my electrical drawings being in one plan is that workgroup referencing allows me to update everything automatically," he continues. "If there are components in the floor plan I want to cut and paste, I can go to a completely different file, and everything comes in at the same location from different plans. It's an amazing time-saver for me."
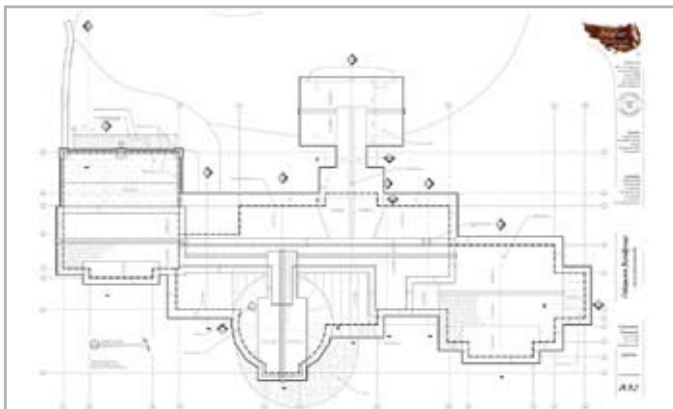
ADDING CUSTOM TOUCHES

Using VectorWorks made the whole lighting design process a lot easier, as he was able to import lighting objects right into his drawings.

"The lighting consultant I worked with put their catalog libraries into an Excel spreadsheet and emailed them to me, so I could import them right into VectorWorks and put the lighting objects into my drawings painlessly," Cox says.

Cox had fun lighting the main entryway. He designed a cable truss system in the entryway and went with a low-voltage cable light system almost identical to the structural components, imitating the bottom cord of the entry truss, to light the space.

In the powder room off the main entry, Cox designed a light shelf of LED lights under the counter, which was made of a translucent green plastic called, so the counter and a Kohler spun-vessel lavatory would glow.

He also designed a water feature, a slab of inch-thick Kaft glass that he edge lit with LEDs to highlight the water trickling off the surface.

He rendered these in VectorWorks, so his clients could see the effects he was trying to achieve. He also turned the models into PDFs, emailed them to a glass manufacturer and plumbing fabricator to get price estimates, then construct the pieces.
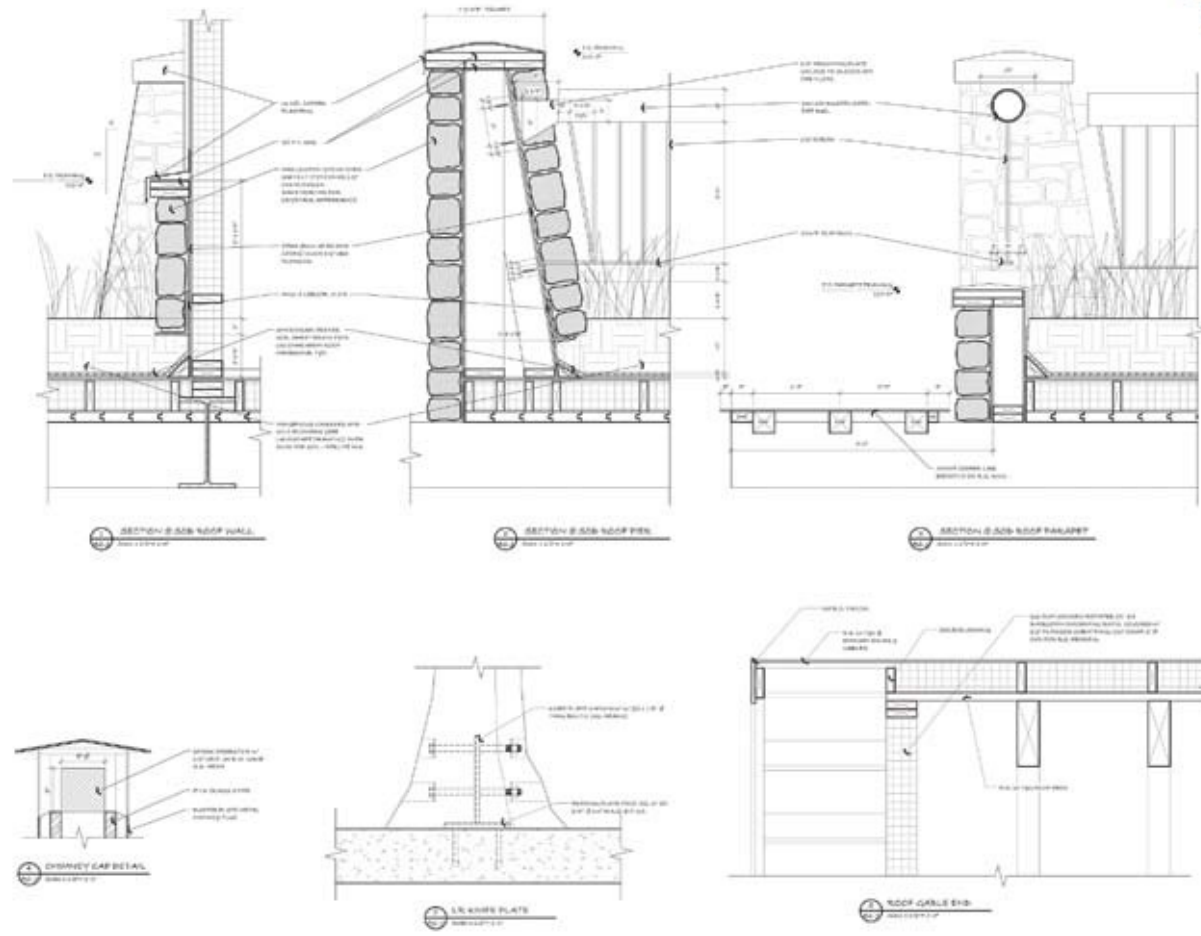
To save his clients some money and sharpen his workshop skills, Cox also designed a sliding barn door to act as sculptural screen between the kitchen and the mudroom, some interior doors and built-in benches with exposed steel details out of reclaimed materials to echo the rustic-meets-modern character of the house.

"Whereas a local craftsman would charge an arm and a leg to design and construct conversation pieces like these, I took photographs and measurements of the inspiration for some of these pieces, went to reclaimed lumber yards to find materials and created 3D models in VectorWorks Architect," says Cox.
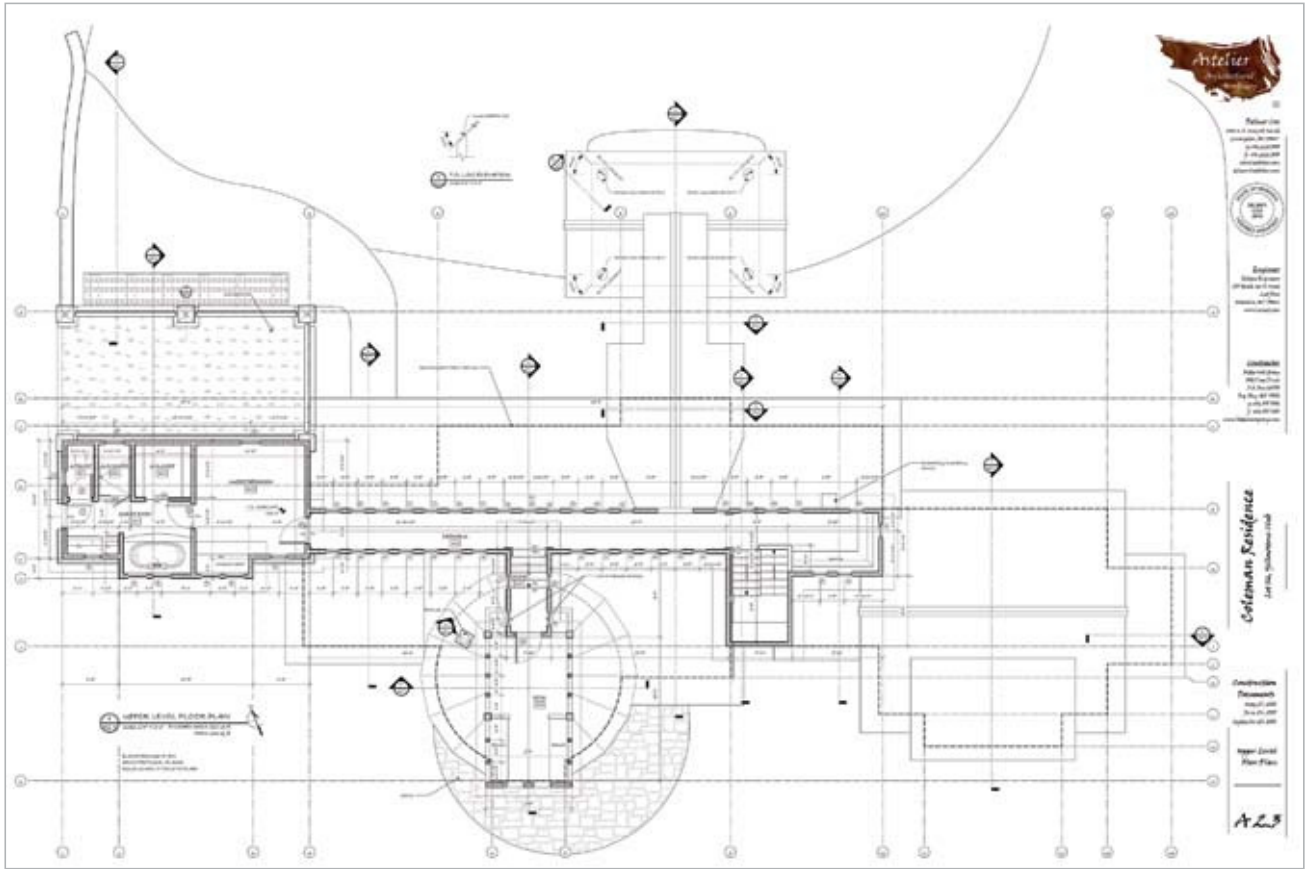
SKETCH STEALS THE SHOW

Modeling in 3D and using the image fill function in combination with the new sketch mode were vital in convincing the review committee to approve Cox's design.

"Using the sketch capacity and image fill in VectorWorks Architect went a long, long way in convincing the ARC that the structure had enough rustic appeal to fit in with the neighboring buildings," says Cox. "For the final submission, I portrayed traditional reclaimed materials using digitally captured rustic images. It gave everything a rough, warm-and-fuzzy feel that was further enhanced by the new sketch mode. The resulting presentation drawings caused one review member to ask if the level of detail shown was within the project budget. With these new presentation features, final renderings were able to perfectly complement the materials pallet and the building style the committee was looking for."

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BENEFIT TO THE BOTTOM LINE

"With the intuitive nature of VectorWorks Architect, I am able to crank out original design ideas—not modifications of old designs—very quickly. This means I'm not so reliant on previous projects and can explore options without immediately worrying about the allotted budget. Firms often spend so much time developing, revising, and drafting that they use up allocations without getting into new territory and, therefore, limit their options."

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This, in turn, goes hand in hand with creativity, according to Cox. "If you're really bogged down and have to get a set of drawings out, you put your nose to the grindstone and do it. But VectorWorks Architect gives me so many time-saving tools and capabilities that I can explore alternatives for clients and achieve exactly what they're looking for. At the same time, it allows me to practice my craft instead of getting bogged down in the mechanics. So it's a good fit for everyone involved."

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For more information, contact Nemetschek North America, makers of VectorWorks, at 888-646-4223. Or, visit us on the web at www.vectorworks.net