Beyond the Plain

So much acoustic ceiling is flat, white-side-down commodity board that the only challenge installation presents is not breaking one’s jaw yawning. But every now and then, an architect is given free rein and the fun begins. After interviewing many contractors around the country, we selected those jobs that were a cut above the rest, either because they presented an unusual challenge or because they looked spectacular when done.

Brian Whipple of Interior Systems, Inc. in Boise, Idaho, had a number of interesting projects come his way, including a large church auditorium that won some awards. “We had to apply 12-by-12 tiles over drywall throughout the ceiling of the auditorium. We used steel frame and bent the drywall com-
ponents to the curve of the barrel ceil-
ing, the radius of which was large enough to then place the glued tiles on the drywall.

“Another job at the recreation facility at the Boise State University involved a combination of different types of ceilings: fancy wood panels in an acoustical type system, as well as perforated metals and fiber glass with insulation behind them.

“The airport terminal in Boise, howev-
er, has the most spectacular ceilings in the area, with all sorts of curves and radius conditions. There is more radius work on this job than we have ever seen, and it’s been keeping the track-bending tool busy non-stop, forming all the radius steel studs. We are using a fine line ceiling grid with a slotted channel in it that is very challenging to make look straight, and installing high-end ceiling tiles and metallic ceiling finishes.

“The ticketing area has an almost S-shaped ceiling 50 feet high, made out of metallic ceiling tiles with insulation above them. We are using long strips rather than tiles, somewhat customized, as the trusses that carry the load of the roof stick through below the ceiling material, and bracing goes back through it to the roof deck. So we have made shop drawings to interface with the structural members.

“This airport is such a high-profile project, $6 million being spent on ceilings alone, with millions of people seeing it over many years—that we want to make sure we do it right. It’s primarily an issue of craftsmanship, but a 2.5 year project in multiple phases to replace the existing and working airport facilities, with the added security concerns since 9/11, means the real challenge is not so much technical, as dealing with a coordination nightmare.”

“We just finished a job at the State Capitol,” states Marshall Quirk of AG Building Specialists in Baton Rouge, La., “where the plaster walls, ceiling and wooden floors made it impossible to hear a speaker in a nearby room. We installed 3.5-foot strips of Whisper Wall fabric panels across the barrel ceiling and down the walls. The 1-inch core board with plastic around the perimeter worked very well, providing a 90 NRC.”

Dennis McCarthy of Raymond Interior Systems in Orange, Calif., reports that they “installed two different grid systems for Apple computer stores: a Chicago 650 Series and underneath that, a Gordon grid system with a customized channel system that integrated all the lighting and HVAC into the channel system itself. Developed by the George Family in Northern California and custom made for Apple, the New-Mat fabric-wrapped acoustical panels have a very clean and distinguished look and very exacting dimensions. The
framing has to be precise because the tolerances are so small, one has to start over if one misses.”

**A COMPASSO Fan**

Gary Alley’s company in Oswego, Ill., completed a job involving (USG’s) COMPASSO. “We did different levels of COMPASSO ceilings recently, with Wire Works that look like pieces of wire in an egg crate, for All State Insurance Company, COMPASSO makes beautiful ceilings but because it is so high end, it has to be spec’d—you can’t sell it. As a result, even though it is not hard to put up, there is a learning curve for the guys that they pretty well get through by the end of the job, but then it’s another year before the next COMPASSO job, and they start at the bottom of the learning curve again.

“The main problem, though, is taking COMPASSO from the architectural/design stage to the installation stage, as you have to order your COMPASSO, bent to the proper radiuses, and there’s a two- to four-week lead time. Then there’s the problem that you order from the drawings and when you get to the site, the building doesn’t quite match the drawing. When designers spec these ceilings with different levels and curves and shapes, their idea of where it should come off a corner, for instance, doesn’t always work in reality. It’s not a major issue, just a minor setback.

“Lastly, the nature of COMPASSO, with all the curves and the geometric shapes it is capable of, inspires architects to draw S-curves and circles, which are very labor intensive to install. Until you have done a few such jobs, it is really hard to price the labor accurately.”

**High Drama in the Theaters**

Theaters are not that complex according to some, the main problem being negotiating the tiered steps and rebuilding the scaffolding each time. Shawn Greene of Custom Ceilings in Kirkland, Wash., had an interesting variation on the scaffolding problem when he was half way through removing the old Tectum ceiling in the Seattle Opera House, and he came to work one day to find the seats had been reinstalled. “We put the ceiling back where we could, but because the ceiling is so high up, you can’t see the ceiling is missing. As the saying goes, ‘The higher the job, the better it looks.’” Unless the patrons happen to turn their opera glasses skyward, that is.

Auditoriums sometimes follow the same, sloped construction as theaters, and Jeffrey Clayes says Olympic Wall Systems has been busy building auditoriums in and around Des Moines, Iowa. “The auditorium in the Wells Fargo Financial building in Des Moines required a suspended acoustical ceiling and wall panels that were pitched to follow the slope. One row at one elevation, stepped up 6 or 8 inches to the next row, and so on from one end to the other, and all on a radius. We used a rolling tower scaffold and set up a laser at the lowest point of the ceiling and began
laying our panels, suspended by wire hangers from an exposed deck that we had painted black. We also put kickers into the deck to hold it into place, and then used a clip that we put in the center of the panel. The panels had metal inserts that we screwed strongbacks into, to keep the panels together—the tiles were free flowing with nothing around them. The front portion had differently-sized panels in a half moon shape tied together above the projection screen, which itself was a plaster wall we created. Then the ceiling had diffusers, lights and sprinkler heads pre-cut in them, so it was a busy ceiling.

“We are doing another auditorium for a cancer center, with suspended acoustical ceiling clouds that follow the pitch of the auditorium, on a radius, and with some interesting wall panels.

“Then there is the auditorium we did for a hospital—same radius spec but even more difficult because we had set dimensions to follow since the architect wanted a certain dimension to be adhered to at the end of each pod of suspended acoustical panels. But as anyone knows who has worked with acoustic panels, things grow as you go. I don’t think architects understand this, though. We had to crank the specs down to 1/32 of an inch, which was interesting considering the radius, suspended and stepped-up nature of the project. But even if you have a tolerance of a 32nd of an inch, when the two materials come together, they tend to build up, and each row becomes longer as you go down it.”

**When Hard Isn’t**

David Williams says Kite of Indianapolis installed vaulted acoustic ceilings in one building, “the challenge being to some extent that they were vaulted, but the bigger challenge was making sure we installed them properly the first time, because the materials were so expensive.

The library we worked on at the Glendale Mall was a 100,000-square-foot job with a lot of curvature and shapes hanging down from the ceiling at different elevations—sun, moon and stars. Noth-
ing really challenging, as good carpenters, of course, will figure out how to handle even the most difficult of jobs given half an hour to look it over.”

For Don Corsi’s company, Southern Acoustics Inc. in Orlando, Fla., the biggest challenge they face is being told they have four days to put up 90,000 square feet of ceilings.

If skill makes any job easy, computers have reduced the challenge even more, as Jim Shumaker of Vernetti’s Mid-States Construction Systems in Rockford, Ill., points out. “We have a project coming up that involves metal panel ceilings with curvatures and different elevations, but computer programs make it easy. We submit what the architects and engineers design to the manufacturer and then install the prefab’d panels using the shop drawings they send us. It’s a cross between putting together a jigsaw puzzle and coloring by numbers.”

Not everyone has it so easy, however. Kurt Tusler of St. Charles Acoustics in St. Louis, Mo., had to “put an acoustic ceiling into a geodesic dome shaped like the EPCOT ball, 45 feet above the deck of a college auditorium. The ceiling followed the form of the building and the key challenge was that nothing fit. The grid went from metal plate to metal plate, and the tiles were all triangles that had to be cut on site and attached with bolts and rods, not wires.

“We also put a ceiling into a museum, the Pulitzer Foundation in St. Louis, using metal framed 4-by-14 panels pre-
fab'd in Canada that could not be altered when they arrived on site. So we measured very precisely every room, many of which were around 25-by-100. We had to know if a room was out of square by even as little as 1/8 inch, for instance. We spent a lot of time measuring—30 measurements in each room that were triple checked. Despite only 8,000 square feet of ceilings, we spent weeks on the measuring. In the end, a couple of measurements proved to be off—the architect was extremely picky as 1/16th of an inch was too far off for him—and which we were able to fix with a few minor cuts on site, so it worked out well.”

**From Coffee to Auschwitz**

Another contractor with a selection of unusual jobs is Shawn Greene of Custom Ceilings in Kirkland, Wash. “One retailer has ordered a 5,000-square-foot ceiling for $40,000, 10 percent of which is white-side-down tile, the rest being all show, with extruded aluminum hanging from arched ceilings. We simply consult the manufacturer’s rep, obtain their cut sheets and get their take on how the stuff hangs together, work out how long it will take to install an arch, etc. The biggest barrier we face is that architects can make things look great on paper, but putting their creations in the air can get pretty nasty. It’s hard to bid these accurately because they create unforeseen problems, so we always work closely with architects to get them on the same page.

“In another unusual job, we are doing a 100,000-square-footer right now in which we are taking out all the tile we can salvage. Then the walls of the many 12-by-12 offices throughout the building are cut out to 6 inches below our grid, after which a Bobcat with jaws comes in to flatten everything and remove the mess. Then they unscrew the top track channel of the old wall that is still attached to the grid, so they don’t tear up our ceiling grid, but that has not worked out very well and we already see big extras coming on this job—$25,000 or so. So then we patch all the holes and paint the scratches and put it all back together. Why, you may ask, is the new owner doing this? I understand that if
they cut all the walls out and don’t put them back to structure, they receive a huge tax break.”

“Another interesting project, although not challenging, is working closely with Starbucks to resolve the echo in their stores. A lot of conversation goes on in Starbucks stores as customers sip their coffee, so we have talked them into putting ceilings throughout each store, not just over the backroom and areas where they serve the coffee.

“LDS churches are another customer. They spec out the most expensive tile I have seen, USG’s glue-up GLACIER tile. It is not mineral board but a rough, cast tile with a unique look. I have been to several plants and seen tiles being made. Slurry comes down a drying belt and they take a broom and sweep the slurry so that it dries into a heavily grooved and brittle form. You deal with enough of it, and your hands turn into hamburgers if you don’t wear gloves when installing it.

“We’ve also done some environmental ceilings in what I call ‘Auschwitz,’ a
building where they test drugs on primates brought in from China. The grid is 1.5 inches wide with a gasket, and the tile is a SHEETROCK board with a vinyl facing that is scrubbable. You can buy it gasketed, but we chose to buy it ungasketed and set up an assembly line to gasket the grid ourselves, because it fits together a lot better that way. The wall is also gasketed when you put on your wall angle. Then you seal the wall angles from behind with a caulk.

Jamie Harrison of Just Rite Acoustics in Chicago mentioned a couple of jobs the company lost money on, but that were difficult to install and impressive when done. “We installed acoustical wall panels and baffles over a pool at Harper Community College. There were two challenges: the ceiling was 35 feet above the deck, and the pool was an additional 15 feet down. It took a lot of scaffolding and lifts to access the ceiling. Secondly, we had to research extensively to find what materials would not corrode from the latent chlorine vapors. It turned out that every piece of hardware had to be stainless steel and the panels needed to be polyester.

“The second job was at Arizona State University with a ceiling made of clouds that did not touch each other. One cloud would be curved, which curve was continued by the next cloud and so on. It took a lot of layout time on the floor, building it before putting it in the air and then bracing and adjusting it.

“On another job, an auditorium for Motorola, we installed the USG CELEBRATION system, perforated metal with sound absorbing material on the back. It was extremely high and curved from the stage, arching all the way to the rear. Metal doesn’t lend itself to curves, so we segmented and cut the grid at the joints. We won an award for that one.”

While doing these kind of jobs is its own reward in terms of added interest and challenge, it’s always good for morale to receive awards for them, too. ☑

About the Author
Steven Ferry is a free-lance writer based in Dunedin, Fla.