FLYING HIGH, PLUMBING THE DEPTHS—

A Look at the Challenges Faced by Ceiling Folks

The flat acoustic ceilings above most people’s heads are what most folks installing ceilings work on most days. But every now and then, a more challenging job comes along to spike their interest. In search of these, and solutions to any problems they may have run into, we surveyed a couple of dozen contractors around the country for the jobs that they remember best.

For those working in theaters, it’s not the ceiling that’s the problem, but the floor, as Pat Hendricks, project manager/estimator at Acoustical Contractors and Drywall Services, Inc. in Lakewood, Colo., explains. “In these new state-of-the-art theaters, the stadium seating results in steeply sloping ceilings and floors. We use $40,000 scissor lifts, and design and

By Steven Ferry
build ramps with two-by-sixes, which we drive the lifts onto.

James Lynn, estimator at Ware Paint and Drywall, Waycross, Ga., says they “solved the slope difficulty while working on ceilings 30 feet up, by building scaffolding and then putting jacks under it. It then took several guys quite some time to disassemble it and move it over.”

Ernie Stocks, estimator/project manager in Midwest Drywall Company, Wichita, Kan., a contractor that handles over a million square feet of acoustical ceiling a year, has the same perspective. Whether it is installing the 16 acres of acoustical ceiling at the Mail Distribution Center in Memphis, Tenn., or seeing to the Venetian® Las Vegas, or even dealing with the

Working Together

Hendricks goes on to say that, no matter what the technical difficulties, “the real challenge and need is to coordinate with other trades-the electricians, the tinners, the ceiling people, the drywall people, as we are at the very end of the schedule and count on the other trades to stay on schedule.”

Dan Cassidy, vice president of Cassidy Bros, Rosemont, Ill., agrees that the key
formidable ceiling tasks presented by the Royal Caribbean Telemarketing Center in Wichita, “We hardly run into anything that is a real challenge as far as the installation goes. With acoustical ceilings, the challenge is coordination with sprinkler, communication, computer, electrical, plumber and mechanical contractors. They’re all working overhead and we can’t do anything until they are all done. Hospitals are usually the most difficult, as they usually have a multitude of different rooms requiring several different types of acoustical ceiling, and there is always a lot that goes in overhead.”

Having said that, Stocks did allow that the first time they used USG’s Compasso™ suspension trim system, a specialty grid and edge system with hanging clouds of acoustical that don’t build clear to the wall, it was a challenge, but after that, it presented no problem. “It’s not rocket science, but to get quality work, you have to have someone who knows what they are doing, especially if you want everything to fit right and level and hang correctly so it will stay in place.”

**Getting There Is Half the Fun**

“Trained installers and attention to detail allow us to pull off any job,” states
Jeremy Harnish, vice president of William E. Harnish Acoustical in Redford Township, Mich. “The only time installation becomes difficult in terms of the product being used, is when it is a new or seldom-used product. USG’s Curvatura, for instance, or Compasso, radiused trim or ceilings that undulate: the skill is in placing it, making sure all the control lines and laser levels are accurate. Apart from that, the challenge isn’t so much in putting up the ceiling, but in coordination with other contractors, and more than anything else, getting to the ceiling in the first place.

“At a First Baptist Church, we had to use scaffolding and scissor lifts to reach the high levels needed to install ceiling clouds at multiple angles and directions. In Canton, Mich., the rectangular Yazaki, NA building has a 50-foot high atrium down the center, with a boat suspended in it that serves as a technical library—the company owner was a yacht racing enthusiast. This boat is 80 feet long by 40 feet wide, suspended from the second and third levels and accessed from those floors by catwalks. Placing the ceiling above this boat required subcontractors to design a unique rolling scaffolding system that was suspended across the 25-foot-wide atrium from walkway to walkway, and even though we had half a million square feet of tricky linear metal and acoustical ceiling to put up, the real challenge was access.”

No doubt the Performance Contracting folks in Las Vegas, Nev., had a similar problem when installing the ceiling in the Aladdin Theater, 120 feet above the floor.

**From a Tall Story to a Fishy One**

While getting there was also a challenge for their colleagues in Anaheim, Calif., working at the circular Nikken building, it was not the only one they faced. As PCI Advanced Estimator Patty Quijaso explains, “This was an extremely cumbersome job. We were creating a compounding curving acoustical metal ceiling 50 feet in the air with every point having a different elevation. Hitting several hundred elevation points and having each work with the adjacent surface—the panels had a continuous pattern that flowed from one to the next—was quite a challenge. We did some templates, laid everything out on the ground, and then transferred up to the ceiling.

“We used three booms to access the ceiling, working in unison to hang the suspension system, starting at one point and progressing out from there so as to tie in the ceiling. When you are that high up, of course, the booms wave around a lot,
so coordinating motions and fixing these unwieldy and heavy 8-by-4, torsion-spring snap-in panels was not only challenging but tiring—like a guy with big fingers trying to thread a needle while doing 200 knee bends. Every single panel and grid part was numbered and was not interchangeable—it had exactly one place to go, like a jigsaw puzzle. If any panel was damaged, it had to be retooled. In the end, we had all the pieces we needed and no more, and that was extremely satisfying and relieving. This ceiling is really a piece of art.”

Giles Turgeon, president of Green Mountain Drywall Company in Wallingford, Vt., also laid out a template on the floor to get the tricky rounds and curves of the ceiling at the Orvis office building. His men cut and lifted up a plywood template and nailed it in place so the owner could confirm the radius was as he had envisioned it. They then built the ceiling around it and removed the template. Turgeon’s advice for anyone attempting complex jobs: “Find someone who is really experienced in acoustic ceilings, or you’ll go through a lot of materials and waste a lot of time.”

Speaking of curves, Duane Christensen, marketing manager at Cascade Acoustics in Tualatin, Ore., reports that they used complex curved wall and ceiling elements, cut from flat stock and then welded together, to create a tiered effect that gave the illusion of descending into the ocean depths to view the marine life at the Oregon Coast Aquarium.

In addition, “We also did a kite, like a mobile, using acoustic panels and fabric for a large atrium in a school to resolve sound issues,” Christensen said.

**Flying High**

Heading up rather than down, Brett Petillo, senior estimator/project manager at Performance Contracting in Tempe,
Cascade Acoustics recreated the ocean on the ceiling of the Oregon Coast Aquarium. The first photo shows an acoustical cloud hovering over a hallway ceiling, and the bottom photo shows the acoustical kite in situ.

Ariz., had a difficult job recently at the America West Flight Training Center where flight simulators are used.

“The main feature of the building is designed to look like an airplane wing extending through the building core when one views it from the side. It’s a 35 by 300-foot glass aircraft wing that is 35 feet in the air. The interior portion is a curved metal ceiling that runs right up into the glass, and the exterior portion continues on the outside and curves around the fascia of the building.

“The key challenges were handling 98-pound panels at that height, and coor-
but I am sleeping better now. In actual fact, the project only took 160 man-days, because once we had the system down, it was a real simple installation—apart from being 35 feet in the air and working off lifts, up and down, up and down, as there was only so much material we could carry up each time.

"From the GC standpoint, this was the

dinates with the exterior contractor to line up all the seams along the entire length of the building. There was a 6-inch reveal on one side, so we had one end floating. In addition, the core narrows, so we had to keep this curved ceiling level and everything running together, while the width is narrowing 10 feet from one end to the other. We used a torsion spring system; every 8 feet there were 4-foot Ts, and we field-cut all the perimeter panels. I was sweating then,
best-run job I have ever been on. A real coordinated effort, so we ran into very few problems. My advice is to get your material on site early, too. We had our material in early and found the color was wrong, but we still had time to return the materials, have them repainted and back to us before the job began.

In another job at a data center for Charles Schwab, the command center had five different levels, requiring a gradual drop of the acoustical ceiling.

Says Petillo, “We used a Compasso trim around the perimeters so as to form light coves, and everything was curved. This created a set of problems, kicking and bracing off everything so we didn’t allow any movement in the ceiling. It took time from a labor standpoint, but it provided a real neat effect. It also turned out much cheaper to make this Compasso light cove than to make drywall soffits.”

**For Those Who Know Where They Are Going**

“Compasso” seems to be the word on the lips of many when it comes to challenging (but rewarding) systems to install. John Eliason, president of E&K in Omaha, Neb., noted that “curves, slopes and radiuses are more challenging, obviously, but vaulted, arched acoustical ceilings are lot more interesting and fun to do, especially given the variety of patterns and brands on the market.

“Compasso trim, with ceilings hanging below another ceiling, are a definite challenge. We did the clubhouse of a fancy apartment complex with a regular white grid ceiling on the top level, and below, little modules of different-colored cloud ceiling grid systems hanging below each other at different angles and overlapping, suspended by hanger wires painted black.

“The challenge, of course, is making sure that everything is hanging level and true. Having put one up, it’s hard to position one below it without disturbing the one above. A bit like building an upside-down house of cards. With the aluminum Compasso trim, also, we
have to use a miter box with a special blade to cut those pieces so they don’t become all frayed out, and file them if they do.

“One point to keep in mind with Compasso, though, is to make sure during the bidding that you allow for the added labor involved— it’s hard when estimating on products you don’t use every day. You have to figure out what one’s best mechanic could do in a day and do it on a man-day basis, rather than dollar-per-foot. It can take as much as five times as long to do these cloud ceilings, compared to flat acoustic ceilings. There may not be much footage or volume of materials for these jobs, but there’s a lot of thought process, planning, organizing and layout and timing.”

Frank Lauria, owner of FL Drywall in Tampa, Fla., handles the trickier radius-es and arches by ordering custom trim from the factory. After almost three decades in the construction business, he doesn’t find much that challenges his skills.

“We did a ceiling once that looked just
like a flashlight cut lengthwise. We made the ceiling parts all on site—figuring the pi times radius squared and all that fancy stuff on the calculator—and then making a jig to make the parts. We don’t come across that every day, though. Disney comes up with some of the weirdest stuff, too. In the early 1980s, we suspended a Goofy from the ceiling in a boat tunnel with #12 hanger wire.”

A Barrel of Laughs

John Glass, exec vice president at Joe Banks Drywall in Mangham, La., has seen his share of tricky jobs, too. Take the Century Telephone building in Monroe, La., installing a concealed grid system with approximately 4-by-8 panels in various shapes that were spring-locked from the topside. It took a lot of measuring and shop drawings to work with the zero tolerances of the recessed grid.

Or the lecture room that required hanging various 4-by-8 panels 15 feet from the ceiling, in an exact location and tilted at a certain angle, to deflect and absorb sound in an oval lecture room. But none were as difficult as a barrel vault, about which Glass says, “If you want to known how challenging that was, I wouldn’t do that one again! The problem was getting the acoustical panels to conform to the radius and remain attached to the substrate. We glued and clipped it, trying to adhere something that is all concealed attachment, and it kept falling on our heads. We fixed it in the end by working at it like dogs, with a lot of glue and clips, bracing it from the bottom and crossing our fingers. Its fighting gravity all the way, but it’s still standing, I am glad to say.”

Rob Scarpitta of Performance Contracting in Las Vegas, Nev., agrees that “barrel vaults are tough. We did a lobby at a rec center with wave ceilings, all curved grid and linear metal. On the Palms Hotel job, we used stainless steel mirror finish, torsion-spring panels with curved perimeters. When you look up, you see a full vault and then two eyelids, with translucent windows that break the main field. The transition and the panels between the two eyelids are compound mitered into each other—where the linear metal meets. It was a tricky job but a nice finish—in more ways than one, presumably.

Lastly, we turn to Dexter Knight, senior vice president of Center Brothers in Atlanta, for a job that comes along only once in a lifetime-to the lucky few.
The opportunity to build an Olympic stadium—"an extremely large job with an extremely short time frame," he assures us. "It took a small truck to deliver all the drawings and specification books. By the time we were allowed in, a lot of the time frame had been used up. It was not the usual working environment, either, as we had bomb scares, bomb threats, and all kinds of interesting things, such as the president of the United States turning up to walk through while we were working. We also had to work on plans and on site with no less than four architectural firms. It
Gene McMichen, who has been with Center Brothers for more than three decades, was their point man on the job. He reports, “We used six different ceiling systems on an area exceeding a quarter of a million square feet. The lower level was very high, and we could not attach the hanger wires wherever we wanted because some of the areas were underneath seats. The wires ranged in length, therefore, from 2 to 30 feet. The public areas were very ‘Plain Jane,’ but in the box areas, we installed expensive custom-made tiles with aluminum trims and reveal moldings. We jumped up and down about installing tiles outside until the manufacturer, Armstrong, assured us that the RH 90s would work fine. We had to clip them into place because of the wind conditions.”

Echoing many of his fellow contractors, McMichen adds, “Coordination between the contractor and the subcontractors was a must on this project because of all the levels and sectors that had totally different designs and problems. The special radios that we were all required to buy, kept everyone in touch.”

Summarizing that feeling contractors may experience after completing one of those extra-special pieces, McMichin wraps up with these words:

“I have always been proud to tell people that I work in construction . . . . The best movie for some people is played each day in the basement of the Great Arch Facility in St. Louis, MO. The movie shows the heart, pride and character that construction workers feel across this nation each day . . . . My dream started with the Olympic Stadium.”

Here’s to all those dreams still to be dreamed.

About the Author

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