The vaulted ceilings in the new Harris County Criminal Justice Center in Houston have everybody in awe. Not many people thought they would turn out so smooth, so monolithic, so much like plaster in appearance.

“The project was written up on the architect’s punchlist,” says Tim Matatall, site superintendent for Marek Brothers Systems Inc., a Houston-based acoustical ceilings and drywall contractor. “They noted our ceilings and wrote, ‘Beautiful! Good job, Tim and Company.’ Good job Tim and Company?”

Architects usually don’t put nice things on punchlists, which is why Matatall beams with excitement. Telling the tale to a writer one blistering hot day after work, he gulps his beer, drops the sweaty mug on the table and leans forward to explain what it means.

continued on page 78
The ceiling contractor didn’t get a punchlist when the job was done; he got a plaque.

“Every superintendent gets a punchlist,” he says. “But we get a plaque!”

Matatall and his crew deserve the commendation. The Marek Brothers’ team worked eight- to 10-hour days for 18 months-installing 60,000 square feet of drop drywall ceiling construction and building 90,000 lineal feet of interior walls. Along with field personnel from Manhattan Construction Company, the general contractor, Matatall coordinated a peak labor pool of 122 workers and escorted architects, attorneys and judges on countless walk-throughs.

And nowhere—not in 43 courtrooms, not on any of the 21 floors—have the architects to date found a flaw in the ceilings. No errors? No mistakes? Nothing but “Beautiful!” for the punch list? Matatall gives much of the credit to the USG Drywall Suspension System from USG Corporation, Chicago.

“Let me tell you,” Matatall says, “this new ceiling system has made my life easier.”

Quite a Courthouse

Construction of the Harris County Criminal Justice Center, a $70-million
high-rise on the north end of downtown Houston, began in 1997. The 800,000-square-foot building is home to the Harris County District Attorney’s office, the Criminal Courts Administrator, 11 floors of courtrooms and associated judges’ chambers and support facilities.

Joseph W. Santamaria, AIA, associate principal at Houston’s Pierce Goodwin Alexander & Linville Architects, the designers of the building, describes the building as postmodern with classical overtones. Its exterior features buff-colored precast concrete panels with notched corners, punched windows and curtainwalls. The dignified interior hallways and courtrooms feature Rojo Alicante marble wall tiling and a combination of sapele, makore, Honduran mahogany and olive ash veneer

Naturally, the ceilings needed to match the level of elegance found throughout the building. So, the architects called for curved ceilings. They span 24 feet across the 36-by-48 courtrooms, peaking at 13 feet and centered between side soffits that house electrical conduit and HVAC ductwork. A large, ceremonial courtroom on the 20th floor measures 50 by 80 feet, with radius ceilings that peak at 17 feet.

Santamaria says the original specification called for glass-fiber reinforced gypsum ceiling panels. The drop-in panels were to be pre-fabricated for the job in 4-
GRG ceilings would have been costly, and cumbersome and wouldn’t necessarily finish uniformly.

and 5-foot sections, suspended on site and taped and floated together. However, Saied Alavi, project manager at Marek Brothers, proposed bending black iron and building drop drywall ceilings instead. The GRG ceilings, in his opinion, would end up being costly and cumbersome and wouldn’t necessarily finish uniformly.

“We architects tend to think of them as foolproof,” Santamaria says. “But I guess sometimes those things don’t fit together real well and require a lot of on-site remedial work to make their appearance acceptable.”

Marek Brothers offered a credit to the job if they could install a suspended gypsum board ceiling. PGAL Architects agreed to switch, but only on the condition that the courtroom and ele-
The results were so outstanding that the architect says he doesn’t foresee specifying a GRG ceiling again. The result is an installation that can be completed twice as fast as conventional hat channel and black iron suspension. According to USG, the system reduces installed costs up to 40 percent vs. conventional cold-rolled channel and steel stud drywall ceilings.

Eventually, the ceiling system was approved. Work began with an initial courtroom ceiling mockup on the eighth floor.

“We started and finished framing as soon as possible,” Alavi says. “It allowed other trades, like the electricians and

At this time, the USG Drywall Suspension System was introduced to the market. Literally.

“It was so new that there wasn’t any literature out,” Alavi says. “We had to make copies of photocopies for submittal to the architects and owners.”

According to USG, the new system offers a better way to install drop drywall ceilings by reducing the time spent measuring, bending, cutting and connecting components. The system uses 12-gauge hanger wire rather than 9-gauge wire.
mechanical people, to start their work sooner than expected."

Matatall formed two-man crews to frame each courtroom. The crews first erected side steel-stud walls and built soffits with light coves off those walls. Then they installed the curved main tees and cross tees in the center of the courtrooms. Each two-man crew, Matatall says, was able to frame a 36- by 48-foot courtroom ceiling in one day.

Three-man hanging crews followed—cutting and applying mostly 4- by 10-foot sheets of wallboard and routing cutouts for the numerous recessed light fixtures. The 14-inch-wide and 1 1/2-inch-thick bands or build-downs, which span the arched ceilings between courtroom pilasters, were constructed using two 3/4-inch sheets of wallboard. Mark Perez, finish supervisor at Marek Brothers, ran the taping and floating crews that finished the smooth, monolithic ceilings.

Matatall insisted on quality. He had framing crews tie 12-gauge wire every 32 inches instead of the required 48 inches on center. Another nice touch came by cutting and applying the gypsum panels so that no joints fell within 4 feet of the side light coves, which eliminated any possibility of joint banding near the soffits.

In the elevator lobbies, intersecting vaulted ceilings formed perfect groins or peaks. They could easily have become misaligned, but Alavi says the ceiling system made it easy to create straight miter joints. He admits it would have been hard to build this level of quality by bending black iron on the jobsite.

The results were so outstanding that Santamaria says he doesn’t foresee specifying a GRG ceiling again. The system that was used, he says, eliminates a lot of submittal review time and
It would have been hard to do this by bending black iron on the jobsite.

gives the building the kind of class it deserves.

“I think people will get a feeling of more space than what is really there,” Santa-maria says. “With light coves around the perimeter and lights in the center of the room, the low vault adds a nice touch—a soft, white ceiling that feels spacious and expansive.”

Alavi and Matatall also look forward to working with the USG system again. They say it keeps things simple and makes for superior consistency on the job. By leaving the design to the manufacturer, they can better budget for curved ceilings, knowing less guesswork is required on site.

“This was a win-win project,” Alavi says. “The owner is happy because he saved some money. The architect is happy because his design came out the way he wanted. The general contractor is happy because he was able to deliver the building on schedule. And we’re happy because we made some money on the job.”

About the Author
Mark L. Johnson is a freelance writer who writes frequently on ceiling system products and installations.