

The Right to Remain Silent

Sound-rated courthouse doors pair function and aesthetics.

BY SEAN CARROLL

Justice has been rendered in Johnson County, Kansas, for more than 160 years, but the space where it was dispensed had long needed a major update. The opening in 2021 of the new, modern, curvilinear Johnson County Courthouse in Olathe City has satisfied that need.

Rising seven stories, housing 28 courtrooms and numerous offices, and embedded with state-of-the-art technology, the building is radically different from the brown-brick courthouse that opened in 1952.

The new \$193 million building was designed by TreanorHL & Fentress Architects and the design-build team was led by JE Dunn. AMBICO joined the project as the supplier of 200 high-end, sound-rated doors with a dignified,

FSC-approved cherry veneer for the multiple courtrooms and offices.

Courthouses represent justice, compassion and tradition, and doors are literally the entrance to that important space. The experience AMBICO has in supplying doors for courthouses located in Boston and Ellicott City, Maryland, made it the ideal candidate when it successfully bid on the Johnson County project in 2018 to our distributor and nationwide distributor American Direct.

CLIENT EXPECTATIONS

To protect privacy in the courtrooms and offices, the door openings—including clear transoms, inserts and sidelights, frames, perimeter seals and thresholds—had to meet the architect's acoustic standard of STC 50. That is an unusually high rating for a wood veneer door.

Along with functional specifications, the courtroom doors in particular had to satisfy demanding aesthetic expectations. The courtroom walls are wood panel veneer from floor to ceiling. The interior door veneer had to match not just the color of the paneling but also had to blend seamlessly with the vertically oriented grain of the walls. Grain matching in a courtroom setting is important in part because of its symbolic value: it's meant to suggest the continuity and integrity that an honorable legal system represents.

These courtroom doors show a subtle visual harmony with the surrounding paneling thanks to blue print match, sidelights and narrow lites.





Above: Grain-matched veneer, two narrow lites and elegant, client-specified hardware mean the exterior of these paired door opening courtroom doors blends with the paneling.

Left: This galvanized steel painted acoustic door combines acoustic security with access control and physical security ensuring confidence and confidentiality that is necessary for a jury assembly room.



This STC 50-rated door suggests the dignity of the courtroom with its simple design and grain-matched veneer.

Grain continuity for the Johnson County Courthouse was accomplished using blueprint veneer from the wood panel manufacturer. While not a new process for AMBICO, it means extra care has to be taken at all stages of material purchasing, storage, manufacturing, quality control and shipping because no matching replacement veneer is available if a sheet was damaged or incorrectly used.

Once the 200 doors, which include hardwood edges, were manufactured, each was tested in the AMBICO lab to ensure it met ASTM E90, the gold standard for sound performance. They passed, and the door openings were shipped to Olathe City for installation by a third party.

But a problem arose.

THE CHALLENGE

AMBICO and the company preparing the wood paneling for installation on the courtroom walls used the same stain and sealer for their respective veneers to ensure the overall color met the architect's specification. But when the doors arrived at the site, some were a lighter shade than the adjoining paneling. The whole point of using

blueprint veneer was to ensure a perfect blend of walls and doors.

AMBICO uses a traditional wiping process for staining: We sand, stain and then apply a clear varnish. That process ensures the grain absorbs the stain. The company that did the wall paneling used the same sanding process, even the same grit of sandpaper, but they mixed the stain and varnish and then applied it. As a result, the stain sat on top of the veneer instead of penetrating as deeply as the AMBICO stain, which produced a more uniform and darker color.

The problem was discovered in July. The courthouse had to be completed by the end of December, which meant the door openings also had to pass in situ HVAC and security testing. The veneer could not be replaced because the grain pattern would not match the paneling. On top of everything, the Canada-U.S. border was closed because of the COVID-19 pandemic, so AMBICO could not travel and rectify the problem on the building site.

The only solution was to ship the doors with the greatest color variability back to Ottawa, where AMBICO had to work with smartphone photos of the paneling to make the color change.

The AMBICO project team had to learn about shading and experimented with some unused cherry veneer. The team sanded, applied a light coat of mixed stain and varnish, waited for it to dry and repeated the entire process until they achieved what they believed was the right color.

The doors were reshipped to Olathe City, while the ones with less variability that had been left at the project site were color-corrected on-site under AMBICO guidance. All the doors were installed, everything matched beautifully, and the door openings passed the HVAC and security tests with flying colors.

LOOKING AHEAD WITH TRUST

The new Johnson County Courthouse is now fully operational and will meet the judicial needs of a growing community for the next 75 years. The design also allows for the addition of future courtrooms to serve an expanding population.

Over the course of its two-year engagement with the project, AMBICO demonstrated its ability not only to meet client expectations and overcome a significant challenge in the midst of a pandemic, but to nurture a relationship built on mutual professionalism and trust. That trust was crucial in achieving the functional and aesthetic goals of the project. Because AMBICO exceeded lead times in the early stages of the project, the company was able to meet the color challenges while still completing the project on time and budget.

Case closed. +



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