

a&amp;d

officeinsight



Conference and hallway (Photography: courtesy of M Moser Associates and Workwell Partners)

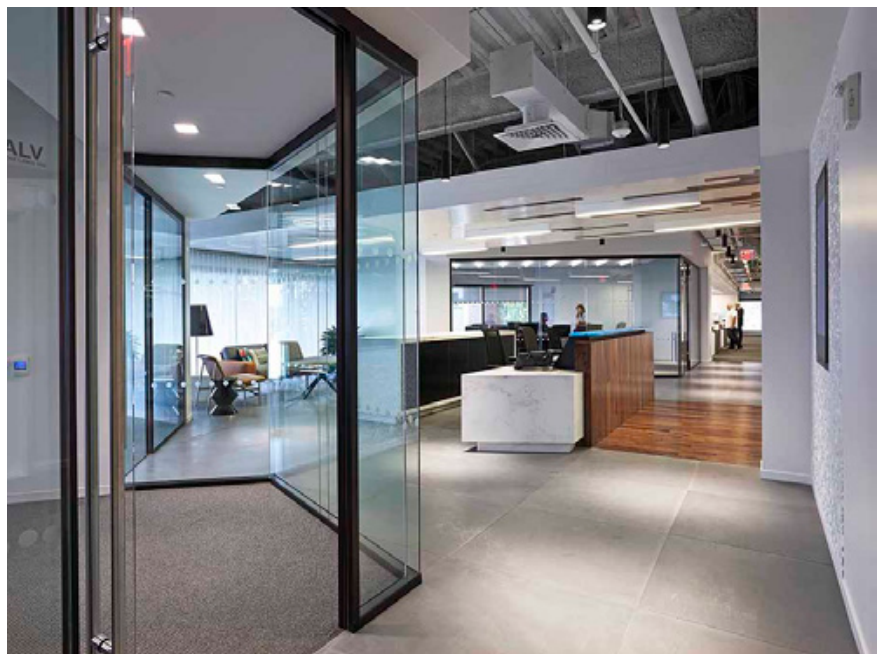
## High-tech Design at CLS Bank by M Moser Associates

by Mallory Jindra

When new technologies appear, the possibilities of their uses often take time to present themselves. A certain amount of trial and error goes into enveloping the technology into existing work processes.

New tech such as laser scanning, virtual reality and 3D modeling aren't necessarily "new" – much of this functionality has been around since the 1990s – but the regular applications of these technologies is indeed still very new.

Figuring out how to put these new technologies into practice at the planning level, while not as attention-grabbing as their initial introductions to the public, enables A&D firms to save valuable resources and at the same time build a forward-thinking reputa-



Angled view of reception

a&amp;d

## officeinsight

tion with clients who want to ensure they're receiving the highest quality, and most economical, designs.

As a fundamental mechanism in the Foreign Exchange Market, the financial institution **CLS Bank International** sought to expand its U.S. headquarters in New York City to include a *business continuity* site in New Jersey. CLS needed this space to continuously function 365 days a year, 7 days a week and 24 hours a day, as well as have the ability to offer additional

workspace and resources to all surrounding area employees during an emergency situation.

After collaborating on the bank's NYC headquarters in 2011, CLS again selected **M Moser Associates** to integrate design, engineering, planning, IT and construction of its business continuity site.

The space accommodates various redundant infrastructures, including power, cooling, backup generation and dual points of entry for fiber, as well as

a state-of-the-art Network Operations Center (NOC), from which network administrators can manage, control and monitor all networks across a variety of platforms, mediums and communications channels.

M Moser's design of this new business continuity site makes use of new technologies that A&D firms everywhere could benefit from using regularly in their work flow.

The firm believes that design, engineering and construction are all increasing their efficiency and productivity, and that 3D modeling and virtual reality are becoming best practice standards in delivering design intent to clients and builders. 3D modeling allows for constructability feedback early in the design process to avoid abortive work, bringing projects in ahead of schedule and in line with budget.

Teams at M Moser use 3D modeling technology and virtual reality in two ways – in presentations and communications with the client, and in collaboration with construction and subcontractors.



Reception waiting area



Reception waiting area rendering



M Moser used Virtual Reality and 3D modeling technology to deliver design intent to both clients and builders, bringing projects in ahead of schedule and in line with budget.

a&amp;d

## officeinsight

“Sometimes clients will have a hard time visualizing the design intent, or a certain space in the design,” said Chris Swartout, project director and client advisor at M Moser Associates. “When you’re able to walk through the space on your own and can get a sense of the scale, it’s much easier to visualize. You get a presence effect with virtual reality that you don’t get on a display in a normal presentation.”

While gathering valuable feedback from clients using VR is definitely a win, subcontractors can also don the VR goggles to offer a very different, but equally valuable, type of feedback.

“We use it when we work with subcontractors so that they can tell us if something doesn’t fit quite right or doesn’t make sense in the planning and constructing phases,” noted Mr. Swartout.

M Moser uses the Oculus Rift and Samsung Gear VR hardware, and

partners with InsiteVR on the software side to bring its design models into the virtual reality experience.

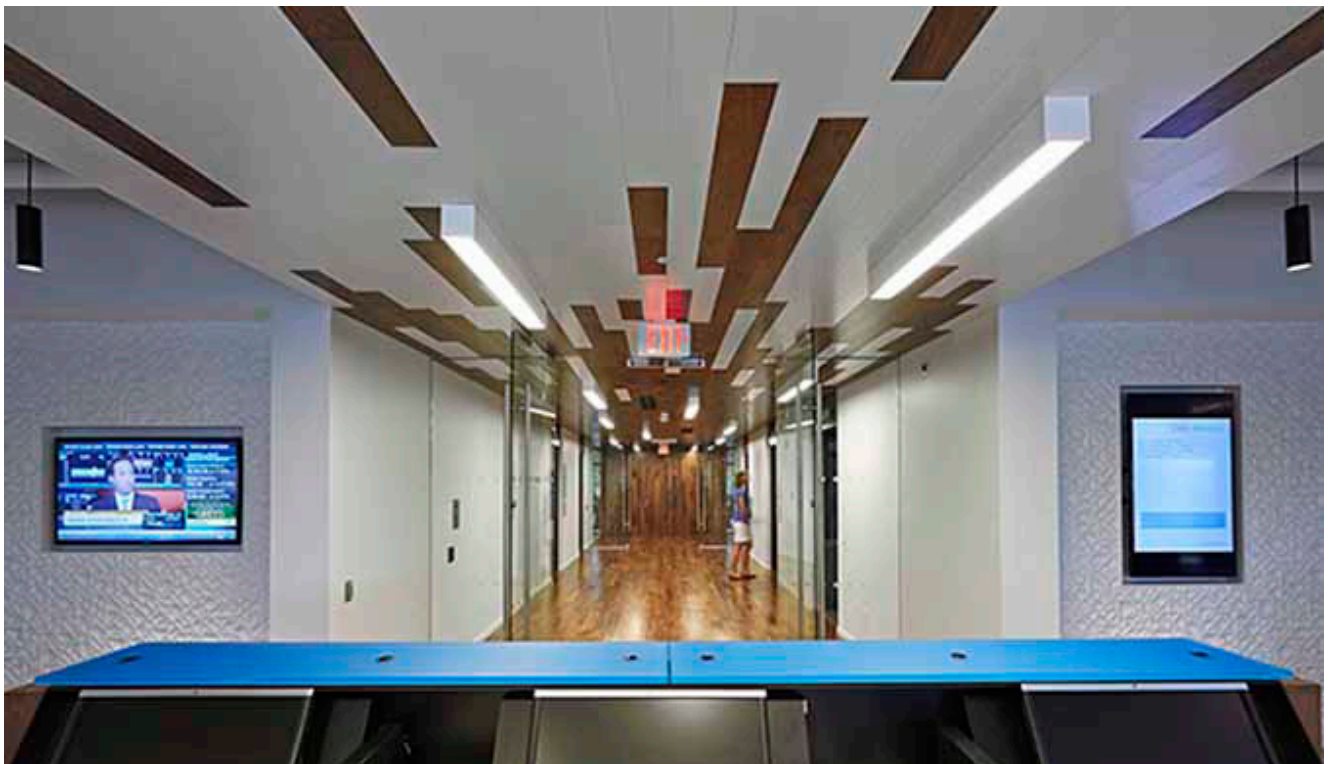
To get a true understanding of where existing walls, columns, core and other services were located, M Moser also performed a laser scan of the existing infrastructure prior to any construction and after demolition. Laser scans are accurate down to the millimeter, which translates to a much smaller window of error compared to using a tape

measure or hand-held laser. All of this provides an easier path to modeling and testing.

“It makes the design process easier for the designer,” said Rebecca Wu Norman, associate at M Moser. “It gives a more holistic, full picture view of the design than the old-school way of scanning space. It helps communicate inefficiencies in the design so that you can realize a higher level of design.”



Entryway rendering



Entryway