



The exterior of the WCAA's Michael Berry Administration Building consists of a metal panel wall system, with ribbon windows skirting the perimeter. The design complements that of the North Terminal next door.

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Wayne County Airport Authority's  
**MICHAEL BERRY ADMINISTRATION BUILDING**  
Arrives at Metro Airport, Departs from the Norm

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BY  
**MARILYN S. JONES-WILSON**

PHOTOS COURTESY OF JASON KEEN

Ten inches. That's how far apart the Wayne County Airport Authority's (WCAA) new Michael Berry Administration Building sits from the North Terminal of Metro Airport, Romulus. That's how much room Ghafari Associates had to design to, and Roncelli, Inc., had to construct, the new state-of-the-art, highly visible four-story steel-framed structure on shallow foundations.

Add that to the fact that the Detroit area's primary airport never goes to sleep, never closes, and you have the story of WCAA's new home.

Opened in August 2017, the new 85,636-square-foot building offers a bright, contemporary workplace to employees who have made do with offices in the cavernous, abandoned L.C. Smith terminal for nine years.

"That building, which was built in 1958, ceased being a terminal when the North Terminal was completed in 2008, so we've been using it as an office building," said Mark McPherson, project manager for Wayne County Airport Authority. "It's a huge building. There are offices up there that we live in, but it was really far too large. It was not designed for that purpose."

Over the years a number of studies were done considering where the workforce of over 200 could move to be most effective at overseeing and operating Detroit Metropolitan Airport, as well as Willow Run Airport near Ypsilanti. Another old terminal, the Berry Terminal, was in the running for a while.

"We did an assessment of the Berry and some space planning," said Scott Hahn, project director with Ghafari Associates architectural firm, Dearborn. "It was determined that the cost benefit of renovating that versus building a new one just didn't make sense."

After a series of other evaluations and master plans, it was clear that the best

location would be directly adjacent to the busy North Terminal, central to the WCAA's mission.

"It's really right in the heart of the airport," McPherson said. It was an open site, near to a large parking structure employees would use. "We're physically connected to the North



A bold reception area greets employees and visitors near the walkway bridge from the North Terminal to the Berry, which serves as the main entrance on the second floor. Beyond, a large conference room features brightly patterned carpet and blue accents.

Terminal, and all the other facilities that are really critical are in adjacent locations."

The new \$20.9-million Berry Administration Building demonstrates sustainable design that complements the architecture of the adjacent North Terminal building, and inspires continued growth and prosperity in line with former Wayne County Road Commission chairman Michael Berry's vision for the Detroit Metropolitan Airport.

"The Berry" has 230 work stations – primarily cubicles with a limited number of hard-walled offices – with plenty of flexible spaces for conference, training and informal collaboration. A skylight provides natural light over the central staircase and atrium that links the second through the fourth floors.

The exterior of the four-story building consists of a metal panel wall system, with ribbon windows skirting the circumference. The design complements that of the North Terminal next door.

**A Cultural Shift in Design**

The transition from the old space into a fresh, modern office has been dramatic for the employees. "The Airport Authority was very smart when they made the decision to move," Hahn said. "They are doing a cultural shift within their organization, so they reduced the number of offices to just a limited few.

"The team developed an open workstation concept and created a lot of variety of areas for teaming, formal interaction spaces, semi-formal, and then more relaxing places where you can build team chemistry," he said.

Calling it a "communicating stair," Hahn said that the open stairwell that vertically links the upper floors is a key component of the overall design concept. "You can interact with employees throughout the building that you normally wouldn't if you were just dealing floor-by-floor. Creative areas in public spaces allow for a quick sit-down to have a five-minute discussion," he said. By reinforcing team-

building, the design demonstrates a more modern approach to office spaces.

Unlike the WCAA's older location, the new building uses natural light to connect areas. In addition to the central stairway's skylight, ribbon windows around the perimeter of the floors bring light in, even given the nose-to-nose proximity of the North Terminal.

"We even punched openings from the office building into the terminal to try and get daylight into spaces that are abutting it," Hahn said. "That was one of the key things. We're trying not to have a certain hierarchy so that everybody has a view to the natural daylight."

Employees use aisles around the blocks of cubicles that allow communal sharing of the windows along the perimeter of the floor plans. Some closed-in offices and conference areas have full-height glass fronts, again to promote movement of light across the space.

Another aspect of the design was how to make a new building fit in with its older, very close neighbor. "We had a site adjacent to a

## MICHAEL BERRY ADMINISTRATION BUILDING

building that's been here for ten years. How do you design a new building so it doesn't look like it was added on ten years later?" Hahn said. "We borrowed similar materials that were utilized in the North Terminal to kind of blend, but the scaling is a little different, so it still has its own independence."

In the interior design, smart choices of furniture and finishes promote durability, not opulence, while emphasizing comfort and practicality. Custom light fixtures add the right note of style.

The lower level offers employees a fitness center, including showers – a feature that was not available in the original offices.

### Site Challenges

The challenge of erecting the Berry right next to a bustling international airport, given all federal security regulations and safety concerns, without ever interrupting service to any part of the airport, was a phenomenal achievement led by the Sterling Heights and Detroit-based Roncelli team. "The airport never closes," McPherson said.

The site chosen for the new building, tucked against the North Terminal's northeast end and adjacent to the terminal's passenger drop-off area, presented a construction challenge beginning with demolition of old foundations, abandoned utilities, and other hidden structures that were not indicated on the "as-builts."


"Treasures," said John Johnson, Roncelli senior project manager. "We called them 'treasures.'"

The footprint of the new building was so close to the terminal that the foundation pads had to be staggered to fit amid existing foundations. "We carefully placed the new pads in between the existing foundation system," said Paul Swift, project manager with Roncelli, Inc.

















Since the Berry shares communications, power and other critical utilities with the rest of the airport, coordinating connections and transitions required extensive communications between the Roncelli team and Airport Operations.

"All of the building services tie into existing





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services," Johnson said. "Making those connections and extending those services had to be done without impacting the airport's daily operation or their customers - the travelling public. That takes a vast amount of teamwork and understanding the design's intent and the airport's operations to ensure the work gets executed safely and without compromising security."

"Once we broke ground, we had a number of challenges to face, working so close to a 24-hour facility," Swift said. "We were rerouting existing utilities, including storm sewers, sanitary lines and communication links from the existing terminal. For example, there was a 16-inch water main running through our site. All of those utilities were active."

Communication with all stakeholders was vital. "It takes a number of pre-construction meetings, not just with ourselves and our subcontractors, but also with the Airport Authority," Swift said.



The focal point of the Berry is the dynamic steel stairway with skylight and glass railings that anchors an atrium shared by the three main floors. With elevators on one side, and kitchenettes with vending machines on the other, the atrium creates community spaces for employees to meet up and recharge.

Part of the solution lay in phasing the project appropriately and coordinating construction activities, including the tie-ins and cut-overs with active airport operations. "There were sequenced shutdowns in order to reroute critical systems without affecting the terminal's operations," he said. "This was particularly critical where the two buildings intersect. This was all accomplished without any interruption to airport operations."

As an example, "We had to demolish the parking lot, which created dust. At an airport, you can't have dust, so we had to keep it wet. We had to put filter fabric on the mechanical room louvers because those systems are constantly running and feeding the terminal," Swift said.

The only time any portion of the terminal was blocked off was during installation of new windows that required portions of existing siding to be removed, and new structural support put in, along with some drywall rework. A temporary enclosure was erected

on the inside of the terminal that limited foot traffic in that area without interrupting airport operations.

#### Making Connections

Among the challenges related to utilities, there was an existing AT&T duct bank that services Southeast Michigan and the Federal Aviation Administration control tower that runs directly through the center of the Berry building. "We had to work around it carefully as we installed our foundations and underground systems," Swift said.

"There are two elevators in the building that were supposed to be side-by-side," Hahn said. "We had to design the elevators separated because that's exactly where the AT&T duct bank is located. It was less expensive to make the elevators not side-by-side than relocating the whole duct, which would have been a major task." The space between the elevators has been turned into an attractive area for casual seating.

Another obstacle to overcome concerned routing thousands of feet of piping for steamed and chilled water along the roof. Air Operations Area security regulations restrict any access or activity to the roof of an airport, including access to aprons, runways and open space without permission. An electronic photo-eye detects any movement in order to monitor roof access and security for the safety of the airport.

"All personnel who worked on that portion of the project had to go through the airport credentials review process," McPherson said.

That also meant restrictions in getting the piping up to the secured roof area. Any hoisting or installation of the piping could not interfere the operation of any airport gates.

"The challenge was getting pipe to the roof, confirming that the piping supports as designed would work with the existing structure, and finding routes through the terminal to access the roof," Swift said.

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“Coordinating the cranes with the FAA presented some challenges,” Hahn said. A solution was worked out to hoist the material up at two non-gate locations using a gantry-style hoist and specially fabricated carts that would not damage the roof.

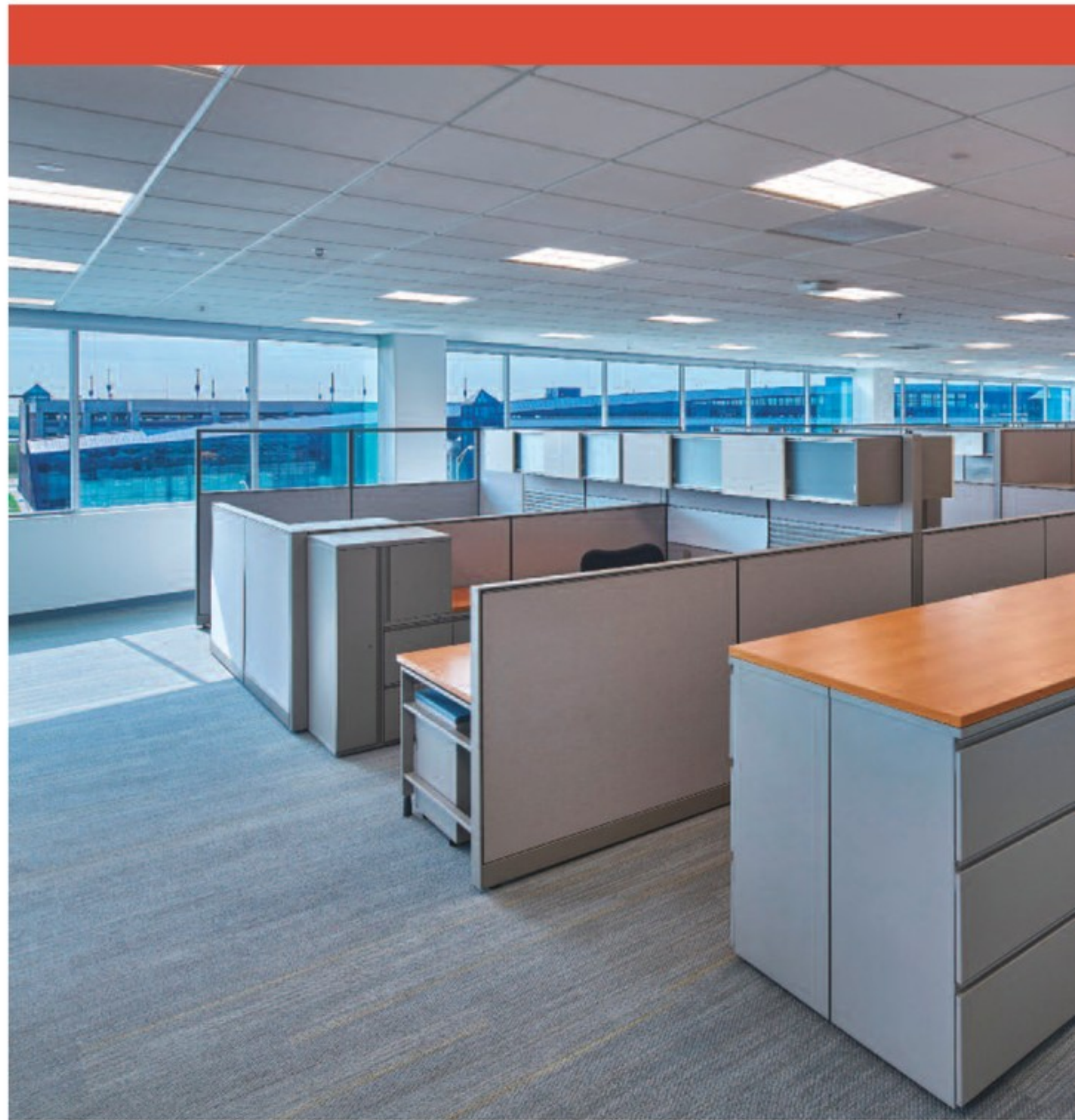
The permanent installation, just barely visible from the fourth-floor windows, runs out almost a thousand feet along the terminal roof.

### Bridging the Gap

Security is also paramount in controlling the connection between the Berry building and the North Terminal. Most employees enter their new workplace by entering the North Terminal near their parking garage, riding an escalator up and crossing the “bridge” or walkway into the second floor of the Berry, where there is a security reception desk.

“You walk through the door, through this bridge, and that’s physically the only connection point between these two buildings for security purposes,” Hahn said.

Like the employees, the public takes the same route across the bridge through the



Modern office design with low-walled cubicles offers a refreshing change from the hard-walled offices employees occupied in their old building, a cavernous and repurposed terminal. Aisles around the workstations and along the windows ensure that lighting and airport views are shared.

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terminal, but bypasses the secured area of the terminal. “We’re trying to separate the public from the air field’s side,” McPherson said. “It’s a nice feature, and makes it convenient for the visitors to go between the Berry and the terminal.”

The proximity between the two buildings – as close as ten inches in places – presents an opportunity to compare the exterior tile, old and new. The blue color is a close match. “Given nine years of weathering, we tried to make it look like the new tile is not an add-on,” Swift said, “and more like it’s part of the whole facility.”

McPherson jokes that the two buildings are close enough that, “You can see what’s on the bistro’s menu” over in the North Terminal.

On the floors where the Berry is closest to the terminal, the windows are at a height of over six feet. That allows light to pass through the high windows of the terminal, but neither side can see much more than that.

“You can’t really look and be distracted, nor

can people see you working, but you get the light effect,” Hahn said. “These windows are set just up above eye-line, and now they’re looking into the terminal.”

Of course, the airport’s lights are on for 24 hours. That area of the office building has the least natural light, but there are outside windows at each end which mitigate that.

### Good Engineering

Considering all of the challenges of security, utilities, and maneuvering close to the existing terminal, what’s remarkable is how well-planned the design and construction were, resulting in few, if any, changes.

“Late changes are not uncommon on a job like this,” Hahn said. “A lot of design decisions were made 18 to 24 months ago. The Airport Authority’s needs didn’t change in that timeframe. They were forward-thinking enough to understand what their needs would be. The key is that it wasn’t major changes. It was just the fine details to make it a better building for their use,” he said.



to reduce operational costs and make it a better building for the users.”

This was accomplished with careful consideration of the budget. While a government body, the Wayne County Airport Authority receives no public tax funding and is self-sustaining.

“I give Mark and his team a lot of credit for minding the store, making sure we were working to the budget,” Hahn said. “We had multiple design options and kept going back to ‘What’s the budget, what’s the budget.’ We made those decisions early on in the design process. We had designs that would’ve made it a little jazzier, but that’s not the intent of the building. It’s to service the airport. It goes back to making smart decisions, but not being opulent.”

The preconstruction process was another factor in ensuring few change orders. “One of the biggest advantages to this team was everybody looking ahead in terms of what construction was coming up next in the work sequences, and getting out in front of it in terms of making sure we understood the details and understood the design,” McPherson said.

**Plenty of Room to Confer**

The finished product is a workplace that the Airport Authority can be proud of. For months, WCAA employees have watched the building grow and their excitement mounted as move-in day approached. “When the skin went on they started asking when we’re moving in,” McPherson said.

The contrast between the ghost-town atmospheres of the L.C. Smith terminal, with its hard-walled, separated offices at the top, and the new Berry, with its dedication to open spaces and shared light, has been dramatic.

The atrium, with its skylight and central steel stairway and glass railings, is a magnet for informal gatherings. The second, third and fourth floors each have a kitchenette with vending machines. On the other side of the stairs, the furniture selection between the two elevators that were split to make room for the AT&T duct offers a natural spot for coworkers to meet up.

“The core of the space is kind of a Town Hall stacked vertically through the building,” Hahn said.

Built to LEEDTM (Leadership in Energy and Environmental Design) standards, the building culminates the efforts of the whole team to make the project a success. “For LEED, you have to have an owner or client that’s committed, and you have to have the construction and design team working together to achieve that,” Hahn said. “Each team member has a role to getting it certified.”

An advantage was that the Airport Authority determined very early that it wanted to go for LEED certification. “It’s very difficult to get LEED once you get too far downstream, so the building was designed with that in mind,” Hahn said. “We made smart choices, specifically in the mechanical systems, going to a more efficient system and tying into the existing central plan here. We chose LEED points that make a difference and not just to get a point. So, it’s good engineering; it’s good sustainable design methodology in the way we put the building together. We wanted

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Most of the floors have similar layouts, featuring cubicles with 46-inch walls to allow light from the windows to flow over the entire workspace. The aisles surrounding the cubicles make the window views accessible to everyone, while interior walls on the lower floors peek into the terminal just enough to share light. Shades all around the building windows block out morning glare, filtering 95 percent of direct sunlight overall, and 97 percent in the conference rooms.

Offices on the top floor are high enough to look over the North Terminal roof and see planes taking off and landing.

The human resources department boasts a



The public and employees enter the Berry building via an enclosed walkway bridge from the airport's North Terminal. At some points, the distance between the two buildings is as close as ten inches.

spacious enclosed training room with computer workstations. That department's need for privacy and security are met with hard-walled separations, while a swipe-in

identification system controls access. Swipe-in security is also installed for the hard-walled executive offices on the fourth floor.

Throughout the building, the interior design favors modular, movable furniture to encourage collaboration and coordination. The choices favor both semi-formal and informal connections between co-workers.

Perhaps the biggest contrast between their old offices and the new building lies in the predominance of conference rooms. "Despite living in that huge building, we had only four active conference rooms over

there. It was always a hassle trying to get one," McPherson said. "I think we've got 17 conference rooms in the new building, so that's a highlight for just about everybody."

There are two large state-of-the-art conference rooms on the first floor that serve public meetings and bid meetings, for more than just the employees. Conference rooms have electronic message boards where information can be transferred to other locations. And, if needs change, some of the larger conference rooms can be split into offices.

"A lot of the conferencing spaces are glass so that you can see the activity inside," Hahn said, "reinforcing the natural daylighting." The informal spaces – officially known as collaboration areas – further the sense of sharing a dynamic work environment.

The feedback from the employees has been overwhelmingly positive. Considering all the challenges that went into the creation of the WCAA Michael Berry Administration Building, the transition to a modern, highly functional and creative workplace has been very smoother.

"When it's done, it all looks like it was so easy," McPherson said. "It always looks easier than what it was."

That, in itself, is the true measure of success.





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