

Architectural Significance in Metal Buildings: An Educational Series

# JACKSONVILLE UNIVERSITY BASKETBALL PERFORMANCE CENTER

Jacksonville, FL



Created in coordination with Quinn Evans,  
Balfour Beatty and Harrell Construction Co., Inc.

Photo courtesy of Balfour Beatty







Photo courtesy of Balfour Beatty

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## PROJECT DETAILS

**Building:** Jacksonville University Basketball Performance Center

**Location:** Jacksonville, Florida

**Client/Owner:** Jacksonville University

**Size:** 16,500 square feet

**Site:** 2 acres

**Budget:** \$10 million

**Completion:** 2022

**Metal Building Manufacturer:** Varco Pruden

**Architect:** Quinn Evans

**Engineers:** A+F Engineers (structural)  
Taylor & White, Inc. (civil)  
James Posey Associates (mechanical, electrical, plumbing)

**Construction Manager:** Balfour Beatty

**Constructor/Erector:** Harrell Construction Co., Inc.

**Athletic Consultant:** SportsPLAN Studio

**AV/IT/Acoustic Consultants:** Convergent Technologies Design Group, Inc.

**Landscape Consultant:** Janet O. Whitmill, RLA, Inc.

**Graphics Consultant:** Younts Design, Inc.

**Translucent Panel Manufacturer:** Major Industries, Inc.











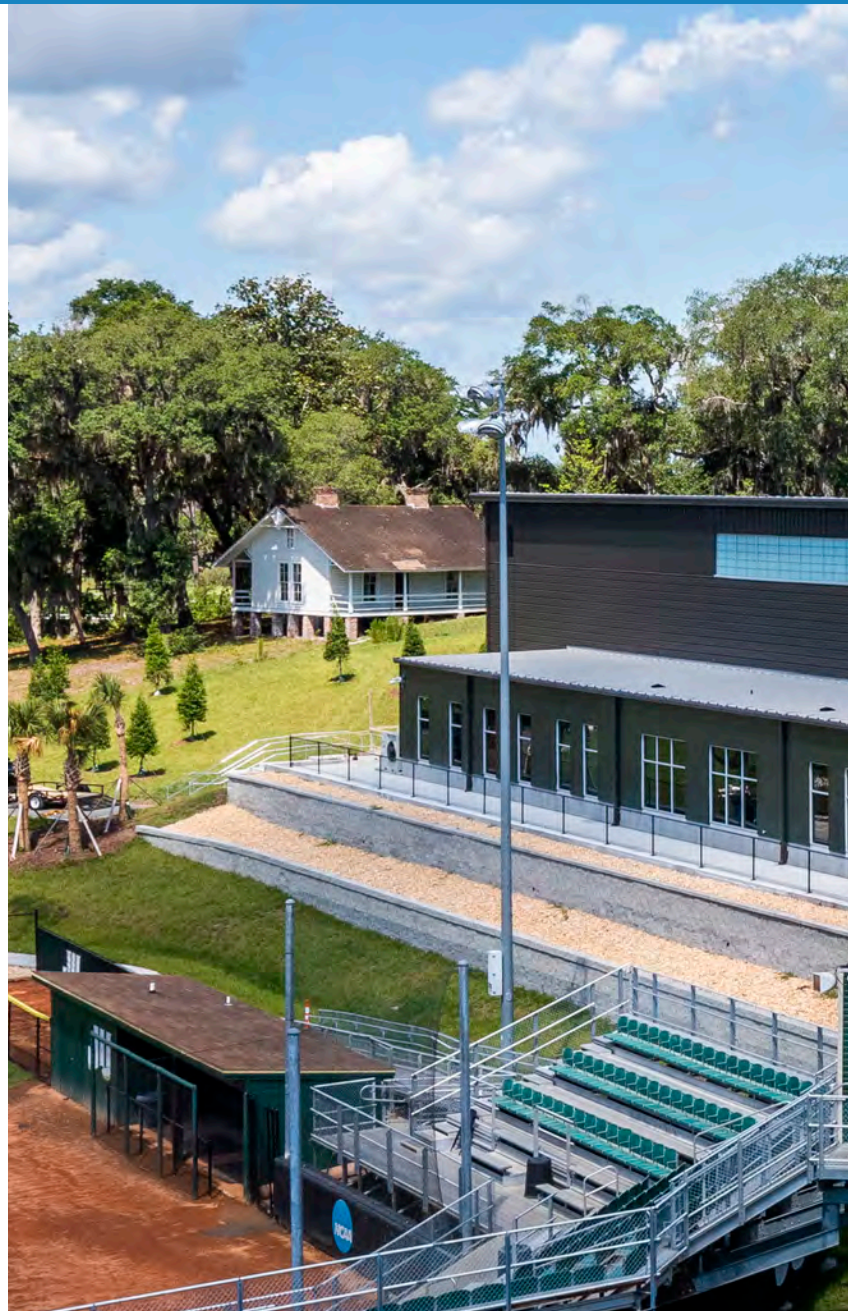
“The JU Basketball Performance Center provides a home for our student-athletes, enhances our ability to recruit quality individuals and allows them to be better prepared academically and athletically. This is a major component of a larger-scale plan to chart our successful future in men’s and women’s basketball.”

- Alex Ricker-Gilbert, Senior Vice President and  
Athletic Director, Jacksonville University

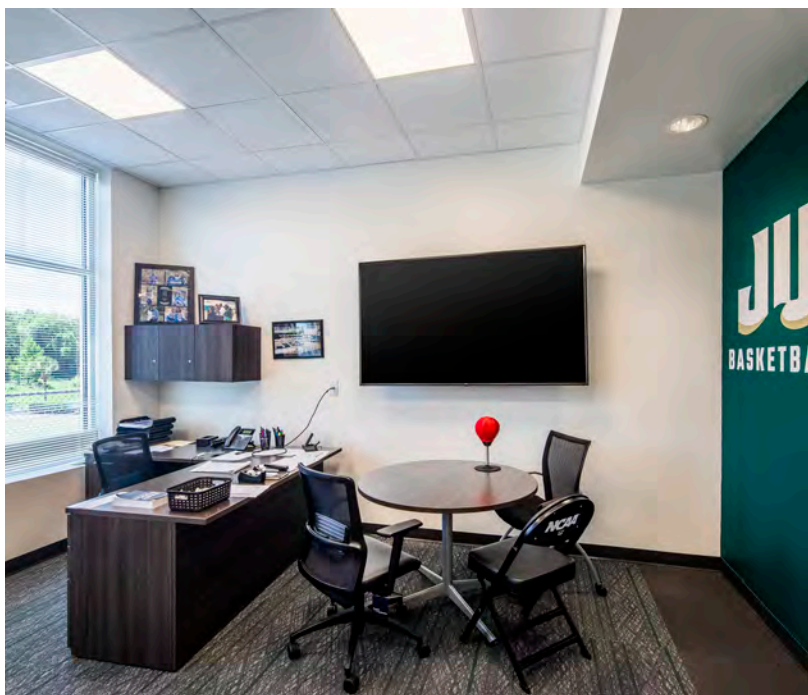
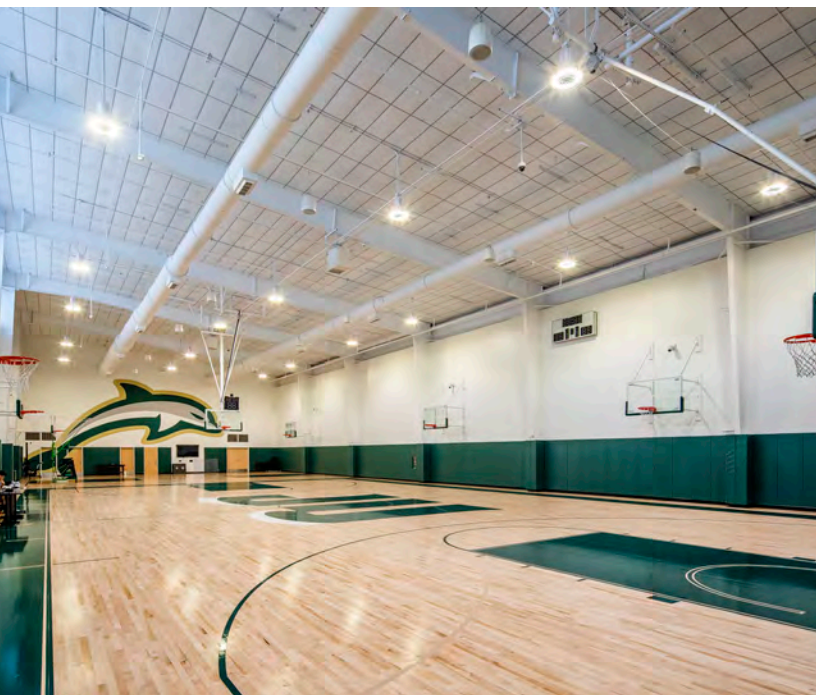


# PROJECT DESCRIPTION

Jacksonville University's (JU's) \$8 million Basketball Performance Center houses the institution's men's and women's basketball programs and related day-to-day operations. The nearly 17,000-square-foot practice facility features coaching staff offices, a training room and a full court and a half court of playing surface. The building provides 24-hour gym access, a valued amenity in collegiate athletics, and a weight room directly off the practice floor that is designed to both improve individual performance and provide injury-prevention programs.









"This project has been a top priority for our university and athletics department for several years," says Alex Ricker-Gilbert, senior vice president and athletic director. "Facilities can set programs apart from their peers, and in the sports of men's and women's basketball, the landscape is increasingly competitive. The JU Basketball Performance Center provides a home for our student-athletes, enhances our ability to recruit quality individuals and allows them to be better prepared academically and athletically. This is a major component of a larger-scale plan to chart our successful future in men's and women's basketball." (1)

Adjacent to the historic Swisher Gymnasium, which serves as the university's game day facility, the JU Basketball Performance Center solves logistical issues and creates more functionality and connectivity between the court and the coaching offices. (1) Now with two full-size courts on campus, the university's basketball, volleyball and cheerleading programs can more easily schedule practice time, intramural clubs can play indoors, and the new center unlocks opportunities for summer youth programming.

## Design Priorities

### 1. Design a massive space that doesn't overwhelm

Nestled into a hill next door to Swisher Gymnasium and uphill from the university's softball fields, the JU Basketball Performance Center proves that physical mass doesn't have to overwhelm. The nearly 17,000-square-foot facility reaches two stories high, housing one NCAA-regulation basketball court and an additional half court. Coaching offices flank the courts on the south side of the building, providing clear views of players on the court. A large glass curtain wall forms the front facade of the new center, opening onto a 560-square-foot lobby where players relax and lace up for the court. The curtain wall extends to an adjacent weight room, creating views into a light and lively space for strength-training activities.

A short, flat walkway from the front door of the center takes players, coaches and referees from the practice facility to Swisher Gymnasium on game days. "Proportionally we didn't want the facility to be a behemoth. To reduce its mass, we tucked the building into the hillside, excavating deeply enough so the entryway could be placed at the same level as Swisher Gym," says Mark Nook, a principal at Quinn Evans Architects.

Architectural elements break up the massiveness of the exterior facade. From the university's main arterial roadway above, drivers and those on foot gaze on the performance center below where a variety of metal panels artfully provide visual interest and break up the scale of the exterior.

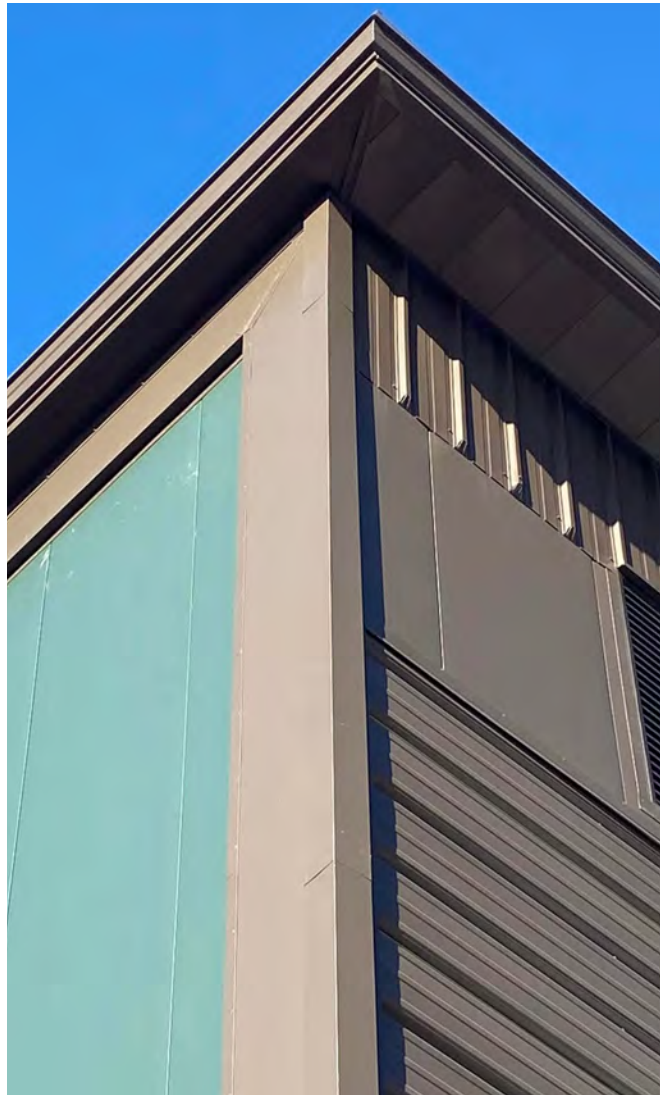


Photo courtesy of Harrell Construction Co., Inc.

"We used a variety of standard metal panels in unique ways—laying them horizontally and vertically—to create visual interest and minimize the building's mass," Nook says. "Nothing we used was a custom part; it was all from Varco Pruden's available building products. Even the bronze framing on the front side of the building was done by stacking two 2.5-inch insulated metal panels on top of each other. In this way, we were able to create a very dramatic transitional look without the added cost of customized pieces."



"The standard metal panels that were used on the north and south sides of the building varied in type and in thickness—from 1.25 to 2 inches," adds Jason Harrell, vice president of Harrell Construction. "For example, the north side of the building features an R panel, a reverse R panel and a flat soffit panel. We were able to keep the exterior facade completely flush by designing the internal structure of the metal system to move in and out to accommodate the varying thickness of the panels," he says.

To avoid overpowering the look and feel of other nearby academic buildings, the metal roof of the basketball court slopes downward toward the roadway to blend with the scale and pitch of the student center and dormitories across the street and to further reduce the building's scale.

The office wing on the south side of the building juts outward from the basketball court, breaking up the massiveness of the exterior structure and providing visual interest to softball players and fans on the field below.

"Down the hill, on the south side, there's a softball field that's almost a full-story drop from the center," Nook adds. "We didn't want the building looming behind the field, so in addition to varying the mass of the south wall, we created stepped walls to further reduce the building's imposing presence."

A translucent panel, perched high above the office corridor, provides natural diffused light onto the basketball court below and further serves to lighten the look of the building facade. (2)

"When you think of a metal building, you think of a shed, a single volume that doesn't change much in scale, massing or material. But we've shown that doesn't have to be true. You can house a large volume within a metal building system but do something very interesting in terms of massing, shape and scale by simply using a standard variety of metal panels," Nook says.



Image courtesy of Quinn Evans



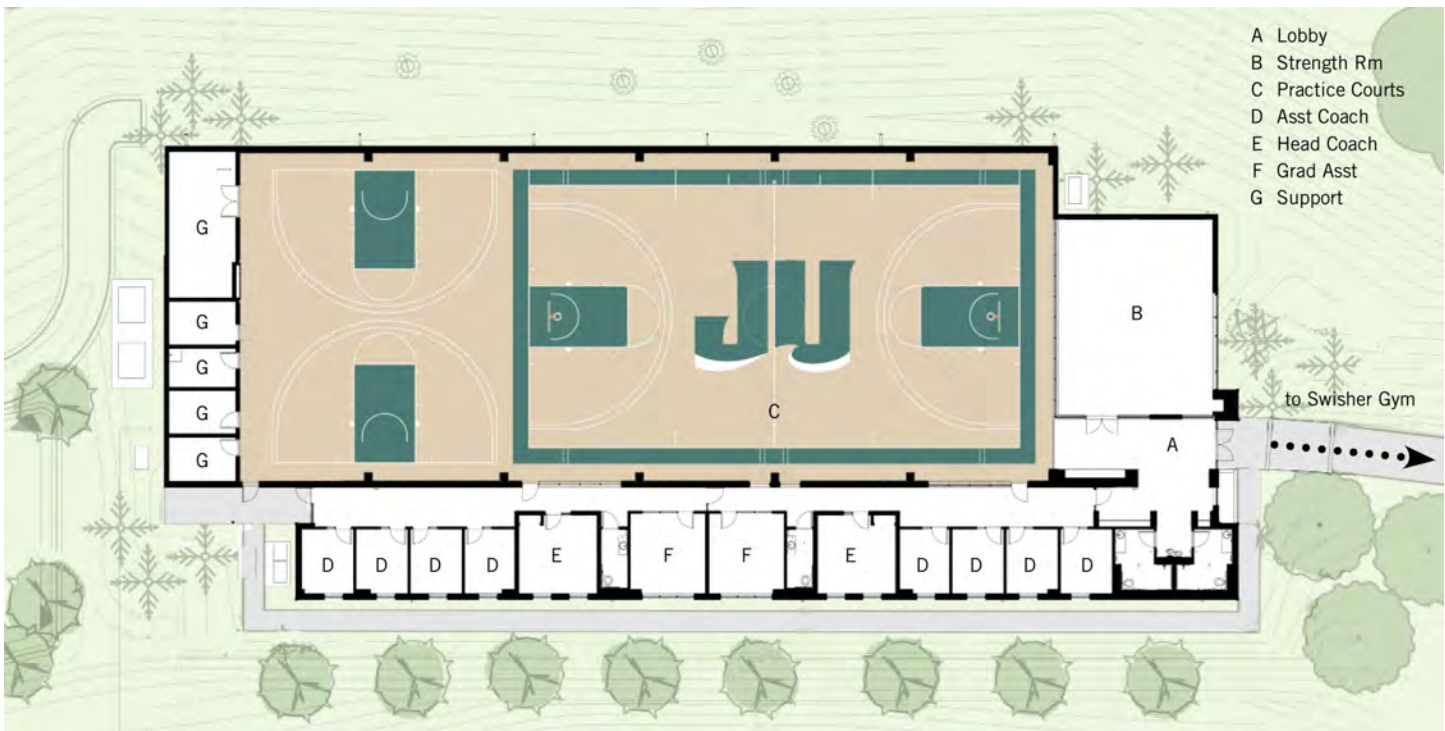


Image courtesy of Quinn Evans Architects

## 2. Create a “home” for basketball athletics

The large interior of the JU Basketball Performance Center could feel immense; however, the design team carved out functional, intimate spaces for athletes and coaches to gather. The light and inviting lobby serves as a gathering space for players, with a built-in bench for changing shoes or hanging out before hitting the court or weight room. A private restroom offers amenities for referees. “Previously, there was no changing room for referees. This gives them a place to suit up or take a shower and then be able to walk directly across to Swisher Gym on game days,” Nook says.

The office suite on the south side of the building brings together both men’s and women’s basketball coaches into one building. The area features two head coach offices, eight assistant coach offices and two workspaces for graduate assistants and athletes needing to decompress, visit and do homework. “With 24/7 access to the building, students can shoot hoops, watch training videos, study, spend time with their coaches and train. It allows us to build relationships with athletes organically. It’s a place where students want to hang out and is much more a home than a gym,” Ricker-Gilbert says.



Photo courtesy of Balfour Beatty

“The performance center allows us to build relationships with athletes organically. It’s a place where students want to hang out and is much more a home than a gym.”

– Alex Ricker-Gilbert, Senior Vice President and Athletic Director



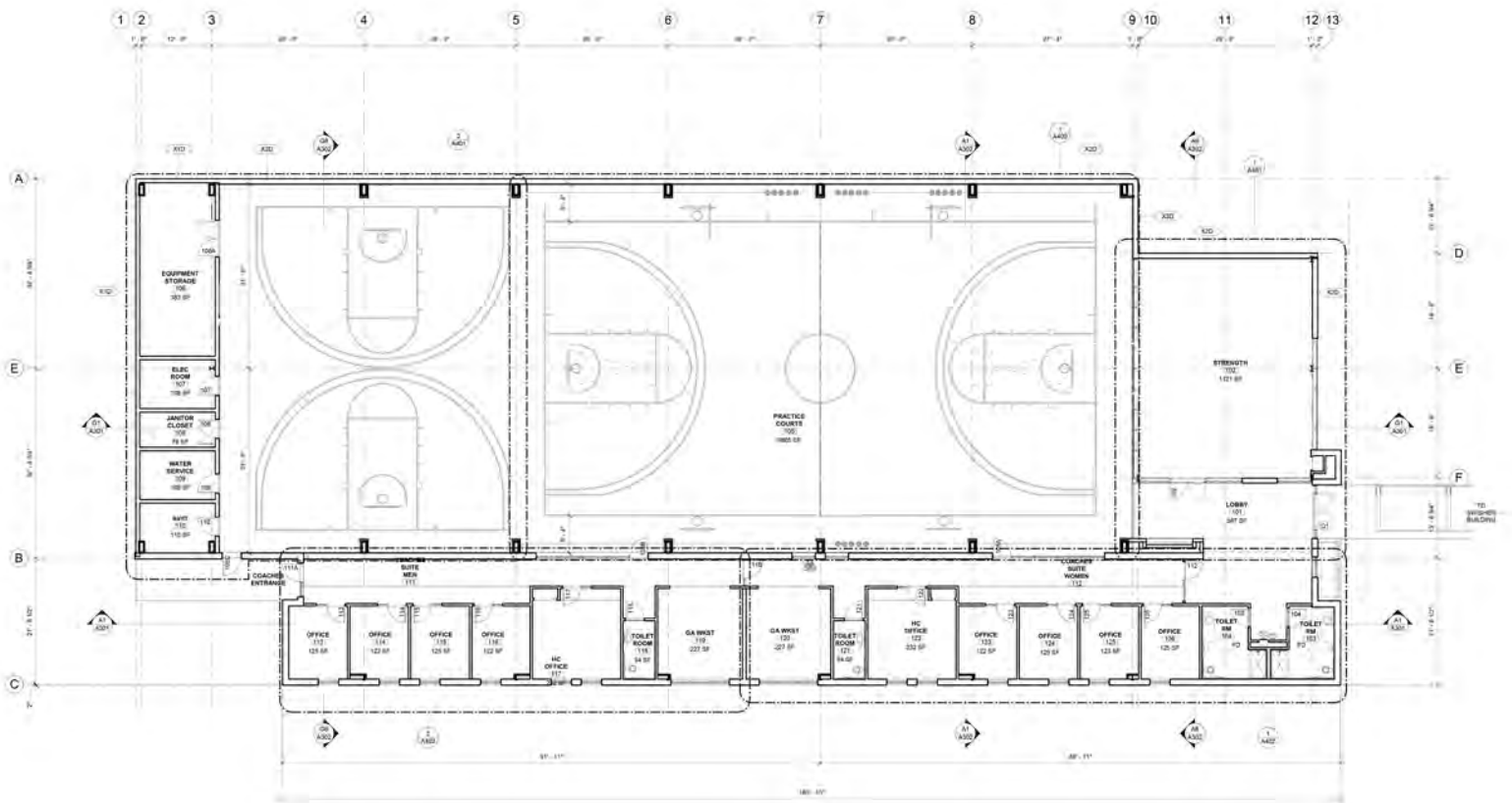
### 3. Create a flexible interior space

Many parameters define the interior design of the facility, according to Nook. "There's a lot of moving parts with an active basketball gym. For example, summer clinics are an important revenue source for the university. The gym has a full court that replicates the game day court and a half court that runs in the other direction. Basketball hoops are designed to be folded up or let down to allow for three half courts for summer basketball clinics," he explains.

"For the first time this year, we had six half courts for summer basketball clinics between the JU Basketball Performance Center and Swisher Gym. We were able to accommodate 28 men's and 21 women's high school teams, as well as youth camps, parent/child camps and elite camps. It was so great to be able to bring the community together during the summer, and the clinics offer potential recruiting opportunities later on as the kids get older and start looking at colleges," says Ricker-Gilbert.

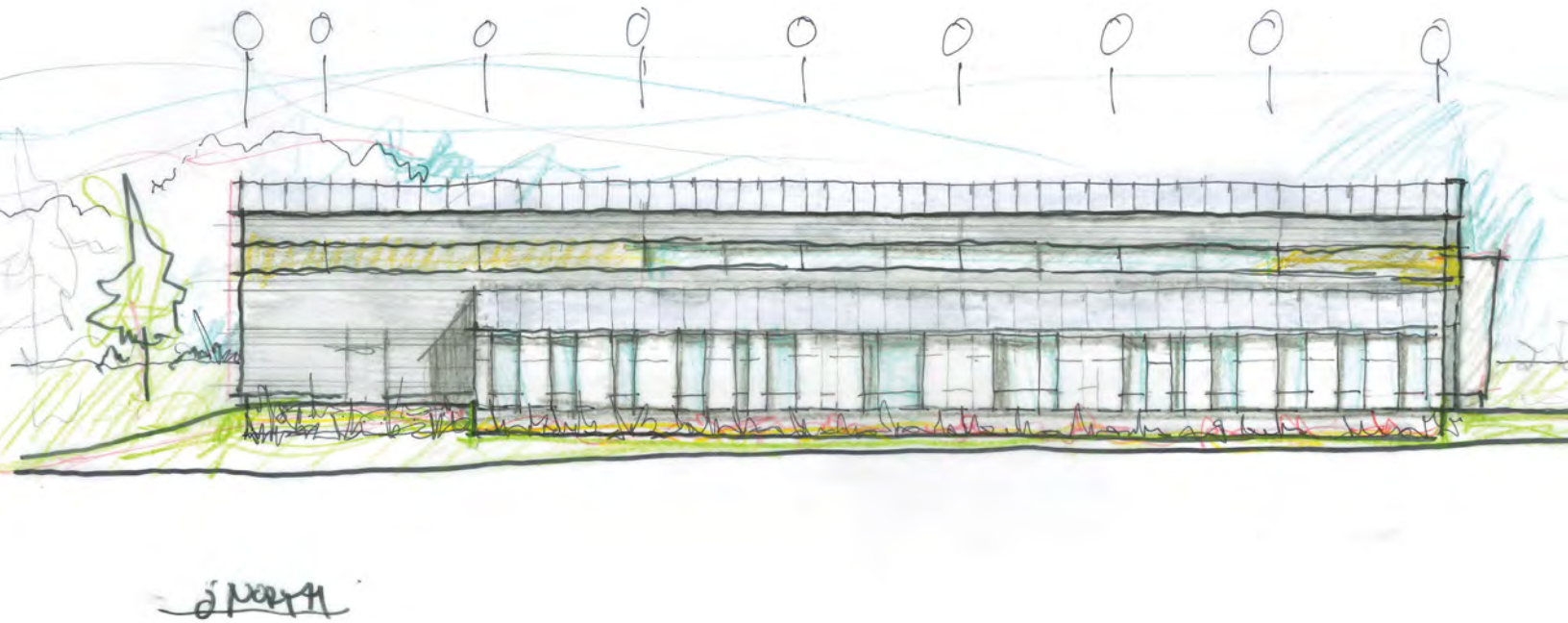
While coaching offices offer views of the court, coaches can capture and replay practices for training purposes thanks to cameras mounted around the gym and TVs in the gym, lobby and weight room. "The cameras offer an eye in the sky," Nook says. While NCAA regulations dictated the elevation and volume of the court, audio-visual technology determined the placement of structural columns. "We needed to make sure each camera had a good line of sight to capture everything on the court. Some columns were shifted by a couple of feet to accommodate this need."

Soundproofing allows for two different programs to use the facility at one time. "We can have 15 to 20 student-athletes lifting, working with their coaches and playing music in the weight room, while another team practices or watches training videos on the court," Ricker-Gilbert says.





# PROJECT GOALS & OBJECTIVES



The JU goals for the performance center are straightforward and bring clarity to the planning and design process. Here are the main goals and objectives.

## 1. Enhance capacity for growing university athletics programs

"Our athletics programs are growing, and this facility allows us to expand our capacity on campus," Ricker-Gilbert says. He explains that before the introduction of the JU Basketball Performance Center, five athletics programs shared Swisher Gymnasium next door. "That single court would get cramped pretty quickly with five teams sharing it, making it hard to practice and improve performance, as well as difficult for recruiting," he says. (3)

The performance center cuts the number of teams sharing Swisher Gymnasium from five to three, freeing up the practice schedule and giving the men's and women's basketball teams 24/7 access to a facility dedicated to the university's basketball program. "Before, if a student-athlete needed to work on his

or her free-throw shooting, it would be hard to get in for practice. You might have cheerleading in the gym from 8 to 10 p.m., when a player really needed to practice. Having a devoted facility for basketball with 24/7 access allows players to get better at their craft," Ricker-Gilbert says.

That dedicated facility for basketball frees up scheduling at Swisher Gymnasium for additional sports opportunities as well. "Students can now schedule Swisher Gym for intramural sports and club events," he adds.

In addition to scheduling benefits, the facility brings coaches together with athletes. "Before, coaches' offices were scattered on the other side of campus. Now athletes have access to their coaches right off the court, and coaches can keep track of student progress with a view of the court from their offices," Ricker-Gilbert says.



## 2. Design and build during a pandemic, on a busy college campus

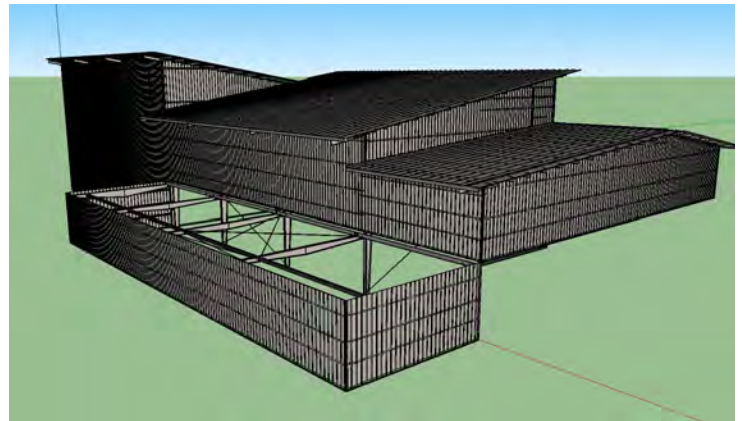
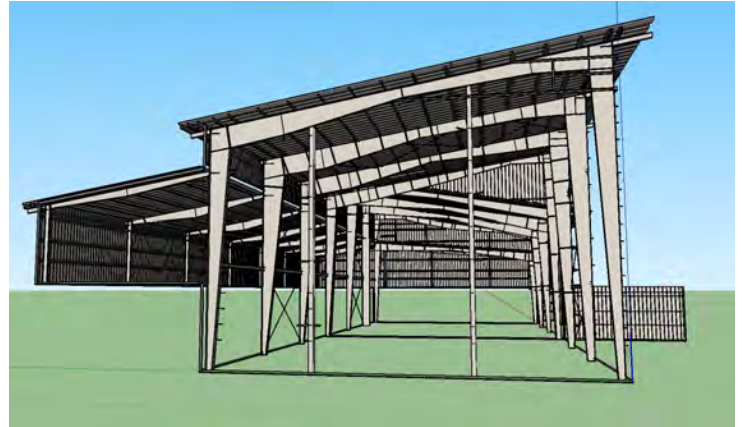
The COVID-19 pandemic created a challenge for the design and construction teams since restrictions impeded in-person meetings. The teams shifted almost entirely to remote meetings to work through logistical challenges such as shifting the internal metal columns to accommodate placement of the bird's-eye camera system on the court. "Oftentimes, by the end of a meeting, I'd have a new building information model (BIM), showing how a tweak or adjustment, like moving a column a foot or two, would work," Harrell says. (4)

He cites another example in the design of the large glass wall on the east side of the building. "The curtain wall is supported by the metal building structure. It's large, heavy and expensive—and if you don't get the design right, it can cause problems. With computer modeling, we could lay out the frame of the building and show exactly where all the connection points were so the project team could accurately design and price the curtain wall. It made a big difference in the success of the project and was really the only way to make it work," he says.

As construction proceeded, the project team on the ground resolved challenges in creative ways. "The project manager mounted a camera on a hard hat, capturing photos and video as he walked through the site so I could remotely track progress," Nook says. "If something at the job site wasn't working, I could lay eyes on what the team was concerned about and help to resolve potential issues remotely."



Images courtesy of Harrell Construction Co, Inc.



"With computer modeling, we could lay out the frame of the building and show exactly where all the connection points were so the project team could accurately design and price the curtain wall."

— Jason Harrell, Vice President,  
Harrell Construction

Dave Campbell, project executive at Balfour Beatty, explains that a metal building offers value for the client in three distinct ways: "First, a metal building offers quality and peace of mind from structure to envelope. Second, there's better predictability in schedule from both a procurement and installation standpoint. And third, a metal building is less expensive than a conventional steel building."



With a year of preplanning work and fabrication, the team hit the ground running once the system elements arrived on-site. “We had the roof up in less than a month, allowing trades to begin work on the inside of the building while we completed construction,” Harrell says.

Campbell credits the strength of the team in completing construction in under a year. “People build projects, not companies. It takes talented individuals like Mark Nook and Jason Harrell to come together and accomplish a goal. Talent and teamwork make the difference,” he says.

### 3. Design and build a basketball practice facility worthy of an NCAA Division 1 basketball team (5)

Campbell credits Ricker-Gilbert in facilitating the project on campus. “We couldn’t have done this project without Alex. He brought together all the stakeholders. Everyone has different needs and wants, and he had to make tough choices on budget and scope. He kept the iconic value of the project and was able to deliver the project within budget,” he says.

Campbell explains that the project was originally a three-story, custom steel building. When the university reduced the budget to three times less than the original scope, Ricker-Gilbert asked what could be done that would still impress. “I knew from my previous work with Jason Harrell that a metal building could be designed in a way that would make it visually interesting and achieve the cost savings needed to get the university what they needed,” he says.

Harrell explains that a metal building typically costs about 30% less than a conventional steel building. In addition to cost efficiencies, the building

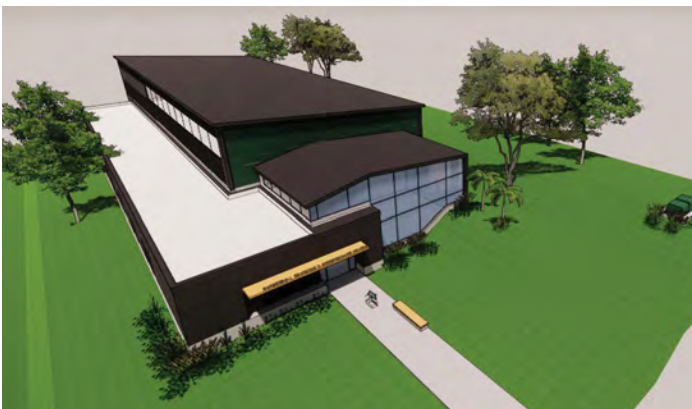


also offers strong insulation advantages to keep players cool on the court. “With insulated metal panels, there’s a dense layer of foam between the outside and inside panels. There are no gaps where air can escape. Furthermore, there are 10 inches of insulation in the roof with an R-value of R-35, which exceeds code. To take the roof from R-30 to R-35 amounts to pennies on the dollar with a metal building system,” Harrell says.

“This is the largest project that Jacksonville University Athletics has done in decades,” Ricker-Gilbert adds. “The way the center was constructed with the colors, lighting, windows and finishes gives it a real ‘wow’ factor. It’s open, bright and beautiful.”

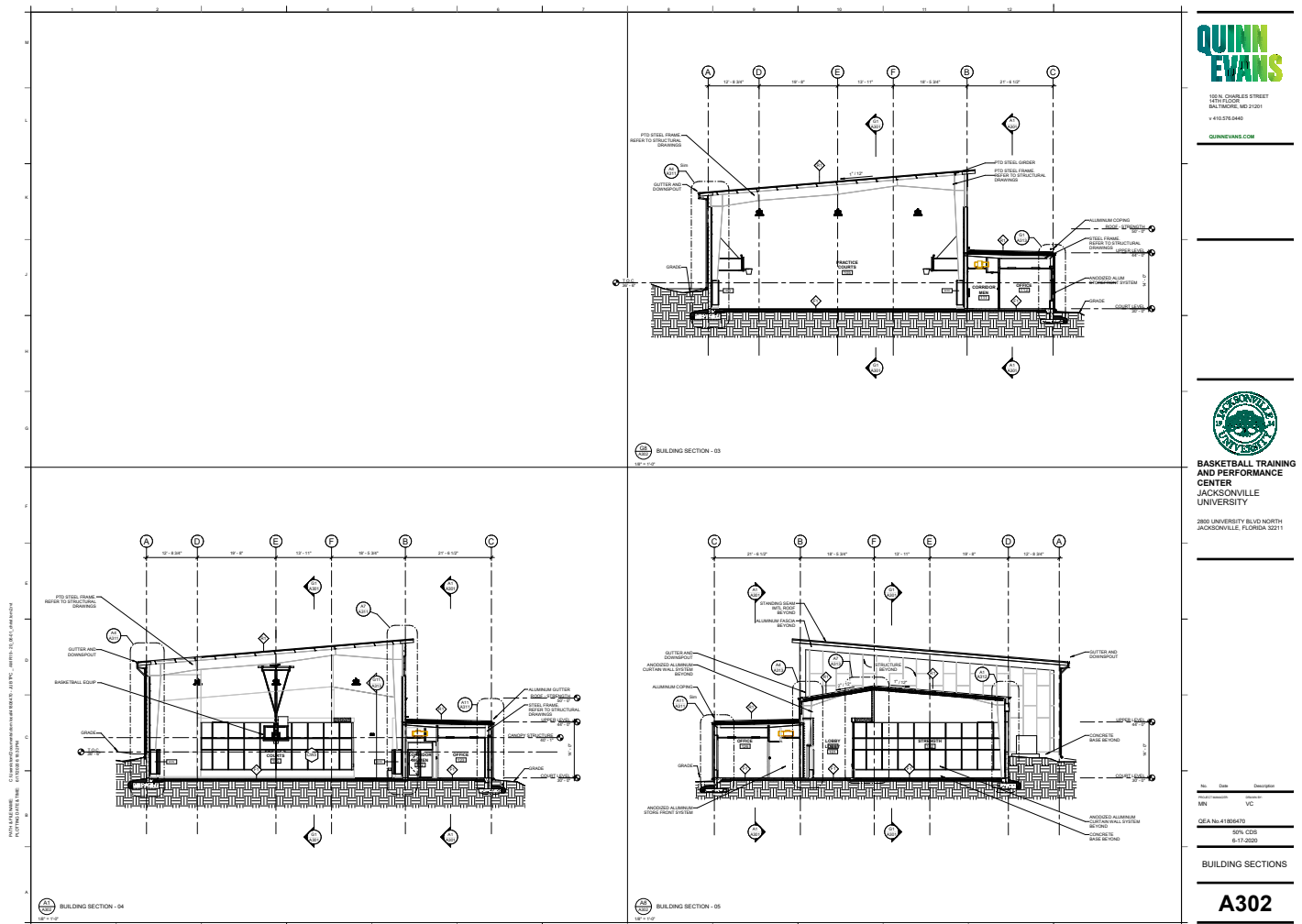
Ricker-Gilbert explains that the Division 1 basketball program is engaged in an arms race of sorts when it comes to university facilities. “Potential recruits want to see what you have to offer from a facilities perspective. Not everyone has a basketball practice facility. For new recruits, it’s impressive. The center really differentiates us from other schools and helps us be more competitive in recruiting,” he says.

Ricker-Gilbert charted an improvement in player performance when the new facility opened in 2022. “We had our best year in 35 years in men’s basketball, winning 21 games and making it all the way to the championship. On the women’s side, we also had an improved season. The practice facility gives athletes the space to practice, get stronger and improve their performance,” he shares, adding “The JU Basketball Performance Center is a vision of our president, a JU alum who really cares about our athletes. A lot of people had a shared goal to make this happen. This facility is as nice as those at schools in the Power Five conference at the highest level of college athletics. It makes the student-athlete experience better.” (6)



Images courtesy of Harrell Construction Co., Inc.





## Important Notes

For Campbell, the JU Basketball Performance Center is another great structure built by Balfour Beatty. "We get to build some of the most interesting and complex buildings in the U.S. It's the best feeling in the world when you can add such tremendous value. Jacksonville University trusted us to do the right thing, and we took that trust seriously," he affirms.

When designing and building with a metal building system, Campbell says it's important to understand from a procurement standpoint that the foundation design is dependent on the final shop drawings for the metal building. "The placement of columns, for example, will change. The building must be designed first before the foundation," he says.

Harrell advises architects and engineers to capitalize on common parts and pieces. "These parts work, we're just putting them together in new and different ways. Standard parts and pieces are your friend and allow you to save

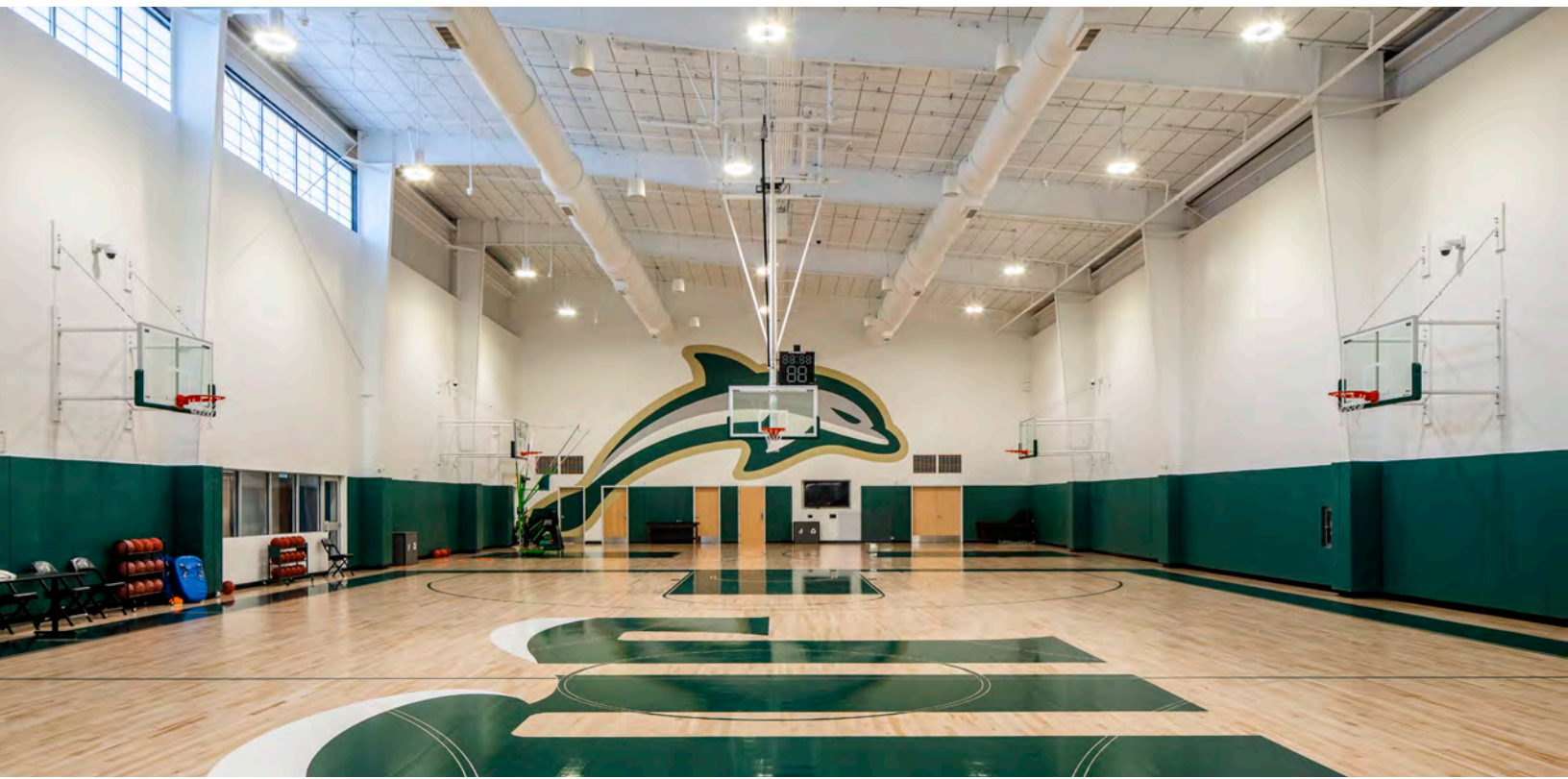
a lot of money and time. When we ran across a limiting factor, we were able to find a commonly used product that fulfilled the need and still achieved the look we wanted without spending a whole lot of extra money on a customized part. It allowed us to keep the project budget-friendly."

A native and current resident of Jacksonville, Florida, Campbell enjoys driving by the new performance center. "I got to help build something really amazing in a town that I love and grew up in," he says. "Maybe one day my kids will go to Jacksonville University, and I can say, 'Hey, your dad built that.'"

"There are really no limits if you follow a few simple rules," he adds. "The Jacksonville University Basketball Performance Center achieves a look that is individualistic, iconic and eclectic."



# RELEVANCE FOR STUDENTS



Nook says that every architect should learn to be an active listener. He says, “Don’t go into a project with preconceived ideas. You may have expertise but give your clients the time and space to explain what their needs are. Walk a mile in their shoes before you ever put pen to paper. A design project is very collaborative, and there’s often back and forth with the client before you settle on a final design—‘This is what I heard, and this is what it means in three dimensions. Is that the right direction, or do we need to adjust?’ When you actively listen to your clients, the solutions that you bring forth are going to be better than any of your preconceived ideas. Your designs benefit from listening to your clients with passion.”

By being thoughtful and efficient, an architect can craft streamlined solutions that solve multiple problems at once, Nook says. “In the case of Jacksonville University, we were able to solve two problems with one design. We provided a practice area for men’s and women’s basketball that met NCAA guidelines and created the flexibility to convert the space into three half courts so the university could earn money through its summer basketball program,” he says.

Nook notes that the resulting design is deceptively simple. “We made the center hoops retractable and added hoops on the side of the court,” he says. “To convert the space into three half courts, the coaches fold up the center hoops to have unobstructed access to the side hoops. It seems like a simple solution, but there was a lot going on in terms of adjusting the design of the metal building to make it work.”

He brings this point home by referencing a previous Quinn Evans project. “At another university, the original vision was to create two spaces: a black box theater and a dance room. After reviewing the project estimate, however, the university only had funding for one of the two spaces. Instead of choosing one, we designed a room that could accommodate both functions. We designed a dance floor with mirrors and a ballet barre, as well as a pipe grid and black stage curtains that could transform the space into a black box theater within five minutes. Additionally, being adjacent to the lobby where the university can host social events, it serves as a catering space. In this way, we actually solved three problems,” he says.



Nook encourages students to design environments that uplift and inspire. “At Jacksonville University, the majority of students on campus walk between Swisher Gym and the JU Basketball Performance Center to get to the academic side of campus. The design decision to have a curtain wall in the weight room allows students to catch glimpses of the student-athletes hard at work preparing for games. It creates a feeling of connection and excitement,” he says.

## Practical Application

1. Describe the cost and time efficiencies that made a metal building system an attractive solution for the JU Basketball Performance Center. Harrell says that metal buildings can be about 30% more economical than a conventional steel building. Contact a metal building manufacturing firm [link: [https://www.mbma.com/System\\_Members.html](https://www.mbma.com/System_Members.html)] and ask them if they agree with that statement, and if so, what contributes to the costs savings. Is this economy also achieved when a metal building system is compared to a wood building?
2. How did the architect design the building’s exterior to reduce the mass of the structure? Was this the best choice in terms of price, energy efficiency and aesthetics? Analyze the design in relation to these factors and explain how you might have made different choices.
3. Alex Ricker-Gilbert says that the “way the center was constructed with the colors, lighting, windows and finishes gives it a real ‘wow’ factor. It’s open, bright and beautiful.” While maintaining the structural elements of a metal building system, analyze how you would design the facility and how you might incorporate light, colors and finishes in another way. Can you improve on the existing aesthetics?
4. Dive deep into the function of a metal roof. Name 10 attributes of a metal roof system. What is its typical cost and lifespan? How is it impacted by weather events, such as hail, wind or snow? What makes a metal roof solar-ready?
5. What’s your design? Download the *Sports & Fitness* case study at [www.mbma.com/Case\\_Studies.html](http://www.mbma.com/Case_Studies.html) [link: [https://www.mbma.com/media/MBMA\\_Sports&Fitness\\_CS\\_final.pdf](https://www.mbma.com/media/MBMA_Sports&Fitness_CS_final.pdf)] and review the sports



Photos courtesy of Balfour Beatty

facilities described throughout the publication. Considering the attributes you find in those buildings, what would your concept look like if you had been the designer of the JU Basketball Performance Center?

6. What must be designed before the foundation design? Why?
7. Explain the importance of computer modeling in metal building design.
8. In addition to cost efficiencies, what are some advantages offered by the decision to use a metal building system?



# RESOURCES/RELATED READING

## Related Reading

- MBMA. (n.d.). Building Solutions: Educational. Retrieved from <https://www.mbma.com/Educational.html>.
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## Video Resources

Over 50 videos highlighting metal building architecture, engineering, design and application can be accessed at [www.youtube.com/mbmamedia](http://www.youtube.com/mbmamedia). We recommend you begin your educational process with the following programs:

- [How It's Made: Metal Building Innovations Are Revolutionizing Low-Rise Commercial Construction](#)
- [How It's Built: Metal Building Construction Raises the Bar for Low-Rise Commercial Structures](#)
- [An Introduction to Metal Building Systems](#)
- [Metal Building Systems 101](#)

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Additional educational folios may be downloaded for free  
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For more information about the educational programs  
available through the Metal Building Manufacturers  
Association, visit [www.mbma.com](http://www.mbma.com) and [www.mbmaeducation.org](http://www.mbmaeducation.org) or speak directly with MBMA General  
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