

STO insights

STO BUILDING GROUP
The Structure Tone organization

Ajax | BCCI | Govan Brown | LF Driscoll | Pavarini Construction | Pavarini McGovern | Structure Tone



Cultural **INSTITUTIONS**

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A Message from Jim and Bob

STO BUILDING GROUP

is an employee-owned family of construction companies committed to excellence in everything we do. We believe in building lasting relationships and always putting our clients first.

The diversity of our clients, who range across sectors and geographies, fuels our drive to innovate and provides a powerful platform to leverage expertise and local market knowledge across our companies.

We honor the individuality and entrepreneurial spirit of all of our brands while providing support for collaboration, growth, and future success.

We are proud of our people.

Jim
James K. Donaghy
Executive Chairman

Bob
Robert Mullen
CEO

How do you define culture? Is it the museums, art, and theaters that enlighten the community? The architecture and landmarks of a city? The public spaces where people engage with each other?

However you define it, culture is undoubtedly reflected in—and influenced by—the built environment. This issue of *STO Insights* celebrates those cultural institutions and supporting organizations that help build a culture, from museums and theaters, to sports arenas and shopping centers, to hotels and college campuses. These projects are some of the most rewarding to build—not only are they prized possessions of a community, but they're also typically public spaces, where residents and visitors alike can enjoy their sights, sounds, amenities, and entertainment.

Please also join us in welcoming BCCI Construction Company to the STO family. Based in the Bay Area, BCCI is one of the leading builders on the West Coast. They bring an incredible portfolio of projects, led by a team of over 300 professionals. Read more about BCCI on [page 14](#).

We also take some time in this issue to celebrate the team at LF Driscoll, who has been building some of Philadelphia's most treasured cultural institutions for 90 years. 90 years! Please see [page 24](#) for more on their impressive legacy.

Jim
James K. Donaghy
Executive Chairman

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Robert Mullen
CEO



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STO Building Conversations podcast: What does it take to restore a historic icon?

In the latest episode of the STO Building Conversations podcast, Rich Schneider and Mike Neary of Structure Tone New York discuss restoring and updating NYC's venerated St. Patrick's Cathedral. From hand-cleaning every inch of the interior to implementing a unique mist fire suppression system, the project was a labor of love and once-in-a-lifetime project for all involved.



Almost Home: NYC's New Irish Arts Center

Over 33 million Americans—10% of the population—claim Irish heritage, according to the 2017 US Census. Irish Arts Center in New York City has long recognized and represented this deep connection between the US and the Emerald Isle, showcasing Irish artists and performers from their New York City space since 1972.

Project Details

Size:
21,700sf

Client:
Irish Arts Center

Owner's Rep:
Jonathan Rose Companies

Architect:
Davis Brody Bond/
Ireland's Office of Public Works

MEP Engineer:
ads ENGINEERS

Structural Engineer:
Thornton Tomasetti

Theater Design:
Fisher Dachs Associates

Acoustics Design:
Jaffe Holden Acoustics

Sector:
Cultural

Completion:
Fall 2020

Project Highlights

- ✓ Fully rebuilds a former tire center to become a world-class arts center
- ✓ Doubles the capacity of their former theater
- ✓ Braces and reintegrates original 1916 brick façade
- ✓ Excavated 17ft of Manhattan bedrock
- ✓ Used 3D modeling to coordinate MEP systems in a tight space



A former tire center is being transformed into a flexible performance space

As Irish Arts Center explored the idea of building a state-of-the-art platform for Irish culture in America, it became clear that the new building would need to be adaptable and entrepreneurial, serving a multidisciplinary mission across a range of art forms.

"We had an opportunity to create a home for many different kinds of artists," says Aidan Connolly, executive director of Irish Arts Center. "We wanted to show what Ireland and Irish America are bringing to the cultural table and how we're engaging with other cultures to tell a broader story about our shared humanity."



Above ▲ Irish Arts Center welcomed Ireland's President, Michael D. Higgins, and Sabina Higgins at a September site visit

COMMUNITY CONNECTION

As part of the City's urban renewal plan for the far west side, Cybert Tire, IAC's neighbor to the west, would be relocated to a brand new home, and Irish Arts Center would have the opportunity to relocate to the larger site next door. Part of the plan was to incorporate the existing façade of Cybert Tire—which happened to be built in 1916, the year of Irish independence—into the new Irish Arts Center building.

The program for the new building included two venues to serve IAC's multidisciplinary mission, two classrooms to serve its education programs, and ground-floor social space for community engagement and Irish hospitality. However, as design progressed, it became clear that the site was too tight to achieve all this, so a plan emerged to combine the new and old IAC buildings into one contiguous new building.

"As the project evolved, we realized it would be difficult to put two venues on the one site without creating a building that was out of context in the neighborhood, and too complex internally," says Connolly. "By restoring our existing facility and its historic, beloved intimate venue, we could relieve those pressures, and construct a state-of-the-art building on the new site, in a wonderful blend of the old and the new."

Another benefit of splitting the facility across two sites was IAC could remain in operation throughout construction. As architects from Ireland's Office of Public Works worked with local architect of record, Davis Brody Bond, on the design, Pavarini McGovern stepped in to get the work started.

SMALL SPACE, BIG VISION

Such a unique and ambitious plan came with some challenges:

1. **Preservation.** To remain true to the neighborhood context and honor the 11th

Avenue building's past life, the design called for reintegrating some of the original brick façade into the new building. Pavarini McGovern installed temporary bracing towers during demolition and sequenced the rest of the work around them before incorporating the existing brick into the new main entrance. "We took out the windows, repointed the area, and reincorporated it all into the construction," says Mark Hildreth, project manager for Pavarini McGovern. "IAC has been there for almost 50 years, so it was important to them to have the new building remain engrained in the neighborhood."

2. **Space.** Construction sites in New York City are always tight. But in this case, the site is a row building, meaning there is no wiggle room to expand on either side. And since one of the goals of the project was to maximize theater space, the design left literally no tolerances. "The theater was designed to 1/8th of an inch," says Hildreth. "Having the builder show up and say 'they'll sort it out' just wasn't an option here." Instead, Hildreth and his team worked much more closely with the design team upfront than usual, hosting extra coordination meetings, using 3D modeling to hone the coordination process, and spending additional time together scrutinizing the details during preconstruction.

3. **Theater considerations.** Changes to the plan required circling back to see if and how it affected the theater design, says Hildreth. "Any small change or dimension needs the architects, sound engineers, and theater consultants to weigh in. It definitely adds a level of complexity." The team worked together to make sure the walls had extra separation and acoustical properties, that the HVAC units on the roof were installed properly to avoid sound and vibration issues, and the theater itself could be as flexible as

possible to accommodate the wide variety of programming planned. Built-in seating can telescope in and out depending on the performance, and a removable platform can add two extra rows of seating if needed. "Reconfiguring the theater into different layouts was essential to IAC's creative vision, allowing the space to accommodate both traditional end-stage formats as well as more immersive performance arrangements," says Carl Krebs, FAIA, partner at Davis Brody Bond.

4. **Neighbors.** The new IAC isn't just bordered by buildings—it shares a party wall with occupied apartments. Throughout construction, safety and noise considerations were an even more pressing concern than usual. Pavarini McGovern installed wall pins to support the adjacent building during demolition and consulted regularly with the owner's representative, Jonathan Rose Companies, to communicate updates to the residents. What's more, IAC staff are still working in the building behind, so the team also had to be cognizant of their operations and frequent visits to check on progress.

The 11th Avenue building is set to open in the fall of 2020. "It's incredible to see this is really happening," says Connolly. "There were so many moving parts—and constituencies—to bring into alignment, and a huge amount of fundraising and diligence required to get it right and ready to go. It's just been hugely gratifying for us to bring everyone together and get it over the line." ◀



Hover over this page with the **STO INSIGHTS APP** for a video from the construction site

The project restored the building's intricate north entry



Hover over this page with the **STO INSIGHTS APP** for a video about the project



Above ▲

Newell Hall was originally built in 1910 to house the university's agricultural program

“ReNewell” Project: Restoring University of Florida’s Newell Hall

Every two years the student government at the University of Florida polls students on what the university can do to improve. And every year, students responded they needed more locations to study on campus.

That’s when the first seeds of the “ReNewell” Project were born. Newell Hall is one of the oldest buildings on campus, originally built in 1910 to house the university’s agricultural program. Over the years, the building—which is listed on the National Register of Historic Places—had become rundown and was eventually left vacant. Recognizing the building’s potential, students led an extensive fundraising and lobbying campaign through the university community and with the Florida legislature, ultimately securing the funding they needed to get the ReNewell Project off the ground.

“This was an entirely student-led effort,” says James Marini, project manager for Ajax Building Company. “The students did not want to see this cool, historic building torn down.”

BACK TO LIFE

The building had some issues, however. In the 1940s, Newell Hall underwent some piecemeal reconstruction to resolve structural and fire protection concerns. While those projects helped extend the life of the building, the problems persisted, leading to the building’s eventual closure.

Restoring the historic building meant not only addressing those long-term concerns, but also finding a way to introduce modern infrastructure and amenities in a building that had to conform to National Register criteria and restrictions.

The brick and terra cotta exterior of the building, for example, was non-negotiable; it had to remain faithful to the original design. Working with the design team, Ajax conducted a field survey of the existing façade. The resulting report made specific recommendations for restoration and replacement, including reconstructing the original north entry, which had been bricked over during the 1940s renovations.

Repainting and repatching the brick was fairly straightforward. Restoring the terra cotta, however, was a larger challenge. The original terra cotta is extremely specific. In fact, Ajax found only two firms in the country that could provide the exact terra cotta necessary to complete the restoration. After procuring the perfect shade of terra cotta, the team worked together to properly recreate every detail of the entryway, from the peak of the adornment all the way down to the arched, wooden doors.

“We had the original, hand-drawn drawings of the whole building, which was pretty amazing,” says Marini. “So we cut out where the entry had been bricked over and recreated it in detail, just as it was in 1910.”

The building’s ongoing structural concerns also needed attention. The exterior walls were extremely stout, so the team was able to tie those together with new and existing reinforcing steel around the perimeter. The roof, however, was framed with traditional wood timbers, which needed new code-compliant trappings and hurricane clips. In the basement, some existing foundation issues required grout injections to ensure the building was fully sound from top to bottom.

NEW ADDITIONS

While the exterior remained true to its origins, the interior got the full renovation treatment. The university’s vision for the space was a unique “learning commons” environment, rich with technology

and flexible, collaborative spaces. One of the central design features toward this goal is a new social staircase, which required the Ajax team to literally cut a hole directly through the middle of the existing structure. For the collaborative areas, the design used existing dormer openings and created smaller niches with movable furniture and power and data connections throughout the space.

The original Newell Hall also featured an annex building built sometime in the 1940s—not part of the historic footprint. As part of the ReNewell Project, the team tore down that annex and replaced it with a new, multistory space with a food service area and “core” spaces that house such necessary features as mechanical equipment, restrooms, an egress stair, and a new elevator.

HISTORY MADE

Despite the new design and uses for the interior, the team was careful to ensure the building’s history was honored inside as well. Materials salvaged from demolition—like original roof tiles and bricks—are showcased in exhibits throughout the building and large-format graphic installations depict the iconic building’s evolution over the last century. And when the interior wall stud frames were removed, the team purposely left the baseplate imprints in the concrete so traces of the building’s past life were still visible.

“We ground the lines down to flush and then stained the concrete so you could still see them,” says Marini. “Now when you walk through the building, those lines are a subtle nod to the way things were.”

The Learning Commons in Newell Hall is now the very kind of building students were hoping for—a quiet, accessible, comfortable study space that speaks to the history and culture of one of the state’s most celebrated institutions. The effort also provides a model for preserving and restoring historic structures in a way that makes sense for modern uses.

“Repurposing an old building is a lot more difficult than simply building something new,” says Marini. “But seeing this building go from rundown to something so modern and beautiful has been incredibly exciting.”



Above ▲

A social staircase opens the interior and connects floors

Project Details

Size:
41,800sf

Client:
University of Florida

Architect:
SchenkelShultz Architecture

Civil Engineer:
CHW Professional Consultants

MEP Engineer:
Moses & Associates, Inc.

Structural Engineer:
Walter P Moore

Sector:
Higher Education

Completion:
May 2017

Project Highlights

- ✓ Used 3D modeling to recreate north entry in detail
- ✓ Sourced unique terra cotta from one of only two vendors in the country
- ✓ Followed original drawings to match the historic facade, down to the downspouts

Marking the third-base entrance is the iconic, 19ft Liberty Bell that once stood in Veterans Stadium



Homerun for the Phillies: Renovations at Citizens Bank Park

After completing a series of renovations during the 2018 off-season, the Philadelphia Phillies kept the ball rolling in 2019 with a complete overhaul of Citizens Bank Park's third-base entry plaza. The Phillies again partnered with LF Driscoll to transform the existing McFadden's Restaurant & Saloon into a brand-new fan area called Pass and Stow—all within six months.

The 32,000sf indoor and outdoor space features a variety of options for food, drinks, and seating. The main restaurant, Pass and Stow, is a 150-seat, family-friendly sports pub. Also inside the repurposed concourse is a brand-new, 120-seat Shake Shack—the fast-food chain's first foray into seated dining within a sports venue. Outside, the reconstructed plaza features eateries like the Goose Island Bar serving local craft and draft beers and the new Foundry Pizza serving brick-oven pies.

The outdoor portion of this new fan destination also offers a beer garden patio with fire pits, a Phillies waterfall feature, long tables with 250 seats, plenty of standing room, and space for live music performances. The space is partially shaded by a 30ft by 50ft pergola, making it perfect for any type of weather. The entire area is full of TV screens—44 to be exact—so fans can grab a bite and a beer without missing a minute of the game.

FAMILIARITY FACTOR

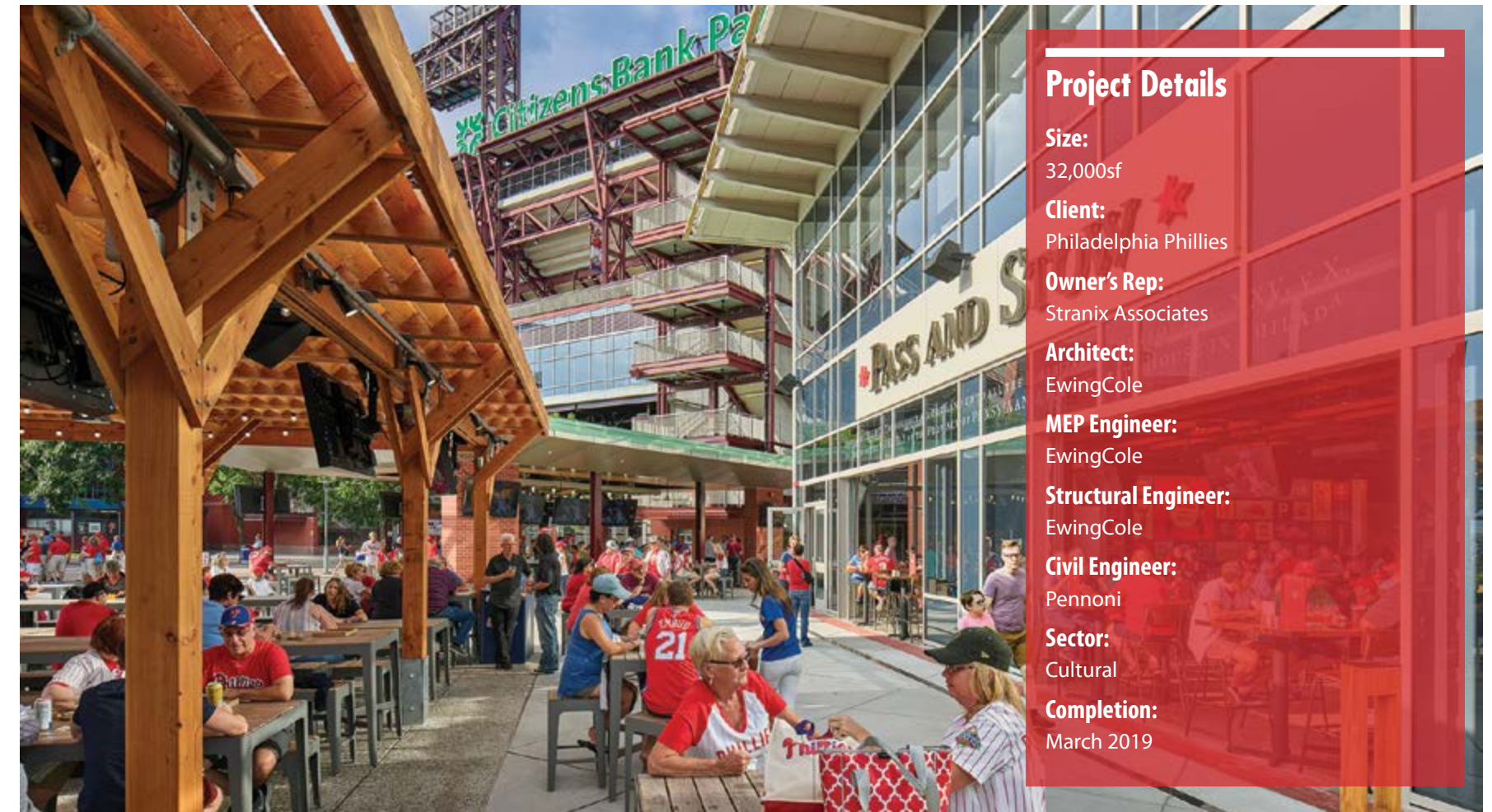
As always, timing was a major consideration during these renovations. Thanks to LF Driscoll's experience in the ballpark during the 2018 off-season, the project team was more than familiar with working in this venue. "This time around, we had more time to plan, a better understanding of the Phillies expectations and their logistics, and plenty of lessons learned from our work the previous off-season," says John Fuente, LF Driscoll project director.

Because of this gained understanding, LF Driscoll had operations already established for the next round of improvements when the 2018 baseball season ended, and the project team was able to start construction immediately.

COMPLEX LOGISTICS

In addition to the third-base entrance plaza updates and the adjacent restaurant work, the Phillies also partnered with LF Driscoll to construct the Ballpark Services Building across the street and install the stadium's new ambitious perimeter security bollards. While these were separate projects—each with its own independent project team—the logistics were not as straightforward.

For instance, the ballpark's perimeter bollard security improvements included installing over 1,000 bollards around the entire stadium. During the last three months of the project, the Pass and Stow restaurant construction team worked closely with the bollard security team to coordinate material deliveries and access to each of the work areas, including securing pedestrian safety and accessibility.



Project Details

- Size:** 32,000sf
- Client:** Philadelphia Phillies
- Owner's Rep:** Stranix Associates
- Architect:** EwingCole
- MEP Engineer:** EwingCole
- Structural Engineer:** EwingCole
- Civil Engineer:** Pennoni
- Sector:** Cultural
- Completion:** March 2019

Above ▲ Pass and Stow features an outdoor beer garden and 44 TVs so fans can grab a bite without missing a minute of the game

"The work on the outdoor plaza took up a substantial area of the sidewalk," Fuente says. "At one point, the construction crews working on our ballpark perimeter security were coming around the corner with the new bollard work and would need to access that sidewalk. We knew we needed everyone to cooperate and coordinate so that both projects could move forward successfully."

All photos these pages: "Haldin Mason Photography"

Project leaders worked together to reimagine the previously established site access, security, and logistics for the plaza and the restaurant. While the perimeter security bollard work progressed, the restaurant project team agreed to reconfigure and relocate their previous access to another location as needed.

HISTORY REVIVED

Outside the Pass and Stow area, the Phillies' iconic Liberty Bell that once stood in Veterans Stadium—the team's home from 1971 to 2003—is now prominently displayed at the third-base entry plaza after more than 15 years in storage.

Preparing for the installation of the 19ft replica was a delicate part of the project. The Phillies hired an outside vendor to refurbish and install this historic symbol, and LF Driscoll worked closely with them to provide the foundation and steel to support the 5,000lb structure. The project team also handled the electrical necessary to light the 270 lightbulbs around the bell's edges. And in keeping with the Phillies' Liberty Bell theme, the Pass and Stow restaurant itself was named after John Pass and John Stow—the dynamic duo who recast the original Liberty Bell in 1753.

Completed with plenty of time for the Phillies vendors to rotate in and brand the area, both Pass and Stow and Shake Shack were ready to go for the team's first home game in late March 2019. ◀

- ## Project Highlights
- ✓ 86,000 total worker hours on the job
 - ✓ 0 recordables
 - ✓ 16,000sf of outdoor entertainment space
 - ✓ 10,000sf Pass and Stow restaurant
 - ✓ 6,400sf Shake Shack restaurant



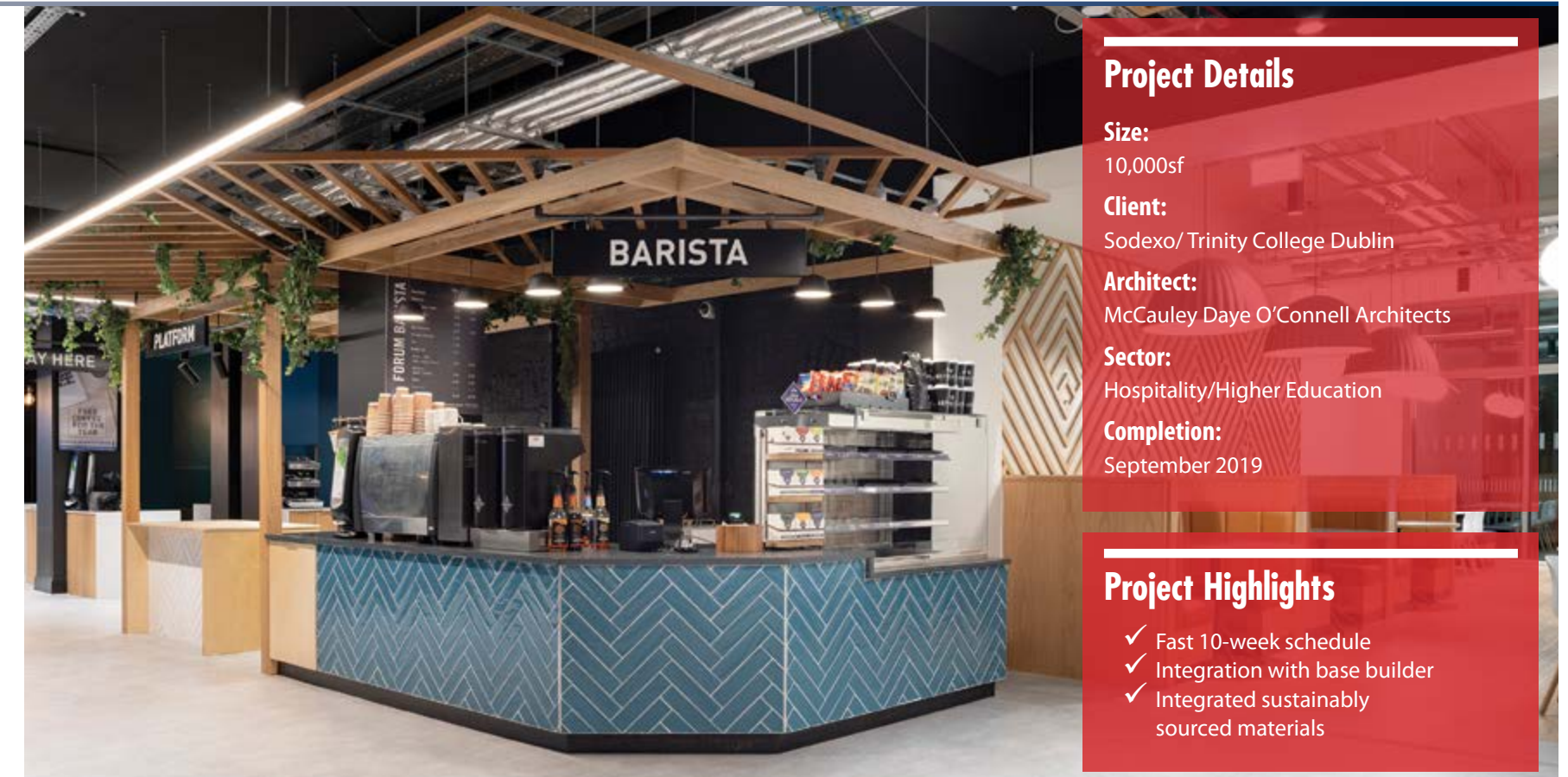
Above ▲ Inside the repurposed concourse is a 120-seat Shake Shack restaurant

Feeding the Future

Trinity College Dublin was founded in 1592—nearly 500 years ago. Needless to say, history is integral to the campus and its culture. At the same time, the college is one of Ireland's most prestigious and progressive and has made it a point to integrate its historic campus within and among the dynamic Dublin cityscape.

The restaurant within the new business school is one such example. Developed and led by Sodexo, and fit out in a design-build partnership of McCauley Daye O'Connell Architects (MDO) and Structure Tone Dublin, the restaurant is housed within the brand-new business school but connects to a series of historic houses. With this unique design scheme as the foundation, the project was an interesting prospect right from the start.

The space blends a modern dining experience with heritage character



Project Details

Size:
10,000sf

Client:
Sodexo/ Trinity College Dublin

Architect:
McCauley Daye O'Connell Architects

Sector:
Hospitality/Higher Education

Completion:
September 2019

Project Highlights

- ✓ Fast 10-week schedule
- ✓ Integration with base builder
- ✓ Integrated sustainably sourced materials

Above ▲

Offerings include locally sourced artisan coffee, vegan options, internationally inspired dishes, and popular favourites

"This opportunity came at a crucial juncture in the school's development, and we soon came to realise that the school was looking for more than just great catering and hospitality for its landmark building," says Deirdre Saunders, account director at Sodexo. "With this in mind, we built on our experience of operating elite business schools around the world to improve the flexibility of the space and provide better connectivity, as well as more social learning areas combined with traditional dining."

DREAM TEAM

With only about 10 weeks to complete the project, collaboration and determination were crucial across the board. As a design-build unit, Sodexo, MDO, and Structure Tone partnered right from the start to value engineer the design into one that better fit the fast-track schedule and the client's cost envelope—all while maintaining the end product the designers intended. In fact, one of the reasons the team was selected for the job was their detailed design-build strategy, which combined Trinity's exemplar design concepts with Sodexo's requirements in 3D models.

"I give total credit to our estimators and the design team for taking that on," says Barry Doyle, project manager at Structure Tone Dublin. "What's in the flesh now reflects massively on the design intent."

The process also involved a good deal of input from the students themselves. Sodexo introduced a "student experience manager" role to the project team to serve as the liaison to the students who would be using the space, including getting feedback on everything from space use to food options.

"Developing a food offer to meet the needs and tastes of a diverse population is crucial to the commercial success of the catering and hospitality service," says Saunders. "To shape the food, we undertook over 300 separate interviews on campus, targeting existing students from the business school."

FROM NEW, TO NEWER

Because the base building for the new school was already underway, the Structure Tone team was entirely dependent on that project's scheduling, meaning collaboration, again, came into play.

"This wasn't a typical commencement of a project where we make our schedule and begin," says Doyle. "We had many meetings with the college and base building contractor to work through how and when we could get going on each phase."

Take the plant room, for example. The restaurant and associated kitchen equipment had to be served by the existing MEP system of the new building. The design-build team worked with Sodexo to determine how the plant room should be constructed to accommodate the needs of a kitchen and how those systems tied into the master MEP infrastructure.

However, the plant room wasn't ready for fit-out until just weeks before the turnover date—which left a lot to do in a small amount of time.

"We had to take an empty box and build the MEP infrastructure within it in just three weeks," Doyle says. "Coordination becomes very specific in that tight a timeframe. Everyone had the best drive and will to make it happen."

WELCOME HOME(S)

Another interesting element of the project was the tie-in to the historic homes. Built in the early 1800s, the houses serve as the receiving areas for the restaurant, with the servery and kitchen spaces filling in behind them in the new construction.

The design of the restaurant leveraged that historic character and incorporated the limitations the team had on how they could work with these protected structures. Nothing could be directly fixed into the plaster walls, for example, so new elements and building infrastructure had to be incorporated in other ways to connect to the new construction area. The heating system uses radiators rather than modern HVAC units to blend in with the homes.

"We had a very clear direction to maintain the quiriness and charm of those houses," Doyle says. **"It's worked out so well, it's almost as if the new building has always been connected to them."**

Since opening in late September, the restaurant has been bustling with activity as the only dining facility in this new section of campus.

"We've created something we are all very proud of, something we believe fits the needs of the students and staff at Trinity College and a place that will connect people through good food and inspiring surroundings," says Saunders. ◀

All photos these pages: ©Donal Murphy Photography

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GIVING BACK: Creative Art Works

Since 1986, Creative Art Works (CAW) has been giving under-resourced neighborhoods the opportunity to empower kids through art. By providing the materials and direction to hone career-oriented skills, actualize creativity, and engage with the community, CAW is helping young people develop the confidence and connections they need to thrive. One of their most impactful programs pairs groups of kids with artists to create lasting murals in their community.

Structure Tone's journey with CAW began 21 years ago. A client, Boston Properties, introduced the company to the cause and the Structure Tone team began donating office supplies, paint, brushes, ladders, and tarps to their budding summer program.

As the program has expanded, so has Structure Tone's involvement. Paint is one of CAW's biggest expenses, so Structure Tone executive vice president Scott Corneby worked with CAW's board to connect them with Sherwin Williams, who now supplies their paint.

"At first we were helping coordinate the donations, but now CAW and Sherwin Williams have developed a direct relationship of their own," says Corneby. "It's gratifying to help in such a tangible way."

Structure Tone employees also attend CAW's annual benefit to help raise money and connect with the individuals behind the program and their vision.

Investing in local people and their communities is crucial to their survival. Murals created "by the community, for the community" are a way for kids to connect and engage with their neighborhood—but

it's more than that. The program instills skills and habits that serve them in both their personal and professional life. Kids who have attended programs like CAW have shown an increase in attendance and a decrease in behavioral issues at school. Their participation improves standardized testing, grades, and the probability of passing the math and English regents, which allows students to graduate, go onto college, and ultimately give back to their community.

Most of us took this job in order to make money, but something else came out of it—we also helped our families, we contributed to the Bronx Renaissance," said one CAW youth apprentice. "I learned that when a community comes together and we work hard, we can get something done, and the whole community will be improved by it, they will enjoy it, and they will respect it."



Above ▲
Scott Corneby (far left) visiting one of the mural sites



Introducing **bcci** builders

This past spring, BCCI Construction Company joined STO Building Group as our new West Coast partner, extending the family of companies' network of resources and service offerings. For over 30 years, BCCI has built award-winning projects and lasting relationships with progressive, industry-leading organizations. Known for its forward-thinking approach to projects and tailored building solutions, clients have come to rely on BCCI to help them realize their real estate goals.

Founded:
1986

Number of Employees:
315

Services:
Client Advisory, Design-Build, Preconstruction, General Contracting, LEED and WELL Consulting

Market Sectors:
Corporate Interiors, Commercial Development, Corporate Base Building, Hospitality, Multi-Unit Residential

Offices:
San Francisco and Mountain View, CA



Above ▲
BCCI SF: LEED-CI v4 Silver & WELL Certified™ Silver



Above ▲
BCCI MTV: WELL Certified™ Silver

The *San Francisco Business Times* and *Silicon Valley Business Journal* have recognized BCCI as a **Best Places to Work in the Bay Area** company—12 years running! And for five consecutive years, we have been honored by the Construction Employer's Association with an **Excellence in Safety Award**.

BCCI is a registered **JUST Organization** for transparent business practices and a commitment to social equity in the workplace. From regular Town Hall meetings to team-building outings to Community Builders' outreach, we bring employees together to learn, share, give back, and have fun!

EXECUTIVE TEAM



MICHAEL SCRIBNER
President and CEO



DOMINIC SARICA
Chief Operating Officer



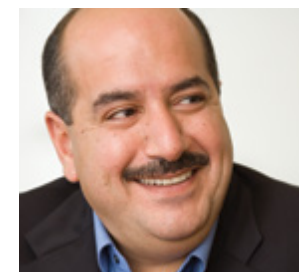
JOHN KRANZ
Chief Strategy Officer



DEBBIE FLESER
Vice President, South Bay



DON TIEFENBRUNN
Vice President, Structures



HISHAM MUSHASHA
Chief Administrative Executive

RECENT PROJECTS



Adobe Systems
San Francisco | CA

250,300sf office build-out from cold shell condition, including two lobbies, three floors of workspace, a café, and a roof deck. The workplace also features a fitness center fitted with meditation areas; media rooms for music, games, and virtual reality modules; a library; and a living wall feature. The project is pursuing two sustainability certifications: LEED v4 Gold and Fitwel.



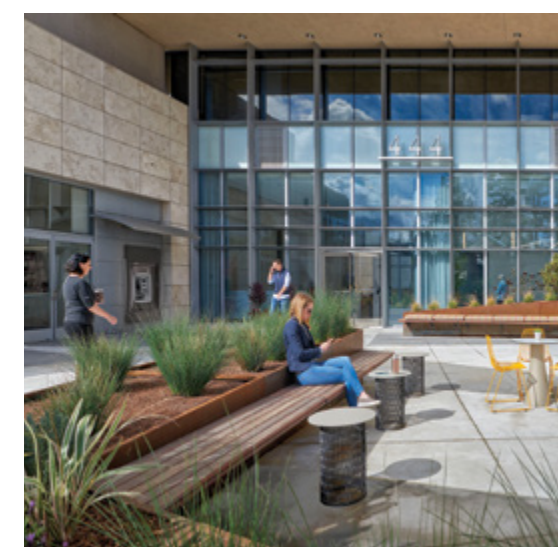
Confidential Professional Services Firm
San Francisco | CA

126,000sf tenant improvement for a long-time client's new Bay Area flagship innovation hub. The vertical campus, which is targeting LEED-CI v4 Gold certification and WELL certification at the Silver level, comprises open workspace with huddle areas, conference rooms, client experience centers, a virtual reality igloo, a maker lab, an interview studio, and San Francisco's first five-story interconnecting stair.



345 Montgomery Street
San Francisco | CA

87,000sf complete renovation and seismic upgrade of an iconic granite and glass cube structure that was once Bank of America's flagship retail location. The property, now owned by Vornado Realty Trust, is being transformed into a dramatic commercial office building with a five-story, 50ft x50ft atrium; a stadium-style staircase from the basement to the first floor; cantilevered stairs; two new elevators; and all new mechanical, electrical, plumbing, and fire sprinkler systems.



444 Castro
Mountain View | CA

103,120sf repositioning and upgrade of a Class A high-rise office building including heavy structural reinforcement, abatement, and design-build base building improvements of the mechanical, fire, and life safety systems. Interior renovations include a new main entrance lobby, interconnecting staircase, lounge and meeting areas, shared conference space, and fitness center. Building exterior and site improvements comprised curtain wall and façade upgrades and a complete courtyard remodel.



A TECH REVOLUTION: Reimagining the Museum of the Dog

Technology has transformed the way the world consumes media—and art is no exception. Today, museums around the globe have embraced technology as a means of enhancing the visitor's experience. So, when the American Kennel Club (AKC) decided it was time to return the Museum of the Dog (MOD) to its New York City roots, they saw the move as the perfect opportunity to bring the museum into the 21st century.

After 30 years in St. Louis, Missouri, the new-and-improved Museum of the Dog sits on the ground and third floors of 101 Park Avenue, right in the heart of bustling Midtown Manhattan. As guests enter the new space, they're welcomed by 18ft-high ceilings, terrazzo floors, a vast mezzanine, retail store, and 180 canine-related works of art—including a 2,000-year-old paw print. The building's glass façade allows light to fill the space, and a central staircase connects one level to the next.

A DIGITAL TWIST

But for AKC, relocating the Museum of the Dog was as much about elevating their visitors' experience as it was creating a beautiful physical space. The goal was to create a unique, engaging experience while providing as much education as possible. Together with Gensler, the AKC designed their own interactive, technological elements to do just that.

Before walking in the door, guests are greeted with digital silhouettes of dogs, which appear to be parading down Park Avenue

alongside the crowds. This feature is so lifelike, Structure Tone New York project manager, Anthony Crawford, recalls observing pedestrians' reactions one night during the commissioning phase. "Most New Yorkers walk around staring at their phones," he says. "But there was one woman in particular who asked us how we got the dogs up there behind the screen!"

Once inside, visitors can get their photos taken at one of two kiosks to find out which dog breed they resemble most. AKC even developed their own digital puppies: Arty and Molly. Visitors can train Molly to obey voice commands at the "Train a Dog on the Job" station, while Arty keeps the museum's younger patrons engaged through a scavenger hunt app similar to Pokémon GO.

TIGHT QUARTERS

While these elements make the space one-of-a-kind, fitting the technology, artwork, and design elements within the museum's 15,000sf proved to be one of the construction team's biggest challenges.



Above ▲
Three libraries within the new office house the organization's extensive book collection

Logistics. One of the main obstacles was installing the three-story staircase and a three-stop, hydraulic elevator. The site's size and layout made it extremely difficult to maneuver the massive equipment and materials necessary to install both elements. To get the job done, the entire project team—from the design and construction crews to specialized subcontractors and MEP trades—came together several times to discuss strategy.

They decided to shift the position of the elevator and staircase so they'd both fit. The design team also eliminated a few risers from the stairs and added multilevel landings to adjust for the limited space. Once installed, the staircase became one of the most eye-catching aspects of the ground floor with its terrazzo treads and beautiful glass railings. "The staircase wraps around a large vitrine," Crawford says. "As you walk up the steps, you get to see all the artifacts and exhibits up-close."

Artwork. Another hurdle was fitting all 180 works of art—many of which are three dimensional—into the tight area. With one wall already occupied by the building's glass façade, display space was extremely limited. To create additional space for the artwork, the team installed seven steel-framed partitions that resemble large-scale easels and rotate a full 360 degrees. These versatile frames not only provide prime display space, but they allow the museum to create completely distinct displays for events or special exhibits.

Photo above: James John Jeter

UNITED COLLECTION

One of the main reasons AKC decided to bring the Museum of the Dog back to New York City was the fact that their headquarters was still in Manhattan—along with a good portion of the organization's growing art collection. With their art split between two locations and nearly 1,000 miles apart, AKC knew they were missing out on showing some of the key pieces in their 2,500-piece collection. So, the organization decided to relocate their office space to 101 Park Avenue as well and, again, saw the move as an opportunity to modernize their headquarters.

The revamped HQ now features breakout areas and executive suites, a boardroom equipped with cutting-edge communication technology, and three unique libraries to house AKC's book collection. The office also displays plenty of canine-themed artwork, starting with the collection of canes in the main lobby area, each of which has a uniquely crafted head and was donated by AKC supporters.

With a more dynamic space and the freedom to exhibit new pieces, the museum's relocation has been highly successful. In Missouri, the Museum of the Dog averaged 300–400 visitors per week. Since officially opening this year in New York, it's averaged 1,000 visitors per week and up to 800 visitors on weekends. ◀

Project Details

Size:
40,000sf

Client:
American Kennel Club

Owner's Rep:
VVA

Broker:
Cushman & Wakefield

Architect:
Gensler

MEP Engineer:
Syska Hennessy Group

Structural Engineer:
Gilsanz Murray Steficek

Sector:
Cultural/Commercial

Completion:
February 2019

Project Highlights

- ✓ 135,000 total worker hours on the job
- ✓ IFMA Award for Excellence Winner
- ✓ 180 pieces of art displayed
- ✓ Three unique libraries



Hotel Valencia's new design blends Spanish and Mediterranean styles

RENEW & REFRESH: Renovating in the Hospitality Sector



The Marriott project involved renovating over 400 guest rooms

Hotels aren't just a place to sleep. They reflect and contribute to the cultural fabric of their city—sometimes even help define it. But as increased competition, online reviews, and public expectations change, hotels must keep up.

"Hotels typically have a 5-to-10-year lifecycle," says Mark Jones, Structure Tone Southwest (STSW) vice president. "Even the coolest or most historic hotels must stay fresh. They can't compete on legacy alone."

In San Antonio, Jones and his team have been working with Hotel Valencia Riverwalk for nearly a decade to do just that. Already one of the more popular hotels in the city, by 2010, its aesthetic and amenities were growing outdated. STSW helped them start small with some restroom renovations, which, over time, led to everything from the guest rooms and corridors to the lobby, bars, and restaurants.

Across the country, iconic hotels in Boston have been experiencing the same cycle of improvements as competition increases.

"Much of the development happening in Boston right now includes a hotel element," says Michael Simonelli, director of account executives for Structure Tone Boston. "That puts some pressure on existing hotels to pull the trigger on renovations and upgrades."

The Structure Tone Boston team has helped several hotels with that evolution in the last few years, including a major renovation at the Boston

Marriott Long Wharf. Along with design partners Signature Architects and Looney & Associates, the team helped the waterfront hotel upgrade such areas as the guest rooms and suites, lobby, and two-story M Club Lounge.

This cycle of renewal brings with it a unique set of design and construction challenges.

Time. Schedule is everything for hotel renovations—when rooms are out of service, their revenue stream is significantly affected. In San Antonio, the team renovated over 200 rooms at Hotel Valencia, starting from the top and moving down, one floor a week. "We started on Monday morning and by Friday at noon, we would turn the floor back over," says Zeke Jones, STSW superintendent. "We added more man hours as needed to make sure that floor was ready for the guests they booked for the weekend."

And the rooms aren't the only element on the wire, says Simonelli. "Once that completion date is identified, the sales department is all over it, booking weddings, business meetings, and other events," he says. "They depend on that date."

Occupancy. Hotels do not typically close for renovations, so working around the people coming and

Hotel Valencia Project Details

Client:
Valencia Group

Architect:
Rottet Studio/Sixthriver

Engineer:
MS2 Consulting Engineers

Sector:
Hospitality

Project Highlights

- ✓ Completed a floor of guest rooms a week
- ✓ Integrated dozens of different materials
- ✓ Incorporates 100+ glass oranges signed by celebrities

going—not to mention sleeping—is a challenge. At Hotel Valencia, the STSW team kept a separate lobby space open and available throughout construction by shoring up the construction areas with Masonite and finishing the lobby-facing side of the wall. "We made it look like a finished space to keep the feel of the lobby while safely separating the public from the construction areas," says Zeke Jones.

Another complicating factor is the "no construction" clause many hotel clients write into event contracts, which require construction to cease if

Photo above left and right: "Jerry Hayes Photo. Photo above, right: courtesy, Marriott International, Inc.

Marriott Long Wharf Project Details

Client:
Sunstone Hotel Investors

Architect:
Signature Architects/Looney & Associates

Engineer:
BLW Engineers, Inc.

Sector:
Hospitality

Project Highlights

- ✓ Renovated 412 guest rooms and created 3 more
- ✓ Relocated plumbing for 60% of rooms
- ✓ Completed punchlist process in 3-4 days per phase
- ✓ Constructed an all-new, 2-story M Club Lounge

it's negatively affecting the event. "Often those events are not yet booked when the construction schedule is created," says Stephen Preble, founding partner at Signature Architects, who specialize in hospitality. "For the month of June, I think we had seven or eight days to perform noisy work. The rest of the month were quiet days due to meetings."

Finishes. Hotels rely on striking finishes to create their desired look and feel, which means the materials packages are often large and diverse. At Hotel Valencia, the "Old World," Spanish aesthetic meant a number of materials were sourced from Europe.

"We started planning months in advance for all of those specialty items," says Zeke Jones. "The client and design team are very well organized so they made it easy to start work on schedule."

The urban, waterfront location of the Marriott posed a related challenge—space, says Structure Tone project executive, James Custodio. "We had

no storage space at the site, so we used a 'just-in-time' approach to make sure materials were delivered just as we needed them for each phase.

With so many unique challenges to manage, hotel renovations typically involve the same key players—which eliminates much of the learning curve.

"Our partnership with the hotel, with the design team, and our consistent team of subs has made all the difference," says Mark Jones. "That collaboration has made the projects successful."

Preble agrees. "One of the things I like most about the hospitality sector is working with the same teams over and over again," he says. "We know each other and can reference how we handled an issue together in the past." ◀



Above ▲
A former registration area is now a library

IT'S ALL ABOUT THE FANS: Reshaping Philadelphia's Wells Fargo Center

Project Details

Client: Comcast Spectacor
Architect: Brisbin Brook Beynon Architects
MEP Engineer: WSP
Structural Engineer: Walter P Moore
Sector: Cultural
Completion: 2020

Project Highlights

- ✓ 25-year LF Driscoll/Structure Tone relationship with Comcast Spectacor
- ✓ Center City Premium Club
- ✓ Assembly Room and Liberty Lofts

In the world of sports, competition is everything. And not just for the players—sports arenas, too, must constantly up their game to remain in tune with spectator expectations and needs.

As the Wells Fargo Center—home to the Philadelphia 76ers, Flyers, Wings, and Soul—approached its 20th year in operation, owner Comcast Spectacor found themselves facing a tough decision: Do we build a brand-new facility or renovate what we have to meet modern standards?

The team ultimately decided to launch an extensive, strategically phased plan to upgrade the arena throughout, from amenities and restrooms, to food and drink service, to seating areas and boxes. They hired Structure Tone's Philadelphia team to start on the plan, which began in 2016 with the luxury suite level, upgrading 82 suites, as well as some sections of the main concourse. In 2017, they continued along the concourse and moved to the seating, concessions, and restrooms on the mezzanine level. By 2018, the team completed the mezzanine level and continued working on the concourse. Work continued in 2019 on main concourse bars and concessions, the box office, and the event-level club.

STICK-HANDLING CHALLENGES

Needless to say, the scope of the upgrades is extensive. To complicate matters, the team also had to face a number of challenges to getting the work done on time and on budget.

1. It's still a functioning arena. With so many sports teams, concerts, and other events relying on the Wells Fargo Center, Comcast Spectacor couldn't simply shut down over the course of the renovations. So, construction had to occur in between events and accelerate during slower periods. During the summer of

2016, a Justin Bieber concert was scheduled as work began, then the team fit out 42 new suites, cleared out again for the Democratic National Convention, built 40 more suites, and wrapped up in time for an Adele concert.

"We basically have to disappear hours before each event and get the work out of the way as much as possible," says John Donnelly, Structure Tone project executive. "But we fast-track what we can and make it work."

- 2. Manpower is at a premium.** Labor has been a considerable challenge for the entire construction industry over the last several years, which proved challenging for such a large project. Many of the premier subconsultants in Philadelphia were too busy themselves to commit to such a large effort. Rather than sacrifice quality, the Structure Tone team split the work by level among three different subs. "We have some of the top subcontractors in the city on this job and it shows," says Donnelly. "Everyone is all in and on the same page so we're able to solve problems quickly without overloading any one sub."
- 3. Change is inevitable.** Because the program was scheduled over such a long time period, the design has continued to evolve. In some cases, it became clear certain design decisions

no longer fit the budget, or shifting fan expectations affected choices. In each case, the project team has had to come together quickly and efficiently to procure materials, produce submittals, and redirect the work to stay on track.

Some changes, too, came from pure serendipity. At the same time the Wells Fargo Center has been undergoing renovations, the Philadelphia Flyers were developing a new mascot, Gritty. The Flyers' marketing team came up with the genius idea to marry those two activities, asking to dedicate some space in the arena as Gritty's Room. Gritty's Room will now be an interactive space for fans to experience where Gritty lives and sleeps. "The story is that we unearthed Gritty during demolition," says Donnelly. "So we've adjusted to accommodate fun ideas like that as well."

WORK IN PROGRESS

Last summer the team completed phase four of the upgrades, which included the Event Level Club, performers' rooms, employee locker rooms, main concourse concessions and bar renovations, a new box office, event storage space, and several more VIP areas. And the overall effort is still ongoing—the team will replace the main concourse ceiling this fall and move on to renovating the Club



Above ▲ "Transformation 2020" has upgraded, renewed, and modernized nearly the entire arena

Level in 2020. In addition, they plan to expand the entrances and build two canopies, complete the main concourse floor and ceiling work, renovate the 76ers' and Flyers' locker rooms, and complete an additional VIP Club.

"It's awesome that 20,000 people get to experience what we're building at every event," Donnelly says. "People tell me all the time how great it looks and the owners are getting really good feedback from fans, which is the most important reward." ◀

THE RETAIL RACE

Designing and building large department stores presents a series of contrasts—they can be fairly straightforward in concept, yet ever-shifting as the project moves forward. Clearly segmented into departments, but under one comprehensive roof. In other words, these types of retail projects have their own unique quirks that require a certain level of experience and skill to manage together with the owner, the design team, and the various vendors who become part of the team as the store approaches opening day.

Govan Brown is one of Canada's leading retail contractors and has amassed that very kind of expertise. Construction in the retail sector, as they have learned, takes a slightly different approach than, say, fitting out a corporate office.

STRAIGHTFORWARD DESIGN BUT... DEADLINE-DRIVEN

First, there are a lot of moving parts to manage, which is particularly tricky with the fixed schedule of most retail projects. Once opening day has been determined, there is no going back, no matter how many changes or challenges pop up.

"The stores usually advertise opening day, so that date is not moving," says Govan Brown project manager Eric Brown. "And really our deadline is about a month before that so the store can bring in the merchandising team, train employees, etc. We have to tackle any issues immediately so they don't snowball."

GLOBAL STANDARDS BUT... DIFFERENT CODES

Since most department stores are chains, they have a fairly consistent approach—and even project team—for developing and renovating their stores. Nordstrom, for instance, works with the same architects and engineers for nearly all of their stores, along with local general contractors.

However, those standards sometimes require adjustments as they open stores in different countries. As a US-based company, Nordstrom's vendors' designs didn't always conform to Canadian codes and standards as the team began working on its new Toronto store.

"Luckily their team knows their program inside and out, so it was easy to work with them to translate that to Canadian standards," says Brown.

Similarly, when Holt Renfrew began work on their Toronto store, the London-based café designer specified a number of materials from out of the country, some of which were not certified for use in Canada.

"We sat down with the architects and did an extensive study on the alternatives we could use from Canada," says Hany Younan, senior project manager at Govan Brown. "We were able to switch out many of them to match the expectations but keep on schedule."

ONE UNITED STORE BUT...SEPARATE DEPARTMENTS

Large retail stores have several departments—each with different needs. Whether it's menswear, women's, shoes, or others, each department typically has a different style and aesthetic.

Simons, for example, designs each department with an entirely different theme and, therefore, treats each like its own separate project.

"We actually tendered them separately," says Younan. "But since there could be potential issues where two departments come together, we made sure all the packages aligned with each other ahead of time."

Within those departments, some stores have specific name-brand vendors who may also have their own needs and approaches to the work. Often the store will give the vendors the raw space and they will bring in their own team to fit it out. For others, Govan Brown manages as many of them as possible to keep the schedule on track, sometimes taking a quasi-design-build approach.

"At Nordstrom, we assigned small teams to focus on the schedule and work with the vendor clients," says Brown. "For a large package with many different materials, we sometimes end up with five or six different millworkers and packages. So it's important to coordinate and keep tabs on all of those projects within the project."

Despite the hustle and coordination, reaching opening day is incredibly rewarding, says the Govan Brown team.

"Working with the designers from preconstruction through construction and seeing that concept come to fruition is so gratifying," says Younan. "Sometimes our clients invite us to cut the ribbon with them, which really makes us feel like we're part of their family." ◀

ANCHORING THE TEAM: Bloomingdale's at the SoNo Collection

Since its start in 1861, Bloomingdale's has become a household name. Known for their luxury products and diverse selection of brands, it's become popular both in name and style.

While Connecticut has been home to as many malls, outlets, and retail centers as any other state, the SoNo Collection in Norwalk welcomes a new kind of retail experience. Developed by Brookfield Properties, the lifestyle center not only offers 70+ clothing stores, but also a unique array of art, dining, and entertainment options.

Pavarini North East was brought in to build out 150,000sf for one of the mall's anchor tenants, Connecticut's exclusive Bloomingdale's store.

TIGHT SITE

The ground-up nature of the project puts numerous general contractors in the same space. With designated GCs for the core and shell plus those for each store, the team worked with Bloomingdale's to negotiate a designated material load-in area and garbage chute to avoid the congestion delays.

Developing the structure on a parking garage restricted the already tight site further. Bloomingdale's was the last part of the mall to go into construction,

and delays to the start of the garage decks meant Pavarini had limited access to three of the four elevations. With no room for an exterior hoist, materials had to be lifted by a chain hoist inside through the escalator pit and crane picks. All the while, deliveries were competing with those of the other GCs on site, meaning everyone had to communicate and coordinate very clearly. The Pavarini team acted quickly and was sure to communicate progress with the client at all turns.

While the project had some challenges with vertical transportation and coordination with the mall construction, Pavarini constantly communicated with all parties to deliver a successful project.

HAIL TO THE TEAM

A fully committed team proved to be the secret weapon. In addition to Bloomingdale's work to find the necessary resources for the team, the developer came through as well when it came to working through local regulatory processes.

"Another challenge was scheduling inspections in a small town short on resources," says David Carlson, Pavarini superintendent. "Brookfield's relationship with the town has enabled all of the retail stakeholders to hit inspection dates despite their different agendas."

In short, the team's combined dedication and persistence has moved the project forward, and they couldn't be more proud of how that teamwork has paid off.

"Without a client with vision and a team that fully stepped up to the plate, this project would not have met the developer's milestones," says Pavarini project manager Stephen Salvatore. "We were all essential partners." ◀



Above ▲
Bloomingdale's anchors the new mall, which opened this fall

Project Details

Size:
150,000sf

Owner:
Brookfield Properties

Client:
Bloomingdale's

Architect/Engineer:
Hixson Architecture, Engineering, Interiors

Interior Architect:
Echeverria Design Group

Sector:
Retail

Completion:
November 2019

Project Highlights

- ✓ Materials lifted with a chain hoist on the interior
- ✓ Exterior is a metal panel system with integrated LED dot fixtures
- ✓ 30+ vendor areas to coordinate
- ✓ Schedule challenges to overcome

90 Years of LF Driscoll

It was the year of the US stock market crash. The first Academy Awards. The invention of the phone booth, the car radio, and 7-Up. 1929 was also the year Leon F. Driscoll founded his construction company, **LF Driscoll**. In the last 90 years, LFD has become the Mid-Atlantic's leading builder in the healthcare, commercial, cultural, and higher education markets, and has developed an unparalleled culture of safety and excellence that continues to drive their reputation to this day.

BUILDING A LEGACY

Over the past nine decades, LF Driscoll has been integral in constructing the buildings that shape Philadelphia's skyline and major commercial and cultural corridors. They are recognized for long-term partnerships with leading companies and institutions within the city and beyond.



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Rodin Museum Temple Morgan Hall

The Barnes Foundation

The Free Library of Philadelphia

Latter-day Saints Temple

The Alexander

One Franklin Plaza

Comcast Center

Comcast Technology Center

One Liberty Place



BY THE NUMBERS

#1

300+

90%

360°

ENR Mid-Atlantic **Top Contractor in Pennsylvania**

construction professionals working at LFD

of work is from long-term **repeat clients**

Safety 360° program developed at LFD in 2016

AN ICONIC PORTFOLIO

HEALTHCARE

1. Children's Hospital of Philadelphia, Master Plan Projects
2. Penn Medicine Campus
3. Hackensack Meridian Health, Jersey Shore Medical Ctr. Expansion

CULTURAL

1. Philadelphia Phillies, Citizens Bank Park
2. Kimmel Center for the Performing Arts
3. Philadelphia Museum of Art, Master Plan Projects

COMMERCIAL/MIXED-USE

1. Loews Hotel Philadelphia
2. Philadelphia Navy Yard, Master Plan Projects
3. American Water, Corporate Headquarters

HIGHER EDUCATION

1. University of Pennsylvania, Wharton School Huntsman Hall
2. Temple University, Mitchell & Hilarie Morgan Residence Hall
3. St. Joseph's University, Mandeville Hall

ALTERNATIVE DELIVERY METHODS: Which One Is Right for Your Project?



For the most part, the traditional “design-bid-build” model for the construction process has been a practical, straightforward means for delivering a construction project. The architect designs, a contractor is hired through the bid process, and the contractor builds.



Above ▲ Detail & build can be a useful approach for fast-track projects, like this London office

But depending on a specific project’s circumstances—from complexity, to scheduling, to budget—alternative delivery methods may offer a more efficient and effective way to meet a client’s needs.

DESIGN-BUILD

In the design-build approach, a unified team of designers and contractors works together from the beginning of the project, under one contract. This approach typically shifts more of the risk from the owner to the contractor and encourages collaboration which, theoretically, reduces RFIs, change orders, and time.

This speed-to-market benefit was initially a huge draw to data center developers, who need their facilities to be up and running quickly. Early on, data centers were also somewhat simple, big-box facilities, so a complex design process wasn’t necessary. “Design-build made total sense for the Mission Critical market,” says Scott Rugen, director of Mission Critical services at Structure Tone Southwest (STSW). “The client and the team knew exactly what they were looking for, so our combined efforts could save time on the schedule.”

But as the Mission Critical market has matured, owners have developed more sophisticated facilities. “The drawback of design-build for an owner is they need to make sure they are very organized and involved in the early planning,” says Andrew Riela, STSW Mission Critical technical services director. “If specific brands, typologies, and configurations aren’t in the program documents at the beginning, they’ll end up with the change orders they were trying to avoid.”

STSW’s Mission Critical team is now seeing a shift to an almost in-between approach. “The majority of our work now is more like ‘design assist,’” says Randy Slagle, STSW Mission Critical director of preconstruction. “We peer review the design documents and assess constructability to make their design fit into the given building or site. It’s not a design-build contract, per se, but collaboration is still a big part of the process.”

INTEGRATED PROJECT DELIVERY (IPD)

In Philadelphia, LF Driscoll has been working in an even more integrated, collaborative delivery model on what Penn Medicine has called Philadelphia’s “most sophisticated and ambitious healthcare building project.”

Totalling 1.5Msf, the new Penn Medicine Pavilion is one of the largest projects on the East Coast to design and build through an integrated project delivery (IPD) approach.

LF Driscoll is part of the PennFIRST IPD team building the project, which also includes Penn

Medicine as owner, Foster+Partners and HDR as architectural designers, BR+A as engineering designer, and Balfour Beatty as construction management partner, as well as a number of key trade contractor partners.

In an IPD arrangement, the contract itself is set up to not only encourage but demand a collaborative environment. Rather than each project team member signing a contract with the owner, the entire team is contracted together in a multi-party agreement where the success of each party relies on that of the others.

“We’re all partners in this together,” says Ed Hanzel, project executive with LF Driscoll. “The contract describes what the process is and how we work through that from a business perspective.”

A key benefit to the IPD approach is the cost control built into the process. At the beginning of the project, the team collectively develops a “project target cost” based on the owner’s budget and program. This target guides all the decisions made for the design and construction going forward. Also called “target value design,” this process allows the designers, construction managers, and users to

Photo, left: Hutton+Crow

work together throughout to make changes and informed decisions that will keep the project from creeping beyond the target cost.

“In IPD, instead of taking a value engineering approach where we have to unravel something already completed, we can do that as we go,” says Hanzel. “And we like that we can get our subs involved at that stage as well, so our expert contractors can work directly with designers. It’s good for everyone.”

DETAIL & BUILD

While these approaches to construction have a number of benefits, the emphasis on team decision-making has the potential to add layers of approvals and possibly slow down the process. Structure Tone’s London operation, however, recently launched a team that leverages the benefits of a design-build relationship in a more agile, flexible model.

STO’s new “detail & build” division in London specializes in Category A and B interior fit-out projects with a value roughly between £500–5M. The idea is to bring together Structure Tone’s experts with the client’s early in the project to create a more integrated, effective partnership, but with the control and governance of more traditional procurement and ongoing construction.

“It’s about making the entire process more efficient by maximising the contractor’s relationship

to take a more direct path from design to construction,” says Richard Howard, Structure Tone’s detail & build lead. “By working closely with the client design guardians and professional team, our team of experts bridge the gap between design-build and traditional procurement.”

So far, the market has responded to the new service and the speed, cost certainty, and minimised risks the detail & build model has to offer. London’s detail & build team is working on a number of core refurbishment and Category A fit-out projects, all of which will take only four months using the approach.

“We’re delighted to offer our clients such a rapid, highly cost-effective fit-out solution with all the benefits of a tier 1 contractor,” says Adam Rowe, Structure Tone London divisional director.

The most important factor in determining the approach to a project’s design and construction is, of course, the client’s goal. Not all projects need, for instance, the expanded team and formality of IPD. But for the PennFIRST team building the Penn Medicine Pavilion, the IPD approach is a perfect fit.

“Since we’re able to make design decisions as we go, we can push out some decisions knowing that medical technologies may evolve just while we’re in construction,” says Hanzel. “But we’ve been able to set our general parameters and use our project target cost process to adjust to whatever our client needs.” ◀



Wells Fargo Center, ©John Baer/Building Images Photography



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