

Christian Financial Moves into the Corner Office

By Mary Kremposky McArdle

Associate Editor



PHOTOS COURTESY OF SHAWN SMITH PHOTOGRAPHY

Many an office worker is now as mobile as the technology in his or her laptop bag. The great unchaining of the office worker from the desk continues unabated and is part of an ongoing workplace revolution. At Christian Financial Credit Union's new headquarters in Sterling Heights, the 100-person staff moves in an easy flow between personal and collaborative workspaces – not to mention the fair-weather option of working on an outdoor balcony.

Every staff member has a laptop to move to different workspaces throughout the workday. "I think the flexibility of being able to move around the building has had a tremendous impact," said Christian Financial's Chief Strategy Officer Lauren Fogarty. "Everyone has commented about the 'vibe' in the new building. There is a natural calm that flows throughout."

"The Voice of The Construction Industry®"



The high-volume, two-story atrium is a transparent, light-filled space, thanks to extensive use of glass. Fully glass-enclosed conference rooms seem to float within the building's upper reaches.

At Christian Financial, this next-generation workplace is about more than the freedom of working in a variety of spaces. Within this new 40,000-square-foot headquarters, the power of design takes the edge off of the daily grind. The interior offers refreshing, eclectic and inspiring places to produce one's very best for the 61,000 members of Christian Financial Credit Union.

Christian Financial placed the making of this break-out building in the trusted hands of Thompson-Phelan Group, Inc. (TPG), a firm based in Anchorville that has specialized in the design and construction of financial institutions since the mid-1960s. TPG has a long history of

working with Christian Financial Credit Union as well. "We have constructed five branches for Christian Financial and remodeled its former headquarters," said TPG's Project Consultant John Fountain. Fogarty adds, "And every project that they have done has been superior."

TPG, along with Barber-McCalpin Associates as its sister architectural firm, crafted this workplace Nirvana in collaboration with Christian Financial. Each of the building's four interior wings is a hybrid-style neighborhood of personal and collaborative workspaces with its own unique sensibility. Two neighborhoods occupy each floor and flank opposite sides of a

central, transparent and light-filled atrium designed with the elegance of an upscale hotel lobby – and with its own appealing collaborative spaces. A sampling of the building's diverse wings includes:

- The Park/Beach Wing is a place of endless summer no matter how hard it snows over the course of a southeastern Michigan winter. Soft fronds of faux grass form the backdrop of a bench seating zone, and collaborative meetings take place at a picnic table under a heavy-timber pergola or at café seating under a series of wind sails. The personal workspace zone subtly evokes life at a beach cottage with its horizontal white ship-lap siding and blue-painted walls. The design helps to create a work environment capable of generating that coveted balance between concentration and relaxation responsible for what is called flow – the state of mind leading to true productivity and the bright ideas of those light-bulb moments.
- The Hospitality Wing hosts a casual, break-away dining area called the Marketplace, along with a large-scale meeting room for training sessions, gatherings, and most recently as the ideal venue for Christian Financial's annual meeting.
- Another stimulating space – literally – is a coffee bar called the Compass Café. Located in the Industrial Wing, the coffee bar's island-shaped counter is clad in a beautifully variegated blue porcelain tile base and a quartz countertop. Overhead, the bottom edges of vertical wood ceiling planks are sculpted and undulating as if emphasizing the craftsmanship, character and unique materials shaping the entire building.
- Wood wainscot and built-in cabinetry give the Administrative Wing a traditional elegance all its own. The Wing houses the boardroom and archive room, along with personal and collaborative workspaces.

The 8.5-acre site at Van Dyke Avenue and 15 Mile Road has the same innovative edge. A walking trail follows the perimeter of a dry stone riverbed, and an apple orchard of 35 trees is already bearing fruit. Taking care of business never looked – and tasted – so good.

"Actually growing food is representative of



The coffee bar's variegated blue porcelain tile base is part of the beautiful weave of materials in the Compass Café. Overhead, the sculpted and undulating edges of the wood plank ceiling embody the craftsmanship, character and unique materials shaping the entire building.

our core value of sustainability," Fogarty said. "We had trees transported from an orchard at the northern end of Macomb County. The trees were already established and mature, and apples are beginning to grow this year."

The City of Sterling Heights honored Christian Financial Credit Union with the Edge Award for the building's and the site's design and for its appeal to the next generation. The building sets a high bar for commercial office space in Sterling Heights. The city planners believe the building "is going to become a standard for other businesses that want to come into Sterling Heights and build," said TPG's General Manager Brian R. Van Peteghem. "The City was very impressed with the level of detail that was put into the design of the building and into the site, along with being impressed with the willingness of the

credit union to make this kind of investment in the community."

Space-Starved

The credit union was cramped and space-starved in its former Roseville headquarters originally constructed in the 1970s and designed to support a considerably smaller staff. The credit union's steady and continual growth resulted in "our back office working in over four different branches in addition to our former headquarters," Fogarty said. "Essentially, we wanted to bring everyone back together in one building."

In this case, "everyone" includes new staff joining Christian Financial as a result of a recent merger with Motor City Co-Op Credit Union. "Our prior environment simply would not have allowed our newly expanded staff to be brought together with our current staff – the space we're in now came at the right time," Fogarty added.

At 40,000 square feet, the new headquarters offers its growing staff room to breathe, effectively tripling the square footage of its former 12,000-square-foot home. The new headquarters has a large multipurpose room for staff-wide meetings and employee training as well. "We didn't even have a place to have formal meetings in the previous headquarters," Fogarty said. "Our team has grown a great deal over the years, and now we are able to draw together a much larger group. It is important to have representation from diverse areas of the



**CONSULTING
GROUP**

Troy, MI | 248.680.0400

Ann Arbor, MI | 734.390.9330

Chicagoland, IL | 847.353.8740

info.g2consultinggroup.com/cam

DIG DEEP BEFORE YOU BUILD UP.

No one likes a surprise during construction. Before you dig into your next project, you need to know what lies underground. With G2's geotechnical and environmental investigative and design services, you can trust your next project will break ground on time, on budget, and surprise free. After all, the G2 motto is **Smart. Results. Fast.**



GEOTECHNICAL
ENGINEERING



CONSTRUCTION
ENGINEERING



ENVIRONMENTAL
CONSULTING

credit union, and now we have the flexibility and the space to do so.”

More than additional space, Christian Financial President and CEO Patty Campbell wanted to achieve the best fit of space and staff at the new headquarters. “Our CEO did some research and reading into the optimal work environment for employees,” Fogarty said. “She even interviewed employees, and what she found is that everybody wants to be able to go back to a private space for focused, heads-down work in addition to having collaboration spaces.

“It was important that we had some open spaces for our employees to come together in cross-functional teams and be able to meet or even casually work and start up a conversation on the spot,” Fogarty added, “but at the same time, staff would have the flexibility to return to a home space that is basically private and quiet.”

The Corner Office

Christian Financial selected the site at the northeast corner of Van Dyke Avenue and 15 Mile Road with equal thought and care. The chosen site gives the credit union “a very strong presence on the corner of a main intersection,” Van Peteghem said. Not to mention prime real estate on the major thoroughfare of Van Dyke and the opportunity to have a property well-positioned to serve the credit union’s branches now spread throughout Oakland, Wayne and Macomb Counties, Fogarty added.

Another advantage was the sheer size of the site. The Michigan Department of Transportation (MDOT) enlarged the site’s available land for property development by eliminating what is called a jersey curve, essentially a curved connector similar to an on/off ramp to a freeway that once helped drivers merge from 15 Mile Road to Van Dyke in an easy flow.

Barber-McCalpin’s building design, site analysis and ultimate site layout took full advantage of this prominent and sizeable parcel. The two-story building stretches on a diagonal very near the tip of the Van Dyke and 15 Mile corner. “The site definitely influenced the shape of the building, because we wanted to push the building closer to that intersection,” Fountain said.

At its center, the building has a two-story “iconic triangle of glass that is prominent in almost all of the credit union’s facilities,” said Barber-McCalpin’s Designer Kelly Watson. This glass triangle projects slightly beyond the rest of the building, and its apex points directly at

the intersection and the nameplate emblazoned with the credit union’s name. The building’s two exterior wings of brick and cast stone flank, unfold and slightly bend away from the central glass triangle, flowing around both sides of the corner to achieve maximum visibility for the new facility.

A Grand Alignment

The site originally hosted a now demolished MJR cinema and the now abandoned jersey curve. The building’s exact location on the corner was determined by the last remaining vestige of the site’s past: an existing water main and sanitary line that cut diagonally through the property. “Because we didn’t want to relocate that 18-inch water main and the sanitary line, we placed the building on the former MDOT part of the property located in between that infrastructure and the Van Dyke and 15 Mile intersection,” said Barber-McCalpin’s Architectural Project Manager William Hass.

Barber-McCalpin’s site design creates balance, symmetry and flow across the rest of this sizeable parcel. At the beginning of every

workday, the credit union’s staff enters the site along a beautiful boulevard lined with the apple orchard on one side, a generous swath of lawn on the other and a greenway in between the divided roadway.

The boulevard cuts a diagonal line through the site, flows around the landscaped circular courtyard, and like a roundabout, naturally steers staff to either the east or west parking lots and visitors to a modest parking area near the building entrance. All three structures – the boulevard, circular drive and the midpoint of the building – are aligned in a diagonal flow of space beginning at the interior roadway and ending at the building’s main entrance.

Launching Construction

TPG launched construction on March 5, 2018. The first site task: Removing approximately four feet of poor soil and importing about six feet of sandy soil to raise the building pad above the existing grade. To be exact, “one end was about six feet and then it tapered down to four feet,” said TPG’s Field Project Manager Chris Phelan.

According to Fountain, the building’s makeup



ZIMMER ROOFING & CONSTRUCTION

INDUSTRIAL • COMMERCIAL • RESIDENTIAL





(810) 966-6991
Z
ZIMMERROOFING.COM



An outdoor balcony marks the main entrance to Christian Financial Credit Union's new headquarters in Sterling Heights. The balcony adds to the building's varied workspace options.

includes poured and formed concrete foundations and a structural steel frame. Campbell & Shaw Inc.'s use of an innovative CNC structural steel fabrication technology benefited this phase of the project. "The machine helped to speed up the fabrication process," Van Peteghem said. "Chris (Phelan) and I went to Campbell & Shaw's facility to see the equipment in operation. It is amazing."

CAM Magazine's February 2019 edition offers more detail: "Campbell & Shaw Steel, Inc., Marysville, installed a fully automated FICEP 1103 CNC three-spindle drilling, layout and sawing structural steel processing production line. The new CNC machine automatically loads the structural steel members from the infeed conveyor onto the processing rollers, drills the correct hole size from a six-bit tool selection for each spindle that automatically changes the tooling, lays out the member with piece marks, and then cuts the material to length with up to a 60-degree bevel cut. After the material is processed, it is transferred to the outfeed conveyor for final fabrication."

According to Campbell & Shaw Vice President Mark Lietke, "This machine is capable of running lights out, meaning that our crew can program it, load it up prior to quitting time, and return in the morning to pre-processed steel ready for fabrication."

The exterior walls are clad in brick and cast

stone. According to Hass, the building has a variety of stone sizes, beginning with 48 x 28-inch cast stone pieces at the very base of the building and ranging from 12 x 24-inch pieces on the majority of the building to 24 x 24-inch pieces on the building's corners. As the mason, HMC Mason Contractors, Shelby Township, needed to machine-set the large base pieces before the arrival of winter and before the scaffolding was erected to begin installation of the rest of the masonry under temporary heat and tented conditions.

Well before installation of the Belcrest 760 Belden Brick, the credit union and the project team paid a visit to Belden Brick's yard to select the brick of choice. "We wanted to show Christian Financial all the potential types of brick so that they could select the one that best met their preferred color," Van Peteghem said. "Having an architect and contractor with a strong link to all of those subcontractors gives the client an upper hand in getting everything they want in a project. Working cooperatively with subcontractors allows us to work ahead of time to give the client a good understanding of their building and its materials."

Innovative Thin Stone Veneer Panels

TPG steered the client toward another optimal material selection: the use of thin stone veneer panels as a type of roofline cornice

appearing to float above the building's glass triangle. "To support typical veneer stone, we would have to utilize large steel beams, but there was not a way to load bear these materials down to the foundation," Van Peteghem said. "Instead we used smaller steel beams and a thin stone veneer system. The thin stone is at least half or maybe a quarter of the weight of a typical veneer stone."

Hass explains the thin stone veneer system: "Metal rails are screwed into the metal stud wall. The stone panels are grooved in the factory, and when they arrive on site, the panels snap into the rail to hold the weight of the stone."

The size of the 24 x 24-inch thin stone panel was innovative for the manufacturer called Redland Brick, a Philadelphia-based division of Belden Brick. "This project is the first time the manufacturer has produced thin stone panels in that large of a size," Hass said.

To keep pace with the fast-track schedule, "we were monitoring on a daily basis exactly how many stone panels were being made, put on a truck, and shipped to us," Van Peteghem said. "Once the stone arrived on the site, it was immediately installed on the building."

The Rainy Season

TPG ran a gauntlet of obstacles to enclose the building, the first being the constant rain and the second the fast-track schedule. With the clock

ticking towards a scheduled occupancy date of September 1, 2019, TPG worked on the exterior façade during one of the wettest years on record. “As far as site work, it was probably the most difficult job I have ever done,” Phelan said. “Maneuvering around the building with heavy equipment to install the exterior finishes was very demanding.”

A temporary parking lot and a good stock of gravel helped TPG receive material deliveries and deploy heavy equipment on the orchard-side of the building, but the corner-facing building façade was much more difficult. “Most of the water went down to the dry riverbed, which became a pond, but the soil and the land surrounding it became very saturated,” Phelan said. “We installed several pumps in the pond to get rid of the majority of water and to have all the water drain to the pond, but the surrounding area just became a muddy mess. The sheer amount of rain would have destroyed any temporary gravel drive in that area, so it would have been wasted money.”

Conducting design and construction simultaneously, along with overlapping trade work, kept the schedule on track. “We were already installing masonry and studs on the exterior, and we were just issuing the interior metal stud bid packs,” Van Peteghem said. “That’s the kind of overlap that this project had, which is not uncommon on construction projects, but it was needed to meet the speed of this project.”

The Best of Both Worlds

The fast-track, design-build schedule resulted in another wave of stone innovation. Because of scheduling demands, the structural steel had to be erected even before the interior design was set in stone so to speak. In this case, the client actually requested stone for much of the atrium’s two-story-high walls. Of course, post-installation, revamping the structural steel was not an option but the project team devised an alternative. “We didn’t have the structural capability of placing actual stone in the atrium,” Watson said. “Instead, we used a faux finish to give the walls a stone appearance.”

This choice kept the schedule on track and gave the credit union the visual representation of its preferred cladding. To make it happen, TPG contracted with a high-quality subcontractor called Saylor’s Inc. in Ottawa Lake, Michigan. “Layering more and more drywall together created the stepped

projections on the walls and columns,” Hass said. Laying down two coats of the Direct Finish System (DFS) gave it the look of stone and created the mortar lines and joints.

Prior to installation, the project team and credit union representatives traveled to Ottawa Lake to review several different mockup panels in Saylor’s shop. “The ability for us to see some of these materials was invaluable and much appreciated,” Fogarty said. “Accommodating that trip to Saylor’s to make sure that the finished product was going to look the way we thought it would was outstanding. Barber-McCalpin did 3D renderings throughout the design that also helped us visualize the end product, which was a tremendous help on this collaborative project. It was great working with this team.”

The actual application took four weeks of continuous work, including the week necessary for the installation and dismantling of scaffolding. “Scaffolding had to be set up in the entire atrium to accommodate the continuous DFS application,” Phelan said.

Coordinating the work of other trades before

and after DFS application added another level of complexity to the project. “We had to have the majority of the work already done in the atrium, because the DFS application was going to take several weeks,” Phelan said. Once the DFS work was completed, TPG was able to utilize the already-in-place scaffolding for ceiling tile installation, along with some caulking work and a light fixture install.

Removing the scaffolding unveiled the finished product. With the texture and appearance of stone, the system melds in with the atrium’s upscale and refined sensibility. A wood and quartz reception desk, along with a quartz backdrop, porcelain tile flooring and well-appointed furnishings, lend the space a sophisticated ambiance.

Transparency was another quality on the credit union’s wish list for this signature atrium. “The credit union wanted to walk in the door and be able to see from one end to the other,” Watson said.

The generous use of glass produces the desired transparency and fills the high-volume, two-story atrium with natural light. Fully glass-enclosed conference rooms seem to float within the upper



POWERUP YOUR CAREER
Master's degrees | graduate certificates | degree completion

LTU offers programs in Civil Engineering, Construction Engineering Management, Industrial Engineering, and more.

Lawrence Technological University
Architecture and Design | Arts and Sciences | Business and Information Technology | Engineering
ltu.edu/powerup ltu.edu/applyfree

reaches of the large triangle of glass. The atrium interior has large expanses of glass window walls integrated with faux stone walls, as well as glass handrails along the second-level mezzanine-type space called the Loft.

Inviting collaboration spaces abound on both levels of the atrium. Take the grand open staircase to the Loft to have an impromptu meeting around a fireplace. Cozy fireside seating gives way to a larger community table, along with small breakout tables in other areas, offering wonderful places to work for the credit union team.

A Meeting in the Park

Each of the four wings flanking the atrium has a different theme and its own set of charms and construction complexities. Follow the boardwalk to a meeting in the Park on the first floor. Natural light washes over collaboration spaces with window-side seating: the picnic table under the pergola and a cluster of café-style seating under a series of wind sails.

Faux trees border both of these unique meeting spaces “reinforcing the feeling that you are sitting outside on a pleasant day even when it is actually

the middle of winter,” Van Peteghem said. Adding to the outdoor ambiance, “the flooring in these two areas was specifically selected because one has a paver-type material and the other has carpeting with a moss-type patterning to it, Watson said.

The skies are always blue in this indoor park. “The open ceiling structure in the Park is painted blue to make it more sky-like,” Watson said. Brick walls are another strategy for cultivating the outdoor feel. The brick wall of one corridor is even dotted with planter boxes brimming with perpetually green and life-like faux vegetation.

Staff working within this wing “not only enjoy the benefits of large expanses of windows flooding the space with natural light, but they also enjoy the warmth and rustic feel of salvaged wood walls highlighting two no-maintenance moss wall canvases,” Watson said.

This walk in the park ultimately segues to a stroll on the beach as one walks further into the personal workspace zone with its beach cottage-type wall finishes. The carpet’s beige tone and patterning simulates sand and amplifies the beach effect.

Even what could be considered a formal meeting space has an innovative edge. In a space called the

Movie Room, U-shaped seating and back-lit, nature-inspired panels envelop attendees in a calming ambiance during webinars and training sessions, while a large screen projector and state-of-the-art technology foster collaboration and communication.

This engaging design was a collaborative effort of Barber-McCalpin and Christian Financial. “Barber-McCalpin definitely had an influence throughout the space,” Fogarty said. “They were very supportive of our thoughts even when they were perhaps a little bit unusual at times.” According to Watson, “The client had a very distinct plan of how they wanted the building to function and how they wanted to incorporate the different themed areas. It was a matter of bringing all the parts and pieces together and helping to find the right materials to use in those places.”

The project team each did their part in identifying the right sources for this diversity of specialty materials. “I think Kelly (Watson) and Bill (Hass) were very resourceful in looking for different suppliers of these materials,” Van Peteghem said. “Lauren (Fogarty) was tracking down some items as well. Having worked with Christian Financial for a number of years, we collaborate with one another and work with their team and our team to bring the best out of both.

“Our Estimator and Contract Administrator Greg Nowicki and Chris (Phelan) worked through the procurement part of making sure the materials were ordered and arrived on site at the correct time,” Van Peteghem continued. “If an item arrives too early, it gets in the way. It has to arrive at just the right time to keep the project on track.”

Let's Do Lunch

On the first floor, the Hospitality Wing’s Marketplace is part kitchen for making lunches, part cafe to purchase various food and beverages, part impromptu collaboration space, and part break-out and gathering space for events taking place in the large meeting room next-door.

“Because the Marketplace is adjacent to the kitchen, large meetings can accommodate food service as well,” Watson said. “If called for, the design also allows an event to be contained within the meeting area and Marketplace.”

Coffee at the Compass Café

On the second floor, live-edge wood conference tables and vertical wood plank ceilings lend a natural character to the meeting rooms of the Industrial Wing. An open work environment of exposed ceilings and MEP systems, and touches of raw or salvaged wood cabinetry, establishes a contemporary/industrial tone in the space. “This



RUBY HELPS YOU BUILD IT BETTER.

Congratulations to all of the CAM Special Issue teams on 12 outstanding Michigan projects!

ruby+associates
STRUCTURAL ENGINEERS

rubyandassociates.com 30300 Telegraph Road, Suite 400, Bingham Farms, MI 48025 T 248.865.8855

area has an industrial vibe to it,” Watson said. “The open structure and the way that some of the millwork was built reinforces that industrial idea.”

The Industrial Wing brings the outdoors into the interior in its own unique way. Filled with natural light, a window-side meeting area, called the Alley, re-creates the ambiance of an outdoor café with its brick walls, paver-type flooring, wood tables, sidewalk seating, string lights, and even an actual fabric awning anchored in the brick wall. The commissioned wall mural of a local Detroit street artist draws the space together. The mural depicts a sunburst, a mountain, a flowing river, and a set of footprints, adding character to the outdoor-style space and symbolizing the core values of Christian Financial.

“The mountain represents our core value of sustainability,” Fogarty said. “The sunburst translates into the phrase ‘Engage in Collaboration’ and the footprints translate into ‘Make an Impact,’ and the name of the Compass Café in the Industrial Wing stands for ‘Perform with Integrity.’”

Fabrication and installation of the undulating vertical wood planks in the Compass Café was quite an undertaking. Hass designed the system and Aria Custom Cabinetry – a millwork contractor based in Rochester Hills – crafted and assembled the pieces of lumber into nine, 22-foot-long individual planks. The planks were delivered to the site fully assembled at their full length.

Being quite heavy, each individual plank “took four to five people to install with the assistance of some equipment,” Phelan said. “But getting them into the building and to the installation site in the Compass Café was almost as hard as installing them.

“We lifted them up to the atrium mezzanine with a forklift,” Phelan said. “Then we carried each of the nine wood planks individually through the doors of a meeting room just to the left of the Café.”

TPG had to coordinate plank installation with the MEP trades and install this unique ceiling system after the porcelain tile-clad, island-shaped coffee counter was already in place. “The island’s cabinetry had to be installed relatively early because the exact size of the quartz countertop had to be measured accurately to allow the manufacturer to begin its work,” Phelan said. “There was a great deal of trade coordination just in that one little room and throughout the Industrial Wing, because of so many different finish materials.”

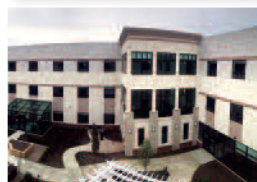
Planning the Future

On the second-level, the Administrative Wing offers the executive team and the risk and finance departments a mix of collaboration and personal workspace. The Wing is a traditional space with



Working in the Park/Beach Wing, the staff enjoys the warmth and rustic feel of salvaged wood walls and two no-maintenance moss canvases.

“Devoted to quality, commitment, relationships and reputation.”



Michigan based Commercial glazing contractor, specializing in fabrication and installation of

- Aluminum storefronts
- Entrances
- Curtain walls
- Skylights
- Glass handrails and more



Pearl Glass & Metals

248-628-1234

248-628-1233 fax www.pearlglasandmetals.com

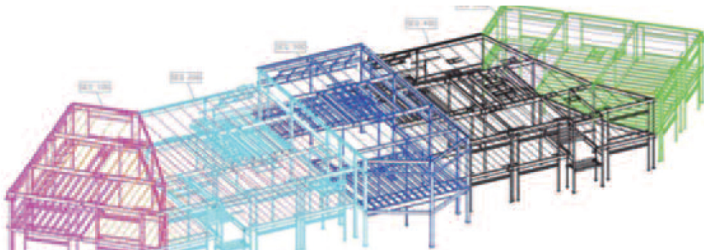


Michigan Celebrates Small Business
50 Companies to Watch
 2019 AWARD RECIPIENT

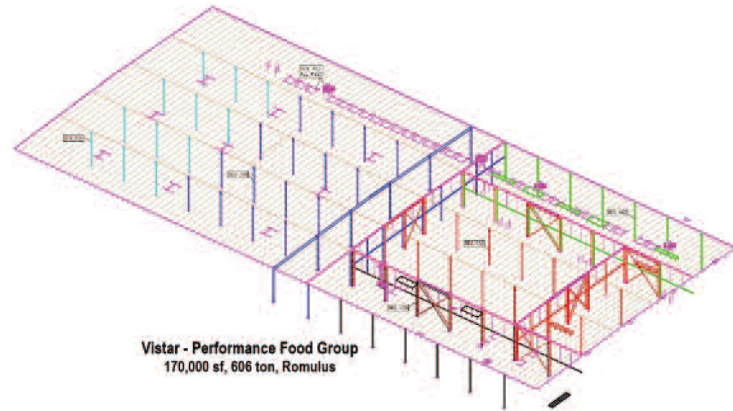
STRUCTURAL STEEL FABRICATORS/ERECTORS
CampbellShawSteel.com
810-364-5100



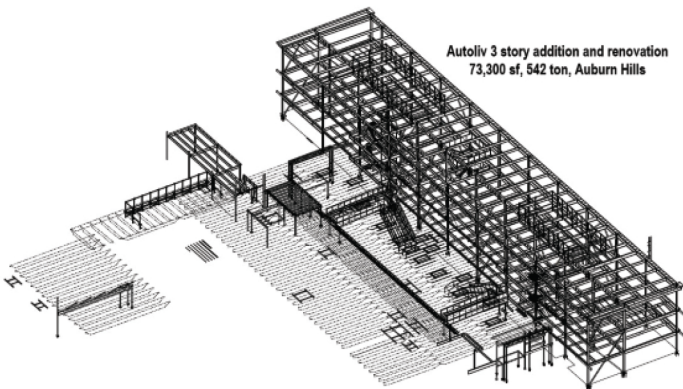
Please Visit Us On The Web, Facebook Or LinkedIn To Learn More About Us.
Recently completed: Autoliv 3 story addition and renovation, Auburn Hills
 Vistar Corporation Performance Food Group, Romulus
 McLaren Hospital Tower Screen Wall, Port Huron • Village of East Harbor, Chesterfield
 Wolverine Plating, Roseville • Birmingham Country Club Turf Building



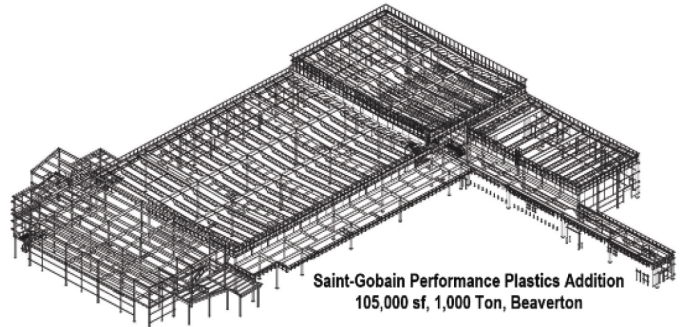
Congratulations to Thompson-Phelan Group and Christian Financial Credit Union
 for being one of CAMs 12 most outstanding projects of the year.
 Our team was honored to participate on the project.



Vistar - Performance Food Group
 170,000 sf, 606 ton, Romulus



Autoliv 3 story addition and renovation
 73,300 sf, 542 ton, Auburn Hills



Saint-Gobain Performance Plastics Addition
 105,000 sf, 1,000 Ton, Beaverton

Awarded as one of Michigan's 50 companies to watch in 2019 by MCSB. We are the 1st structural steel fabricator to ever receive this prestigious award since the awards program started in 2005.

We are also the 1st steel fabricator in Michigan to install a new, fully automated FICEP CNC drill and saw steel processing line.