



BUILDING Pride

The Wentzville School District uses Masonry to Enhance the Educational Experience of its Students



chool Pride” has been redefined at the new Liberty High School.

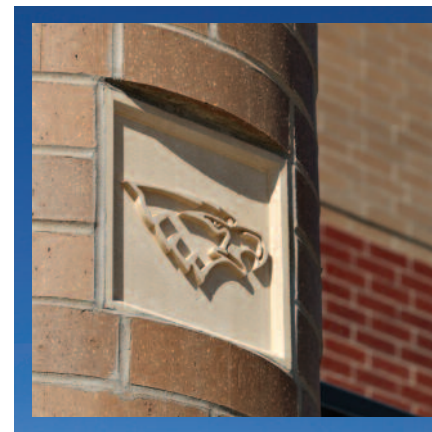
Thanks to the insightful use of different colored brick, cast stone logos, circular brick column wraps and massive amounts of block, everybody involved in the construction of the first stage of this educational facility is proud of the new school.

This first stage of a three part construction master plan resulted in a nearly 200,000 square foot building with five academic wings, a gymnasium and cafeteria, as well as athletic field dugouts, concession stands and press box. The project used 75,000 square feet of brick and 200,000 square feet of block in ways that create a sprawling learning environment that is not only safe, durable and functional but also welcoming, whimsical and visually appealing in its design and execution.

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ABOVE: THE ENTRANCE TO LIBERTY HIGH SCHOOL SHOWS THE USE OF CIRCULAR BRICK COLUMN WRAPS AND COLORED BRICK BANDING TO ADD VISUAL INTEREST TO THE SPRAWLING BUILDING.

BELOW: THIS CIRCULAR BRICK COLUMN WRAP SERVES AS A MICROCOSM OF MANY OF THE DESIGN ELEMENTS FOUND THROUGHOUT THE EXTERIOR OF THE SCHOOL; MULTI- COLORED BRICK BANDING WITH A CAST STONE MEDALLION SET INTO A CIRCULAR BRICK WRAP.



INSIDEMASONRY

**BUILDING PRIDE:
WENTZVILLE
SCHOOL DISTRICT**

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**FAITH IN MASONRY:
KENRICK-GLENNON
SEMINARY**

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**RIGHT-SIZING
THE BOX: WALMART
CHOOSES MASONRY**

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**Volume 22
Issue 1**

BUILDING Pride

CONTINUED FROM THE COVER



ABOVE: THE WENTZVILLE SCHOOL DISTRICT IS THE FASTEST GROWING DISTRICT IN MISSOURI. THE DISTRICT ESTABLISHED A UNIFORM LOOK AND FEEL FOR ITS NEW SCHOOL CONSTRUCTION FROM THE ELEMENTARY SCHOOL LEVEL ON UP. MASONRY CONSTRUCTION PROVIDES THE FUNDAMENTAL UNIFYING ELEMENT DISTRICT WIDE.

BELOW: THE VAST SPACE OF THE CAFETERIA COMMONS IS BROKEN UP BY THE USE OF BRICK COLUMN WRAPS ACCENTED WITH CAST STONE INSETS FEATURING A CARVING OF AN EAGLE – THE SCHOOL'S MASCOT.



ABOVE: THE PRESS BOX AT THE FOOTBALL FIELD EXTENDS UP FROM A BRICK CONCESSION STAND AT GROUND LEVEL. ATTENTION TO DETAIL IN THE MULTI-COLORED BANDING IN THE NARROW COLUMNS BETWEEN THE WINDOWS ASSERTS THAT THERE ARE NO INCONSEQUENTIAL SPACES ON THIS CAMPUS.



MULTI-COLORED BRICK BANDING AND MULTIPLE INSETS BREAK UP THE VISUAL SCALE OF THE MASSIVE EXTERIOR WALLS.

AT A GLANCE

Owner | Wentzville School District
Architect | Hoener Associates Architects
General Contractor | Brinkmann Constructors
Mason Contractor | Grant Masonry Contracting
Brick & Block | Midwest Block & Brick
Accessories | Irwin Products
Cast Stone Medallions, Trim and Bandings | Midwest Cast Stone
Mortar | Spec Mix

“We find masonry to be versatile, durable and a good value for the money,” said **Bruce Dell**, Principal of **Hoener Architects** of Saint Louis, Missouri. “Educational customers plan that a school building will be in operation for many generations. They choose masonry for practically all of their new construction and additions.”

Bill Grant served as project manager for **Grant Masonry**. “The initial cost of using masonry is the most competitive in the industry, especially when the masonry is utilized as the structure. On top of that, there is less maintenance when you use masonry, so the life cycle cost is outstanding. When you factor in that the masonry systems used today can meet the energy needs of the code and allow for electrical and plumbing to be run within our wall system, you can then achieve the look you want with the many options provided by masonry. A building’s owner is realizing many solutions with one system.”

The circular brick columns are a design element that appear throughout the school — both inside and out. “The color on the cast stone picks up the color of the brick in the banding we used on the outside of the school,” notes Dell.

The cafeteria space features a sloped gable. The pitch in the roof line was just one of the many multiple elevation challenges on this project that were deftly handled by **Grant Masonry** and the craftworkers from **Bricklayers’ Union Local #1 of Missouri** and the **Eastern Missouri**

Laborers’ District Council. “This was not a square box, there is a lot of detail to it,” said Grant. “All the roof lines have different heights and elevations. There are special pieces for every head and sill and corner detail on this job.”

The general contractor **Brinkmann Constructors** wanted to drive the construction schedule from one year to nine months. Grant convinced them to set aside one interior wing where the masons could work inside during bad weather. The masons only missed one day because of weather during the winter of 2012-2013, and that was because the pipes froze, preventing them from getting water.

“When every other trade was unable to work because of weather, we were inside working, so we were able to beat their schedule,” said Grant — with a great amount of pride.

M

THE RESTROOMS AND CONCESSION STANDS AT THE SCHOOL’S FOOTBALL FIELD ARE CONSISTENT IN DESIGN AND CONSTRUCTION TO THE SCHOOL.



Both Grant and Dell point with pride to the school’s cafeteria as a showcase of the role masonry plays in the school’s construction. The cafeteria creates a commons for large gatherings until an auditorium is built in the next phase of construction. Circular brick column wraps emblazoned with a cast stone logo of the school’s mascot — an eagle — add visual relief to the cavernous space.



ABOVE: THE SOUTHERN FACE OF THE SCHOOL OFFERS ANOTHER VIEW OF THE CREATIVE USE OF MULTI-COLORED BRICK. HERE THE COLUMNS OF THE WINDOW BAYS EXTEND IN A DECORATIVE PATTERN BY USING A COLOR CHANGE TO CARRY THE DESIGN UP TO THE ROOF LINE.



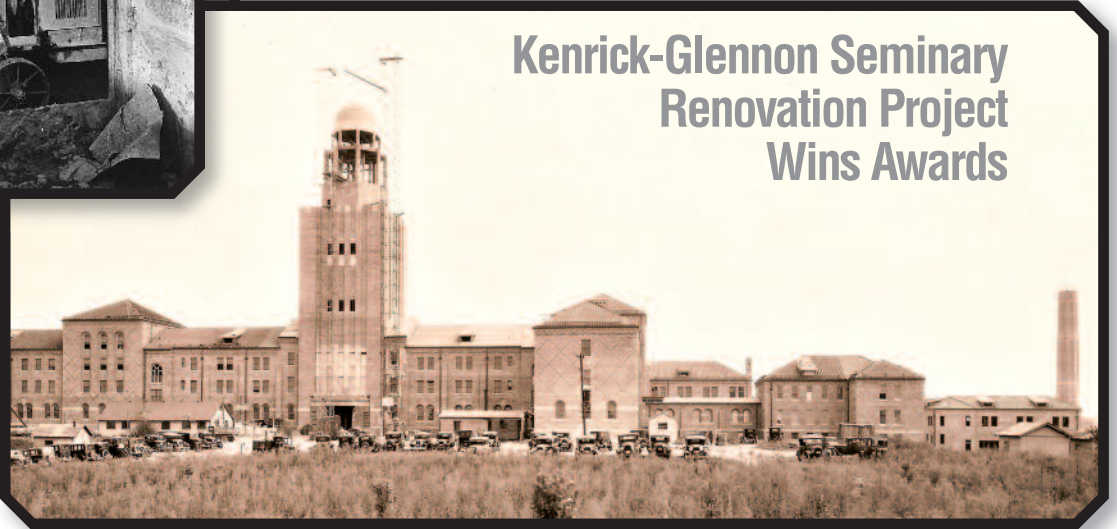
THE SAME ATTENTION TO COLOR BANDING FOUND IN THE SCHOOL IS REPEATED IN THIS CONCESSION STAND AT THE FOOTBALL FIELD.

Faith in Masonry



ABOVE: MIXING MORTAR IN 1929. NOTE THE LIME PITS.

RIGHT: THE ORIGINAL CONSTRUCTION OF THE KENRICK GLENNON SEMINARY WAS DONE BY FRED DAUES, SR. OF DAUES CONTRACTING COMPANY IN 1930. AN EXTENSIVE RENOVATION AND CONSTRUCTION PROJECT IN 2011-2012 WON MAJOR AWARDS FROM DESIGN AND PRESERVATION GROUPS.



Kenrick-Glennon Seminary Renovation Project Wins Awards

BELOW: INSTALLATION OF THE DISTINCTIVE BELL TOWER, 1930.



The most visible landmark in the town of Shrewsbury is the distinctive brick bell tower of the Kenrick-Glennon Seminary. A glimpse of it hints at the beauty of the masonry buildings on the Seminary campus. These structures look like they were transported to their hilltop location from a town in Tuscany.

Erected in 1931, the current Seminary campus has been the center for the education of young men entering the Catholic priesthood for 85 years. The Seminary underwent a renovation from 2011-2012. This project won awards of merit from both the American Institute

of Architects and the St. Louis Landmarks Association in 2013. Masonry not only played a major role in the construction of the original Seminary complex, but also in the renovations and upgrades.

“Our use of masonry on this project was an obvious choice. The beauty and durability of that original building was tied to its own masonry construction. Using a well matched brick to continue the building’s sense of timelessness and permanence, and have our addition feel equal in character and yet part of the whole complex was important to us,” said **Brendan Smith**, Project Architect for **Cannon Design**.



A NEW ADA COMPLIANT ENTRANCE IN THE BUILDING'S COURTYARD IS MADE OF STRUCTURAL MASONRY ACCENTED WITH GRANITE WALLS.

The Seminary's distinctive original undergraduate building features a multi-wythe brick construction that uses up to six wythes of brick toward its base. Expansion plans on this project called for the construction of a new addition to fit in a space between two of the building's wings.

Cannon Design chose a cavity wall system using a CMU load-bearing wall with a brick veneer for this three-story addition. The intent was to blend in with the original building, but not mimic it.

"Space was at a premium, the inches counted," said **Brendan Smith**. "Using CMU as a back up to the face brick allowed us to use those exterior walls both for primary structural support and for shear. We got a cleaner layout and a better use of space than we would have if we had used perimeter steel framing."

The masonry bearing walls and flat concrete slab construction allowed the contractors to match the floor-to-floor heights of the original building while still allowing enough ceiling space for modern HVAC systems.

The choice of brick on this addition was critical, as the original brick was no longer available. The design and construction team studied numerous options before settling on a blend of 67% Shadow-Tex and 33% Light Autumn brick that was blended at the plant.

"**Danielle Bach**, Architectural Rep for **Midwest Block and Brick**, did a great job of finding the right brick for this project," said Smith. "She really nailed it."

Brian Bell, Project Manager for general contractor **BSI** credits the masons from **John J. Smith Masonry** for their craftsmanship and dedication on this project.

"Smith Masonry did multiple mock-ups to help us arrive at a match for the existing brick," said Bell. "It was worth the effort to go the distance and get this match. It is remarkable that it is an almost seamless transition to an existing 80-year old wall."

Randy Rathert, Director of Building and Real Estate for the **Archdiocese of Saint Louis**, served as the owner's representative on this project. He appreciated the level of craftsmanship displayed not only on the construction of the new addition, but on all of the renovation work involved in this project. "The craftsmanship speaks for itself," said Rathert. "Everybody involved in the project enjoyed restoring this architectural treasure. It showed in the quality of their workmanship and the pride they took in their work. Smith is a good masonry contractor. I have worked with them on numerous projects over my career."

THE ORIGINAL STAIRCASE ON THE WEST SIDE OF THE SANCTUARY HAD TO BE REBUILT IN ORDER TO ACCOMMODATE THE NEW HANDICAP ACCESSIBLE ELEVATOR TO THE SECOND FLOOR.



A NEW DOOR WAS CREATED DURING THE MODERNIZATION OF A SECOND STORY WALL FOR ADA COMPLIANCE. THE SILL OF THE ORIGINAL WINDOW SERVES AS A HEADER FOR THE DOOR FRAME, EMPHASIZING THE PRESERVATION AND REUSE OF ORIGINAL MATERIAL WHENEVER POSSIBLE.

CONTINUED ON PAGE 6

Faith in Masonry CONTINUED FROM PAGE 5

David Tarter served as Superintendent and foreman on this project for **John J. Smith Masonry**, while **Chris Nyland** and **Mike Healey** also shared foreman duties.

Masonry provided additional solutions to this sprawling renovation project. Modernizing entrances on this historic structure for handicapped access without taking away from the building's original beauty with an ill-fitting addition required a high degree of craftsmanship.

The main entrance to the undergraduate building was converted from a staircase into a switchback ramp that also functions as a common space. Granite walls on this ramp also serve as benches where people can congregate or wait for rides. Another ADA compliant entrance with granite ramps and walls was added to a courtyard area on the building's interior. The new stone ramps blend seamlessly with the original architecture.

The masons built the structures for new handicap lifts on the east and west sides of the sanctuary wing. They also added a new entry way on the west side of the sanctuary. A new, taller and steeper staircase was built to accommodate this new lift.

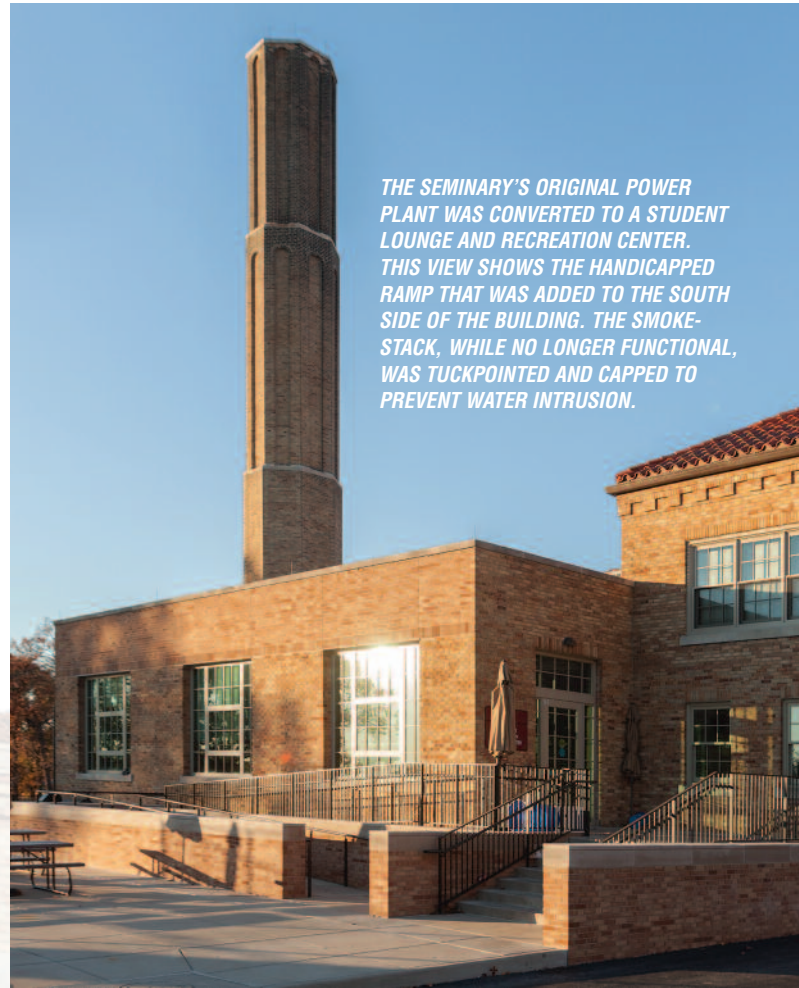
The campus's original power plant was repurposed to a student lounge and recreation center. Saving this building's original brick for reuse whenever possible was an important part of this project.

"We have people who know how to take masonry apart and save it, rather than just tear things down," said **David Tarter**, Superintendent for **John J. Smith Masonry**.

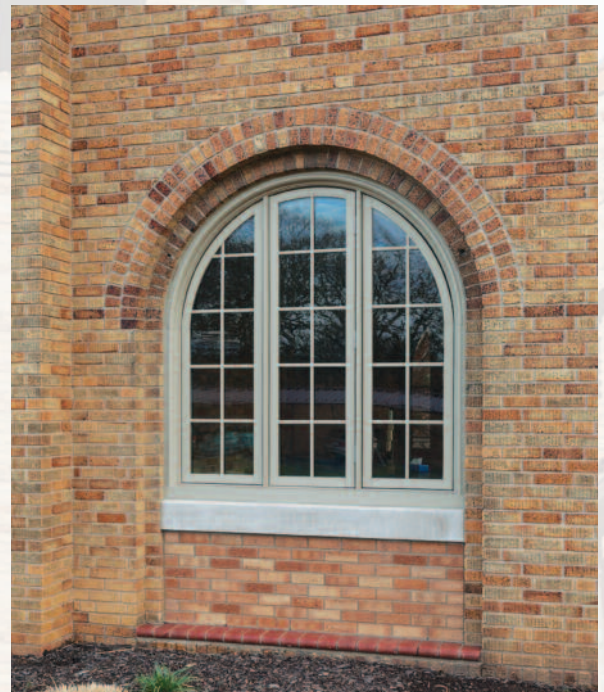
The masons built a three-story elevator shaft inside the building. A new handicap accessible entrance ramp featuring block footings, brick veneer and limestone capping was installed on the structure's main entrance. The building's smokestack was capped and tuck pointed to prevent water intrusion. Original brick and window lintels were removed, cleaned and repaired where necessary.

No detail on this project was treated as minor. While it is often said that "work is its own reward", the participants in the renovation of the Kenrick-Glennon Seminary are also proud of the recognition they have received from design and preservation organizations.

"I have been involved in a lot of historic rehab projects," said Rathert. "This was a very pleasurable project for me to be involved in. I'm very pleased with the end product and the process of the masonry."



THE SEMINARY'S ORIGINAL POWER PLANT WAS CONVERTED TO A STUDENT LOUNGE AND RECREATION CENTER. THIS VIEW SHOWS THE HANDICAPPED RAMP THAT WAS ADDED TO THE SOUTH SIDE OF THE BUILDING. THE SMOKE-STACK, WHILE NO LONGER FUNCTIONAL, WAS TUCKPOINTED AND CAPPED TO PREVENT WATER INTRUSION.



THIS ARCHED WINDOW WAS ORIGINALLY AN OPENING TO A COVERED PORCH. CARE WAS TAKEN TO MATCH THE BRICK COLOR WHEN THE AREA WAS ENCLOSED.



GRANITE WALLS AND A GRANITE BENCH GIVE THIS HANDICAP ACCESSIBLE ENTRANCE TO THE UNDERGRADUATE BUILDING AN ADDITIONAL USE AS A COMMON SPACE.

at a glance

Owner | Archdiocese of Saint Louis

Architect | Cannon Design

General Contractor | BSI Constructors, Inc.

Mason Contractor | John J. Smith Masonry

Block and Brick | Midwest Block and Brick

Precast Stone | Caliber Cast Stone

Tuckpointing | James G. Staat

Tuckpointing and Waterproofing

Cut Limestone | Architectural Stone

Craft Workers | Bricklayers' Union

Local #1 of Missouri, Eastern

Missouri Laborers' District Council

RIGHT: GREAT CARE WAS TAKEN TO SELECT A BLEND OF BRICKS FOR THE NEW ADDITION. THE ORIGINAL BRICK HAS A DISTINCTIVE COLOR AND TEXTURE. "FINDING A GOOD BRICK MATCH WAS CRITICAL TO MAKING OUR ADDITION FEEL LIKE IT BELONGED AND WAS NOT JUST AN IMITATION OF THE ORIGINAL BUILDING OR A FUNCTIONAL AFTERTHOUGHT," SAID BRENDAN SMITH.



LEFT: "ACHIEVING BALANCE BETWEEN BUILDING SOMETHING NEW AND OF ITS OWN TIME BUT STILL BEING IN HARMONY WITH THE ORIGINAL BUILDING WAS A LARGE PART OF WHAT PEOPLE SAW IN GIVING AWARDS TO THE BUILDING," SAID BRENDAN SMITH, PROJECT ARCHITECT FOR CANNON DESIGN. THE ORIGINAL BUILDING IS ON THE RIGHT.



Right-Sizing the BOX

Wal-Mart Chooses Masonry for its New Neighborhood Markets



THE NEW WAL-MART NEIGHBORHOOD MARKET AT MID-RIVERS MALL DRIVE IN ST. PETERS FEATURES SINGLE WYTHE LOAD BEARING MASONRY WALLS.

Masonry should be the first choice for building owners and designers when faced with a fast track retail construction project of any size.

Don't believe it? Just look at your local Wal-Mart.

Wal-Mart is the first name that springs to mind when someone uses the phrase "big box" retailer. This designation refers to the actual building, which is usually a large rectangular structure of 50,000 square feet or more. The durability of masonry is perfectly suited to the high traffic volume of these retail operations.

The Bentonville, Arkansas-based chain has perfected the system of driving down the cost of goods sold and passing the savings on to their customers. That includes the cost of construction. The installed cost of load-bearing CMU is less than other comparable building systems.

A typical Wal-Mart supercenter averages 182,000 square feet. Now, the company is setting its sights on a relatively new concept, first tested as a pilot in 1998. The Wal-Mart "Neighborhood Market" is a smaller format, 40,000 square foot grocery store that is being introduced to the St. Louis Metro Area with the construction of two stores in St. Peters. These stores are about 30% smaller than a typical new supermarket. The price conscious retailer uses a mix of masonry materials as the backbone of both its traditional "big box" stores and its newer "small boxes" to achieve the desired look, while providing the structural need of the project.

"These buildings are a perfect example of how load bearing CMU can satisfy a tight, aggressive schedule and provide a quality product," said **Luke Siebert**, Project Manager for **Heitkamp Masonry**, the masonry contractor for both St. Peters Neighborhood Markets.

The use of load-bearing CMU eliminated the need for additional perimeter steel beams and columns. The CMU walls also act as shear walls to take the lateral loads into the foundation. Shear connections installed between the roof deck and walls

THE INSTALLED COST OF LOAD-BEARING CMU IS TYPICALLY LESS THAN OTHER COMPARABLE BUILDING MATERIALS, SO IT IS A CHOICE OF WAL-MART FOR MANY OF THEIR PROPERTIES.



AT A GLANCE

St. Peters, Missouri

Owner | Wal-Mart

Architect | SGA Design Group,
Tulsa, Oklahoma

General Contractor | SM Wilson

Mason Contractor | Heitkamp
Masonry

Block and Spec-Brik | Midwest
Block & Brick

Accessories | Irwin Products

Dry Goods | Specmix

Cast Stone | Midwest Cast Stone

Craft Workers | Bricklayers'
Union Local #1 of Missouri,
Eastern Missouri Laborers'
District Council

eliminates the need for additional steel bracing, saving costs. Foam fill insulation within the installed wall increases the R-value to help achieve the energy requirements. Block filler and elastomeric coating is used on the exterior walls, while a coat of paint on the interior achieves the designers anticipated look.

Heitkamp Masonry started work on the first building in late August 2015. Work on the second building began a few weeks later. The structural masonry work took about five weeks to complete for each building. It helped that both buildings followed virtually the same plans. The only difference between the two is the detached gas station included at the store on Mid-Rivers Mall Drive.

The buildings' three walls that are visible to the public incorporate four feet of Spec-Brik concrete wall system on footings. The remainder of the walls up to the roofline are painted split-faced CMU. A single course of white painted

CMU delineates the line between the Spec-Brik and the brown or buff painted block. CMU is also used to form the thick bases of columns capped with pre-cast stone. The rear wall is constructed of solid smooth-faced CMU.

The building's vestibule is defined by a combination of Spec-Brik walls, painted CMU columns and pre-cast windowsills. This provides a customer-friendly entrance.

ABOVE: THE WAL-MART NEIGHBORHOOD MARKETS IN ST. PETERS USE A COMBINATION OF SPEC-BRIK, SPLIT-FACED CMU AND CAST STONE IN THEIR CUSTOMER AREAS. A WHITE PAINTED

BAND ON A SINGLE COURSE OF SPLIT-FACED CMU ABOVE THE SPEC-BRIK BASE IS ECHOED BY THE THIN COURSE OF CAST STONE ABOVE THE SPLIT-FACED COLUMN BASE. THESE DESIGN SOLUTIONS ECONOMICALLY ENHANCE THE AESTHETICS OF THE NEIGHBORHOOD MARKETS.

“These buildings are a perfect example of how load bearing CMU can satisfy a tight, aggressive schedule and provide a quality product.”

Luke Siebert
Heitkamp Masonry

“Wal-Mart knows that masonry can go up quickly,” emphasized Siebert. “All we need is a footing and we can work with very short lead times with our materials. The Spec-Brik lays out like block, it is reinforced like block, but it provides the look of brick on its face. This is a great option for a single wythe application.”

Siebert has praise for his foremen on these projects – **Steve Schulte** at Sutter's Mill and **Dave Helms** at Mid-Rivers Mall Drive – for bringing the projects in on time.

“Any Wal-Mart construction project requires an accelerated schedule. We worked six days a week – ten hours on the weekdays and eight hours on Saturdays. Fast construction of the load bearing masonry shell was critical so they could set the steel joists and get under roof,” said Siebert.

COLUMNS IN THE STORE'S VESTIBULE ARE MADE FROM PAINTED SPLIT-FACED BLOCK.

CONTINUED ON PAGE 10



Super Effort on New Super Centers

CONTINUED FROM PAGE 9



AT A GLANCE

Florissant, Missouri

- Owner** | Wal-Mart
- General Contractor** | Poettker Construction Company, Breese, IL
- Mason Contractor** | JDS Masonry
- CMU** | Midwest Block & Brick
- Utility Brick** | Missouri Brick
- Sack Goods** | Raineri
- Accessories** | Irwin Products
- Cast Stone** | Caliber Cast Stone

Wal-Mart's expansion in the St. Louis area includes Super Centers as well as the new concept Neighborhood Markets. Two new projects in Florissant and Shrewsbury emphasize the retailer's continued use of masonry in both practical and imaginative ways.

Wal-Mart is a very efficient company," said **Jeff Schmidt** of **JDS Masonry**. "Masonry has been their choice for construction materials because of its durability, aesthetics and consistency."

Schmidt is proud of the job his team did on the 169,426 square foot Wal-Mart Supercenter in Florissant, Missouri. The retailer chose load-bearing masonry for their entire structure. Half of the building is single wythe CMU on a footing and the other half is brick veneer over load bearing masonry construction.

Masonry products were selected to meet the aggressive production schedule on this project. A deadline of seven weeks was set for the block work. Schmidt used two foremen to supervise the seven-day a week job. Despite scheduling the exterior work during the cold, wet winter of 2014-2015, the job was completed on time. "This is a good, solid building. When you think construction, masonry should be your first choice," said Schmidt. **M**



ABOVE: BRICK VENEER OVER LOAD BEARING MASONRY ACCOUNTS FOR HALF THE WALLS AT THE NEW FLORISSANT WAL-MART. MASONS FROM BRICKLAYERS' UNION LOCAL #1 OF MISSOURI AND EASTERN MISSOURI LABORERS' DISTRICT COUNCIL RAN 150 FEET OF WALL AT A TIME.

LEFT: COLUMNS OF UTILITY BRICK CAPPED WITH CAST STONE DEFINE THE OUTDOOR AREA OF THE LAWN AND GARDEN DEPARTMENT.

THE USE OF DRY STACKED LEDGE STONE CONTINUES IN THE WALLS AND COLUMNS SURROUNDING THE OUTDOOR LAWN AND GARDEN CENTER.



AT A GLANCE

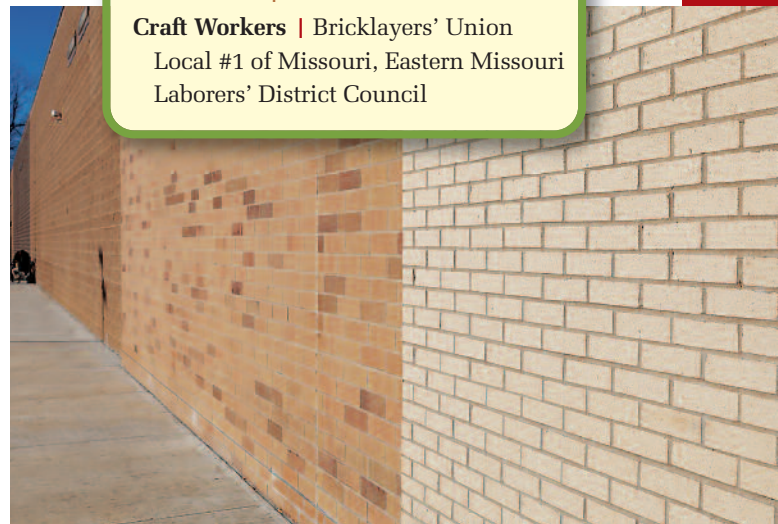
Shrewsbury, Missouri

- Owner | Wal-Mart
- General Contractor | SM Wilson
- Mason Contractor | Leonard Masonry Block & Brick
- Midwest Block & Brick
- Cast Stone | Midwest Cast Stone
- Sack Goods | Raineri
- Accessories | Irwin Products
- Craft Workers | Bricklayers' Union Local #1 of Missouri, Eastern Missouri Laborers' District Council

“Masonry has been Wal-Mart’s choice for construction materials because of its durability, aesthetics and consistency.”

Jeff Schmidt
JDS Masonry

BELOW: THIS NEW SUPERCENTER IN SHREWSBURY RELIES ON DRY STACKED LEDGE STONE IN MANY OF THE CUSTOMER AREAS FOR ENHANCED AESTHETICS.



ABOVE: A VARIETY OF COLORS OF UTILITY BRICK WERE USED TO ADD INTEREST TO THE IMMENSE WALLS OF THE SUPERCENTER.





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