

Seed Money

*Eastern Market's Shed 3 Renovation
Primes District for Growth*



**By Mary E. Kremposky,
Associate Editor**

**Photography by Curt Clayton,
Clayton Studio**

Every Saturday, a part of Detroit becomes the land of milk and honey. Jars filled with the sweet gold of orange clover, loosestrife and wildflower honey line one of the many vendor stalls in Eastern Market's newly renovated Shed 3. Originally constructed in 1922, Shed 3 is a grand hall of produce bursting with tomatoes, potted herbs, blueberries and broccoli crowns, all displayed in a historic

building with 40-foot-high ceilings and abundant windows once blocked by sheets of opaque, corrugated Plexiglas.

The Eastern Market Corporation (EMC), in cooperation with the City of Detroit Recreation Department, forged a master plan, called Eastern Market 360, for the redevelopment of all five sheds in Eastern Market and for the renewal of the Market as a whole. Thanks to this visionary plan and

the dedication of Detroit-based Kraemer Design Group, PLC, and a joint venture of Keo & Associates, Inc. and the Michigan office of Turner Construction Company, Shed 3 is now flooded with natural light and primed for a geothermal system.

Letting in the sunshine and drawing on the good Earth are all part of "growing the market." An added bonus is the rental revenue generated from the use of Shed 3 as



a venue for special events. Unveiling its architectural beauty and inserting new building systems has created an exciting new venue in the Detroit metropolitan area. The Market is already enjoying the fruits of its labor. In January 2010, General Motors unveiled its 2011 line of cars and trucks to the media at historic Shed 3 as a parallel event with the North American International Auto Show.

The flexible planning of EMC, a 501(3) (c) nonprofit organization operating under an agreement to manage and promote Eastern Market for the City of Detroit, steered the project and the newly revised master plan in the proper direction. Shed 3 was originally slated to be a market hall complete with teaching kitchens and nutrition education – a slot now reserved for a future Shed 4. “Because any food preparation requires a washable ceiling, inserting lower roofs would compromise the amazing architecture of the building,” said Randall Fogelman, EMC vice president of business development. Plus, the 30,000-square-foot building was too large to make it as a viable market hall. “It would have been the largest market hall in the country,” added Fogelman. “Due to its size and architecture, we decided to renovate Shed 3 and return it to its former glory.”

Shed 3 is a cruciform, or cross-shaped, building with an octagon core rising to a height of about 40 feet, said Brian Rebain, Kraemer project architect. The building arms radiate from the octagon and step down in two separate tiers – one an upper tier of clerestory windows and the lower one a series of 20-foot-high roofs and overhead doors. Each of the four arms has an imposing brick entrance graced by gabled roofs, cornice dentils, decorative medallions and massive arched windows.

Before renovation, all window openings were wrapped in a cocoon of opaque Plexiglas, including the octagon. With the Plexiglas “shutters” removed, the play of light and the soaring, nave-like ceilings turn a simple “shed” into a grand, light-washed space with an almost cathedral-like feel. Kraemer’s contemporary renovation even called for the installation of new entry and overhead doors with windows, drawing even more natural light into the interior and showcasing the market activities within to the community outside.

Renovation of this 88-year-old shed called for juggling a busy construction site with a bustling market. Keo/Turner had to completely vacate the jobsite every Friday at 3 pm to clear the way for the popular Saturday Market. Keo/Turner also managed the meticulous work of replacing rusted steel angles and repairing spalled concrete throughout the entire building. “In a building of this age, nothing is square, plumb or level, so in addition to everything else, we would have to construct a lot of little infills to make things fit and work,” said Bob Bowen, Turner senior project manager. Added Kojo Dom, Keo vice president operations, “Every one of the overhead

doors are custom made, because the slope of the floor is slightly different.”

Given the amazing results, the entire project team – and people throughout the region – can enjoy the bounty of this landmark enclave due east of downtown Detroit. “Eastern Market is such a historic and vibrant part of the city,” said Bowen. “It is great to be a part of bringing it back given what it means to the Market, the city, and the region to have a district like Eastern Market.”

GROWING A CITY

At Eastern Market – the largest historic public market district in the United States – it’s hard not to eat your vegetables. At peak, the retail or public market attracts 40,000 people every Saturday to this hub of fruits, vegetables, restaurants and unique specialty shops adrift with the aroma of spices and stocked with cheeses. The incomparable Shed 3 serves not only as a special events venue, but also as part of the public Saturday Market and as part of the wholesale market that operates midnight to 6 a.m. every weekday from April through November. The wholesale market transfers produce from growers to distributors and buyers in restaurants and independent supermarket chains. “We are probably one of the few that still has a retail and a wholesale market all in the same campus,” said Fogelman.

The 44-acre district has a fascinating past, present and future. Once a ribbon farm and then a cemetery (the graves were removed around 1890), the district once housed a prison at its northern end, said Fogelman.

The present Market is in the middle of a welcome renovation, for Shed 3 is only one of many seeds of economic growth being planted by EMC. Part of the Eastern Market 360 master plan will turn the Market into a living classroom and an agent for economic growth. According to EMC’s website, the renovated Shed 2 already hosts live cooking demonstrations, the future Shed 4, expected to be an L-shaped, two-story building, will house a teaching kitchen as part of a Market Hall/Education Center, and a Shed 5 expansion and renovation will serve as community kitchen, business incubator, and another special events venue. Shed 6’s canopy will be expanded, as well. “The Sheds are part of a strategic plan to develop the entire market to a national standard such as you would see in Philadelphia and other cities,” said Vincent Anwanah, AICP, general manager, planning design and construction management of the City of Detroit Recreation Department.

The goal is to have our Saturday Market, a



PHOTOS BY MARCE CHRISTIAN, CAM MAGAZINE

Shed 3 and the entire Eastern Market – the largest historic public market district in the United States – attracts about 40,000 people on prime Saturdays. Keo/Turner had to vacate the jobsite every Friday at 3 p.m. to clear the way for the popular Saturday Market.

weekday market in the evening, and ultimately to open Eastern Market to the public seven days a week. "Eastern Market is an integral part of the overall economic development of the city, because the entire area will benefit from a busy market," said Anwunah. "We want to link this area to activities going on downtown, at Comerica Park and at Ford Field." Another development is linking Eastern Market to the nearby Dequindre Cut, a pathway following a former freight rail line from the

Detroit riverfront to just south of Gratiot. "The next phase will take it all the way to Mack Avenue, and it will have specific exits to bring people right to the Market, and a future loop will connect all the way to Midtown," said Fogelman.

PREPARING THE SOIL

The revitalization of Shed 3 and the Market as a whole have been years in the making, for tilling the troubled economy of Detroit is not work for the faint-hearted.

Dating back to 1996, groups have coalesced around a series of task forces, action plans, and advisory panels, including the Eastern Market Reinvestment Strategy that addressed each of the sheds and the overall potential of the Market in 2003. As a further effort, The University of Michigan conducted a design charette in 2005.

The City of Detroit forged the agreement in August 2006 with EMC to manage the Market for the city. EMC built on past efforts to "prepare the soil" for the 2007 renovation

of Shed 2, an open-air structure built in 1891. But in 2008, "we re-evaluated the entire Market plan, because the world had changed a great deal since the original re-investment strategy was done," said Fogelman.

EMC and the Recreation Department worked in cooperation on the Eastern Market 360 master plan, including the renovation plan for Shed 3. "Part of the money was also from the City, so we worked out how best we can fuse private money and City money together to achieve the anticipated result for Shed 3," said Anwunah.

After selection of Kraemer Design Group, EMC bid the project in collaboration with the City, ultimately selecting the Keo/Turner joint venture. "We work very closely with the Recreation Department, which is our official liaison with the City," said Fogelman.

Kraemer Design Group began translating ideas into a design for the regeneration of Shed 3. Kraemer used the magic of glass – clear, insulated and low E – and the power of the paintbrush to "create a more inviting atmosphere on both the interior and exterior of the building," said Rebain. Kraemer Design "warmed the color palette," transforming the sterile white interior into richer hues of color. Warm orange coats the concrete, dark brown covers the steel columns, and a subtle grayish green blankets the high ceilings.

The same color palette transforms the exterior, once a sea of blue-painted overhead doors. Shed 3 now complements its next-door neighbor, Shed 2. "The colors were chosen to tie the two buildings together," said Fogelman. "Shed 2 is red brick with brown accents and Shed 3 is brown brick with reddish-orange accents."

Kraemer unsealed the window openings (only the transom windows above the overhead doors were sealed to conceal the workings of the new power doors) and opened the floor plan, first removing the central concession stand and then the rows of concrete curbs once used as product platforms. Shed 3 is now an open and inviting "empty slate" ready for rental by for a wide variety of community and corporate events. Designing creature comforts and restoring the integrity of the concrete masonry rounded out the design mission.

APRIL SHOWERS AND MAY FLOWERS

Having a design 100 percent complete at bid time was a blessing to the budget. "Because of the fully complete design, we were able to obtain fully complete bids as far as scope of work," said Bowen. "We were able to formulate some very detailed bid


packages, making allowances for a few items we knew might have some gray areas to them." The competitive bidding environment in 2008 also aided the project's bottom line, helping Keo/Turner control costs and deliver a \$6.2 million dollar renovation.

Schedule-wise, vendors were moved into Shed 5 from January through the end of March, giving Keo/Turner free rein to work

within the interior during the first phase. On Jan. 2, the clock began counting down to the first major deadline: being ready for Flower Day 2009, a grand event turning the market into a sea of over a million geraniums, petunias and other plants, and a tidal wave of over 150,000 people from across the region. "A major milestone was to achieve temporary occupancy and to make the building functional for Flower Day always

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held a week after Mother's Day in mid-May," said Bowen. Having the new floor poured by April – the start of EMC's lease year and the wholesale market – was an interim checkpoint on the way to Flower Day 2009, added Fogelman.

The first step was to carefully peel away layers of old paint. "In January, we enclosed the building in a sealed work environment and our demolition and abatement contractor came in and removed all the lead-based paint," said Bowen.

Demolishing the existing concrete floor was the next step in revitalizing the 88-year-old building. At this juncture, Keo/Turner encountered the first of several unforeseen conditions. "When we took out the old floor and dropped the elevations, we found that the bottom of some of the columns had rusted out a bit over the years," said Bowen. Kraemer designed a two-and-a-half-foot tall encasement at the base of the rusted columns, reinforcing the columns in concrete and adding some new plates to transfer the load downward.

Both revamped column bases and the newly installed radiant heat floor offer the Market welcome amenities. All of the column bases have convenient electrical outlets and direct water service strategically placed throughout the shed; the piping installed within the newly poured radiant

heat floor will soon be part of a geothermal system slated for future installation. Ultimately, the geothermal or geo-exchange system will heat both Shed 3 and its future next-door neighbor, Shed 4.

Having successfully met the first scheduling hurdle, the core difficulty in meeting the Flower Day deadline was installation of new exterior concrete curbs and sidewalks and a new asphalt parking lot. The culprit was the weather. In this case, April showers did not easily bring the market's May flowers. "It was a very wet spring," said Bowen. "It rained almost all of April, which created some serious difficulties in trying to prepare the sub-base and accomplish asphalt paving."

Whenever Mother Nature turned off the spigot, Keo/Turner's subcontractors set to work, sometimes laboring on weekends and nights to deliver the job. "The sub-base, where a couple of the parking lots were to be poured, was inundated with water," said Bowen. "Our subcontractor basically re-graded everything, pushing the stone from one side to the other to bring air and sunlight to help dry it out sufficiently to allow us to compact and pave it." Thanks to Keo/Turner and its cooperative subcontractors, Shed 3 opened for business, unrolling a carpet of colorful blooms in plenty of time for Eastern Market's 43rd

annual Flower Day in May 2009.

Shed 3 then opened for the public market every Saturday from May through November, creating another logistical hurdle for the construction team. Keo/Turner turned the Shed over to EMC every Friday afternoon in preparation for Saturday's public market and then resumed control of the space on Monday morning.

Having the design 100 percent complete at time of bids was again pivotal in smoothly accomplishing this schedule pressure point. "EMC and the City put together the requirements for that whole schedule phasing, so we actually purchased it that way with the subcontractors," said Bowen. "They understood that as of this date the building is turned over to the Market every Friday at 3 p.m."

An adjacent parking lot offered the perfect staging area for equipment and material storage. "Every Friday you would see a small parade of lifts moving at two or three miles an hour to the staging area 200 feet away," said Bowen. "On Monday morning, the same parade would move back into the building."

LET THE SUNSHINE IN

While pouring the floor, Keo/Turner began the "grand opening" of the building by

New lighting fills Shed 3 with a beautiful glow and highlights its historical façade. Shed 3 serves as part of a wholesale market that operates from midnight to 6 am every weekday from April through November.



unsealing the windows. The grapples of hydraulic excavators plucked eight-foot wooden carrots, clusters of ruby red-painted apples, and other fruit murals from the window openings of the four brick entry facades. A local architect created the well-known fruit graphics in the '70s as a less expensive way to draw more attention to the Market. Because the murals were not in good enough shape to save, EMC crafted smaller versions and installed the mini-murals on the exterior walls of their own office, cutting holes in the fruit tableau for people to place their faces and have their photograph taken. "Being part of our history, the murals were something that we wanted to recognize and wanted to incorporate in the feel of the Market," said Fogelman.

Next, the opaque Plexiglas sheets were removed from the octagon, clerestory, and entry portals, slowly flooding the Shed interior with unobstructed light and restoring dramatic sight lines as surely as removal of a cataract sharpens vision. But simply glazing in new windows and calling it a day was just not possible in this old

building. Moisture had seeped along the edges of the Plexiglas sheets rusting the 88-year-old steel angles needed to hold the windows in place.

"The original idea was to reuse the angles, but when we took the windows and the flashings out we could see how far they had deteriorated," said Bowen. "If left in place, we would be back in three or four years replacing them, because the windows would start to sag. The decision was made to rip out the old and install new angles."

The extent of the corrosion made it difficult to achieve a proper fit between the old openings and the new windows. "One of the biggest issues was actually fitting in new windows to the old openings, which had just corroded over the years," said Reba. "A great deal of restoration work had to be done to get those openings square and ready for new glazing. These conditions existed pretty much around the entire building."

The poor fit "prevented us from ordering the high octagon windows for a couple of months," said Bowen. "Corroded framed openings had to be evaluated and repaired

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Converting Shed 3 into a more appealing marketplace and a venue for special events meant removal of Plexiglass shutters and an introduction of new building systems.



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before new measurements could be taken and materials ordered.”

Hard work and the meticulous probing of the layers of the masonry wall resolved each issue until all openings were glazed with clear glass. Standing in the interior, the octagon of clear glass becomes a canvas of clouds, a living Weather Channel of sun, rain or snow. The new windows even complement the historical brick façade. “We selected windows that were obviously modern in efficiencies, but worked well with the historical character of the building,” said Rebaun.

COSMETIC CONCRETE SURGERY

From spring through September 2009, the project team worked on repairing the historical façade, replacing only about 10 percent of the brick and thoroughly cleaning “the dull and discolored masonry,” said Jessica Knight, architect with the Recreation Department. As part of the renovation, the grand arched portals of the four historical entrances were given more class and dignity. Gone are the battered old rubber gasket doors. New doors with windows, signage, and an entrance canopy now greet visitors. The canopy does double duty as a platform for exterior lighting that illuminates the towering entrances and the beautiful details of the historical façade at night. Thanks to a fresh coat of natural tone

paint, the details of the decorative precast concrete medallions – one of the seal of the City of Detroit and the other the seal of the State of Michigan – stand out in sharper relief, along with the central keystone arch depicting a bundle of wheat.

Generations of Detroiters have passed under the same portals on their way through the Saturday Market, for the vast majority of the brick and precast of the entrance portals are original to the building, minus a few pieces of replaced cornice, new metal coping, and the large precast headers over the expansive side windows.

Other concrete components in the interior and exterior did not fare as well. “During design and construction, the biggest challenge was the concrete cladding,” said Rebaun. “The columns, beams, and window headers are steel encased in concrete, but the concrete itself had been failing. With all that spalling, we had to chip away and basically figure out the extent of it, and determine how much work we really had to do to make it clean again.”

The overhead doors ringing the building offered another glimpse into the extent of the failed concrete encasement. Each of the columns between the doors had a metal banding or steel channel wrapped around three sides of the column. “The idea was to leave those channels in place and use them to mount the hardware and tracks for the new powered versus the old chain-operated overhead doors,” said Bowen. As we were examining some of the columns, we could almost see all the way through the concrete behind the channel. It had just deteriorated, fallen out, and turned to dust.”

The steel channels on all of the columns were ultimately removed, and then RAM Construction Services, Livonia, “formed and patched all the columns to provide a structurally sound and level surface for the attachments of the new overhead doors,” said Bowen.

Few visiting the Market would ever realize the hard work poured into Shed 3. “It looks like it should be simple,” said Bowen. “If we were to build it new in the field, it would be easy, but because of its age and all the unforeseen conditions, it increased the level of challenge.”

None of these conditions affected the basic integrity of this rock-solid and structurally sound building. The structural steel frame was sound, and “the concrete foundations are so deep they could probably support a 20-story building,” said Bowen. After bracing a few concrete panels on the sloped roof, Keo/Turner installed a membrane roofing system on the lower tier,

and a new standing seam metal roof on the upper tiers to blend with the roof system of Shed 2.

KEEPING IT COOL

Today, Shed 3 is the jewel of Eastern Market with its clear glass and warm color palette. The years of planning and months of design and construction have brought out the original character of this early 20th century building. Welcome amenities to this old Shed include a new electrical system, restrooms and other creature comforts such as a series of massive circulation fans installed in the high ceilings "to move air down when the heat rises in the winter and to draw air up and keep it moving in the summer," said Rebaun. The immense fans with bent yellow tips have the cool factor both in function and in appearance. "I have started seeing them in the last five years in projects all over the country," added Rebaun. "They are being used in large loft-type spaces or industry-type spaces with high ceilings. Architects love them because they look so cool, and engineers like them because the fans function so well."

Low E windows block heat gain, keeping it cool in the summer, as well as a series of mechanically operable vents in some of the clerestory windows. The vents alternate on either side of each arm of the cruciform building. "Air is not just moving between opposite sides of the same arm, but the placement of the vents circulates the air better and helps to eliminate hot spots," said Rebaun.

For winter's chill, air curtains blow heat over each entry to temper the rush of cold air into the Shed. The geothermal system will soon feed into the radiant heat tubing already installed in the new concrete floor. In the future, another geothermal field will serve the anticipated renovation and expansion of Shed 5 and Shed 6. "The plan for Shed 5 – originally built in 1981 – will be to bring it out to Russell Street by building a front addition," said Fogelman.

Something good is always growing at Eastern Market. Virtually all the sheds are aligned in a main avenue, turning the walk between and through them into an unfolding carpet of blooms and edibles. Shed 2 and Shed 3 offer locally grown and Michigan produce, some of it from vendors who are part of the urban farms beginning to sprout across Detroit. Lettuce, herbs and greens are softening Detroit's rough edges on vacant plots of remediated land throughout the city. EMC supports Greening of Detroit, a group that will begin establishing a 2.5-acre garden near the heart

of the Eastern Market District this summer, said Fogelman.

Some of that produce will probably be sold in Shed 3 as the Market deepens its roots as part of the local food network. Thanks to the concerted efforts of a broad network of committed people and design and construction professionals, the renovation of Shed 3 has returned this workhorse of building to its original brightness and then

some, giving Old Farmer MacDonald a quality venue and Eastern Market a redevelopment boost. Like a tray of celosia plants, with blooms the shape of candle flames and colors ranging from deep maroon to a startling gold, Eastern Market is a regenerative force with roots poised to spread new shoots of growth into the surrounding city. ♦

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