

JOHN H. BLACK COMPANY, INC.

DISTRIBUTORS OF QUALITY CLAY & STONE PRODUCTS

Established in 1896

8615 WEHRLE DRIVE

WILLIAMSVILLE, NY 14221

Phone: (716) 632-6693

Fax: (716) 632-7202

January 6, 2007

The Matching and Making of the Custom Roman Size Face Brick for Frank Lloyd Wright's Martin House Complex Restoration Project

By: Lawrence J. Izydorczak, President
John H. Black Company, Inc.

We at the John H. Black Company, are very proud in matching and supplying the bricks for this National Historic building and Frank Lloyd Wright's "Opus". .

The History of the John H. Black Company Inc. and the Restoration of the Martin House Complex dates back in August of 1993 for the first phase of masonry repair work at the Martin's main house. We started investigating the possible brick manufacturers that we represent who could even possibly come close to matching this structure.

It wasn't until November 1996, when I became involved into the investigation and research of finding a match to the Martin House Complex for one of the largest reconstruction projects ever done for a National Historic building. In working with Ted Lownie and Matt Meier of Hamilton Houston Lownie Architects, we had asked numerous brick manufacturers we represent to supply sample runs of material to review at the main house for a brick match.

During this research, HHL Architects even found an article about the actual production process of the face brick for the Martin house. The original face brick was produced by the Fallston Fire Clay Co., Fallston, Pa. In reviewing this article, I realized that the only brick manufacturing plants that could reproduce the iron-spot smooth die skin full flashed range tan, buff, and orange based color roman sized face bricks, would be a manufacturer that still produced bricks in old style Bee-hive kilns. The only way to obtain such a range in colors required for the Martin house complex was to burn the face brick in a bee-hive kiln. A process of "flashing" the face brick in concentrated heat of a bee-hive kiln would achieve the needed range of colors. The bee-hive kilns firing process is different from a tunnel kiln firing process. (this is how a majority of our face brick is fired today). This had narrowed the brick manufacturers (we represent) down to only three manufacturers in the United States that still can produce face brick in a bee-hive kiln. We had received samples from all three manufacturers. The one company that I felt was the best to reproduce the full range colors was the Belden Brick Co., Canton Oh.

The Belden Brick Co. Plant #4 is a 1917 brick plant that still operates twenty bee-hive kilns in Sugarcreek, Oh. Then only difference in the brick production of this plant and the production at the Fallston Brick Co. is firing of the material with natural gas versus the coal firing process.

In, June of 1999, I had invited Ted Lownie of HHL Architects to visit and review the brick manufacturing process at this plant. This is when I felt the actual relationship of Martin House Complex, HHL Architects, Martin House Restoration Conservancy and John H. Black Company became more of a reality than just research and investigation.

Throughout many years of hard work, everyone at Belden Brick's Company, The Belden Family, Sales Manager Mark Britko, Salesman Harry Allman, Plant Manager Jeff Graham and Plant #4's Plant Supervisor Bill Swinderman were very supportive and helpful in supplying samples and for this project. The original face brick samples were sent down to the plant for color matching the old iron-spot bricks. After much research, and many field samples of brick, a color match was achieved. Each brick for the test field panel was hand cut to achieve the 1 ½" x 12" True Roman Size face brick. This field panel of 100 pieces of brick was approved by MHRC and HHL Architects in October 2004.

An order for the Roman face brick was placed by MHRC with the John H. Black Company in October 2004. A custom die was produced in obtain the original size dimensions required for this project. However, there was a problem with obtaining the Roman size face brick's height dimension in actual production from Belden's plant. The cutting machine from 1917 could only cut face brick to a height of 1 5/8" vs the 1 1/2" required for the duplication of the bricks. This machine is so old it can not be altered for this cutting process. Another problem in cutting the face brick down to 1 1/2" x 12" was the recovery rate of bricks coming out of the bee-hive kilns. Face brick today must meet ASTM C-216 specifications in able to be supplied to a jobsite. Belden Brick Co. felt that the loss of custom color roman size brick due to warping or bending would be too high of a quantity, to make any economic sense. It was proposed to hand cut each and every roman brick to size. The John H. Black Company took on the extensive manufacturing process of cutting each Roman size face brick. Being a National Historic building, the Martin House Complex's Roman face brick was cut to a higher quality of industry standard material. Spearheaded by Jim Heinrich and Dan Oehman of JHB each brick was hand cut on wet saws and hand inspected by caliper tolerance requirements for approval before being repackaged by hand and shipped to the jobsite. I have estimated that each Custom Roman size face brick was handled by a human hand at least 9 times before setting in the final wall of the Martin House.

To date, we have hand cut over 100,000 pcs of Custom Color Roman size face brick and supplied them to the jobsite. We have also supplied approximately 70,000 pieces of red common back up face brick from the Glen Gery Brick Co. for the project.

Please visit the Martin House Complex, Jewett Parkway, Buffalo, New York to see a beautiful reconstruction of great American Architecture and History. Also, for more information, visit the Martin House Restoration Conservancy website at darwinmartinhouse.org.

Lawrence J. Izydorczak
President, John H. Black Company Inc.