



# Case Study

## Pennsylvania Aggregates and Concrete Association



### QUICKVIEW

**CONCRETE PRODUCER**  
York Building Products -  
Bonnybrook Quarry

**CONCRETE CONTRACTOR**  
Macri Concrete (ICFs), Hartman  
Concrete (decorative)

**LOCATION**  
Carlisle, PA

## ICF Construction Proves to be the Solution for York Building Products Facility

### THE SITUATION

At some point in a company's growth, more space becomes a priority. York Building Products - Bonnybrook Quarry location was no exception!

At the time of construction, the office space was approximately 30' x 50' and housed the weighmaster, dispatcher, and all administrative and accounting offices. A new space was needed to provide for these functions, but also to include room for training, general meetings and conferencing, quality control and future growth.

### THE SOLUTION

The company opted to be their own general contractor for the project. We stopped by to speak with Dan Ridenour (Director of Engineering and Planning - PA Operations) about the process and their experience.

### WHAT WENT INTO THE DECISION TO BUILD THE OFFICE WITH ICFs?

All construction types were evaluated. An existing trailer stood in the location of the new office and was first

evaluated for rehab to fit our needs for more office space.

When it was determined that it was not large enough to accommodate our needs, we evaluated stick, modular, and pole building construction in addition to ICF. ICF construction proved to be, not only the favorite, but also the most cost-effective solution.

### WHO DESIGNED THE BUILDING? DID THEY HAVE PRIOR EXPERIENCE WITH ICFs?

The building was designed in-house and was reviewed by Akens Engineering. While there was no prior experience with ICFs, construction and related design knowledge proved beneficial.

### WERE THERE BEEN ANY HURDLES ASSOCIATED WITH USING ICFs VERSUS CONVENTIONAL FRAMING?

It was challenging finding a contractor that was experienced in ICF construction. The construction process is different when utilizing ICFs and how utilities (electric, plumbing, heating) are run must be given consideration.

## PROJECT PROFILE: York Building Products Facility

**“A future project recommendation would be integrating ICFs for subgrade stub-wall construction. Additionally, during the selection of mechanical subcontractors, we would suggest ample time to educate and review design criteria for each application, as concrete walls do pose a hurdle to these contractors.”**

- Dan Ridenour,

Director of Engineering and Planning – PA Operations, York Building Products



Choosing to use ICF decking (Insuldeck) to construct the roof added to the challenge. We opted to go with a concrete roof in order to accommodate future vertical expansion of the building.

### ***WHO WAS THE BUILDING CONTRACTOR, AND DID THEY HAVE ANY PRIOR EXPERIENCE WITH ICFs?***

Specific to the ICF install, walls and roof, Macri Concrete was our chosen contractor. This was Macri's first ICF project.

### ***WHAT IS THE SQUARE FOOTAGE AND HOW MANY YARDS OF CONCRETE DID THE PROJECT USE?***

The total office floor space is 2,100 sqft. We used approximately 874 cubic yards of concrete. Recognizing sustainable construction practices, the concrete incorporated slag and Type II cements.

### ***WHAT CONTRACTOR DID THE DECORATIVE FLATWORK CONCRETE?***

Hartman Concrete performed all decorative concrete construction, including both exterior and polishing and staining of interior floors.

### ***PLEASE OFFER ANY ADDITIONAL COMMENTS YOU WISH REGARDING THE PROJECT AND RECOMMENDATIONS FOR FUTURE COMMERCIAL OR RESIDENTIAL CONSTRUCTION INCORPORATING ICFs.***

As is common in ICF construction, all exterior walls utilized ICF. Where this build breaks from the norm, is the use of ICFs for interior wall construction and the roof. Over 50% of the interior wall and 100% of the roof construction utilized ICFs.

A future project recommendation would be integrating ICFs for subgrade stub-wall construction. Additionally, during the selection of mechanical subcontractors, we would suggest ample time to educate and review design criteria for each application, as concrete walls do pose a hurdle to these contractors.



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