

General Description:

- **Location:**
Benton Harbor, Michigan
- **Profile:**
New construction
- **Project:**
Field Quality Assurance

Services Provided:

- Field Quality Assurance
- Construction Review
- Verification of Materials
- Specifications

Challenges:

- Timeframe
- General contractor's budget
- Working with multiple contractors
- Specifying details during construction

Solutions:

- Designed new details in a timely manner
- Performed multiple testing and review procedures
- Cost-effective yet sustainable solutions



*Downtown Campus
New Roof Installation
Benton Harbor, Michigan*

Most of us will recognize the adage "measure twice, cut once." The truth behind this familiar proverb is applicable to many aspects of life, but the notion of double checking work is a must in the construction industry a notion that the Director of Global Real Estate at Whirlpool realized when installing a new roof on a new Downtown Campus. The structure is an essential piece of a new restructuring of Whirlpool's facilities. Without proper Field Quality Assurance (FQA), the construction may not meet Whirlpool's high facility standards.

Whirlpool's long-term relationship with StructureTec showed them the importance of proper FQA. A shocking 34% of StructureTec's remedial projects are with buildings that are less than five years old, proving that if workmanship is not properly reviewed, projects may not yield a productive return on investment.

Whirlpool contracted

with StructureTec to perform extensive construction review of the new roof on the 250,000 square foot complex.

As part of a Field Quality Assurance program, StructureTec made multiple site visits where a Project Manager verified materials and workmanship, represented the owner, performed inspections, communicated with the contractor, and monitored any required testing. The Project Manager also managed the creation of new details throughout construction.

One issue that StructureTec encountered during construction was the need for details that were not proposed in the original specifications. When reviewing new changes, StructureTec noted the need for changes that would increase the sustainability of the facility.

Many times materials and specifications would sacrifice quality and sustainability for aesthetics because of the FQA program. StructureTec



During construction



After construction



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recommended changes that would provide a long-term solution for Whirlpool's facilities. These included adhering the membrane instead of mechanically fastening it, a crucial detail considering the high winds the building would face on the Michigan lakeshore. Also, StructureTec recommended installing TPO instead of a PVC system and installing a cover board to increase durability.

The details that were needed during this project had to be completed in a timely manner as the roof needed to be secure before winter. By utilizing StructureTec's expert staff, the Project Manager was able to have all details fabricated quickly ensuring timely completion.

Though some may assume that a relationship between a third party consultant and a general contractor may be difficult, this was not the case. When the Project Manager presented all the facts and explained the reasoning, all parties agreed on a solution that was best for the client.

Without having StructureTec as a representative on site these changes may not have been made, which could have led to increased maintenance early in the building's life cycle.

As part of an \$85 million investment, Whirlpool could not let their new campus be constructed without proper FQA. Due to proper review by StructureTec, Whirlpool now has peace of mind that their new facility will assist in providing a sustainable future for their organization. ■



Preparing and placing materials



Insulation is being adhered with VOC free adhesive



Roof at RTU screen wall.

<u>FEATURES</u>	<u>BENEFITS</u>
Field Quality Assurance	Unbiased third party review
Scientific approach to problem solving	New details provided more sustainable solutions
Close coordination with contractors	Supplied new details

Solutions for the Built Environment

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