



Service/Product Provider

The Benham Companies

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Business: A/E Design, Systems Integration
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Industrial Partner

Ford Motor Company

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Business: Michigan Truck Assembly Plant
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The Benham Companies provides a Design/Build Ventilation System and a Building Management System producing savings of over \$1 million annually.

Project Scope

Benham and Ford Michigan Truck developed a complete new ventilation system and Building Management System that will provide \$1.1 million dollars a year in savings for nine years.

Project Summary

Benham performed a complete architectural and engineering design, managed construction, installed unit controls and installed a Web-based Building Management System. Benham provided 14 Air Rotation Units (ARU) with related field devices, metering, and a required Ford IT-approved server with software to monitor the plant from Benham's Walled Lake, MI office. Ford plant staff provides required maintenance on the units, while Benham supplies any consumables for ARU operation.

- **Energy Savings**
Annual guaranteed energy savings are \$1.1 million and average additional savings are 18% over the guaranteed yearly savings
- **Investment**
Benham provided the initial capital investment for the project at approximately \$6 million
- **Financial Return**
Benham guaranteed \$1.1 million a year of energy savings for 9 years
- **Other Benefits**
Web-based Building Management System (BMS) allows the plant to schedule equipment on and off and change temperature set points per planned plant activities. Additionally, the BMS aids the maintenance staff in trouble-shooting ARU faults from anywhere in the facility.

Monitoring & Verifying Energy Savings

Benham provided many utility meters that verify the actual energy usage in the facility for comparison with actual utility data from past years. The Web-based Building Management System measures, trends, and gathers the required data to verify the reported energy savings on a monthly basis.

Distinguishing Value

The Benham team designed a creative energy saving solution by integrating new and existing equipment. The professionalism of the Benham team was well demonstrated by working in a difficult industrial environment while preventing the interruption of vehicle production. Remote monitoring has reduced equipment downtime, improved efficiency performance, and minimized employee complaints.