



Project Profile



Completed in the fall of 2004, FedExForum is an iconic structure in Memphis, Tennessee.

The facility primarily consists of the dome structure that houses the main arena, and several interconnected, multi-level buildings.

The dome structure consists of a steel frame. The original roofing system on the dome consisted of an air barrier, rigid insulation panels, and a single-ply thermoplastic olefin (TPO) roof membrane.

BTC was retained to perform an evaluation of the existing roofing system to assess its condition and to evaluate options for repair and/or rehabilitation. BTC's evaluation included a visual review of the dome structure, high-voltage leak detection testing to assess the number, pattern, and extent of roofing membrane breaches, and an infrared thermographic survey using a drone equipped with an infrared thermographic imager. BTC then developed options to address the ongoing roofing issues, and investigated various roofing systems for a roof membrane replacement project. Among many challenges involved with the project, any new or recover roofing system would need to meet FM Global requirements.

After assisting the ownership to select the most appropriate roof repair/replacement scheme for the project, BTC was retained to develop repair documents for the roof membrane replacement which included complete tear off along the perimeters, and a roof membrane recover at the center of the dome. During the design phase, we worked closely with the specified roofing system manufacturer and FM Global to ensure the recover and new roof sections meet all FM Global requirements. BTC's design also included providing provisions for future lighting of the iconic FedExForum logo on the roof.

In addition to the evaluation and design phase services, BTC provided bidding assistance and construction phase services during the roof replacement work.

Project Name:

Roof Membrane Replacement
FedExForum
Memphis, Tennessee

Project Location:

191 Beale Street
Memphis, Tennessee 38103

Client:

Memphis Basketball, LLC

Approximate Construction Cost:

\$3,900,000

Year Completed:

Ongoing

Nature of Services:

Evaluation, Design, Bidding Assistance,
and Construction Contract
Administration

