

BANNER THUNDERBIRD



AT A GLANCE

- 5555 W Thunderbird Road
Glendale, AZ 85306

PROJECT SIZE

- 866,000 ft², 5250 tons

ANNUAL SAVINGS

- 803,100 kWh/year
- \$64,248/year

CORRECTIVE MEASURES

- Low chiller refrigerant replacement
- Evaporator tube fouling
- Increased chiller condenser water flow

Banner Health was looking for ways to maximize the results (long term) from a chiller plant energy project at their Thunderbird campus. The chiller plant serves the 5 buildings on campus comprised of 6 York YK chillers with VFDs and a waterside economizer piped in parallel to the chillers.

ETC Group provided chiller plant testing and analysis using ClimaCheck on 3 chillers at Thunderbird Medical Center. Engineers coordinated with operations staff to determine prior maintenance and design specifications. This testing method uses thermodynamic evaluation to produce accurate and unbiased performance analysis. The system is brought to full load and data is collected and analyzed (COP, capacity, compressor efficiency, approach temperatures, and other vital performance parameters).

Our report identified that the chillers were operating less efficiently than designed and recommended measures to improve performance. Corrective measures included refill refrigerant (low), evaporator tube fouling and increased chiller condenser water flow.