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# Qualifications

## HVAC

**Project:** Houston Northwest Medical Center Tower and ER Expansion

**Description:**

FEI was responsible for the HVAC design for this 37 million dollar 6 story tower and ER expansion at Houston Northwest Medical Center. This project included a 26,000 SF emergency department, 24 ICU beds, 38 telemetry beds, 38 medical surgical beds and two shell floors. To support this major expansion, a two story addition was added to the existing central plant.

**Challenges:**

- Existing facility did not comply with current codes required by the addition / renovation.
- Improper separation of the chillers and boilers.
- Inadequate chiller and boiler capacity.
- Inadequate cooling tower system.
- Limited space for the central plant expansion.
- Relocate existing chillers while keeping hospital on line.
- Low above ceiling heights in existing areas.
- Phasing.

**Solutions:**

- Provided separate chiller and boiler rooms in central plant expansion.
- Added 1,800 tons of chilling capacity to support current and future chilling requirements.
- Added new heating water and steam boilers in exiting plant separated from the new expansion.
- Relocated towers to the roof of the new two story expansion to allow for expansion of the existing central plant.
- Added two story expansion to central plant to fit on tight site.
- Phased central plant expansion and chiller relocation to keep the existing facility on line during construction.

