



PROJECT DESCRIPTION:

A 7-story precast concrete and post-tensioned concrete garage

Approximately 192,000 square foot Parking Facility with 110,000 s.f. of precast concrete floor and 81, 000 s.f. of post-tensioned concrete floor slab.

ADDITIONAL PROJECT FACTS:

- Garage inspections and repairs have been ongoing since 1982
- Garage operations maintained during repairs
- Multi-year repair program developed to extend the service life of the garage while the Owner made decision to keep or replace.
- Repair strategies differed in areas of the facility due to varying structural systems used in the garage construction.

The Lakewood Hospital Parking Facility was built in 1967 and later vertically expanded in 1975. The seven-story structure consists of approximately 110,000 square feet of precast double tee construction in the center of the structure and approximately 81,000 square feet of post-tension concrete slabs in the end bays of the facility for a total of 192,000 square feet of parking area.

The current Facilities Program at the Lakewood Hospital calls for maintaining and extending the useful service life of the parking facility for approximately five years. At the end of that period a decision will be made to completely restore the parking garage or replace it with a new state-of-the art facility.

Barber & Hoffman performed a conditional appraisal the facility and developed a multi-year repair program that addresses the needs, budget concerns and future plans of the Hospital. Repairs have been phased to address the immediate structural concerns of the facility and the parking requirements of the Hospital.

Repairs to date to the post-tension end bays have consisted of removal and replacement of spalled and delaminated concrete from the floor and ceiling slabs of the post-tensioned end bays. Repair and protection of deteriorated and damaged post-tensioning tendons. Repairs were also performed to the concrete beams and columns. After the floor slab repairs were completed the post-tension concrete floor slab was prepared and protected with a Vehicular Traffic Topping Membrane system. Supplemental steel beams were installed beneath the post-tensioned floor slabs where the amount of post-tensioning tendon damage made it not economical to repair all of the damaged and/or deterioration tendons.

