CityPlex Towers is Oklahoma's largest mixed use office and medical complex comprising of approximately 2.2 million square feet. The structure is reinforced, poured in place concrete, built in 1980.

The owner is Oral Roberts University, while management and leasing is handled by Trinity Corporate Real Estate Advisors, LLC.

The <u>single building</u> complex consists of a 20 story tower, a 30 story tower, and a 60 story tower all supported on a 4 story base that extends underneath all three towers.

By the late 2000's CityPlex Towers had become very expensive to operate due to age, deferred maintenance, and inherent design including the lack of a building automation system. Starting in 2009 to through today, CityPlex Towers has completed several major capital improvement projects totaling over \$20 million dollars, with the majority of the contracts being awarded to small businesses in Oklahoma. The list as follows:

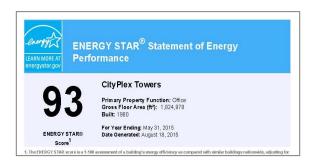
- A complete new TPO roofing replacement of all three towers and the base building roof
 was one of the first projects started 2009. Note: In 2016, a storm with high winds
 damaged a large portion of the base roof which was enough to require a full base roof
 replacement and is currently being done.
- A curtainwall joint seal of all three towers to stop window and joint leaks was completed in early 2016. The entire project took 3 years with as many as five, three men stages working at the same time. Crews worked throughout the year and in most weather conditions to complete this project.
- The Atrium Roof replacement took 2 years to complete. The roof slopes in two directions with the highest point at 12 stories and angles as much as 45 degs.
- Three new 500 kW back-up emergency generators were added to replace the original backup system.
- A new Fire Alarm system for all 110 floors was completed to ensure life safety and to improve the overall detection system.
- A de-humidification system was added to improve humidity control to the 20 surgery suites. This included 3 new fresh air fans, a very large surface 10 roll chilled water coil (supercoil) to ensure air time across the coil would be long enough to remove moisture from the fresh air. A 50 ton chiller (ice chiller) designed for low water temperature just for the supercoil. 1000 ton hours of ice tanks are being built so the ice chiller can be turned off during peak electric load times.
- Cooling towers with heat exchangers for free cooling
- 1 1500 ton Chiller replacement

- 1 700 & 60 Hp Steam Boilers, replacing one of the two 2500 hp boilers
- Along with the major capital improvement projects come the energy efficient projects that has helped reduced the overall energy usage by >50% since 2010.
- 230+ AHU's has had most of the pneumatic controls replaced with direct digital controls which also allows start/stop scheduling for the first time in the facilities history.
- 250+ speed control drives was added to water pumps and air handling units
- 26 electric & 8 water sub-meters have been added to help understand and control how electric and water is used in the facility.
- Right sizing pumps when conditions allow. Domestic water jockey pumps in two locations now serve 98% of the daily pumping load at a total of 20hp and removing 100hp from the 24/7 schedule. Boiler feed water pump was de-rated from 40hp to 15hp with the replacement of one of the 2500 hp boilers.
- Air conditioning condensate recovery system added in 2016 collected and transferred 500,000 gallons of cooling clean water into the cooling tower makeup system. 2017 is projected to collect 1,000,000 gallons as more areas have been added.
- Lighting upgrades as tenant areas are built out. By the middle of 2017, over 2000 2X4 & 2X2 troffer T-8 lighting will have been replaced with LED lighting.

Each of the projects had their own challenges but when dealing with a 30+ year old 2.2 million square feet facility, you need to have a team that can work through the problems. CityPlex Towers has a team that can do just that. A couple of the challenges our team faced was the new fire alarm system. Since the facility is occupied with many types of tenants including three independent hospitals, the fire system had to be operational throughout transition. The new system had to interface with existing equipment and the hundreds of smoke dampers and other controls throughout the facility. A lot of the wiring and controls had to be traced and verified as it went along. The project took longer than was projected, but the outcome was a success. The three new 500 kW back-up emergency generator project required extra local and state approvals, again due to the three independent hospitals, with each having to submit its paperwork approvals. This process delayed the install of the generators, but again the project was successful.

Each of the projects listed above, has helped in making CityPlex Towers a "go to" location for companies of all sizes. Over the last two years, Trinity Corporate Real Estate Advisors, LLC has leased in excess of 200,000 square feet, with more in the works.

CityPlex Towers has had an energy star score of 93, out of 100, for the last 2 years. In 2015 Public Service Company of Oklahoma, recognized CityPlex Towers for its outstanding energy reduction over the past few years.





Energy Star 2015 & 2016





PSO 2015 BEST ENERGY MANAGEMENT TEAM AWARD

Clay Hathaway with PSO presented the 2015 PSO Best Energy Management Team award to David King, Director of Energy Management for CityPlex Towers and Oral Roberts University.

PSO recognized the outstanding energy reduction that CityPlex Towers has achieved in the past few years which lead to a 50% annual kWh reduction and a 30% demand savings. CityPlex Towers also received a score of 93 for the 2015 Energy Star Certification.

























