



Arapahoe County – OpTerra Energy Solutions Phase II - EPC 2015

RMAEE Energy Forum

October 22, 2015

Timeline

- Performance Contract – 2006 (Chevron)
 - \$5.525M Guaranteed over 10 Year
 - CEO Oversight – 10 year financing
 - Lighting, Boilers, Chillers, Building Controls
 - Guaranteed Savings achieved in 7th Year (2013)
- Performance Contract – 2015 (OpTerra)
 - Contract Executed – December 2014
 - \$7.74M Guaranteed Over 11.5 Years
 - CEO Oversight - Self Funded w/ M & V Option
 - Lighting, HVAC, Building Controls, IT, Water

Altura Plaza

- **6 story - 74,675 sq. ft. – Built 1974**
- **80% sq. ft. = Tenant Lease**
- **Great Candidate for Deep Retrofit**
 - Use today – 100% different than 1974
 - 70%+ original heating cooling equipment
 - Last 5 years - \$2.5 million in renovations
 - Any Mechanical upgrades – like for like
- **Building Modeled with different options**
- **Use and repurpose of existing equipment**
- **Control of equipment through VFD and BAS**

Installed ECM's

- LED exterior and parking lot lights
- Interior - 50% - 60,000 hour T8 lamps/ballast
- Upgrade of BAS to Tridium AX
- 56 water source heat pumps – sized to space
- New BAC Cooling Tower
- Reznor NG MAU converted to HW/CHW
- Heat Recovery System for ventilation air
- Variable flow on WSHP and CHW based on actual load
- 95%+ complete -

LTB / LL

- **Long Term Benefits:**

- Improved Comfort / Improved Productivity
- Decreased Costs – maintenance/utility/man hours
- Viability of Building, Equipment, Infrastructure
- Increased lease / sale potential

- **Lessons Learned:**

- Communication to ESCO, employees, end users
- Push ESCO to look beyond normal TEA
- Be creative at all levels – TEA/Finance/M&V
- Use CEO throughout the process