

Overcoming increasing maintenance costs and the need for capital investments

41%

Reduced energy consumption

54%

Actual facility expenses saving

Challenges

This popular retail store in Fort Worth was suffering from aging equipment and high maintenance costs. The potential failure of the refrigeration system could result in wastage of stored food and big financial losses. Additionally, the owner was looking into an environmentally sensible solution to upgrade their existing systems within their time and budget constraints. The challenges facing the owner included:

- Ongoing repair expenses for old and deteriorating equipment.
- Increasing cost of operation due to inefficiency and outdated controls.
- Increase retail sales by improving lighting.
- Update aging HVAC and refrigeration infrastructure in an economical and timely manner.
- Improve security around the building.

Solutions

CVAL's team spent time with the client to understand the detailed nature of the business and based on initial consulting proposed a customized audit that meets and exceeds ASHRAE Level II requirements. After a comprehensive audit, CVAL's engineering team performed an in-depth analysis on the data collected from measurements and performed energy analysis of the building. Based on that analysis the following solutions were proposed to the client.

- Proposed several low cost/no cost measures contributing to lower energy usage.
- Installed new high efficiency HVAC systems which eliminated significant annual equipment operation/maintenance expenses from their budget.
- Designed and installed new LED lighting taking advantage of scientific data concerning the influence of lighting on shopping experiences.
- Researched and designed the systems to be right-sized for the usage of this facility. This created superior energy efficiencies.

Our team spent time with the clients to understand the detailed nature of their business and based on initial consulting proposed a customized solution that was beyond the conventional design and implementation practices.

PAYBACK

3.9 years for total program

Technical Competency

CVAL's unique approach to client's needs produced solutions that were beyond conventional design and implementations practices. The highlights of this approach can be summarized as:

- Performed value engineering to right size equipment.
- Installed high efficiency equipment.
- New LED lighting taking advantage of scientific data concerning the influence of lighting on shopping experiences.

Environmental Impact

This project reduced pollutants by 29%. This reduction is equivalent to removing 13 cars from the road, planting 16 acres of pine trees, or saving 159 barrels of oil each year

New HVAC unit advantages

- Reduced maintenance cost.
- Higher control of temperature at different zones.
- Improved power factor to reduce penalty.
- Long warranty period for peace of mind.