

The Home of Placer County Air Pollution Control District



Background

The building located at 110 Maple Street was constructed in 1979. There had only been a handful of owners when the Placer County Air Pollution Control District purchased it, in December 2010, from North Fork Associates. North Fork Associates, an environmental firm, designed the lobby floor tile and reception area glasswork, to depict the American River confluence.

After an extensive financial evaluation of the pros and cons of leasing or purchasing, the Board of Directors directed staff to procure a suitable location for the operations of the District, and the building purchase was completed in late December 2010. From January to June, extensive upgrades were done to the property using local contractors. These upgrades included investments in energy efficiency enhancements, interior and exterior improvements, high speed and large bandwidth information technology infrastructure, improved fire and security systems, and ADA compliance measures. On June 27th, 2011 the new District office opened for business.

The following summary outlines the work and upgrades performed. The fiscal investment in the 110 Maple St. building ultimately saves the District money each year on operating and maintenance costs as compared the previous leased District facility.

Fiscal Investment

The building was purchased for \$1,500,000 using the District's Settlement Fund. Relocation costs, moving costs, and building improvements/upgrades were paid for out of the District's Litigation Cost Recovery Fund (\$369,000). The District Board of Directors, at their discretion, may direct staff to set aside monies annually, to be paid back into those funds. Annual operating costs are estimated to be between \$25,000 and \$40,000 a year -- depending on whether there is a tenant or not. These costs are a 78% to 87% reduction in operating costs compared to our former lease. In 2013 the District installed a roof top photovoltaic system at a cost of \$82,377, of which \$32,377 was drawn from the Settlement Fund. It is anticipated that cost savings from this system may reduce electricity costs by up to \$6,000 annually.

IT Communication Upgrades

The District modified the existing IT communications by upgrading and improving them beyond the County's current standard. The goal was to install a communication network which allows the office to seamlessly communicate with the County's IT infrastructure, and make accessible multiple forms of media, including free WI-FI, thereby reducing staff time spent traveling and VMT (vehicle miles travelled).

- ♣ Cat6 Cable - 11,000 feet installed
 - Doubles the bandwidth and performance over the basic cabling standard – 20 mbps circuit
 - Improves performance, less transmission errors and data corruption
 - Reduces expenses as a result of networking errors
 - Allows the District to keep up with changes in technology, increasing the operational lifespan of the cabling infrastructure
- ♣ Coaxial Cable - 600 feet installed
 - Combined with the Cat6 Cabling, allows for a universal connectivity in the IT infrastructure
 - Connection for accessing cable TV and wireless router for free WI-FI
- ♣ VoIP (voice over internet protocol)
 - Migration of our County communications network to the new County standards
 - Integrates all forms of communications with a single communication data network
 - Less expensive and more flexible than using separate circuitry and phone lines
- ♣ Video Conferencing
 - Installation of video conferencing system and 4 desktop video conferencing units
 - Reduces staff travel time and vehicle miles traveled for meetings and trainings

- ♣ Wave Broadband
 - Makes wireless internet available for guests and the public
- ♣ Uninterruptible Power Source (UPS)
 - Provides power for emergency communications during power outages up for up to 5 hours

Interior and Exterior Improvements

Extensive modifications were done on the inside and outside of the building. The offices, conference rooms, and other areas were painted, and new furniture was installed and tailored to meet the needs of staff. Widespread upgrades were made for ADA access. The parking lots and landscaping were redone as needed.

- ♣ Interior Improvements
 - Interior decorating and lighting fixture upgrades
 - New office and conference room furnishings
 - Construction of a secure public records storage vault with a 2 hour fire rating
- ♣ Fire and security upgrades to meet or exceed current codes
 - Fire detection and alarm system upgrade
 - Security cameras and keyless entry installed
 - Exterior and lobby cameras installed for the security and safety of staff, visitors, and property
 - Keyless entry allows staff members to access the building securely
- ♣ ADA compliance upgrade
 - Grading and installation of ADA parking, sidewalks, and signage
 - Installation of new front entrance stairs and handrails
- ♣ Exterior improvements
 - Paving and striping of front and back parking lots
 - Sidewalk work
 - New landscaping and removing of problematic trees
 - New District signs

Energy Efficient Building Upgrades

Energy efficient upgrades were installed and completed beyond what is required by Title 24. An increase in energy efficiency is expected with decreased electrical and natural gas usage, a lower carbon footprint for the building, and an increase in annual energy cost savings.

- ♣ Less efficient electric water heater was replaced with a tankless on demand, natural gas water heater
- ♣ Attic and ceiling insulation upgraded from R19 to R39
- ♣ HVAC unit and duct work replacement
 - Two main units replaced with 4 smaller efficient units with economizers for a total of 6 HVAC units on the building
 - R4 HVAC duct work replaced with R8 ducting
- ♣ Lighting upgrades, including change out of ballasts, reflectors, diffusers, and bulbs was done building-wide
- ♣ A solar photovoltaic system was installed in March 2013
 - Peak system output is 29.8 kW which produces 63% of the building's annual power usage

Equipment	Cost	kWH Savings	Therms Savings	Annual CO2 savings (tonnes)	Annual Energy Cost Savings	Simple Payback (years)
Replacement of HVAC units	\$ 61,242	23,657	702	10.52	\$ 4,304	14.2
Interior Lighting Upgrades	\$ 22,895	18,715		5.40	\$ 2,960	7.7
Attic Insulation to R38	\$ 2,887	287	212	1.20	\$ 215	13.4
Tankless Water Heater	\$ 3,000	1,675		0.48	\$ 265	11.3
Economizers	\$ 3,240	4,740		1.37	\$ 750	4.0
Solar Photovoltaic	\$ 82,377	46,100		23.6	\$ 6,035	10.5
Totals:	\$175,641	95,174	914	42.57	\$14,529	
Estimated rebates from PG&E	(\$1,500)					