



1133 15th Street Energy Management and Retro-Commissioning Services Washington, DC

Facility Engineering Associates, P.C. (FEA) was engaged by CB Richard Ellis (CBRE) to provide energy management and retro-commissioning services to provide support in their pursuit of the LEED® for Existing Buildings, Operations and Maintenance Certification. Our Services included:

1. **Outside Air Analysis.** FEA reviewed original construction drawings and calculated the required ventilation requirements to satisfy ASHRAE Standard 62.1-2007. The results were provided to the client in an expedited fashion to allow for testing and air-balancing of the HVAC system.
2. **ASHRAE Level I Energy Audit.** FEA performed a building walk-through assessment and identified 14-no and -low cost energy conservation measures (ECM) that would reduce the building's energy use. It is anticipated that the ECMs identified will save the building approximately \$65,000 per year in utility costs and 423,000-kWh of annual electricity consumption.
3. **Retro-Commissioning.** FEA performed retro-commissioning on major base building HVAC equipment including the chiller plant, perimeter fan-coil units and air-handling units. FEA studied trending data generated by the building automation system (BAS) to identify capital intensive energy efficiency opportunities and equipment malfunctions. This analysis allowed FEA to identify approximately \$120,500 per year in additional annual energy cost savings and 2,271,000-kWh of annual electricity consumption.
4. **Sequence of Operations.** FEA also developed a comprehensive sequence of operations for the major base building equipment. Through conversations with building staff and a thorough review of design drawings FEA successfully composed a document detailing the optimal operation of the building.
5. **Energy Star Validation.** FEA is currently working with the building to validate their ENERGY STAR score.



PRIMARY CLIENT REFERENCE

Mr. Chris Liston, REPA, LEED AP
Project Manager
chris.liston@cbre.com
(617) 718-2797

START DATE: July 2010

COMPLETION DATE: On-going

PROJECT SIZE: 234,000 SQFT+

VALUE OF CONTRACT: \$45,000

CLIENT BENEFITS

- Team knowledgeable in management and maintenance of existing buildings
- Verification that systems are operating in accordance with Owner's requirements
- Over \$180,000 in estimated annual savings identified

SCOPE ITEMS

- ASHRAE Level I Energy Audit
- Airflow Design Analysis
- Retro-commissioning Services
- Sequence of Operations Documentation
- ENERGY STAR Validation

The **building achieved LEED Gold Certification** under the LEED for Existing Buildings, Operations and Maintenance rating systems.