

**425 Market Street**

**Certification for Leadership  
in Energy and  
Environmental Design**



## 425 MARKET STREET AT-A-GLANCE



- ◆ 425 Market Street is a prominent high rise building located in the Financial District of San Francisco, CA.
- ◆ The high rise was constructed in 1973.
- ◆ The building is comprised of approximately one million square feet of retail, office and parking facilities.

## 425 MARKET STREET GOES GREEN

Cushman & Wakefield is proud to share the details of our continuing efforts in pursuit of LEED (Leadership in Energy and Environmental Design) Certification in the Existing Building Operations and Maintenance (EBOM) Category through the United States Green Building Council (USGBC). The LEED Certification program provides building owners and operators a concise framework for identifying and implementing practical and measurable sustainable building design, construction, operations and maintenance solutions. EBOM performance is evaluated in five key areas: Sustainable Sites, Water Efficiency, Energy & Atmosphere, Materials & Resources, and Indoor Environmental Quality.



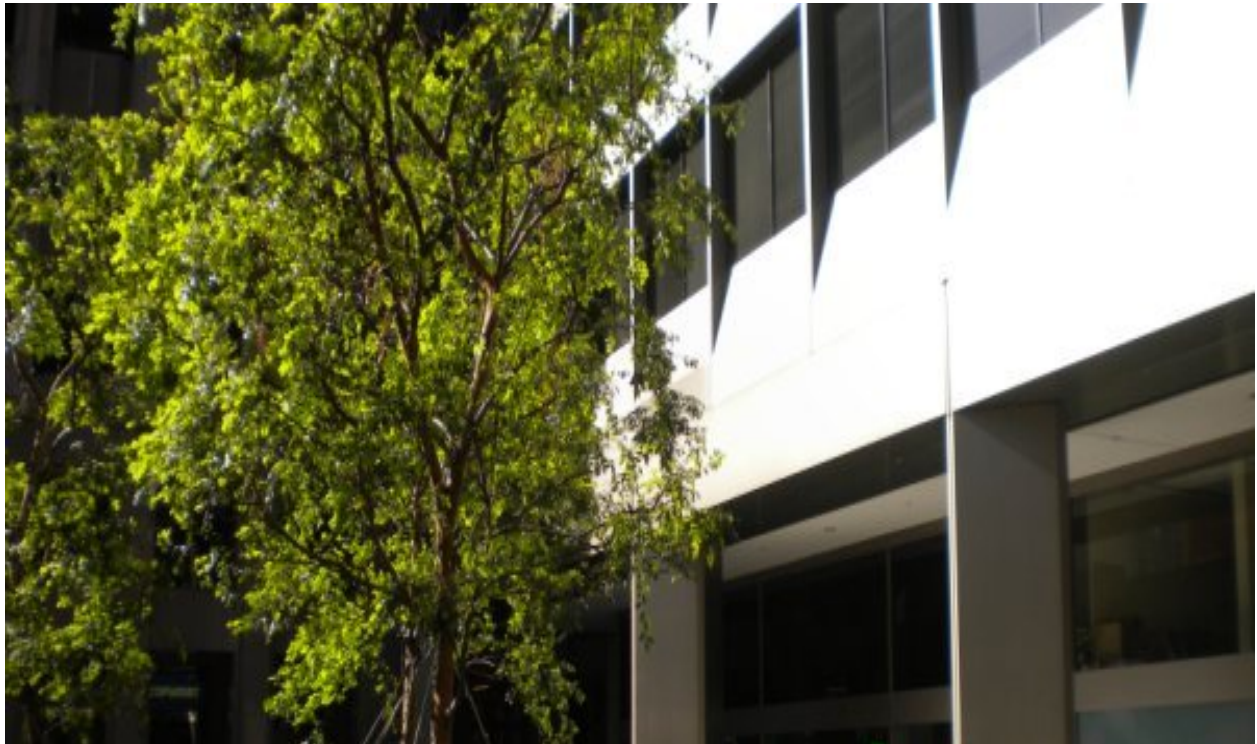


# SUSTAINABLE SITES

The Sustainable Sites category concentrates on the impact of a building's design and exterior space.

Sustainable Sites considers whether a building is making an effort to reduce light pollution and the heat island effect through its construction materials. It rewards a building for planning and executing appropriate regional landscaping practices to minimize the building's impact on ecosystems and waterways. Landscaping practices should especially concentrate on controlling storm water runoff and reducing erosion. Sustainable Sites also focuses on the transportation practices of the occupants in a building and encourages public modes of transportation.

- ◆ 425 Market St. surveyed more than 20% of the building's occupants regarding their means of transportation to work. The response of this representative sample group indicates that **more than 50%** of the building population uses alternate means of transportation other than driving alone.



# SUSTAINABLE SITES



- ◆ 425 Market St. utilizes drip irrigation and hand watering practices in the maintenance of the exterior landscaping. Drip irrigation works by applying water slowly and directly to the soil. This system allows the water to soak into the soil and applied where it is needed most, at the plant's roots. Besides drip irrigation, the landscapers hand water the planters and small areas of vegetation. Both practices help minimize over watering and runoff.
- ◆ 425 Market St. installed a "cool roof" in 2006. A cool roof is usually white or light in color. It is a roofing system that can deliver high solar reflectance and high thermal emittance. This benefits the building and the environment in many ways.
  - ◆ A cool roof reduces the building's absorption of heat. White reflective roofs typically increase only 10-25°F above ambient temperature during the day. Buildings with black roofs however can see temperature increases as much as 50°F in the heat of a full sun.
  - ◆ A cool roof reduces both building cooling loads and the urban heat island effect. As there is less heat-gain by the building, the demand on the air conditioning system lessens and allows the building both immediate and long-term savings on energy costs.
  - ◆ A cool roof reduces air pollution and smog formation.
  - ◆ A cool roof enhances the life expectancy of the roof which allows for savings in roof maintenance and replacement expenses.

## WATER EFFICIENCY

The Water Efficiency category focuses on strategies to conserve water. As buildings are major users of our potable water supply, the USGBC encourages buildings to concentrate on water reduction inside and outside. This is typically achieved through the use of more efficient appliances, fixtures, and fittings, and water-wise landscaping practices. 425 Market Street has implemented the following practices to improve water efficiency.

- ◆ The San Francisco Water Department conducted an audit of the building's water usage. The audit results showed that by installing more efficient plumbing fixtures in select locations (low flow toilets, low flow aerators and dual flush valves) the building's water consumption will decrease nearly 20%.
- ◆ 425 Market's urban landscaping practices facilitate water efficiency. The use of drip irrigation and hand-watering practices reduces water consumption. In addition, the water usage is monitored through an independent sub meter, allowing for detailed tracking of the water usage and ensuring that landscaping practices are consistent with 425 Market St.'s landscaping management program.





## ENERGY & ATMOSPHERE



According to the U.S. Department of Energy, buildings use 39% of the energy and 74% of the electricity produced in the United States. The Energy & Atmosphere category promotes strategies that buildings use to conserve energy. Reducing energy consumption improves the energy performance of buildings, reduces operating costs and pollution and enhances occupant comfort. These strategies include Retro-Commissioning; energy use monitoring; efficient design and construction; efficient appliances; systems and lighting; the use of renewable and clean sources of energy, generated on-site or off-site; and many other innovative approaches.

- ◆ 425 Market St. participates in PG&E's Retro-Commissioning program. Retro-commissioning is a systematic and documented process of identifying which of the building's systems, including mechanical/HVAC, lighting, plumbing, and standby power, are not performing to their intended level and making necessary repairs or improvements to save energy and cost. In 2009 Taylor Engineering performed a Retro-Commissioning audit of the existing building systems and recommended seven low and no cost measures for immediate implementation, six possible measures for further analysis, and seven possible measures outside the scope of the Retro-Commissioning audit.
- ◆ Cushman Wakefield has been a United States EPA Energy Star Partner since 1999 and has been participating with the EPA on various levels. The EPA Energy Star program provides a standardized methodology that is recognized and accepted throughout the commercial real estate industry. 425 Market Street benchmarks its electricity, gas and water consumption by using the Energy Star web-based tool called "Portfolio Manager". 425 Market St. first earned the Energy Star rating in 2006 and in 2009 achieved an Energy Star rating of 90 out of a maximum point scale of 100.
- ◆ 425 Market St. has a building operations plan that identifies what needs of the building and procedures to meet those needs. Through ongoing testing, maintenance, and monitoring of these systems, the building is able to meet these requirements at the most efficient level.

## MATERIALS & RESOURCES

Office buildings and its occupants use large amounts of materials and resources, and generate tons of waste through its daily operations and while undergoing construction. The Materials & Resources category encourages the selection of materials that is environmentally friendly. This typically includes products that have been sustainably grown, harvested, produced and transported. Increased use of sustainable materials promotes the practices of reuse and recycling, which will reduce the amount of waste going into a building's waste stream.

- ◆ Following considerable effort and outreach to tenants, 425 Market St. has achieved a 73% waste diversion rate. The building's waste removal vendor, Golden Gate Disposal, performed numerous waste audits to determine the contents of the building's waste stream. The audit results showed that many recyclable items were being included in the waste stream. In response, Cushman & Wakefield initiated a desk-side recycling program, dedicated an existing 30 cubic yard compactor to recycling only, purchased a new compactor for trash only, and initiated a composting program.
- ◆ 425 Market St. utilizes various vendors to recycle electronic waste for the building. The building has installed a drop box in the loading dock for small e-waste items such as cell phones, PDA's, electronic cords and other miscellaneous electronics. For larger e-waste items the building holds e-waste recycling days each quarter. This encourages tenants to recycle all electronic waste when possible so that it can be diverted from the landfill.





## MATERIALS & RESOURCES

- ◆ 425 Market St. has a separate collection area in the loading dock where tenants can drop off dead batteries for recycling. The building encourages the proper method of battery disposal. The California Department of Transportation states that each individual battery must be either placed in its own plastic bag or have both terminals taped, even during transportation. The batteries collected at the loading dock are taken to the local Ace Hardware store for proper handling and recycling.



- ◆ 425 Market St. recycles used ballasts, fluorescent lamps and other mercury containing lamps with Regency Lighting. The quantity is recorded and reported to the state at the required times. 425 Market St. complies with all State and Local hazardous waste disposal regulations.
- ◆ 425 Market St. always look for ways to reduce the amount of hazardous materials that are used in the building. The building staff examined the level of mercury contained in each light bulb of the 30,000 plus presently used in the building. By exploring options with our vendors, the building staff was able to find alternate lamps with less mercury content. By using light bulbs with less mercury content, the building reduces the amount of hazardous materials to be disposed.



## MATERIALS & RESOURCES

- ◆ 425 Market St. has implemented a desk side recycling program. Tenants separate recyclable materials from trash prior to disposal. All these materials - including plastics, cardboard, paper, bottle and cans - are collected and diverted from landfills.
- ◆ 425 Market St. has implemented a composting program. Paper hand towels from the building restrooms, food scraps, and compostable items are diverted to green receptacles on the loading dock that are removed daily.
- ◆ 425 Market St. collects its partial toilet paper rolls from the restrooms and donates them to local charities in the San Francisco Bay Area. Delancey Street Foundation picks up two 64-gallon trash containers of partial toilet rolls for its constituents each week. Delancey Street Foundation is a self-help organization that assists individuals in acquiring employment skills and achieving economic independence.
- ◆ Several tenants at 425 Market St. hire vendors to shred their confidential documents. Currently 27 out of 36 floors employ document shredding services. The building management office records the volume of shredding from each vendor and tenant. The totals indicate approximately 36,000 pounds of paper is shredded and recycled each month.



# MATERIALS & RESOURCES



# INDOOR ENVIRONMENTAL QUALITY



The U.S. Environmental Protection Agency estimates that most Americans spend about 90% of their day indoors. The vast majority of those work in an office environment. Studies have shown that Indoor Air Quality (IAQ) can be significantly worse than outside air quality. Poor IAQ is a major concern as it can impact the health, comfort, and productivity of the building occupants. This category focuses on a building's strategies to improve indoor air quality and occupant comfort levels.

- ◆ 425 Market St. has developed and implemented an Indoor Air Quality (IAQ) management program based on the US Environmental Protection Agency (EPA) standards. The purpose of the IAQ program is to maintain a healthy and comfortable working environment for building tenants. This is achieved through a set of policies and procedures that concentrate on the following: preventative maintenance of the building structures and systems; controlling microbial growth; regulating construction and renovation projects to meet the building Green Construction Policy; and reducing contaminants indoors by using environmentally-friendly products.
- ◆ Preventative maintenance plays the most vital role in preventing IAQ problems. Preventative maintenance is the routine inspection, adjustments or repairs of the building systems to make certain the systems operate efficiently. Through scheduled maintenance, potential problems are discovered and fixed in a timely manner. In addition, 425 Market Street's environmental consultant, Environova, performs an annual IAQ test of select floors in the building. This test confirms that the IAQ meets EPA I-BEAM and ASHRAE standards and exceeds the quality of the air outside the building.



# INDOOR ENVIRONMENTAL QUALITY

- ◆ 425 Market St. utilizes filters with a minimum efficiency reporting value (MERV) of 14. MERV 14 filters have an 85% efficiency rate which helps to reduce particulates circulating in the air distribution. The maintenance of these filters is included in the IAQ Best Management Practices program.
- ◆ 425 Market St. instituted a green cleaning policy. The policy encourages the use of sustainable products and materials.
  - ◆ The building makes every effort to use cleaning products that meet Green Seal standards. Green Seal is a nonprofit organization that provides science-based environmental certification standards. This set of standards allows buildings to make responsible choices in our purchases that are environmentally friendly.
  - ◆ The building also uses green cleaning equipment like microfiber mops and cloths and high-efficiency particulate air (HEPA) filters in vacuums. Microfiber materials have electrostatic properties that give them high dust-attracting power that is helpful in effectively removing dust particulates. The use of HEPA filters in vacuums improves the indoor air quality of the building. HEPA filters remove at least 99.97% of airborne particles that are 0.3 micrometers in diameter.



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