The quality consulting and energy modelling provided enabled us to become the first LEED® platinium high-rise office building in Florida.
600 Brickell Achieves LEED® Platinum

When Loretta Cockrum, CEO of the Forum Group, decided the time was right to build a world-class office tower in the up-and-coming Financial District of Miami, she knew she had to put sustainable practices at the heart of the development for it to succeed...
The Project

The Challenge

“We build real estate investment portfolios for families to protect their wealth for future generations,” explains Cockrum. “When I bought the 600 Brickell property over 30 years ago, I felt even then that Brickell was an address that would one day have global recognition, in the way that everyone’s heard of Rodeo Drive in LA or Park Avenue in New York.”

She adds, “When a Brickell property sold for a very high price in 2007, I knew it was time to go vertical and build a world-class tower, consisting of 600,000 square feet of leasable office space. From the start, I focused our development on the principles of sustainability and innovation. I knew if we got that quality infrastructure in place, we could reduce operating costs and create a wonderful working environment that would attract premier tenants willing to pay premium prices.”

The approach

“To make the building as sustainable as possible, and assist in earning Leadership in Energy and Environmental Design (LEED) certification, we appointed BVM Engineering (BVME), the Atlanta division of IES, to lead the team in incorporating sustainability, and perform all the energy analysis and commissioning,” explains Cockrum.

“As well as its reputation as the consultancy best able to ensure an unencumbered path to LEED certification, BVME’s team had the technical knowledge and first-hand experience needed to help us design the building with sustainability at its core. They also had the commissioning expertise to carry out functional testing after construction to ensure the building was working as expected.”

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The Solution
“The first challenge was deciding where to locate the building,” says Cockrum. “It’s a huge site, so we also wanted to provide an adjoining acre of open space, Brickell World Plaza, for the public to enjoy social gatherings and cultural events in the heart of the financial district. BVME helped us to consider the impact of the sun on the building and plaza, throughout the day, and over 12 months, to position the widest part of the building so the plaza plants would be sustained by the early morning sun and the people shaded during the heat of the day.”

She adds, “BVME then went on to provide a number of energy models to help us understand what impact a huge range of variables would have on energy use and comfort levels within the building. By looking parametrically at where cost savings could be realised and how comfort levels would respond if materials such as the glass were changed, we were able to refine the design and systems to create significant energy and cost savings. BVME then led the team’s documentation efforts to gain us our LEED Plantinum accreditation.”

The building was completed in 2011. Cockrum says: “BVME also provided the bridge between design and construction, commissioning the building by testing not just the LEED features, but also the lighting controls, building management system, electrical HVAC and plumbing systems to ensure there were no problems for future tenants.”

The Results
“The most valuable outcomes of the consulting provided by BVME were the improvements to the daylighting and indoor air conditions within the building,” says Cockrum. “As well as predicting an 18% reduction in energy costs, adjustments to make the HVAC systems more efficient increased outdoor air ventilation to all occupied spaces by 30% more than the standard ASHRAE requirements. BVME’s recommendation to introduce daylight harvesting, to maintain a constant luminance - with automatic lighting adjustments in response to available sunlight - has also made a massive improvement to the comfort, wellbeing and productivity of occupants.”

Other sustainability achievements include the capture and reuse of storm water, eliminating the need for portable water for landscaping. Inside the building, the recovery of condensate from the cooling systems to be used for cooling tower make up water, and use of efficient plumbing fixtures, has reduced water consumption by at least 30%, saving three million gallons of water a year.

Cockrum concludes, “The quality consulting, energy modelling and commissioning provided by BVME enabled us to become the first LEED platinum high-rise office building in Florida. We’re delighted and honoured by the achievement, which helped us win Developer Of The Year. We’re leasing at a record pace, and earning the highest rates in the market. Tenants tell me the LEED Platinum rating is a key factor.”

For Further Information
Contact us at enquires@iesve.com, or call 0141 945 8500.

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