GREEN BUILDING TOURS July 27, 2012

427

LEED[®] Facts

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LEED [®] Fac Toyota Center Houston, TX	cts		101	FA
LEED for Existing Buildin Certification Awarded May 12, Silver	gs – O&M 2010 47 *		JI	R
Sustainable Sites	5/12			
Water Efficiency	5/10			
Energy & Atmosphere	12/30			
Materials & Resources	8/14	N EAN		
Indoor Environmental Quality	10/19	ΤΟΥΟ	TA CE	NTE
Innovation & Design	7/7	115		Trees
*Out of a possible 92 points				TICCS

TOYOTA CENTER 115 Trees \$100,000 63 33,287 sf 3,147 tons Greenhouse gases

Saved annually with lighting retrofits

Electric submeters

Landscaped area in an urban environment

reduced annually

PROJECT PROFILE

Toyota Center The Green Team PROJECT BACKGROUND

Toyota Center became aware of the need for reducing energy costs, through the initial efforts for cost reductions. LEED EBOM became a focus point for becoming more sustainable. With the efforts of Toyota Center's staff, energy usage has consistently dropped annually, and from the efforts regarding LEED EBOM even further reductions were realized.

In keeping with Leslie Alexander's vision of sustainability and operational efficiency, the Houston Rockets and Toyota Center have gained the Silver level of certification within the LEED-EB: O&M program. "We have always been aggressive with our approach to energy management, recycling, and reduction of waste. Toyota Center has a unique opportunity to serve as an industry leader in the future of sustainability. We are operating in a more environmentally-conscious manner and educating the millions of patrons that attend Toyota Center events each year regarding ways they can help. Our organization takes great pride in being recognized as one of the country's leading innovators of green practices among sporting and entertainment venues". Tad Brown, Chief Executive Officer Houston Rockets Toyota Center SUSTAINABLE SITES (5/12)

Implemented an exterior maintenance and outdoor integrated pest management plan which greatly reduced or eliminated the use of chemicals or non-biodegradable detergents, and managed water runoff. Heat island effects are reduced with light and bright sidewalks and covered parking. They also use native and adaptive landscape elements and maximized open space. WATER EFFICIENCY (5/10)

Toyota Center has a system of meters and sub-meters on the water-using systems in the building, allowing for effective tracking of use and detection of leaks. High efficiency water fixtures reduced water consumption along with the native and adaptive landscape to minimize irrigation needs. A chemical treatment plan is utilized in the building HVAC system to enable more efficient use of water.

ENERGY & ATMOSPHERE (12/30)

Toyota Center is more energy efficient than any other arenas surveyed and turns things off while using more energy efficient lighting. An extensive commissioning process determined what building systems could be operated more efficiently or upgraded to maximize energy efficiency. A building automation system allows Toyota Center to efficiently use and track its energy use. Carbon emissions were reported by the building to a third party to prove the buildings reductions of green house gasses beyond the national average.

MATERIALS & RESOURCES (8/14)

The property utilizes sustainable purchasing policies to purchase more environmentally friendly energy star appliances and computers, furniture and construction materials. They currently recycle paper, cardboard, aluminum, plastic, glass, light bulbs, and durable goods such as computers, monitors, copiers, microwaves, furniture, etc. Where possible, Toyota Center uses low-mercury content light bulbs. Construction events are monitored at the building to make sure the proper supplies are being purchased, construction waste is being sorted and recycled and extra steps are taken to ensure that building tenant indoor air quality is not compromised. **INDOOR ENVIRONMENTAL QUALITY (10/19)**

Toyota Center utilizes enhanced filtration to minimize contaminants in the air as part of an IAQ program. A comprehensive green cleaning program is in place, featuring sustainable cleaning chemicals and recycled paper products, green equipment which reduces particulates and reduces noise pollution, and healthy cleaning protocols. Cleaning effectiveness is tracked regularly to ensure that the protocols and products are being used correctly and the cleaning is effective along with environmentally friendly pest management.

INNOVATION & DESIGN (7/7)

Toyota Center conducts recycling outreach with their E-Cycling program along with the Green Game to encourage education of their clientele on how to be more environmentally friendly. They also exceeded LEED requirements for several credits so that extra credit was given for exemplary performance— durable goods recycling, covered parking, solid waste management and sustainable purchasing for building materials of facility alteration. A LEED Feasibility cost/benefit analysis was performed to document and quantify all LEED aspects of the project.

Through our efforts with "Green Games", aggressive recycling, public outreach initiatives featuring Rockets players, environmental support efforts, and many other programs, we are providing a significant educational support mechanism to our community and fans alike.

Tad Brown Chief Executive Officer Houston Rockets Toyota Center



Toyota Center allows for expansive concourses filled with light.

Operator: Clutch City Entertainment, Inc. **LEED Consultant:** Reihl Engineering, LLC **Project Size:** 775,000 SF



Appropriate landscaping for our region and shade welcome guests of Toyota Center.

ABOUT LEED

The LEED Green Building Rating System is the national benchmark for the design, construction, and operations of highperformance green buildings. Visit the U.S.Green Building Council's Web site at <u>www.usgbc.org</u> to learn more about how you can make LEED work for you.