



**TRANSIT AUTHORITY OF RIVER CITY
(TARC) MAINTENANCE FACILITY
LOUISVILLE, KENTUCKY**

80% reduction in potable water use

90.7% decrease in stormwater quantity,
volume and rate leaving the site

335.8 tons
of on-site generated waste
diverted from landfill

LEED® Facts
TARC Maintenance Facility
Louisville, Kentucky

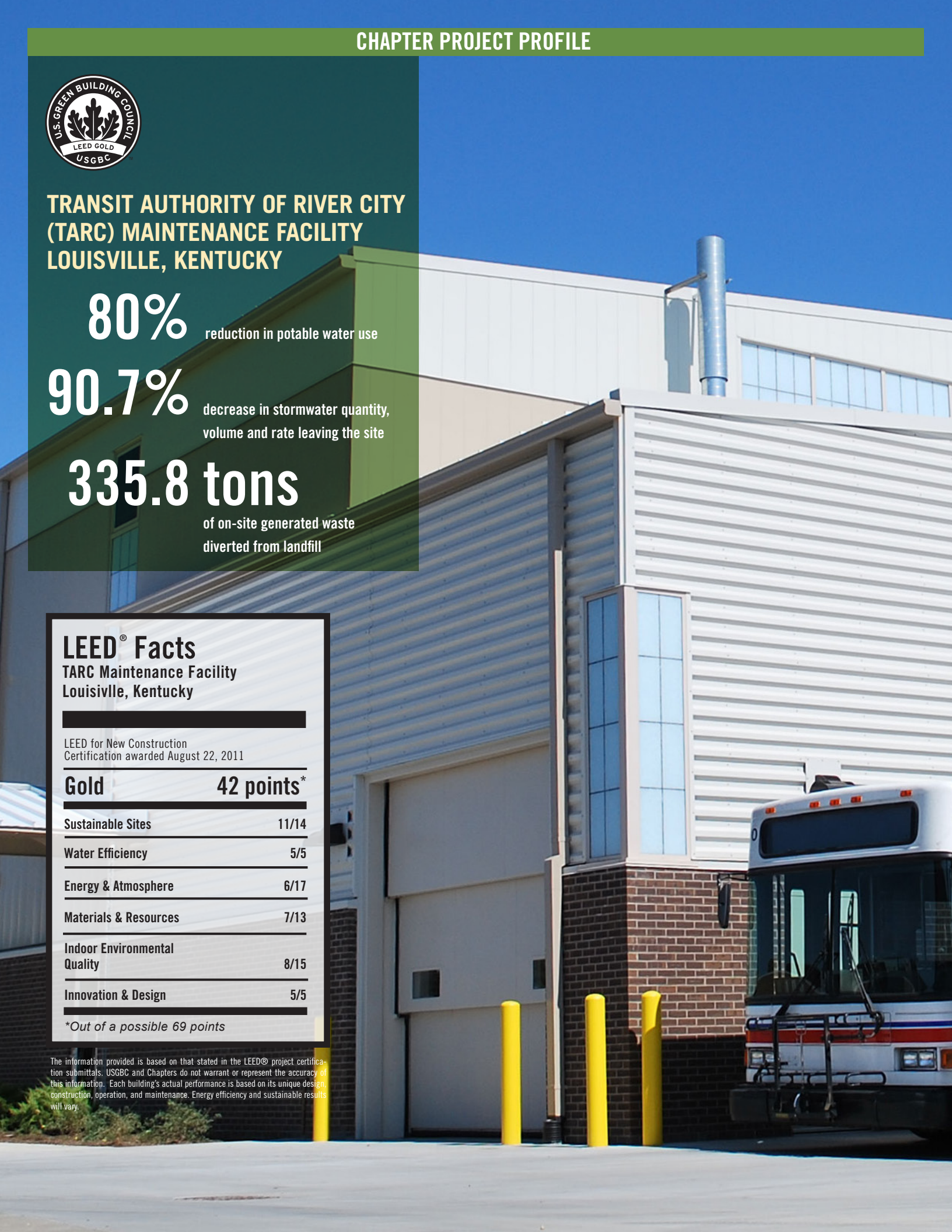
LEED for New Construction
Certification awarded August 22, 2011

Gold 42 points*

Sustainable Sites	11/14
Water Efficiency	5/5
Energy & Atmosphere	6/17
Materials & Resources	7/13
Indoor Environmental Quality	8/15
Innovation & Design	5/5

*Out of a possible 69 points

The information provided is based on that stated in the LEED® project certification submittals. USGBC and Chapters do not warrant or represent the accuracy of this information. Each building's actual performance is based on its unique design, construction, operation, and maintenance. Energy efficiency and sustainable results will vary.



TRANSIT AUTHORITY OF RIVER CITY (TARC) MAINTENANCE FACILITY

Transit Goes Gold

ARRA invests in life cycle savings

PROJECT BACKGROUND

The Transit Authority of River City's (TARC) mission is to "explore and implement transportation opportunities that enhance the social, economic and environmental well being of the greater Louisville Community." Their primary offices operate from Louisville's Union Station, once the largest train station in the South. TARC became the occupant of Union Station in 1980 and operates its current bus and trolley service from the same site today.

TARC hired Luckett & Farley to guide the design of a proposed new facility to enhance their operations and maintenance needs. Having expressed interest in LEED and sustainability, TARC committed to the pursuit of LEED Certification, keeping with the intent of their Mission statement.

BUILDING AND SITE USE AND PROGRAM

A design charrette was implemented by the project team to identify the owner's objectives including sustainable design and LEED goals, identifying key programmatic requirements and discussing strategies that could be implemented to achieve these needs. The building provided six service bays for the daily cleaning of buses following their scheduled runs. This was identified as the first programmatic goal for the new facility. The second use for the facility is operator and maintenance training, and third, the facility will provide an additional bay for bus electronics/fare box maintenance with a support shop and storage.

The existing cleaning facilities were in the bus storage barn, an older, dark space not conducive to good cleaning operational needs. Goals for the new spaces included being clean and well lit with plenty of natural light—a space in which the employees will enjoy working. TARC also wanted the building to reflect and promote their value of sustainability within the Metro Louisville community.

TARC operates between 200 and 300 buses a day, most originating from one site. It was necessary that the space around this facility be durable to facilitate buses coming through the cleaning facility each day. Staging and moving of buses is the primary activity on this site of the new building.

STRATEGIES AND RESULTS

The existing site was nearly 100% impervious. A Bio-swale and a vegetative roof were proposed to restore habitat. 61.8% of the site was restored, and in doing so, the design resulted in a 90.7% decrease in quantity and rate of storm water runoff and 80% of total suspended solids were removed from the runoff. The roof and non-roof surfaces are designed to reduce heat island effect. The landscaping installed does not require permanent irrigation. Water strategies include low flow lavatories, showers and faucets and a rainwater harvesting system has been installed for non-potable water for flushing toilets and urinals using 80% less water.

98.7% (335.8 tons) of onsite generated construction waste was diverted from the landfill. The construction utilized materials having 39% recycled content, 60% materials within 500 miles from the project site and 82% of the wood used on the project is from FSC certified forests.

A variable volume refrigerant HVAC system and energy recovery limits, coupled with a thermally efficient building envelope, has reduced energy costs by nearly 30%. One of the operational issues associated with bus cleaning is lighting inside the bus. The project has provided a 20 module PV array to power the bus lights thru cord drops with DC connectors as an innovation in design, credit saving 4,380 gallons of diesel fuel each year.

"The Recovery Act investments at TARC have not just provided vitally-needed jobs - they're supporting efficient technologies that will cut energy usage to keep our environment cleaner and save taxpayer dollars for years to come."

John Yarmuth
Congressman, KY-3



Architect: Luckett & Farley
Civil Engineer: Luckett & Farley
Commissioning Agent: Luckett & Farley
Contractor: Brasch Barry
Landscape Architect: Luckett & Farley
LEED Consultant: Luckett & Farley
Lighting Designer: Luckett & Farley
MEP Engineer: Luckett & Farley
Structural Engineer: Luckett & Farley
Project Size: 17,768sf
Total Project Cost: \$4,700,000

Photographs Courtesy of: Luckett & Farley

ABOUT KENTUCKY USGBC

Our goal is to improve the health and welfare of all Kentucky citizens through a sustainable and responsible built environment. Through education and awareness we encourage the use of sustainable practices that provide our residents with a healthy environment in which to live, work and learn.



KENTUCKY CHAPTER
Greening the Bluegrass

www.usgbckentucky.org
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