

# U.S. Embassy Bujumbura LEED® Gold Certified



The U.S. Embassy in Bujumbura, Burundi is the first Leadership in Energy and Environmental Design (LEED®) Certified building in Burundi. The Embassy earned LEED Gold Certification under the LEED for New Construction green building rating system.

Site 8.3 Acres | Project Cost \$133 Million | Occupancy November 2012

## Sustainable Site

The embassy is located in the Kigobe District of Bujumbura. Hardscape and rooftops were constructed using materials with high solar reflective indexes (SRIs), which reflect, rather than absorb heat from the sun. Light grey concrete was used in lieu of dark colored asphalt for pedestrian-orientated walkways, parking, and the majority of drive areas. This helps reduce urban heat island effect which occurs when dark surfaces absorb heat during the day, and release that heat at night causing thermal gradient differences between developed and undeveloped areas.

## Water Efficiency

The embassy was designed to reduce water consumption by a calculated 39% from the baseline case through the use of low-flush and low-flow plumbing fixtures, and waterless urinals. All water used at the embassy is treated on-site and reused for irrigation. The amount of water needed to irrigate landscape plantings is reduced through designing with plants native to the region.

## Energy and Atmosphere

The building is modeled to reduce electricity cost by 52% from the baseline building. This was accomplished through architectural shading of the building and a white "cool" roof; LED task lighting; occupancy sensors; electric traction elevators; and variable frequency drives for pumps, fans, and motors. Additionally, the embassy produces emission free power from 960 solar panels expected to produce 453,454 kWh annually.

## Materials and Resources

This facility was built using sustainable materials. Over 27% of base building materials contain recycled content, including reinforcing steel, insulation, and carpet. An estimated 95% of waste generated during construction was diverted from landfills and incinerators. This was accomplished by source separation during construction. Wood, metal, plastic, cardboard, paper, concrete and gypsum board were separated for reuse locally.

## Indoor Environmental Quality

Employees and visitors will benefit from a superior indoor environment. By monitoring CO<sub>2</sub> levels, optimal amounts of fresh air are provided to the occupants. Outside air is filtered with HEPA and carbon filters.

Low-emitting materials were selected to reduce potential off-gassing after installation. Adhesives, sealants, paints, coatings, carpets, composite woods, and furniture systems all contain low quantities of volatile organic compounds.

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**Architect** EYP Architecture & Engineering

**Contractor** Caddell Construction Co.

**Landscape** Carol R Johnson Associates

**Civil** AST Cowen Design Group

**Structural** Elliot LeBoeuf & McElwain

**MEP** EYP Architecture & Engineering

**Commissioning** RMF Engineering

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