DPR building earns Platinum certification

By Special to the Daily Transcript
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SAN DIEGO -- The dream of a net-zero energy, LEED-certified workplace has become a reality for DPR Construction.

The 24,000-square-foot, company-owned San Diego regional headquarters in University City is the first and only commercial office in San Diego to achieve both net-zero energy status over 20,000 square feet and LEED for New Construction Platinum certification, according to Jay Leopold, regional manager of DPR San Diego.

To be eligible for a net-zero rating, a building must be capable of producing at least as much energy from renewable sources within a year to compensate for what it draws from the grid.

Over the last year, DPRs San Diego office generated nearly 12,000 kilowatt-hours (kWh) more than it consumed with the use of the roof-mounted 64 kW-AC photovoltaic system.

DPRs San Diego office is also the first and only commercial building to achieve LEED-NC Platinum in San Diego, the highest rating given by the U.S. Green Building Council.

Reducing energy consumption

DPR reduced the building's energy consumption by over 50 percent by incorporating natural light and ventilation into the building's design.

Light was brought in utilizing several modifications to the structure, including stripping the film off existing curtain wall, installing 36 Solatubes or high-performance daylighting systems, as well as four roof monitors or large vertical operable skylights, and glass roll up doors around the perimeter of the space.

Reducing HVAC hours

DPR utilized a ventilation strategy that reduced the number of operating hours of the HVAC system by 79 percent compared to a sealed building.

The open platform building management system automatically opens the windows to bring natural ventilation into the structure.

When the outside and inside air temperatures meet the set criteria, the system opens the windows and the roof monitors to naturally cross-ventilate and cool the open office area. As windows open, the HVAC system is shut down to conserve energy.

Other sustainable features

Outside the building, features included new preferred parking for fuel efficient vehicles, replacing the roof with an Energy Star product, diverting over 80 percent of construction waste from disposal in landfills, installing low flow plumbing fixtures to decrease water usage by more than half, modifying the existing irrigation to reduce landscape water usage by 60 percent, and placing hand dryers in the bathrooms.

Salvaged and reused

DPR also salvaged and reused many materials from its previous office and the existing building, such as 40 work stations and casework.

Salvaged wood stripped from pallets from jobsites was used throughout the space for wood trim.

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More than 80 percent of the new wood was managed using the Forest Stewardship Council (FSC) principles and high recycled content materials were selected including metal studs, ceiling tile, drywall and steel plate.

The highly recycled content carpet tiles were adhered using adhesive that do not contain volatile organic compounds (VOC). Other no or low-emitting VOC materials that were used included paints, coatings, composite woods, sealants, adhesives and caulking.

The team and others

The DPR project team was comprised of Elizabeth Barrie, Jeff Cole, Jerry McElfresh and Mark Seidl.

Jonathan Wood, of Seattle-based Callison, was the architect.

Other engineering consultants and designers included KEMA for bio-climatic design; Hope Engineering for structural; Latitude 33 Planning and Engineering for civil; Howard Associates for landscape architecture; Sargent Electric Corp. for electrical services; and Pacific Rim Mechanical for plumbing and mechanical services.