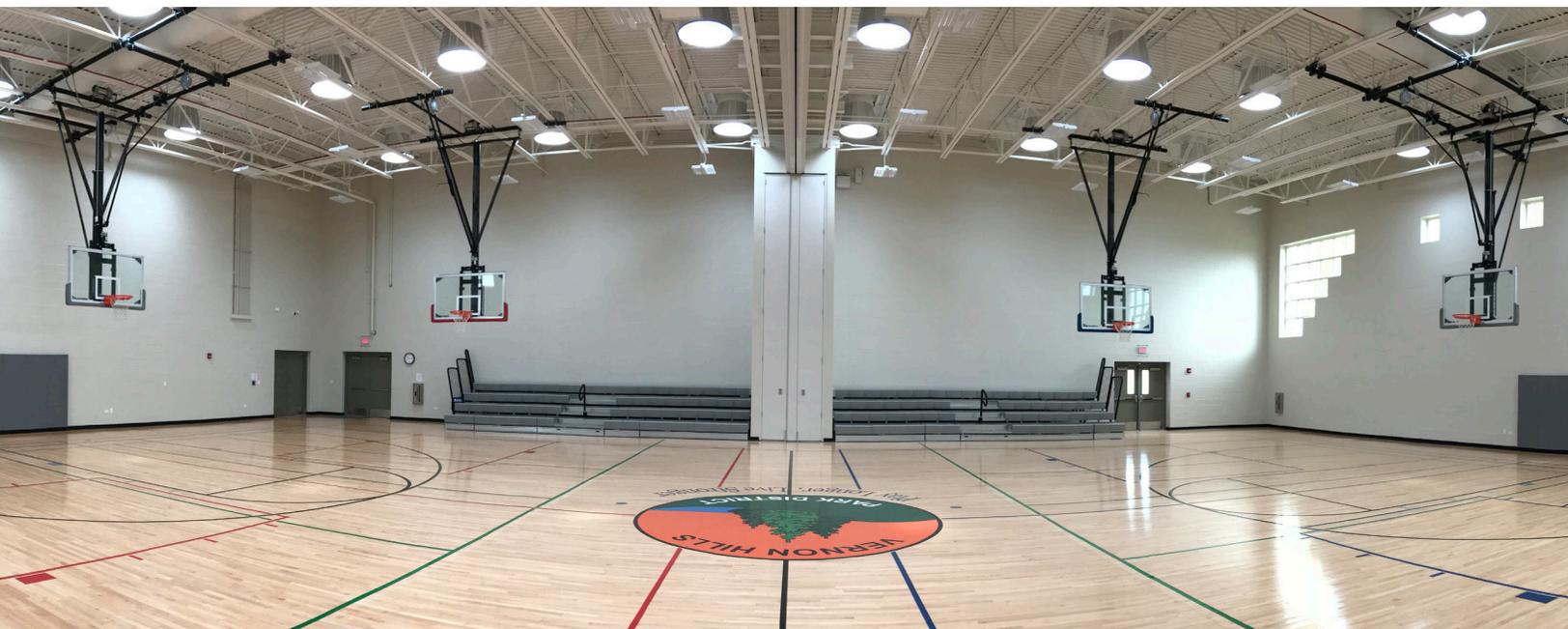


Sullivan Community Center

Sports & Recreation

Case Study



CLIENT

Sullivan Community Center

CHALLENGE

Integrate energy-efficient natural lighting to meet the requirements of the 2015 International Energy Code

RESULTS

Daylighting incorporated throughout the gym; no electric lighting needed during the day.

PRODUCT

SkyVault M74 series with Amplifier extension

SOLATUBE INSTALLER

Hadley Associates

ARCHITECT

Williams Architects

BACKGROUND: The Vernon Hills Park District - Sullivan Community Center and Family Aquatic Center is located in Vernon Hills, Illinois. The center was built in 1992 to promote diverse, community-based recreational opportunities to enhance the quality of life for local residents.

In order to meet the needs of the growing community, the Vernon Hills Park District (VHPD) decided it was time to renovate the aged facility and inadequate gymnasium space.

“They also request that we turn the lights off during the day because honestly we don’t need them at all.”

- Matt Dewitt
Rec Supervisor, Vernon Hills Park District

CHALLENGE: The project fell under the requirements of the 2015 International Energy Code. In order to meet the daylighting requirements, the design team had to determine the best way to add high bay natural lighting to the 26-foot gymnasium space.

SOLUTION: The design team was able to use Solatube’s proprietary design calculator to determine the number of units needed in the gym and the amount of light that the Solatube Daylighting Systems would bring into the space based on the geographic location of Chicago.



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Recommended by Solatube, the team also used the thermal insulation panel in the Solatube system to accomplish the u-value that was required by the energy code as well.

In order to properly daylight the space, the project used the Solatube M74 DS SkyVault series, the largest daylighting system on the market. The 29-inch diameter tube allowed for maximum output while minimizing impact on the building envelope and significantly reducing installation costs.

The SkyVault Amplifier extension was also added to improve the delivery of daylight to the floor. The cone-shaped Amplifier with 36 highly reflective facets made of proprietary Spectralight® Infinity material ensured proper daylight delivery in the high bay gymnasium.

RESULTS: “I truly appreciate the quality of daylighting that the Solatube Daylighting Systems are able to bring into the space,” said Scott Morlock, Williams Architects. “The daylighting is very even and diffused perfectly.”

“Many members request to specifically and solely use the newer gym with the Solatube units because it’s much livelier and brighter,” said Matt Dewitt, Rec Supervisor, Vernon Hills Park District. “They also request that we turn the lights off during the day because honestly we don’t need them at all.”

Members of the Vernon Hills Park District - Sullivan Community Center and Family Aquatic Center now have a vibrant, energy-efficient gymnasium that can be used for its intended purpose without artificial lighting.

Get design help or information for your next project.
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