Innovative Solatube Product Application

Application:
Vegetated Green Roofs
Effectively daylight buildings that use vegetative roof systems

Solatube® Daylighting Systems allow daylight apertures to be elevated above roof vegetation, enabling them to be incorporated into the rooftop architecture while minimizing and/or eliminating daytime shadowing. The unique optical properties and light transportation capabilities of Solatube Daylighting Systems also allow multiple units to be grouped together within a custom multi-unit curb cap to reduce the number of rooftop penetrations needed to daylight interior spaces.

Objective
Effectively and efficiently daylight interior spaces of buildings that use vegetative roof systems. Apply the daylighting system in a way that harmonizes with rooftop landscape architecture and/or hardscaping while minimizing the potential shading and/or shadowing of the daylight system apertures.

Potential Products Used
• Solatube Brighten Up® Series 290 DS Daylighting Systems;
  SolaMaster® Series 330 DS or 750 DS Daylighting Systems
• Solatube Spectralight® Infinity 0-90 Degree Tubing
• Curb cap adapters
• Optional Solatube turret extensions

Solution
Solatube Daylighting Systems with curb cap (FCM) flashings and optional turret extensions were used to mount Solatube optical domes above rooftop vegetation. Custom, multi-unit grouped flashing curb caps may also be installed and used to group Solatube Daylighting System apertures within a single roof curb. Solatube Spectralight Infinity Tubing and Solatube angle adapters were attached to the roof assembly, and extended downward into the building interior toward the desired ceiling diffuser locations.

Considerations
To recreate this effect, keep the following considerations in mind:

• Use traditional curb construction to provide the necessary waterproofed rooftop apertures.
• Multi-unit curb cap or self-flashing on custom curb by others must be designed and fabricated to accept and use off-the-shelf Solatube product flashings without the need for trimming or modification in any way.
• Consult a roofing professional to ensure curbs are properly fastened and weatherproofed.
• Keep top of curb cap elevated well above vegetated medium.