

Application:

Functional Curbs in Public Spaces

Create curb designs for roof systems that double as public gathering spaces

Many roof systems today double as public spaces. In the areas below, Solatube Daylighting Systems can be used to illuminate interiors with natural light without sacrificing system performance or disrupting activities in the public space above. By creating a functional and/or artistic curb design to house the Solatube roof assembly, a dual purpose can be achieved.

Objective

Enhance a roof space for public use as a seating area, view deck, garden or other purpose while effectively delivering daylight to the area below it.

Potential Products Used

- Solatube Brighten Up® Series 290 DS Daylighting Systems;
- Solatube SolaMaster® Series 330/750 DS Daylighting Systems - with curb-mounted cap or self-flashings
- Optional turret extensions

Solution

A custom-built roof curb was fabricated to fit the designated roof opening, then a Solatube self-mounted flashing (or curb-mount cap) was applied to the custom curb. A turret extension can be installed to elevate the Solatube optical dome, if necessary. Next, the curb cap assembly was affixed to the roof curb, and Solatube extension tubes and angle adapters were attached to the roof assembly. The tubes were extended downward into the building interior toward the desired ceiling diffuser location. Artistic and functional elements, like benches, can be built around the curb.

Considerations

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

- Create enough of a barrier around the dome itself so that no shadows interfere with system performance.
- Take care to make curb visible to users of a rooftop space. Optional Solatube turret extensions can be used to raise the height of the dome above roof level to prevent accidents, especially in high traffic areas.
- Optional Solatube turret extensions can also be used to prevent dirt buildup on domes.
- Curbs, curb caps, and self-flashings may be painted to match color themes at the roof level.
- Incorporate barriers or signage for users of the rooftop space that:
 - explain the purpose of Solatube Daylighting Systems and the importance of daylight for human performance as well as energy savings.
 - warn them against sitting on or interfering with the domes.

