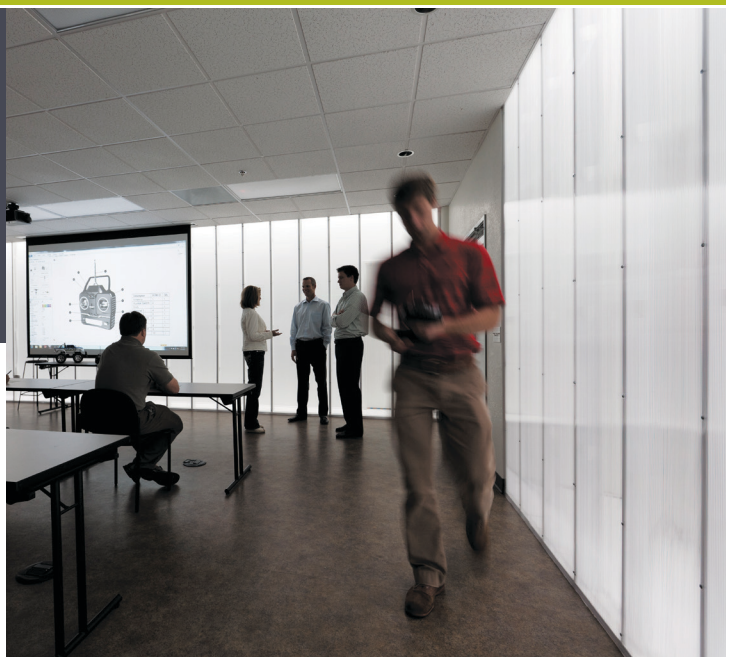
Application:

Luminous Walls

Visually extend an open space by illuminating a wall interior with natural light



Fabricating a luminous wall using natural daylight is an innovative way to create an appealing visual element that gives occupants the impression that the space is more expansive than it actually is.

Objective

Use Solatube® Daylighting Systems to create a dramatic yet functional luminous wall that minimizes the building's reliance on electric lights during the day. It should also provide occupants with substantial and optically comfortable lighting as well as a visual and psychological connection to the outside.

Potential Products Used

- Solatube Brighten Up® Series 290 DS Daylighting Systems
- Optional Solatube Daylight Dimmers™ with switch
- Translucent acrylic or glass surface
- Metal framing

Solution

A dimensional wall cavity was built behind the space where the finished wall would be situated. The translucent wall surface was reinforced with traditional framing (metal studs on 16 in. centers), then the Solatube Daylighting Systems were installed. After the tube openings were sealed with plastic, the interior wall cavity surfaces were painted—including the translucent wall framing—with a highly reflective, diffuse white paint. Once the paint was dry, the plastic was removed from the tube openings and Solatube diffusers were installed. To seal the wall cavity, the translucent wall panels were attached to the painted framing using chrome "beauty washers" and screws. Daylight Dimmers were added to allow personnel to control the brightness of the walls.

Considerations

When recreating this effect, keep the following considerations in mind:

- Be sure to provide an access door to the interior wall cavity for periodic maintenance.
- Establish switched Daylight Dimmer circuits as needed to allow for the brightness of individual walls to be controlled in unison, or individually, as desired.
- Daylight can effectively be shared by two adjacent spaces divided by a luminous wall.

SOLATUBE®
Innovation in Daylighting®

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