

New London Educational Learning Center (ELC) Case Study



CLIENT

The New London Educational Learning Center (ELC)

CHALLENGE

Introducing natural daylight into the central recreation area, which also serves as a storm shelter, posed a significant challenge. Traditional windows and skylights were not feasible due to the need to comply with strict ICC 500 and FEMA P-361 storm shelter codes while ensuring structural integrity and occupant safety.

RESULTS

The installation of Solatube SolaMaster 750 DS-O tubular daylighting devices (TDDs) successfully illuminated the recreation area with natural light. The solution met stringent storm shelter regulations, enhancing both the energy efficiency and comfort of the space without compromising safety.

PRODUCT

(12) Solatube SolaMaster 750 DS-O compliant with ICC 500/FEMA P-361
(8) Solatube SolaMaster 300 DS

SOLATUBE DISTRIBUTOR: Daylight Specialists

ARCHITECT OF RECORD: Hay Dobb

GENERAL CONTRACTOR: BCI Construction

BACKGROUND: The New London Educational Learning Center (ELC) in New London, Minn., was designed to support students with learning and behavioral challenges. This 25,000-square-foot facility replaces an outdated building in Willmar, Minn., that had become too costly to maintain. Completed in June 2024 by BCI Construction, the ELC offers specialized educational services for up to 50 students. The project represents a significant investment in the local community, providing a safe, modern and functional environment tailored to the needs of its students.

CHALLENGE: The key challenge during the construction of the New London ELC was introducing daylight into spaces where traditional windows or skylights were not viable. Most critically, the recreation area, which also serves as the building's storm shelter, needed to comply with Minnesota's strict building codes. ICC 500 standards require that storm shelters meet specific safety guidelines without compromising structural integrity. This created a need for a daylighting solution that met both the architectural requirements and safety standards.

SOLUTION: The design team, led by Hay Dobbs architects and BCI Construction, collaborated closely with Solatube distributor Daylight Specialists to integrate 12 Solatube SolaMaster 750 DS-O daylighting systems. The 750 DS-O is the only rooftop daylighting product globally that complies with both ICC 500 and FEMA P-361 standards, making it the optimal choice for storm shelters.



The system allowed natural daylight to be introduced into the storm shelter without the need for costly protective measures, maintaining the structural integrity and safety required by strict storm shelter codes. Architect Gary Hay highlighted the importance of the solution: “The quality of these internal spaces is much higher due to the daylight infused throughout. With Solatube TDDs, we provided ample daylight while extracting UV rays, a feature important for students with UV sensitivity.”



Adam Aalgaard, another architect from Hay Dobbs, emphasized the collaborative effort: “Daylight Specialists was a great asset on this project by working with our team and providing a project solution that quite positively impacts the space.”

The success of the project was due to the strong collaboration between the design, precast and engineering teams. By working together, they were able to meet the daylighting objectives without compromising the safety and functionality of the storm shelter.

RESULTS: The integration of Solatube SolaMaster 750 DS-O systems transformed the storm shelter and recreation area into a bright, welcoming space. This marks a milestone for the architectural and construction teams, who had not previously incorporated daylighting into a storm shelter.

BCI Construction’s Project Manager, Jennifer Colton, recalled being surprised by the daylighting’s effectiveness, stating, “I found myself looking for a light switch to turn off before realizing the brightness was simply natural daylight!”



The project’s success demonstrates how Solatube systems provide an effective, compliant solution for storm shelters. Fergus Falls School District, a key stakeholder, praised the \$8 million project for meeting budget and design goals, while Phase II’s \$8 million expansion is expected to further improve educational facilities without requiring a bonding referendum or raising property taxes.

CONCLUSION: The New London ELC stands as a model of innovative design, where cutting-edge daylighting technology seamlessly integrates with storm shelter requirements. Solatube’s ICC 500/FEMA P-361 compliant SolaMaster 750 DS-O system, installed by Daylight Specialists, ensured a safe, functional, and aesthetically pleasing environment. This project underscores how modern technology can enhance learning environments while meeting the highest safety standards.