

The Future is Now as California Library Sets New Standard for Service and Design

When community officials decided to renovate the Cerritos Public Library in Cerritos, CA, they wanted to create a grand library that would honor the past while embracing the future. After four years of design and construction the result is the newly named Cerritos Millennium Library; a sleek, futuristic-looking building that blends traditional library services with state-of-the-art technology and design.

A 1986 renovation of the Cerritos Library won a national award of excellence, the highest honor given out by the American Institute of Architecture and the American Library Association, so expectations for this most recent project were high.

To design the new facility, library and city officials called on Charles Walton and Associates (CWA), the Glendale, CA-based architecture firm that previously re-designed the library in 1986. Hoping to exceed the standards it set with its 1986 award-winning design, CWA created an exciting new model for public library services in the 21st century.

The three-story Millennium Library features an elaborate interior design that stretches across nearly every spectrum of history with themed rooms that define its various collections. The first floor is host to an Old World reading room reminiscent of ancient Rome, featuring rare first editions, wood paneling and a Gothic fireplace with holographic flames. The second and third floors are laid out in an ultra-modern design, filled with art deco furniture and futuristic glass sculptures.

The \$40-million library offers patrons nearly 300,000 books and instant access to the World Wide Web via 200 computer work stations and 1,200 laptop-ready Internet portals. Every aspect of the



Millennium Library encourages intellectual exploration, from the museum-quality exhibits scattered throughout the building to the 15,000-gallon saltwater aquarium that greets patrons at the entrance.

While the interior amenities of this 82,500 square-foot library are topnotch, the exterior design and construction commands attention before you even set foot in the building. The Millennium Library is one of the first titanium-clad buildings in the United States, featuring a golden skin that changes color depending on the atmospheric pressure and the angle of the sun.

Cerritos Public Library

Project Location:

Cerritos, CA

Product Used:

Carlisle's WIP 300HT Roofing Underlayment

Square Footage:

82,000 square feet

Cerritos Public Library

“The city of Cerritos wanted a substantial, long-lasting material. We considered granite, but with the building’s unique design the 100-year titanium made the most sense,” said James Nardini, vice president at CWA. “It worked perfectly with the building’s compound curves and the subtle shifts in color that the titanium creates are a perfect metaphor for change, a concept the library felt very strongly about.”

Similar to other metal products, titanium becomes extremely hot when it is exposed to excessive sunlight. In order to maintain the integrity of the building and ensure a long service life, a special waterproofing underlayment had to be installed under the titanium that could withstand the extreme temperatures from the California sunshine.

CWA approved a Carlisle Water and Ice Protection (WIP®) roofing underlayment to be installed under the metal roof sheets. “We looked at a number of underlayments and Carlisle’s WIP 300HT exceeded all

of the necessary requirements for use under the titanium,” said Nardini. “This underlayment will allow the titanium to reach and probably exceed its expected 100-year service life.”

The 40-mil WIP 300HT is a high tensile strength, rubberized asphalt underlayment specifically designed to withstand temperatures up to 240°F. The rubberized asphalt is laminated to an impermeable polyethylene film layer, making WIP 300HT a superior waterproofing underlayment that provides dual-barrier moisture protection. Unlike other underlayments, Carlisle’s WIP 300HT will not melt or become brittle, even under the most extreme weather conditions.

“WIP 300HT offers permanent protection and low life cycle-costs,” said Tim Eorgan, technical services manager with Carlisle Coatings & Waterproofing. “This underlayment will not crack, dry out or rot, resulting in superior long-term performance.”

Before the WIP underlayment and titanium panels could be installed, a complete overhaul of the library had to take place. The entire western half of the Cerritos Library was torn down, with collections temporarily stored in trailers, to make way for the new and improved Millennium Library. The general contractor for the project was C.W. Driver, a full-service construction firm with offices located in Los Angeles, CA; Irvine, CA; Ontario, CA and San Diego, CA.

Construction began with C.W. Driver erecting metal studs 16 inches on center, which formed the library’s new skeleton. After the metal studs were erected, Custom Metal Fabricators Incorporated (CMF) from Orange, CA, was subcontracted to install the unique wall system. CMF has been in the sheet metal business for more than 50 years and they specialize in unique wall applications such as the one at the Millennium Library.

Although not accustomed to working with titanium, CMF was quite familiar with Carlisle’s WIP 300HT underlayment, having used it exclusively on high-temperature applications for several years. “We use the WIP underlayment because it works extremely well and it’s so easy to install,” said Dave Duclett, vice president at CMF.





“The self-sealing feature on all of Carlisle’s underlayments is extremely beneficial.

- Tim Peterson”

Before CMF could install the titanium cladding they had to attach 20-gauge metal sheeting to the building’s metal frame to create a smooth, flat surface for the application of the WIP underlayment. When all of the metal sheeting was attached, CMF adhered the WIP underlayment starting at the bottom of the building and working towards the top.

Because Carlisle’s complete line of underlayments are self adhering, CMF installed them directly to the metal sheeting without the need for additional primers, adhesives or fasteners. The self-adhering WIP underlayment easily maneuvered around the library’s curved design, leaving no gaps where holes could develop.

To install the WIP underlayment, CMF simply peeled the easy-to-remove backing off of the 67-foot by three-foot membranes and adhered them to the metal sheeting, maintaining the specified overlaps with each subsequent sheet to ensure a watertight seal.

For areas of the wall that featured penetrations such as light boxes and pipes, CMF ran the WIP underlayment onto the penetration, caulked over it, covered it with a metal flashing and installed another layer of WIP. A time-consuming task with underlayments that are not self adhering, CMF had no problems quickly flashing the penetrations with WIP 300HT.

After the underlayment was completely installed, CMF began attaching the titanium panels. The panels were installed using a blind clip system that utilized four interlocking clips per panel, allowing them to expand and contract.

Each clip was installed directly to the wall, through the WIP underlayment, with two screws. WIP 300HT membranes feature a self-sealing quality that allowed them to seal around the screws that punctured them when the clips were installed.

“The self-sealing feature on all of Carlisle’s underlayments is extremely beneficial,” said Tim Peterson, project manager at CMF. “Water infiltration would have a very detrimental impact on a system like this one and the self-sealing feature on Carlisle’s underlayments significantly reduces the likelihood of water entering the building.”

When it was time to install the titanium panels, CMF worked horizontally, completing one row before moving onto the next. Each subsequent panel concealed the clips of the previous panel, giving the titanium walls their flat, unobstructed surface appearance.

After the project was complete, it didn’t take long for the awards and accolades to pile up for the new library. The Millennium Library was voted the “best public library” by numerous publications, including Reader’s Digest and Los Angeles magazine. As the world’s first library where everything is centered on the experience of the patron, the Millennium Library has set the standard for library service in the 21st century and Carlisle was right there to help guide the way.

About Carlisle WIP Products

As a division of Carlisle Construction Materials, Carlisle WIP Products manufactures premium construction products for steep-slope and low-slope residential and commercial applications.

For more information about the products and services offered by Carlisle WIP Products, call 888.717.1440 or visit their web site at www.carlislewip.com.



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