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SAFELY ANCHORED IN THE COMMUNITY

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ROOMS WITH A VIEW



To harden the Charlotte-Mecklenburg University City Police Department, U.S. Bullet Proofing's USAW400 series ballistic-rated aluminum curtain wall and storefront system were installed to protect against multiple firearm threats.

JIM GRAZIANO OF SNAPWEX DIGITAL IMAGING

Safely Anchored in the Community

U.S. Bullet Proofing ensures a police station's accessibility, sustainability and security.

BY WADE ARNOLD, CSI, CDT

The city of Charlotte, North Carolina, recently built five new permanent police stations for the Charlotte-Mecklenburg Police Department (CMPD). A sixth station is also planned. These new facilities accommodate the current and future needs of CMPD by replacing four temporary leased facilities currently in use.

CMPD selected prominent locations for the stations to serve as anchors to the community, encouraging revitalization. The sites are easily accessible to the public and are located on pedestrian-friendly main thoroughfares served by public transportation. Included in the strategic plan for the police stations was the creation of a

brand for the CMPD that is easily recognizable to the public while retaining an appearance that has adapted to the surroundings.

ADW Architects was selected to plan, design and administrate construction of CMPD's University City Division Station. By collaborating with ADW

Architects on the design and construction of the new station, CMPD ensured the new facility met modern operational standards while enhancing community interaction.

The two-story, 16,000 square-foot facility includes a secure parking lot with 132 spaces for police vehicles and staff. The design includes numerous pockets of urban pedestrian space along the two streets bordering the station, fostering connection with the surrounding community and encouraging pedestrian engagement. Prioritizing public accessibility was crucial for the CMPD. However, the lack of a setback from the busy intersection raised security concerns.

COMMUNITY ACCESSIBILITY

The University City's station is in a high-profile location in Charlotte. "Making the building accessible to the public as a community anchor, while maintaining a level of security so that the CMPD could work and serve safely, was very important," Ashley Love, AIA, LEED AP BD+C,

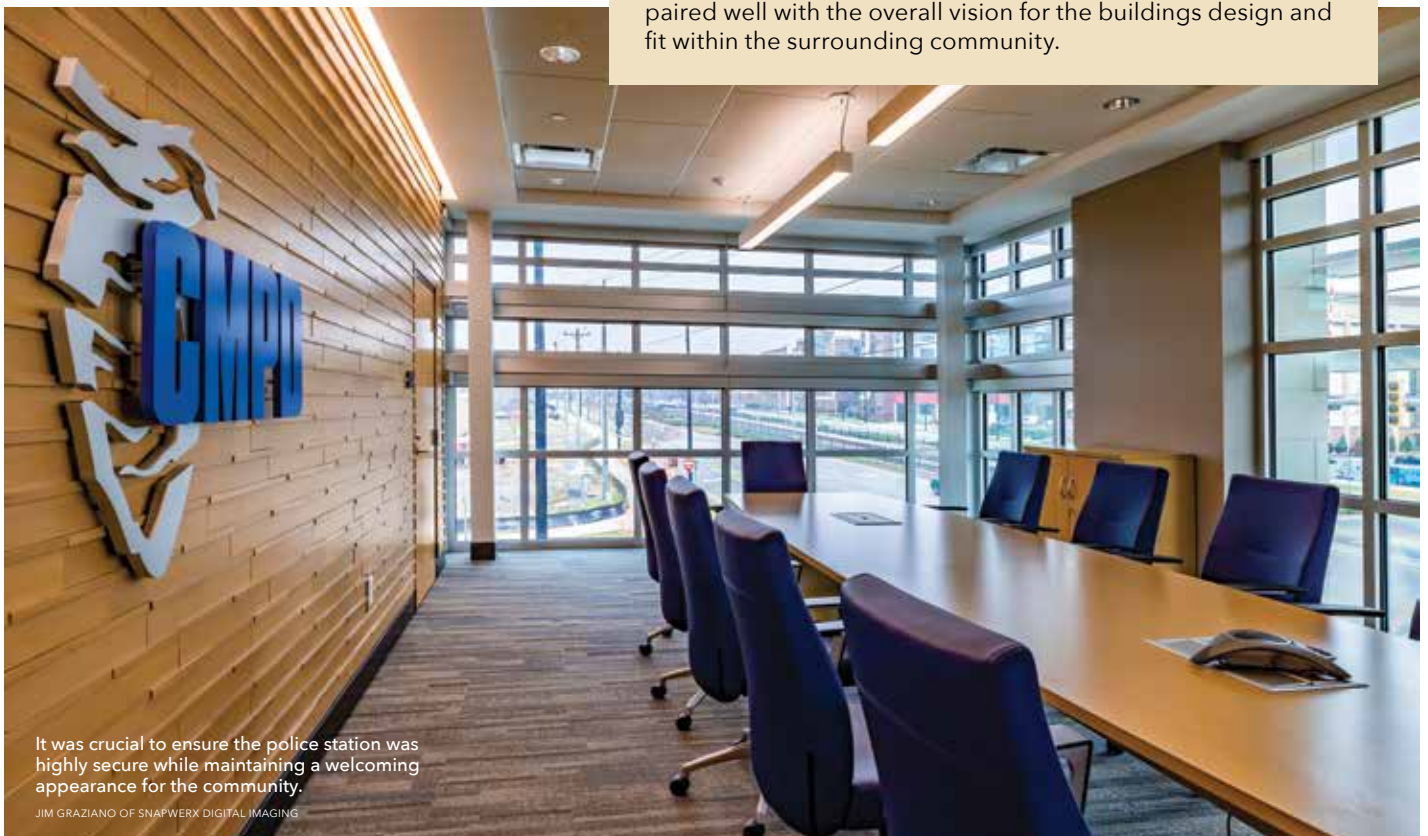
BUILDING A POSITIVE CUSTOMER EXPERIENCE

Police stations are generally concrete structures with punched windows that clearly mark them as police stations. However, Johnny Jennings, Charlotte Police Chief, has a different vision. This modern facility not only enhances the operational capabilities of the CMPD but also strengthens its relationship with the University City community by promoting safety, accessibility and community interaction.

The station boasts an impressive CMPD hornet's nest logo at its entrance, which captures the community's attention. The hornet's nest, a long-standing emblem of Charlotte, is featured with backlit lighting on the side of the building.

Local historians haven't definitively confirmed or refuted the popular tale behind this symbol. According to legend, after the Battle of Charlotte during the Revolutionary War, British General Cornwallis reportedly described the city as a "hornet's nest of rebellion" as he retreated.

Indeed, Charlotte was a major center of resistance against British rule. Today, the smaller nest within the larger nest symbolizes growth, while the movement in design suggests motion and change toward a new direction. The symbol has paired well with the overall vision for the buildings design and fit within the surrounding community.



It was crucial to ensure the police station was highly secure while maintaining a welcoming appearance for the community.

JIM GRAZIANO OF SNAP WERY DIGITAL IMAGING



The lightweight aluminum construction of the USAW400 series means the façade does not require additional structural support while providing high levels of protection.

U.S. BULLET PROOFING



A ballistic-rated USBP transaction window was installed in the reception area to control access into the station and provide for the safe and secure exchange of goods with the public.

U.S. BULLET PROOFING

NCARB, Principal at ADW Architects, said. "Given its role within the public sphere, it was crucial to ensure the structure was highly secure while maintaining a welcoming appearance for the community it serves, and without adopting a cold, fortified look."

LESSONS LEARNED

Love says much of the glass installed in University City's station was in response to incidents that happened at other CMPD stations. "That influenced what they decided to incorporate," Love said. "With their new stations, the CMPD is making sure that they're taking those precautions with their security levels."

To harden the facility, U.S. Bullet Proofing's USAW400 series ballistic-rated aluminum curtain wall and storefront system were installed to protect against multiple firearm threats. The lightweight aluminum construction of the USAW400 series means the façade does not require additional structural support while providing high levels of protection.

The USAW400 window series construction consists of heavy-duty aluminum extrusions and enhanced wall thickness. The extrusions allow for the insertion of armor consistent with the identified threat level for the area. Complimentary door construction also permitted an aesthetically uniform appearance.

"We like the USBP product because it looks like a typical storefront, so you can't really tell that the building is fortified," Love said. "That is important."

The project includes the USBP USA1000 series ballistic aluminum door. These bullet resistant entry doors are specifically designed to handle larger glass make-ups required for high security applications.

A ballistic rated USBP transaction window was also installed in the reception area to control access of people into the station and provide for the safe and secure exchange of goods with the public.

"People come in to file a police report or to be interviewed at the station," Love said. "We wanted the reception space to be warm and inviting, but secure."

SUSTAINABLE PUBLIC SAFETY

The city of Charlotte has a strategic energy action plan with sustainability policies that require all its facilities to be LEED certified at a minimum.

"We had to laminate the exterior ballistic glazing with Vitro Solarban 70 low-e glass to achieve the thermal aspects that LEED requires, which we were able to accomplish with the USBP system," Love said. "We were able to achieve LEED Gold certification with this building, which was the icing on the cake."



The goal of the police station's reception space was to be warm and inviting, while maintaining a sense of security.

JIM GRAZIANO OF SNAPWEX DIGITAL IMAGING

EASY INSTALLATION

A1 Glass & Aluminum installed the ballistic rated curtain wall, storefront, doors and transaction window. "We're a minority-owned company and get a lot of bid requests for police departments and government projects, especially here in the Carolinas and Charlotte," Walter Baucom, Co-owner of A1, said.

"CMPD University City was a very tight site adjacent to light rail. Luckily, the job site was only a mile away from our facility so we could store the material until we needed it."

"It played out really well," Ricky Urbach, A1's Chief Operating Officer, said. "USBP focused on the logistics and flowing the job. The frames arrived as a unit, and we didn't have to assemble knock-down frames on the job site or deal with putting things together in an open environment. That was a tremendous help."

"With a typical curtain wall, vertical components are installed followed by horizontal components, but with the USBP system, it is the entire frame, so it's a little heavier going in, but that is expected. Overall, it was easier because it was a complete unit."

Water tightness is confirmed by performing a hose test. This involves using a particular nozzle to spray water at a predetermined pressure and flow rate along the joint's length for a specified duration and from a certain

PROJECT PROFILE

LOCATION: Charlotte-Mecklenburg Police Department - University City Division (LEED Gold)

USBP PRODUCTS: Ballistic Rated USAD1000 Door and USAW400 Curtain Wall and Storefront Window System

ARCHITECT: ADW Architects

GLAZIER: A1 Glass and Aluminum

SIZE: 16,000 square feet, two stories with secure parking

PROJECT TYPE: Public Safety - Police

GENERAL CONTRACTOR: Miles McClellan

distance away from the façade. Air leakage testing measures air leakage rates through a building envelope under controlled pressurization and depressurization.

"In our meetings, there was a lot of discussion about the water tightness and air leakage smoke tests," David Thomas, Director of the A1 Lite Commercial Division, said. "It was a stressful stage, and the air leakage test can be a difficult process. We passed the hose test and were told University City was the first building that passed the smoke test on the first try. That was good news." +

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