

Safe and Secure: Multifunctional Glazing Helps Elementary School Meet Design Goals



PROJECT SPOTLIGHT

By joining forces with LTI Smart Glass, Inc., TGP was able to combine two products with a proven track record and create a reliable fire and security solution for education facility design teams.

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| Project: | Candy Lane Elementary School |
| Location: | Oregon City, OR |
| Architect: | BRIC Architecture, Inc. |
| Glazing Contractor: | Black Line Glazing |
| Product: | Fireframes® Heat Barrier Series doors and frames with Pilkington Pyrostop® fire-rated glass laminated to School Guard Glass® |

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In 2020, Oregon City School District 62 began renovating Candy Lane Elementary's 1960s-era facilities. The project focused on improving safety and security from the fence line to the heart of the building.

To support project goals, the main office was relocated and its layout reconfigured so staff faced forward towards the interior hallway, making it easier to welcome students and carefully monitor who is entering and exiting the building. However, the new location and configuration presented a few challenges.

Straddling a central hallway and entry vestibule, the interior doors and windows of the main office needed to have a fire rating to satisfy code requirements. While not yet code driven, they also needed to be rated for forced entry resistance to provide the Candy Lane community with the utmost security in the case of an intruder. Lastly, because these doors and windows give students, families and visitors one of their first impressions of the school, they had to convey a warm and welcoming atmosphere.

FIRE-RATED FRAMES AND GLAZING ALSO RESIST FORCED ENTRY

To solve these challenges with a single, multifunctional product, Fireframes Heat Barrier Series doors and frames with Pilkington Pyrostop fire-rated glass from Technical Glass Products (TGP) laminated to School Guard Glass from LTI Smart Glass, Inc. were installed. School Guard Glass meets H.P. White 5-aa1 and ASTM F1233 Class 1.4 standards, which means in testing, after being shot, it could defend against violent attacks for over 12 minutes. It is also compatible with fire-rated glazing.

By joining forces with LTI Smart Glass, Inc., TGP was able to combine two products with a proven track record and create a reliable fire and

security solution for education facility design teams. This system offers a Level III bullet resistance rating and withstands forced entry attacks. This level of security helps school districts protect students and faculty, which is becoming more necessary as incidences of gun violence in schools continue to rise year after year.

Additionally, the system's 120-minute fire-rating can provide staff and students with an extended window to escape a fire and first responders the ability to enter and exit the building to stop any flames deep within the school. The TGP and LTI Smart Glass systems used at Candy Lane Elementary helped the retrofit achieve its security goals. The fire-rated, forced entry and bullet resistant frames and glass work together to delay violent intruders, taking away the element of surprise and giving first responders time to arrive on scene.

LARGE LITES SUPPORT A WELCOMING ENTRYWAY

Improving the safety and security of the building was not the only concern driving the new Candy Lane Elementary design. These improvements also needed to create a warm and welcoming environment for students, faculty and visitors.

Reconfigured so receptionists can monitor foot traffic and welcome students, the main office and entry vestibule play a vital role in creating a building that is not just safe but also can support the emotional wellbeing of its occupants. Due to their narrow profiles, the Fireframes Heat Barrier Series doors and frames help support large lites of multifunctional fire-rated glazing to increase visual connectivity and the amount of daylight let into the school. They also offer a close visual match to adjacent non-rated systems to provide a cohesive design aesthetic.

A RETROFIT THAT LOOKS AHEAD

The renovated school opened its doors in early 2021. As students and staff walked in, they may not have even noticed the fire- and life-safety features of the main office and entry vestibule. While increasing safety and security was a goal the school administrators took on voluntarily, it speaks to a larger trend in school design—one that may become a requirement soon. Candy Lane Elementary chose to provide its students and faculty with what might be standard protections in the future, and they are now safer because of these design choices.

The fire-rated, forced entry and bullet resistant frames and glass work together to delay violent intruders, taking away the element of surprise and giving first responders time to arrive on scene.



Learn more about:

[Fireframes Heat Barrier Series doors frames](#)

[Pilkington Pyrostop fire-rated glass laminated to School Guard Glass](#)



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