



Case Study

Concurrent New Residence Hall Construction Jobs Put Fire Sprinkler Contractor on Tight Turnaround

Type of Construction:
School/Dormitory

Installation Type:
New

Location:
Nacogdoches, Texas

Scope of Project:
Heads: 2,700
Total Occupancy: 914
Stories: 4

Fire Sprinkler Contractor:
Oasis Fire Protection

Easy-to-install BlazeMaster® CPVC Sprinkler System Helps Oasis Fire Protection Meet Texas University's Limited Construction Timeline and Budget

Stephen F. Austin State University needed additional student housing, and it needed it fast. The residence halls at the rapidly growing higher-education institution in Nacogdoches, Texas, had become crowded and overflowing with students.

University officials embarked upon developing two new on-campus residence complexes on a tight timeframe and an even tighter budget. The Texas Board of Regents initially approved funding for the construction of the four-story, 320-bed Lumberjack Lodge, setting the expansion plan in motion.

Design-build contractor Camden Builders Inc. won the bid on the project and started planning, design and construction in April 2005 with a projected occupancy date of January 2006.

During the planning and design phase, the general contractor and university officials discussed fire sprinkler system options. The university's specifications outlined a fire sprinkler system utilizing CPVC pipe, such as a BlazeMaster CPVC system, which the university has installed in past projects.

"We have used BlazeMaster fire sprinkler systems in the past and appreciate its constructability, value, flexibility and long life," says Bruce Lanham, manager of construction services at Stephen F. Austin University.

The university first used BlazeMaster CPVC fire sprinkler systems during a retrofit of two residence halls several years earlier. Both residence halls were round buildings, which would have presented installation challenges had a steel system been specified.

"BlazeMaster CPVC pipe was the ideal product for this job because it was so easy to join in round runs," Lanham explains. "I can't even picture installing a steel system in those buildings. By the time you would have joined and hung a portion of a steel system, you could have an entire BlazeMaster CPVC system installed."

That's one reason why Lanham specifically requests BlazeMaster CPVC fire sprinkler systems be installed in university facilities, whenever fire codes allow for it. The other is the product's long-standing reputation for excellent, long-term performance.



"We want the highest quality system for the job," he says. "BlazeMaster CPVC fire sprinkler systems fit the bill."

With this in mind, Camden Builders called upon its trusted fire sprinkler contractor partner, Houston-based Oasis Fire Protection

to design and install the new residence hall's fire protection system. Tommy Lightfoot, president of Oasis, prefers to specify BlazeMaster CPVC fire sprinkler systems where possible, especially on jobs under tight time and budget constraints.

"It makes it affordable to sprinkler low-rise, multi-family, residential projects, because you don't have to install an expensive steel system," Lightfoot says. "CPVC is much faster to install. Steel is expensive and time consuming to use. It can cost two to three times more in price and time combined."

Oasis set to work designing and installing a fire sprinkler system in the new Lumberjack Lodge project. The approximately 126,000-square foot residence hall houses 320 students in four-bedroom /two-bath and two-bedroom/one-bath suites



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that also feature a kitchen, study areas, laundry facilities and common space. The project included a four-story parking garage with more than 500 spaces. Total project cost was approximately \$17 million.

Midway through the Lumberjack Lodge project, the state Board of Regents approved funding for a second residence hall – Lumberjack Village. Camden was awarded this project, as well, and again turned to the Oasis Fire Protection team to handle sprinkler system design and construction on the second residence hall. Thus began the true challenge as both projects would be under construction concurrently and under tight time constraints and budgets.



“We had to give the university a budget estimate on Lumberjack Village before we even drew up a single construction document,” says Steve Brickhouse, senior project manager at Camden.

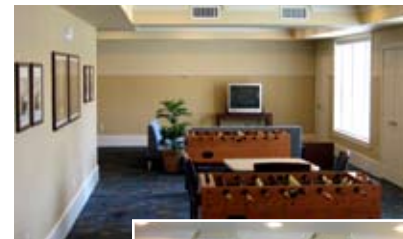
The second project consisted of three modern, four-story buildings that provide a community building and residential housing for 594 students. Lumberjack Village spans 319,000 square feet and features bedroom suites, study areas, laundry facilities and common space. The project, which included a four-level parking garage with approximately 700 parking spaces, was valued at nearly \$35 million. Construction plans were based on a 10-month timeline. Design began in October 2005, and the residence hall opened in August 2006.

When construction began on Lumberjack Village, the initial Lumberjack Lodge project was still only part-way completed. Lightfoot realized that in order to get the work done on both projects on schedule, he would need to double up Oasis Fire Protection crews and tackle Lumberjack Village as a completely separate job.

Because the Lumberjack Village project was more than twice the size of Lumberjack Lodge, it required additional sprinkler heads and piping. The number of sprinkler heads for both projects totaled about 4,000. That factor, combined with budget restrictions, a stringent construction timeline and the university’s desire for a reliable, durable fire protection system in both of the residence hall projects, made BlazeMaster CPVC pipe a logical choice for the second residence hall.

Key to the tremendous time savings was the fact that BlazeMaster CPVC fire sprinkler systems can be engineered quickly, requiring only simple hand tools, so fabrication, changes and alterations can all be done on site. A solvent-cement joining system eliminates the need for torches or heavy equipment. Ease of installation and minimal cleanup allowed both jobs to move smoothly and meet construction deadlines, according to Lightfoot.

“There was no way to complete two large concurrent dormitory projects using steel pipe with the timeline we had to follow,” he says. “It just couldn’t be done. There was no way the halls would be built on time or within budget.”



Lanham agrees: “We work on tight construction schedules. Anything you can do to make up time along the way helps. BlazeMaster CPVC pipe and fittings install quickly and reliably. And, they’re durable, do the job and stand the test of time. Our retrofit systems continue to deliver great performance. We’re certain the new systems will also perform with excellent results now and into the future.”

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