

## **The Cost of Integrity**

by Dean K. Wilson, P.E.

**I work as a fire inspector for a medium-size city in the southwestern United States. I recently attended a conference where one of the speakers talked about the responsibility Authorities Having Jurisdiction (AHJs) have to their constituents to deal consistently and fairly in every situation. The speaker insisted that this was a matter of integrity. Have you ever encountered unfairness from either AHJs or fire protection contractors?**

Sadly, yes I have. Please let me explain.

The caller at the other end of the phone call serves as pastor at a small church in the south. He explained that a friend of his at a recent pastor's conference had given him my name as someone who did consulting work in fire protection. After I acknowledged that I did such work, he told me this story.

It seems that about fourteen years ago, the church he serves decided to build a new educational building on their church property. The building would have a large central 1=2 story atrium that would serve as a fellowship space with room for banquet tables and chairs. The perimeter areas around the atrium on both floors would have classrooms for the church's Christian Education program.

Because the architect had designed a very simple rectangular building, the church decided to build this educational building detached from the existing church building with a 50-foot covered walkway between.

With only the very best intentions, the church soon found that they had stepped into an almost unreal fire protection nightmare.

Their nightmare began when they submitted the plans to the local fire marshal for the town in which the church resided. The fire marshal took over two months to review the plans and specifications. Then, the marshal returned the plans with demands that the church install an automatic sprinkler system and a complete Emergency Voice-Alarm Communications (voice evacuation) fire alarm system. The marshal specified that the church must also install smoke detectors throughout *all* areas of the building. And, the church would have to connect the alarm system to a listed central station.

Believing that they had no choice in the matter, the church began the process of adding these protection features to the design of their building.

The first hurdle they encountered came from the local water department. The church received a letter from the attorney representing the water department informing them that they would have to apply for special permission to obtain a water connection for fire protection service. They needed to include a \$1,500 tapping fee with their application. Furthermore, this connection would need a backflow preventer and a fire protection service water meter. The water department also enforced a regulation that set the minimum size of the connection at eight inches.

When the church leaders received the cost estimate for the water connection, they gulped in surprise. The backflow preventer would cost about \$2,500 and the 8-inch fire protection service water meter would cost nearly \$6,000. Their chagrin increased when the sprinkler contractor they

had hired reported that the automatic fire sprinkler system for their 10,000 sq ft building would cost them over \$30,000.

Since most readers of this article have little or no knowledge of automatic sprinkler systems, let me hasten to explain that an 8-inch water connection to serve the sprinkler system in a 10,000 sq. ft. building represents massive overkill. At the most conservative estimate, using 120 sq. ft. per sprinkler head, the 10,000 sq. ft. would need 84 sprinkler heads. Even with moderately low water pressure, a 4-inch connection to the water system would easily supply the needed volume and pressure. So, even if the water department wanted to standardize connections for small business occupancies, a 6-inch connection would prove a more reasonable requirement. In addition, for new construction at this time—now almost 20 years ago—an installation cost of \$1.50/sq. ft. would represent a reasonable cost. Compare that cost to the \$3.00/sq. ft. proposed cost from this particular sprinkler contractor.

One of the church leaders worked as an engineer at a nearby aircraft engine manufacturer. He noticed that the sprinkler contractor had specified a 3-inch sprinkler riser for the building. He wondered why the water department required an 8-inch connection to feed a 3-inch sprinkler riser. So, he telephoned the water department. The clerk who answered his call said that the caller would have to submit such a question through the church's attorney to the attorney for the water department. Since the church had not retained an attorney, the caller decided to just drop the matter.

The next blow came from the fire alarm contractor. The church had hired a local central station operating company to install the fire alarm system. Just part way through the installation, a very large national fire alarm company absorbed the local company. The price for the fire alarm system suddenly jumped from \$21,000 to \$39,000. With a \$64 per month monitoring fee, the church leaders reeled again from the sky rocketing costs of fire protection for their small addition.

Upon completion of the building, the fire marshal informed the church that they would have to contract for quarterly inspection of the fire alarm system and for quarterly inspection of the sprinkler system. The fire alarm contractor quoted a price of \$5,000 per year for quarterly fire alarm system inspections. The sprinkler contractor quoted a price of \$1,200 per year for quarterly sprinkler system inspections.

To add a further insult, the water department charges the church \$150 per month just for the privilege of having the fire protection connection. Then, the water company adds any water usage charges on top of that fee. Now remember, this water connection only serves the automatic fire sprinkler system. Apart from quarterly tests, which at best flow 15 gpm for two minutes, no other water usage occurs from this connection.

Over the course of the last fourteen years, the church had spent nearly \$40,000 additional dollars on repairs to the fire alarm system. It seems that every time a lightning storm of any consequence occurs in the area, some portion of the fire alarm system sustains damage.

The testing contract with the fire alarm system installer did not include maintenance or parts. So each time, the church would have to pay for new circuit boards and the labor to install them. In fact, the pastor had collected two large cardboard boxes full of damaged circuit boards.

Now I wish I could tell you that my intervention into this situation brought immediate and prompt resolution. Sadly, it did not.

Oh, I contacted the main office of the manufacturer of the fire alarm equipment hoping that they would offer some assistance. They recommended an authorized dealer to review the history of the system. That dealer ultimately ended up charging the church another enormous sum of money—nearly \$4,000—for an inspection and audit of the fire alarm system. And the church still has problems every time a storm occurs.

In researching this situation, I discovered that the *Standard Building Code* enforced by this jurisdiction at the time of construction required neither a fire alarm system nor a sprinkler system for this type of occupancy. And, I discovered that some other water departments around the country also make outrageous charges for fire protection connections, while most do not. It seems that an increase in fire safety and reduction of the danger to the responding public fire department does not provide those communities with enough benefit. Rather, the jurisdictions have determined to make as much money as possible, while seemingly providing as little real service as possible to their constituents.

The fire marshal, fire alarm contractor, sprinkler contractor, and fire alarm manufacturer should feel enormous shame for the way each one of them took advantage of these sincere folks. How sad that the people of this church had to waste their resources in paying for fire protection they did not really need. How very sad, indeed.

The lesson to Authorities Having Jurisdiction and contractors alike: your integrity has a far greater value than anything else. Don't let greed and an arrogant desire for power overtake your natural sense of right and wrong.

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