A *Shotcrete* feature:

SAFETY SHOOTER

Always Use Protection

by ASA Safety Committee Chair — Chris Zynda of Concrete Structures

About fifteen years ago, we had a project that involved doing some extensive shotcrete (dry process) window infills. The job required shooting from the inside of the building onto plywood forms and involved about 5 stories of window and door infills. Partway through the first morning of shooting, I was privileged to receive a visit from the special inspector assigned to the job. The question he posed seemed out-of-focus at first, but his reason for asking it became clear very quickly. His question was: "Do you know the cost of a new BMW sedan?"

I told him that I didn't know. He suggested that I should quickly find out, since there were about 25 BMWs parked next to the building we were shooting, and all of them were covered with shotcrete overspray!

After the sharp pain in my chest subsided a little, I ventured outside to see the damage. He was right! There, to my dismay, was a long row of cars parked next to the building we were shooting—all waiting for service at the BMW dealership. They had been dropped off by their owners the evening before.

Remember, we were shooting on the inside of the building onto plywood forms five stories up. Why worry about protecting the outside? A walk around the perimeter of the building revealed that small spaces in the forms were letting out the overspray! I quickly stopped the productive work of shooting and began the remedial work of washing cars and putting up protection. It took the rest of the day to clean all the cars and to protect all five stories. Fortunately, no claims were filed and no permanent damage was done.

Protection is a critical safety issue in almost all shotcrete jobs. The areas surrounding the shotcrete installation must be protected from damage, and all workers must be protected from flying debris, rebound, and dust. Dust travels up to 150 to 200 ft (46 to 70 m), and in some instances, the dust needs to be tented and fans used to direct its flow.

The most commonly used protection is plastic sheeting. It is easy to work with and can be nailed or fastened to almost any surface. Canvas tarps can be used in the same manner, but need to be cleaned frequently. Masonite and plywood also work well in some instances. A trick we use is to over-form everything we can. For example, if it's a 6-ft-high (1.8 m) wall, we will form it at 8 ft (2.4 m), thus creating 2 ft (0.6 m) of protection. The same would apply to the end of the wall.

Remember, USE PROTECTION! It will save you time and money. You might even save enough to buy one of those BMWs!