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For nearly 20 years Architectural Fiberglass Inc. (AFI) has custom designed and manufactured decorative ornamentation for the restoration, reproduction and new construction industries. Fiber Reinforced Plastic (FRP) parts are chosen over other material because its lightweight, cost effective, corrosion-resistant and virtually maintenance-free. FRP shapes can be curved, corrugated, ribbed or contoured in a variety of ways, with varying thickness. Pound for pound, FRP is stronger than concrete, steel or aluminum, and it has weathered extremes for more than 50 years without sign of deterioration.

Fire-retardant FRP can be used to replicate wood, stone, concrete, terra cotta, marble, granite, copper, steel and other popular building materials. It is versatile enough to match existing structures in both color and texture. As President and Founder, Mike Dobronos explains, "Architects send us stuff and we match it. We build what people want us to mimic. You can see it and you don't know that it is fiberglass." Mike goes on to say, "FRP pieces are less expensive to use not so much because they are in themselves more economical, but because they are so much lighter and thus easier to place and fasten, without the need for heavy scaffolding, cranes or specialty workers. Lighter weight also means that heavy structural supports are not necessary."

Many occurrences of fire-retardant fiberglass are being installed throughout Cleveland, Ohio. It can be observed in restoration projects such as the W.T. Grant Building downtown, the Keith Building and West Technical High School. When St. Peters Church on 17th and Superior went through restoration, the building was discovered to be too frail to hold the weight of stone replacement pieces for its 65-foot by 28-foot bell tower. AFI was called upon by project structural engineers to recreate the bell tower from flame-retardant FRP. The dramatic reduction in material weight enabled the project's successful completion. AFI relies on Ashland HETRON® FR620T-20M fire retardant polyester resin for all its building projects. When properly fabricated, HETRON FR620T-20M resin produces Class I ASTM E-84 composites. "We use it in everything," says Mike Dobronos.

More recently, AFI landed a contract to participate in the \$40 million makeover of the Grand Dame of Cleveland's historic downtown structures — the Terminal Tower. Once the tallest skyscraper outside of New York City, the Terminal Tower rises 52 stories and 708 feet into the Cleveland skyline. AFI is working to replace the damaged terra cotta and limestone that sheathe the 81-year-old structure. They have provided 32 fire-retardant FRP columns and hundreds of feet of specialized cornices for several floors of the structure. In as little as 16 weeks, AFI can make a mold from the existing terra cotta and deliver pieces to the site that cannot be distinguished from the original stone. It would take more than 36 months to procure the same architectural pieces in terra cotta. The 32 fiberglass columns that AFI produced for this project cost about the same as four new stone columns. And the fire-retardant fiberglass columns can be transported up in the elevator as opposed to renting a heavy crane for \$200 thousand or more.



Architectural Fiberglass Inc. owes a debt of thanks to the American Composites Manufacturing Association (ACMA) who has been working tirelessly to introduce Fire-Retardant FRP into the International Building Code (IBC) to promote the acceptance of composites in building construction. During the International Code Council (ICC) public hearings last February, the Fire Safety Committee voted to accept ACMA's proposal as the initial step to including Fire-Retardant FRP into the IBC and outlining the proper use of fire-retardant fiberglass in non-structural applications. ACMA past President Bill Kreysler stated, "This is a major step forward in getting composites treated the same way as traditional materials. This has the potential for growing the architectural market for ACMA members." Fire-Retardant FRP made with Ashland HETRON FR620T-20M resin is opening doors for cost-efficient urban renewal of historic city centers all over America.

