



**BLACK ROCK  
FIREPROOF COLUMN**  
A DIVISION OF UNITED STEEL

# THE PROOF IS IN THE COLUMN

**Black Rock Fireproof Column manufactures durable, aesthetically designed prefabricated fireproof columns. Black Rock Fireproof Columns are UL and AISC certified and offer several types of cost savings to building owners.**

Black Rock's round, square, and rectangular shapes (along with customized shapes and sizes) are designed for exposed exterior and interior loadbearing columns. They are utilized in hospitals, schools, dormitories, cafeterias, shopping centers, and countless other structures. The columns are the premier choice for parking garages and high traffic entryways because of their protective steel shells.

Our structural steel WF, pipe, and HSS squares and rectangular shapes meet ASTM and AISC standards, and all steel and concrete meets or exceeds UL regulations.



**Black Rock Fireproof Columns save owners cost and installation time through:**

- Factory fireproofing (in-shop labor eliminates need for field labor to apply other forms of fireproofing)
- Exacting quality control performed by our in-shop factory professionals
- Decreased long-term maintenance costs and the added durability of exterior steel shells
- Predictable scheduling as Black Rock Fireproof Columns are delivered to site completely fabricated, fireproofed, and ready for erection
- No additional trades needed for on-site fireproofing
- Added security and confidence of working with an AISC-certified structural fireproof column fabricator

Black Rock assures on-time deliveries by maintaining our own trucking fleet of 15 tractors and 40 trailers. We also tap into our network of over-the-road trucking firms whenever needed to meet owner demands.

**See Reverse for Cost Analysis →**

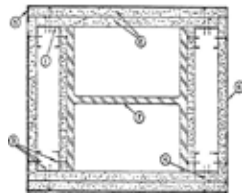


# Prefabricated Building Column Cost Comparisons

## Costs based on a 10 x 10 Column @ 12' Tall (Open shop rates)

	<b>Sheetrock Encased 2 Layers, 2 HR, UL X509</b>	<b>Intumescent 2 HR Field Applied Coating</b>	<b>Spray on Fireproofing as per UL X716, 2 HR, 9/16" Thickness</b>	<b>BRFC "BRIDGEPORT" 2 HR TYPE SS X106</b>
<b>Labor</b>	\$550 4 Hours - frame and sheetrock 4 Hours - bead and tape	\$300 4 Hours - Install back up framing and install column cover	\$300 2 - two-hour days per column	\$300
<b>Material</b>	\$225	\$1,650	\$50	\$650
<b>Equipment</b>	\$125 Lift Rental	\$125 Lift Rental	\$50	-----
<b>Column cover</b>	-----	-----	\$1,500	-----
<b>Onsite lost time</b>	1 Day	1 Day	2 Days	<b>No Days Lost</b>
<b>Total Initial Cost</b>	\$900	\$2,075	\$1,900	<b>\$950</b>
<b>Maintenance Costs</b>	\$450 Patching holes and re-beeding, taping and painting every 5 years	\$925 Relacing FRP Column Cover every 10 Years	\$950 Re-apply spray on fireproofing once every 10 years	-----
<b>Total 30-Year Cost</b>	\$3,600	\$7,625	\$7,600	<b>\$950</b>

### UL Design No. X509 Rating 3 Hr



Steel Studs — 1-5/8 in. wide with leg dimensions of 1-5/16 and 1-7/16 in. with a 1/4 in. folded flange in legs, fabricated from 25 MSG galv steel. Steel stud cut 1/2 in. less in length than assembly height.

2. Gypsum Board — Two layers of 1/2 in. thick wallboard

3. Screws — 1 in. long self-drilling, self-tapping screws, spaced vertically 24 in. on centers, except on the outer layer of wallboard on the flanges, which are spaced on 12 in. centers.

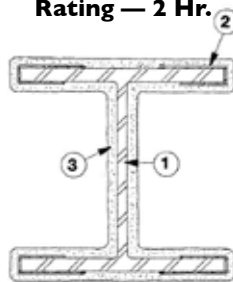
4. Screws — 1-5/8 in. long self-drilling, self-tapping screws spaced vertically 12 in. OC.

5. Corner Beads — No. 28 MSG galv steel, 1-1/8 in. legs. Attached to wallboard with 4d by 1-3/8 in. nails spaced 12 in. OC at each leg.

6. Joint Compound — 1/16 in. thick. As an option, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard.

7. Steel Column — Min size of column, W10 x 49, with outside dimensions of 10 x 10 in. with a flange thickness of 9/16 in., a web thickness of 5/16 in., and a cross.

### Design No. X601 November 29, 1999 Rating — 2 Hr.

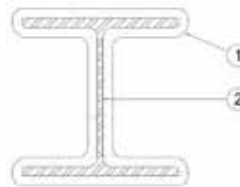


1. Steel Column — Min size W10x49. The column surfaces shall be sand-blasted and be primed with epoxy based or zinc silicate primers to an approximate dry film thickness of 0.003 in.

2. Flange Edge Reinforcement — 1/2 by 1/2, No. 19 SVWG galv steel welded wire mesh. Butt ended mesh bent to fit tightly over flange edges along the column length. At a coating thickness greater than 0.50 in., galv or stainless steel flange edge clips of min diameter of 0.08 in., spaced at a max of 24 in. on center and at the ends of mesh shall be used. The mesh ends shall be fastened together across the flange faces with galv wire of 22 gauge or larger.

3. Mastic and Intumescent Coating. Two component spray material applied in one or more coats as described in the application instructions.

### Design No. X701 May 23, 2016 Ratings — 1, 2, 3 and 4 Hr.

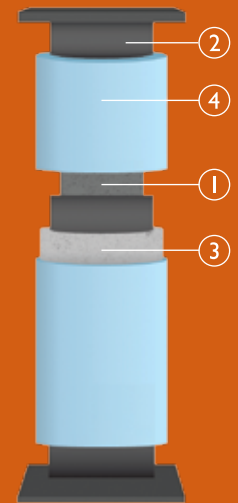


1. Spray-Applied Fire Resistive Materials. For method of density determination, refer to Design Information Section, preceding these designs. Rating Hr Min Thkns In.

The thicknesses contained in the table below are applicable when the Spray-Applied Fire Resistive Materials applied to columns flange tips are reduced to one-half that shown in the table below:

4 HR = 2-1/2"  
3 HR = 1-11/16"  
2 HR = 1-1/8"  
1 HR = 11/16"

### BlackRock Fireproof Column Ratings — 2, 3 and 4 Hr.



(1) Concrete (2) Structural Steel (3) Vermiculite, a special proprietary insulating material (4) Outer steel shell that is permanently protecting the fireproofing material. Blackrock columns are rated and labeled by Underwriters Laboratories, Inc. for fire retardant classifications of 2, 3 and 4 hours. Columns are completely shop fabricated and shipped to the job site ready to erect.



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An Affirmative Action/Equal Opportunity Employer

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