

**27 CFR 181.187: CONSTRUCTION OF TYPE 1 STORAGE FACILITIES
(Also 181.188, 181.189)**

Alternate construction standards for storage facilities for explosive materials are prescribed.

ATF Rul. 76-18

[Status of ruling: Active]

The Bureau of Alcohol, Tobacco and Firearms has reviewed the construction standards for storage facilities contained in Subpart J of 27 CFR Part 181 to determine if such construction criteria for bullet resistance meet current safety standards recognized by the explosives industry.

Under the provisions of 18 U.S.C. 842(j), it shall be unlawful for any person to store any explosive material in a manner not in conformity with regulations promulgated by the Secretary. In promulgating such regulations, the Secretary shall take into consideration the class, type, and quantity of explosive materials to be stored, as well as the standards of safety and security recognized in the explosives industry.

The regulations in 27 CFR 181.187, 181.188, and 181.189 prescribe types of storage facilities for explosive materials and provide, among other things, that such storage facilities shall be bullet resistant. 27 CFR 181.181(b) provides that alternate storage facilities may be authorized for the storage of explosive materials when it is shown that such alternate facilities are or will be constructed in a manner substantially equivalent to the standards of construction contained in the applicable regulations.

The term bullet-resistant means resistant to penetration of a bullet of 150 grain M2 ball ammunition having a nominal muzzle velocity of 2700 feet per second fired from a .30 caliber rifle from a distance of 100 feet perpendicular to the wall or door.

It has been determined that a wide range of construction criteria meet the bullet-resistant requirements of regulations for construction of storage facilities for explosive materials.

In order to promote standards of safety and security in the storage of explosive materials while allowing the industry a wide latitude in the selection of construction material, it is *held* that storage facilities (magazines) that are constructed according to the following minimum specifications are bullet resistant and meet the requirements of the regulations as set forth in 27 CFR Part 181. (All steel and wood dimensions indicated are actual thicknesses. To meet the concrete block and brick dimensions indicated, the manufacturer's represented thicknesses may be used.)

- a) Exterior of 5/8-inch steel, lined with an interior of any type nonsparking material.
- b) Exterior of 1/2-inch steel, lined with an interior of not less than 3/8-inch plywood.

- c) Exterior of 3/8-inch steel, lined with an interior of two inches of hardwood.
- d) Exterior of 3/8-inch steel, lined with an interior of three inches of softwood or 2 1/4 inches of plywood.
- e) Exterior of 1/4-inch steel, lined with an interior of three inches of hardwood.
- f) Exterior of 1/4-inch steel, lined with an interior of five inches of softwood or 5 1/4 inches of plywood.
- g) Exterior of 1/4-inch steel, lined with an intermediate layer of two inches of hardwood and an interior lining of 1 1/2 inches of plywood.
- h) Exterior of 3/16-inch steel, lined with an interior of four inches of hardwood.
- i) Exterior of 3/16-inch steel, lined with an interior of seven inches of softwood or 6 3/4-inches of plywood.
- j) Exterior of 3/16-inch steel, lined with an intermediate layer of three inches of hardwood and an interior lining of 3/4-inch plywood.
- k) Exterior of 1/8-inch steel, lined with an interior of five inches of hardwood.
- l) Exterior of 1/8-inch steel, lined with an interior of nine inches of softwood.
- m) Exterior of 1/8-inch steel, lined with an intermediate layer of four inches of hardwood and an interior lining of 3/4-inch plywood.
- n) Exterior of any type of fire-resistant material which is structurally sound, lined with an intermediate layer of four inches solid concrete block or four inches solid brick or four inches of solid concrete, and an interior lining of 1/2-inch plywood placed securely against the masonry lining.
- o) Standard eight-inch concrete block with voids filled with well-tamped sand/cement mixture.
- p) Standard eight-inch solid brick.
- q) Exterior of any type of fire-resistant material which is structurally sound, lined with an intermediate six inch space filled with well-tamped dry sand or well-tamped sand/cement mixture.
- r) Exterior of 1/8-inch steel, lined with a first intermediate layer of 3/4-inch plywood, a second intermediate layer of 3 5/8 inches well-tamped dry sand or sand/cement mixture and an interior lining of 3/4-inch plywood.

- s) Exterior of any type of fire-resistant material, lined with a first intermediate layer of 3/4-inch plywood, a second intermediate layer of 3 5/8-inch well-tamped dry sand or sand/cement mixture, a third intermediate layer of 3/4-inch plywood, and a fourth intermediate layer of two inches of hardwood or 14-gauge steel and an interior lining of 3/4-inch plywood.
- t) Eight-inch thick solid concrete.

Signed: June 23, 1976

[**Editor's Note:** 27 CFR Part 181 is now 27 CFR Part 555.]