System No. C-AJ-3021
March 07, 1996
(Formerly System No. 204)
F Rating – 2 Hr
T Rating – 0 Hr

1. **Floor or Wall Assembly** – Min 4-1/2 in. thick lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 6-1/4 in.

   See Concrete Blocks* (CAZT) category in the Fire Resistance Directory for names of manufacturers.

1A. **Steel Sleeve** (Optional, Not Shown) – Nom 4 in. diam (or smaller) Schedule 10 (or heavier) steel pipe sleeve cast into floor or wall assembly. Sleeve to be flush with floor or wall surfaces.

2. **Cables** – Min 12 percent to max 40 percent fill area per max 4 in. diam steel sleeved through opening. Min 20 percent to max 40 percent fill area per max 6-1/4 in. diam unsleeved through opening. Cables to be rigidly supported on both sides of floor or wall assembly.

   The following types and sizes of cables may be used:
   
   A. Max 7/C No. 12 AWG multiple copper conductor power and control cables with polyvinyl chloride (PVC) insulation and jacket materials.
   B. Multiple fiber optical communication cables jacketed with PVC and having a max outside diam of 3/4 in.
   C. Max 200 pair No. 24 AWG copper conductor telephone cables with PVC insulation and jacket materials.
   D. Max 350 kcmil power cables with PVC insulation and jacket material.

3. **Packing Material** – Nom 1 in. thickness of ceramic (aluminum silica) fiber blanket or mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed min 1 in. from top surface of floor or sleeve or from both surfaces of wall.

4. **Fill, Void, or Cavity Materials** – **Putty** – Moldable putty material kneaded by hand and applied to fill annular space (and interstices between cables to max extent possible) to a min depth of 1 in., flush with top surface of floor or sleeve In wall assemblies, required putty depth to be installed symmetrically on both sides of wall.

   3M COMPANY – MP+ Stix

*Bearing the UL Classification Marking