

- 1A. Floor Assembly (Not Shown) As an alternate to Item 1, the fire rated unprotected concrete and steel floor assembly shall be constructed of
 - the materials and in the manner specified in the individual D900 Series Designs in the Fire Resistance Directory and as summarized below: A. Steel Floor and Form Units* — Composite or non-composite max 3 in. (76 mm) deep galv steel fluted units as specified in the individual Floor-Ceiling Design.
 - B. Concrete Min 8 in. (203 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete.
- 2. Through Penetrant One nonmetallic pipe to be centered within the firestop system. Pipe to be rigidly supported on both sides of floor assembly. The following type and size of pipes may be used:
 - A. Polypropylene (PP) Pipe Nom 1-1/2 in. (38 mm) diam (or smaller) SDR 11 or SDR 7.4 PP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - B. Polypropylene (PP) Pipe Nom 40 mm OD (or smaller) Fusiotherm® SDR11 or SDR 7.4 for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - C. Polypropylene (PP) Pipe Nom 1-1/2 in. (50 mm OD) diam (or smaller) Orion PolystarTM CT-White SDR 11, SDR 9 or SDR 7.4 PP pipe for use in closed (process or supply) piping systems.
- 3. Firestop Device* Cast in place firestop device permanently embedded during concrete placement or grouted in concrete assembly in accordance with accompanying installation instructions with a max 2 in. (51 mm) projection above the top surface of the concrete. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - CP 680-75/2.5"N, CP 680-P 2", CP 680-PX 2"
- 4. Packing Material Min 1-1/4 in. (32 mm) thickness of min 4 pcf (64 kg/m3) mineral wool batt insulation shall be firmly packed into top of device, flush with the top of the device.
- 5. Pipe Covering* (Optional) Min 1/2 in. (13 mm) thick hollow cylindrical glass fiber units with an all service jacket installed around pipe at the top of the floor and extending min 12 in. (305 mm) above floor surface or device. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. See Pipe and Equipment Covering Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
- Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



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