nonmetallic covering, electrical metallic tubing, flexible metallic tubing, intermediate metal conduit, or rigid metal conduit without an overall nonmetallic covering shall be installed in ducts specifically fabricated to transport environmental air. Flexible metal conduit shall be permitted, in lengths not to exceed 1.2 m (4 ft), to connect physically adjustable equipment and devices permitted to be in these fabricated ducts. The connectors used with flexible metal conduit shall effectively close any openings in the connection.

Exception: Wiring methods and cabling systems, listed for use in other spaces used for environmental air (plenums), shall be permitted to be installed in ducts specifically fabricated for environmental air-handling purposes under both of the following conditions:

(1) The wiring methods or cabling systems shall be permitted only if necessary to connect to equipment or devices associated with the direct action upon or sensing of the contained air.
(2) The total length of such wiring methods or cabling systems shall not exceed 1.2 m (4 ft).

The use of wiring methods within ducts is limited to minimize the contribution of smoke and products of combustion during a fire in an area that handles environmental air.

Δ **(C) Other Spaces Used for Environmental Air (Plenums).** This section shall apply to spaces not specifically fabricated for environmental air-handling purposes but used for air-handling purposes as a plenum. This section shall not apply to habitable rooms or areas of buildings, the prime purpose of which is not air handling.

Informational Note No. 1: The space over a hung ceiling used for environmental air-handling purposes is an example of the type of other space to which this section applies.

Informational Note No. 2: See NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*, and other mechanical codes for information on how the term *other spaces used for environmental air (plenum)*, as used in this section, correlates with the use of the term *plenum* where the plenum is used for return air purposes, as well as some other air-handling spaces.

Other spaces or plenums — such as the space or cavity between a structural floor or roof and a suspended (hung) ceiling — are used to transport environmental air and are not specifically manufactured as ducts. Many spaces above suspended ceilings are intended to transport return air. Informational Note No. 2 correlates the phrase *other spaces used for environmental air* with the term *plenum* as used in NFPA 90A, *Standard for the Installation of Air-Conditioning and Ventilating Systems*.

Exhibit 300.17 illustrates the distinction between a habitable room and one used for air handling. If the prime purpose of the room or space is air handling, the restrictions in 300.22(C) apply.

Exception: This section shall not apply to the joist or stud spaces of dwelling units where the wiring passes through such spaces perpendicular to the long dimension of such spaces.

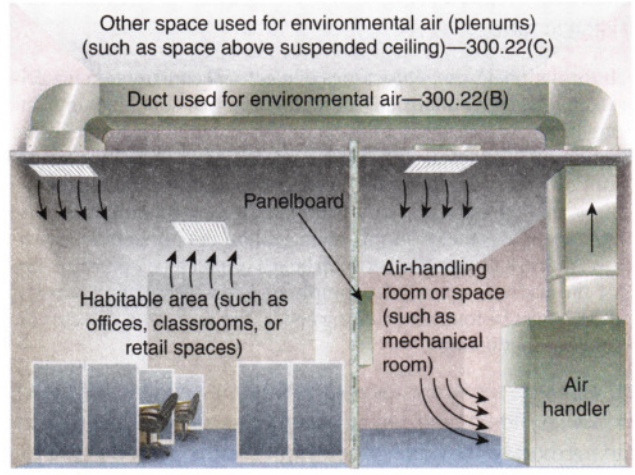

EXHIBIT 300.17 An example of spaces used for environmental air.

This exception permits cable to pass through joist or stud spaces of a dwelling unit where the joist space is used as a return for a forced-air central heating or air-conditioning system. As shown in Exhibit 300.18, the joist space is covered with appropriate material, and the cable passes through the space perpendicular to the vertical run.

Δ **(1) Wiring Methods.** The wiring methods for other spaces used for environmental air shall be limited to totally enclosed, nonventilated, insulated busway having no provisions for plug-in connections, Type MI cable without an overall nonmetallic covering, Type MC cable without an overall nonmetallic covering, Type AC cable, or other factory-assembled multiconductor control or power cable that is specifically listed for use within an air-handling space, or listed prefabricated cable assemblies of metallic manufactured wiring systems without nonmetallic sheath. Other types of cables, conductors, and raceways shall be permitted to be installed in electrical metallic tubing, flexible metallic tubing, intermediate metal conduit, rigid metal conduit

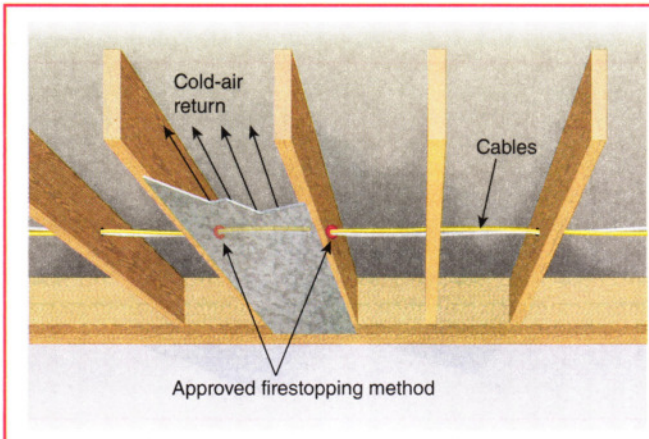

EXHIBIT 300.18 A cable passing through a joist space used as return air for a forced-air system in a dwelling unit.