Informational Note: See ANSI/UL 183, *Standard for Manufacturing Wiring Systems*, the safety standard for manufactured wiring systems.

604.7 Installation. Manufactured wiring systems shall be secured and supported in accordance with the applicable cable or conduit article for the cable or conduit type employed.

The securing and supporting requirements for manufactured wiring systems are taken from the specific article in Chapter 3 that covers the wiring method employed in the system construction. Typically, manufactured wiring systems are constructed of armored cable (Type AC), covered by Article 320, or of metal-clad cable (Type MC), covered by Article 330.

604.10 Uses Permitted. Manufactured wiring systems shall be permitted in accessible and dry locations and in ducts, plenums, and other air-handling spaces where listed for this application and installed in accordance with 300.22.

Exception No. 1: In concealed spaces, one end of tapped cable shall be permitted to extend into hollow walls for direct termination at switch and outlet points.

Exception No. 2: Manufactured wiring system assemblies installed outdoors shall be listed for use in outdoor locations.

Manufactured wiring systems are constructed of Type AC or Type MC cable and are provided with factory connectors and receptacles. The connection devices used with these systems facilitate ease of initial installation and future relocation of equipment. These systems are used extensively for the installation of branch-circuit and tap conductors supplying luminaires in accessible locations, including open and suspended-ceiling construction. Manufactured wiring systems employing flexible conduits, flexible cords, busways, and surface-mounted raceways also are permitted by this article.

604.12 Uses Not Permitted. Manufactured wiring system types shall not be permitted where limited by the applicable article in Chapter 3 for the wiring method used in its construction.

604.100 Construction.

(A) Cable, Conduit, and Tubing Types.

(1) Cables. Cable shall be listed Type AC cable or listed Type MC cable containing nominal 600-volt, 8 AWG to 12 AWG insulated copper-clad aluminum or copper conductors.

Other cables as listed in 722.135, 800.113, and 830.179 shall be permitted in manufactured wiring systems for wiring of equipment within the scope of their respective articles.

(2) Conduits and Tubing. Conduit shall be listed flexible metal conduit (FMC), listed liquidtight flexible metal conduit (LFMC), liquidtight flexible nonmetallic conduit (LFNC), or electrical metallic tubing (EMT) containing nominal 600-volt, 8 AWG to 12 AWG insulated copper-clad aluminum or copper conductors with a bare or insulated copper-clad aluminum or copper equipment grounding conductor equivalent in size to the ungrounded conductor.

Exception No. 1 to (1) and (2): A luminaire tap, no longer than 1.8 m (6 ft) and intended for connection to a single luminaire, shall be permitted to contain conductors smaller than 12 AWG but not smaller than 18 AWG.

Exception No. 2 to (1) and (2): Listed manufactured wiring assemblies containing conductors smaller than 12 AWG shall be permitted for remote-control, signaling, or communications circuits.

Exception No. 3 to (2): Listed manufactured wiring systems containing unlisted flexible metal conduit of noncircular cross section or trade sizes smaller than permitted by 348.20(A), or both, shall be permitted where the wiring systems are supplied with fittings and conductors at the time of manufacture.

(3) Flexible Cord. Flexible cord suitable for hard usage, with minimum 12 AWG conductors, shall be permitted as part of a listed factory-made assembly not exceeding 1.8 m (6 ft) in length when making a transition between components of a manufactured wiring system and utilization equipment not permanently secured to the building structure. The cord shall be visible for the entire length, shall not be subject to physical damage, and shall be provided with identified strain relief.

Flexible cord facilitates a transition between manufactured wiring systems and utilization equipment found in display cases, merchandise racks, temporary workstations, and the like. This transition is limited, however, to hard-usage cord not over 6 feet in length to minimize damage, as illustrated in Exhibit 604.1. Examples of polarized receptacles and connectors are shown in Exhibit 604.2.

Exception: Listed electric-discharge luminaires that comply with 410.62(C) shall be permitted with conductors smaller than 12 AWG.

This exception and the requirements in 410.62(C)(1) permit the use of flexible cord equipped with a manufactured wiring system connector as a means to supply listed electric-discharge luminaires such as fluorescent or high-intensity discharge types. In this application, the cord-equipped luminaires are supplied from branch-circuit conductors installed using a manufactured wiring system. This method of supplying luminaires is permitted only where the cord is visible for its entire length, from its attachment to the luminaire to its interface with the branch-circuit conductors of the manufactured wiring system. Where used for connection of listed electric-discharge luminaires, listed manufactured wiring system cord assemblies not longer than 6 feet and containing conductors smaller than 12 AWG copper are permitted.

(4) Busways. Busways shall be listed continuous plug-in type containing factory-mounted, bare or insulated conductors, which shall be copper or aluminum bars, rods, or tubes. The busway shall be provided with an equipment ground. The busway shall