Manufactured Housing Consensus Committee

Letter Ballot for MHCC - #1
Vote on the proposed changes to the
Comparison between **NFPA 501 (1997 and 1999 editions)** and 24 CFR 3280 (1999 edition)

AFTER VOTING, RETURN ONE COPY OF BALLOT TO NFPA
1 BATTERYMARCH PARK, QUINCY, MA 02269, OR FAX TO (617)984-7110

Must be received by NFPA
By: February 6, 2003

Committee Action:
A = Accept

Send ballot to: Jill McGovern
jmcgovern@nfpa.org

Negative votes or abstentions must be accompanied with reasons for so voting. Please make comments on a separate sheet. If handwritten, please use black ink only. If voting Affirmative on all items, only return this page to NFPA.

With respect to the Committee Actions on the proposed changes that accompanied this ballot, please record me as voting:

☐ Affirmative on all items, or

☐ Affirmative except as indicated below

Date: _____ Signed: _____

Name: _____
Type or Print in black ink

Proposed Change Number	24 CFR 3280 Referenced Section	Comm Action	Vote: Affirm With Comment	Vote: Neg*	Vote: Abstain*
1-99	3280.208	A			
2-99	3280.210 **NEW**	A			
3-97	603(a)(2)	A			
4-99	603(b)(4)(iii)	A			
5-97	604(b)(2) **NEW**	A			
6-97	605(a)(7)(i)	A			
7-97	607(b)(2)(v)	A			
8-97	607(b)(3)(i)	A			

* Reasons must accompany these votes

Proposed Change Number	24 CFR 3280 Referenced Section	Comm Action	Affirm With Comment	Neg*	Abstain*
9-97	607(b)(3)(v) **NEW**	A			
10-97	607(b)(4)(i)	A			
11-97	607(b)(5) **NEW**	A			
12-99	607(c)(6)	A			
13-97	609(b)(7)	A			
14-97	609(b)(7)	A			
15-97	610(b)(1)	A			
16-97	702(a)	A			
17-97	714(1)(i)	A			
18-97	715(a)(1)	A			
19-99	803(f)	A			
20-99	803(k)(1)	A			
21-99	804(f)	A			
22-99	805(a)(2)	A			
23-99	805(a)(3)(vi) **NEW**	A			
24-99	806(b)	A			
25-99	806(d)	A			
26-99	806(d)(11) **NEW**	A			
27-99	806(g) **NEW**	A			
28-99	807(c)	A			
29-99	808(f)	A			
30-99	808(h)	A			

* Reasons must accompany these votes

Proposed Change Number	24 CFR 3280 Referenced Section	Comm Action	Affirm With Comment	Neg*	Abstain*
31-99	808(k)	A			
32-97	811(a)(1)(i)	A			
33-99	813(b)	A			

* Reasons must accompany these votes

The following information is the activity of the NFPA Manufactured Homes Technical Committee for the revisions to the 1999 and 1997 edition of NFPA 501, Standard on Manufactured Housing.

This chart reflects those changes that occurred in the 1997 and 1999 edition of NFPA 501. The bold text represents material that has been affected by the changes.

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
1 99	**3-8 Fire Detection Equipment.** **3-8.1 General. At least one smoke alarm shall be installed in the home in the location(s) specified in 3-8.2, arranged to operate as specified in 3-8.3, installed as specified in 3-8.4, and labeled as specified in 3-8.5.** **3-8.2 Smoke Alarm Locations.** **3-8.2.1 One smoke alarm shall be installed to protect the living room and kitchen space. Where located within 20 ft (6.1 m) horizontally from cooking appliances, the smoke alarm shall incorporate a temporary silencing feature or be a photoelectric type.** **3-8.2.2 Where there are stairs leading to other occupied levels, a smoke alarm shall be located near the top of each such stairway so that smoke rising in the stairway cannot be prevented from reaching the alarm by an intervening door or obstruction. For stairways leading up from a basement, the smoke alarm shall be located on the basement ceiling near the entry to the stairs.** **3-8.2.3 A smoke alarm shall be installed in each sleeping room.** **3-8.2.4 Smoke alarms shall not be located within kitchens or garages, or in other spaces where temperatures can fall below 40°F (4°C) or exceed 100°F (38°C). Smoke alarms shall not be located within 3 ft (0.9 m) horizontally from the door to a kitchen, a bathroom containing a tub or shower,**	3280.208 Fire Detection Equipment. (a) General. At lease one smoke alarm shall be installed in the home at the location(s) specified in 3280.208(b), arranged to operate as specified in 3280.208(c), installed as specified in 3280.208(d), and labeled as specified in 3280.208(e) (b) Smoke Alarm Locations. (1) One smoke alarm shall be installed to protect the living room and kitchen space, located as far away from the kitchen and cooking appliances as possible. Where located within 20ft (6.1 m) horizontally from cooking appliances the smoke alarm shall incorporate a temporary silencing feature. (2) Where there are stairs leading to other occupied levels a smoke alarm shall be located near the top of each such stairway so that smoke rising in the stairway cannot be prevented from reaching the alarm by an intervening door or obstruction. For stairways leading up from a basement, the smoke alarm shall be located on the basement ceiling near the entry to the stairs. (3) A smoke alarm shall be installed in each sleeping room. (4) Smoke alarms shall not be located within kitchens or garages, or in other spaces where temperatures can fall below 40°F (4°C) or exceed 100°F (38°C). Smoke alarms shall not be located within 3 ft (0.9 m) horizontally from the door to a kitchen, a bathroom containing a tub or shower, or a	**3280.208 Fire detection equipment.** **(a) General. At least one smoke detector (which may be a single station alarm device) shall be installed in the home in the location(s) specified in paragraph (b) of this section.** **(b) Smoke detector locations.** **(1) A smoke detector shall be installed on any wall in the hallway or space communicating with each bedroom area between the living area and the first bedroom door unless a door(s) separates the living area from that bedroom area, in which case the detector(s) shall be installed on the living area side as close to the door(s) as practicable. Homes having bedroom areas separated by any one or combination of common-use areas such as kitchen, dining room, living room, or family room (but not a bathroom or utility room), shall have at least one detector protecting each bedroom area.** **(2) When located in hallways, the detector shall be between the return air intake and the living area.**

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
1 99 con't	**or a supply grille of a forced air heating or cooling system.** **3-8.2.5 When a home is equipped or designed for future installation of a roof-mounted evaporative cooler or other equipment discharging conditioned air through a ceiling grille into the living space environment, the smoke alarm closest to the air discharge shall be located no closer than 3 ft (914 mm) horizontally from any discharge grille** **3-8.2.6 A smoke alarm shall not be placed in a location that impairs its effectiveness.** **3-8.3 Operation.** **3-8.3.1 Smoke alarms shall be powered from a primary (ac) and secondary (battery) source, or from a primary battery rated for a 10-year life provided the smoke alarm is listed for use with a 10-year battery.** **3-8.3.2 Smoke alarms shall be interconnected such that the operation of any one smoke alarm shall cause the alarm to sound in all smoke alarms in the home.** **3-8.3.3 Visible notification appliances if provided in rooms where a hearing impaired person(s) sleeps shall have a minimum rating of 177 candela for a maximum room size of 14 ft x 16 ft (0.27 m x 4.88 m). For larger rooms the visible notification appliance shall be located within 16 ft (4.88 m) of the pillow. Visible notification appliances in other areas shall have a minimum rating of 15 candela. In sleeping rooms where the visible notification appliance is mounted more than 24 in. (610 mm) below the ceiling, a minimum rating of 110 candela shall be permitted. Listed tactile devices shall also be permitted. Visible or tactile devices need only be provided when ordered by the customer. Visible**	supply grille of a forced air heating or cooling system. (5) When a home is equipped or designed for future installation of a roof-mounted evaporative cooler or other equipment discharging conditioned air through a ceiling grille into the living space environment, the smoke alarm closest to the air discharge shall be located no closer than 3 ft (914 mm) horizontally from any discharge grille. (6) A smoke alarm shall not be placed in a location that impairs its effectiveness. (c) Operation. (1) Smoke alarms shall be powered from a primary (ac) and secondary (battery) source, or from a primary battery rated for a 10-year life provided the smoke alarm is listed for use with a 10-year battery. (2) Smoke alarms shall be interconnected such that the operation of any one smoke alarm shall cause the alarm to sound in all smoke alarms in the home. (3) Visible notification appliances used in rooms where a hearing-impaired person(s) sleeps shall have a minimum rating of 177 candela for a maximum room size of 14 ft by 16 ft (4.24 m by 4.88 m). For larger rooms the visible notification appliance shall be located within 16 ft (4.88 m) of the pillow. Visible notification appliances in other areas shall have a minimum rating of 15 candela. In sleeping rooms where the visible notification appliance is mounted more than 24 in. (610 mm) below the ceiling a minimum rating of 110 candela shall be permitted. Listed tactile devices shall also be permitted. Visible or tactile devices need only be provided when ordered by customer. Visible or tactile devices are not required to operate from	**(3) When a home is equipped or designed for future installation of a roof-mounted evaporative cooler or other equipment discharging conditioned air through a ceiling grille into the living space environment, the detector closest to the air discharge shall be located no closer than three horizontal feet from any discharge grille.** **(4) A smoke detector shall not be placed in a location which impairs its effectiveness.**

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
1 99 Con't	**or tactile devices are not required to operate from secondary power.** **3-8.4 Installation.** 3-8.4.1 Smoke **alarms** shall be mounted on the ceiling at least 4 in. (10 cm) from the wall, or on a wall with the top of the detector not less than 4 in. (10 cm) or more than 12 in. (30 cm) below the ceiling. **3-8.4.2 In rooms with sloped ceilings, smoke alarms shall be located on the ceiling within 3 ft (0.9 m) of the highest point, measured in the horizontal direction.** **3-8.4.3** Smoke **alarms** that receive primary operating power from the home electrical system shall be mounted on an electrical outlet box and connected by a permanent wiring method to a general electrical circuit. There shall be no switches in the circuit to the detector between the over-current protective device and the detector. Smoke alarms shall not be powered from a circuit protected by a ground-fault circuit-interrupter. 3-8.5 Labeling. Smoke detectors **and smoke alarms** shall be labeled as conforming with the requirements of UL 217, *Single and Multiple Station Smoke Alarms Detectors,* **or ANSI UL268, *Smoke Detectors for Fire Protective Signaling Systems.*** **3-8.6 Testing and Maintenance** **3-8.6.1 Following installation, smoke alarms shall be functionally tested in accordance with alarm manufacturer's instructions.** **3-8.6.2 Home manufacturers shall provide specific instructions to set-up crews or other responsible parties for the inspection and testing of smoke alarms during manufactured home setup.** **3-8.6.3 Home manufacturers shall provide the**	secondary power. (d) Installation. (1) Smoke alarms shall be mounted on the ceiling at least 4 in. (10 cm) from the wall, or on a wall with the top of the detector not less than 4 in. (10 cm) or more than 12 in. (30 cm) below the ceiling. (2) In rooms with sloped ceilings, smoke alarms shall be located on the ceiling within 3 ft. (0.9 m) of the highest point measured in the horizontal direction. (3) Smoke alarms that receive primary operating power from the home electrical system shall be mounted on an electrical outlet box and connected by a permanent wiring method to a general electrical circuit. There shall be no switches in the circuit to the detector between the over-current protective device and the detector. Smoke alarms shall not be powered from a circuit protected by a ground-fault circuit interrupter. (e) Labeling. Smoke detectors and smoke alarms shall be labeled as conforming with the requirements of UL 217, Single and Multiple Station Smoke Alarms or ANSI UL 268, Smoke Detectors for Fire Protective Signaling Systems. (e) Testing and Maintenance. (1) Following installation, smoke alarms shall be functionally tested in accordance with alarm manufacturer's instructions. (2) Home manufacturers shall provide specific instructions to set-up crews or other responsible parties for the inspection and testing of smoke alarms during manufactured home setup. (3) Home manufacturers shall provide the	**(d)** Installation. Each smoke **detector** shall be installed in accordance with its listing. The top of the detector shall be located on a wall 4 inches to 12 inches, **or at a distance permitted by the listing, below the ceiling. However, when a detector is mounted on an interior wall below a sloping ceiling, it shall be located 4 inches to 12 inches below the intersection of the connecting exterior wall and the sloping ceiling (cathedral ceiling).** The required **detector(s)** shall be attached to an electrical outlet box and the detector connected by a permanent wiring method into a general electrical circuit. There shall be no switches in the circuit to the detector between the over-current protection device protecting the branch circuit and the detector. Smoke detector(s) shall not be placed on the same branch circuit or any circuit protected by a ground fault circuit interrupter. (c) Labeling. Smoke detectors shall be labeled as conforming with the requirements of Underwriters' Laboratories Standard No. 217-Fourth Edition 1993 for Single and Multiple Station Smoke Detectors.

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
1 99 Con't	**homeowner with the alarm manufacturer's information describing the operation, method, and frequency of testing, and proper smoke alarm maintenance.**	homeowner with the alarm manufacturer's information describing the operation, method, and frequency of testing, and proper smoke alarm maintenance.	
2 99	**3-10 Fire Sprinkler System.** **3-10.1 This section establishes minimum requirements when a fire sprinkler system is installed in a manufactured home. Unless the authority having jurisdiction requires a fire sprinkler system for all detached one- and two-family dwellings these requirements for sprinkler systems are voluntary.** **3-10.2 When an automatic fire sprinkler system is installed in a manufactured home it shall be installed and tested in accordance with NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.*** **3-10.3 The manufacturer shall permanently affix the certificate shown in Figure 3-10.3 adjacent to the data plate.** **FIGURE 3-10.3 Residential Fire Sprinkler System Certification and Information.** **3-10.4 Home manufacturers shall provide specific instructions to setup crews or other responsible parties for the inspection and testing of the fire sprinkler system during manufactured home setup. The manufacturer shall specify on the certificate required by 3-10.3 the minimum required water supply in both pressure (psi) and**	3280.210 Fire Sprinkler System. (a) This section establishes minimum requirements when a fire sprinkler system is installed in a manufactured home. Unless the authority having jurisdiction requires a fire sprinkler system for all detached one- and two-family dwellings these requirements for sprinkler systems are voluntary. (b) When an automatic fire sprinkler system is installed in a manufactured home it shall be installed and tested in accordance with NFPA 13D, *Standard for the Installation of Sprinkler Systems in One- and Two-Family Dwellings and Manufactured Homes.* (c) The manufacturer shall permanently affix the certificate shown in Figure 3280.210(c) adjacent to the data plate. FIGURE 3280.210(c) Residential Fire Sprinkler System Certification and Information. (d) Home manufacturers shall provide specific instructions to setup crews or other responsible parties for the inspection and testing of the fire sprinkler system during manufactured home setup. The manufacturer shall specify on the certificate required by Section 3280.210(c) the minimum required water supply in both pressure (psi) and flow	new material not currently addressed in 3280

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
2 99 Con't	**flow (gpm).** **3-10.5 Upon final connection at the home site of the fire sprinkler system to the water supply per the manufacturer's instructions, the adequacy of the water supply shall be verified, and the system shall be tested per NFPA 13D. The installer shall insert their name, address, and date on the certificate per 3-10.3.** **3-10.6 Home manufacturers shall provide the homeowner with information describing the operation, method, frequency of testing, and proper fire sprinkler maintenance.**	(gpm). (e) Upon final connection at the home site of the fire sprinkler system to the water supply per the manufacturer's instructions, the adequacy of the water supply shall be verified, and the system shall be tested per NFPA 13D. The installer shall insert their name, address, and date on the certificate per Section 3280.210(c) (f) Home manufacturers shall provide the homeowner with information describing the operation, method, frequency of testing, and proper fire sprinkler maintenance.	
3 97	7-3.1.2 7-3.1.2 Conservation. Water closets shall **not use more than 1.6 gal (6 L) of water.**	603(a)(2) (2) Conservation. Water closets shall not use more than 1.6 gal (6 L) of water.	603(a)(2) (2) Conservation. Water closets shall be **selected and adjusted to use the minimum quantity of water consistent with proper performance and cleaning.**
4 99	7-3.2.4 (3) **(3) Freezing. A receptacle outlet complying with 9-6.4(10).**	603(b)(4)(iii) (iii) Freezing. A receptacle outlet complying with Section 3280.806(d)(11).	603(b)(4)(iii) **(iii) A receptacle outlet for the use of a heat tape located on the underside of the manufactured home within 2 feet of the water supply inlet. The receptacle outlet provided shall be placed on a branch circuit which is protected by a ground fault circuit interrupter**
5 97	Table 7-4 Plastic Pipe and Fittings **Standard Specification for Crosslinked Polyethylene (PEX) Tubing ASTM F876-1993** **Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems ASTM F877-1995**	604(b)(2) Plastic Pipe and Fittings Standard Specification for Crosslinked Polyethylene (PEX) Tubing ASTM F876-1993 Standard Specification for Crosslinked Polyethylene (PEX) Plastic Hot- and Cold-Water Distribution Systems ASTM F877-1995	New material not currently addressed in 3280

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
6 97	7-5.8 (a) (a) Approved or listed hubless pipe **and fittings shall be permitted to be joined with listed couplings or adapters**, per the manufacturer's recommendations.	605(a)(7)(i) (i) Approved or listed hubless pipe and fittings shall be permitted to be joined with listed couplings or adapters, per the manufacturer's recommendations.	605(a)(7)(i) (a) Approved or listed hubless pipe as per the manufacturer's recommendations.
7 97	7-7.2.2.5 7-7.2.2.5 Floor Connection. Water closets shall be securely bolted to an approved flange or other approved fitting that is secured to the floor by means of corrosion-resistant screws. The bolts shall be of solid brass or other corrosion-resistant material and shall be not less than $^1/_4$ in. (6 mm) in diameter. A watertight seal shall be made between the water closet and flange or other approved fitting by use of a gasket, sealing compound, **or listed connector device.**	607(b)(2)(v) (v) Floor Connection. Water closets shall be securely bolted to an approved flange or other approved fitting that is secured to the floor by means of corrosion-resistant screws. The bolts shall be of solid brass or other corrosion-resistant material and shall be not less than $^1/_4$ in. (6 mm) in diameter. A watertight seal shall be made between the water closet and flange or other approved fitting by use of a gasket, sealing compound, or listed connector device.	607(b)(2)(v) (v) Floor connection. Water closets shall be securely bolted to an approved flange or other approved fitting which is secured to the floor by means of corrosion-resistant screws. The bolts shall be of solid brass or other corrosion-resistant material and shall be not less than one-fourth inch in diameter. A watertight seal shall be made between the water closet and flange or other approved fitting by use of a gasket **or** sealing compound.
8 97	7-7.2.3.1 7-7.2.3.1 Each **shower** compartment shall be provided with an approved water-tight receptor with sides and back extending at least 1 in. (25 mm) above the finished dam or threshold. In no case shall the depth of a shower receptor be less than 2 in. (50 mm) or more than 9 in. (230 mm) measured from the top of the finished dam or threshold to the top of the drain. The wall area shall be constructed of smooth, noncorrosive, and nonabsorbent waterproof materials to a height not less than 6 ft (2 m) above the bathroom floor level. Such walls shall form a water-tight joint with each other and with the bathtub, receptor, or shower floor. The floor of the compartment shall slope uniformly to the drain at not less than 1/4 in./ft (20 mm/m) or more than 1/2 in./ft (43 mm/m).	607(b)(3)(i) (i) Each shower compartment shall be provided with an approved water-tight receptor with sides and back extending at least 1 in. (25 mm) above the finished dam or threshold. In no case shall the depth of a shower receptor be less than 2 in. (50 mm) or more than 9 in. (230 mm) measured from the top of the finished dam or threshold to the top of the drain. The wall area shall be constructed of smooth, noncorrosive, and nonabsorbent waterproof materials to a height not less than 6 ft (2 m) above the bathroom floor level. Such walls shall form a water-tight joint with each other and with the bathtub, receptor, or shower floor. The floor of the compartment shall slope uniformly to the drain at not less than 1/4 in./ft (20 mm/m) or more than 1/2 in./ft (43 mm/m).	607(b)(3)(i) (i) Each compartment **stall** shall be provided with an approved watertight receptor with sides and back extending at least 1 inch above the finished dam or threshold. In no case shall the depth of a shower receptor be less than 2 inches or more than 9 inches measured from the top of the finished dam or threshold to the top of the drain. The wall area shall be constructed of smooth, noncorrosive, and nonabsorbent waterproof materials to a height not less than 6 feet above the bathroom floor level. Such walls shall form a watertight joint with each other and with the bathtub, receptor or shower floor. The floor of the compartment shall slope uniformly to the drain at not less than one-fourth nor more than one-half inch per foot.

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
9 97	**7-7.2.3.5 Showers, bathtub, and bath-shower combinations shall be protected with individual control valves of the pressure-balancing, thermostatic, or combination pressure-balancing mixing valve type. The handle position or limit stops on such valves shall be set to deliver a maximum hot water setting of 120°F (49°C). The water heater thermostat shall not be considered a suitable control for adjusting the maximum hot water setting.**	607(b)(3)(v) (v) Showers, bathtub, and bath-shower combinations shall be protected with individual control valves of the pressure-balancing, thermostatic, or combination pressure-balancing mixing valve type. The handle position or limit stops on such valves shall be set to deliver a maximum hot water setting of 120°F (49°C). The water heater thermostat shall not be considered a suitable control for adjusting the maximum hot water setting.	new material not currently addressed in 3280
10 97	7-7.2.4.1 7-7.2.4.1 A dishwashing machine shall discharge its waste through a fixed air gap installed above the machine; through a high loop as specified by the dishwashing machine manufacturer; or into an open standpipe-receptor with a height greater than the washing compartment of the machine. When a standpipe is used, it shall be at least 18 in. (457 mm), but not more than 30 in. (762 mm), above the trap weir. The drain connections from the air gap or high loop shall be permitted to connect to an individual trap; to a directional fitting installed in the sink tailpiece; or to an opening provided on the inlet side of a food waste disposal unit.	607(b)(4)(i) (i) A dishwashing machine shall discharge its waste through a fixed air gap installed above the machine; through a high loop as specified by the dishwashing machine manufacturer; or into an open standpipe-receptor with a height greater than the washing compartment of the machine. When a standpipe is used, it shall be at least 18 in. (457 mm), but not more than 30 in. (762 mm), above the trap weir. The drain connections from the air gap or high loop shall be permitted to connect to an individual trap; to a directional fitting installed in the sink tailpiece; or to an opening provided on the inlet side of a food waste disposal unit.	607(b)(4)(i) (i) A dishwashing machine **shall not be directly connected to any waste piping, but** shall discharge its waste through a fixed air gap installed above the machine, or through a high loop as specified by the dishwashing machine manufacturer, or into an open standpipe-receptor with a height greater than the washing compartment of the machine. When a standpipe is used, it shall be at least 18 inches but not more than 30 inches above the trap weir. The drain connections from the air gap or high loop may connect to an individual trap, to a directional fitting installed in the sink tailpiece or to an opening provided on the inlet side of a food waste disposal unit.
11 97	**7-7.2.6** **7-7.2.6 Shower Valves. Shower and tub-shower combination valves shall be balanced pressure, thermostatic, or combination mixing valves that conform to the requirements of ASSE 1016, *Performance Requirements for Individual Thermostatic Pressure Balancing and Combination Control for Bathing Facilities*. Such valves shall be equipped with handle position**	607(b)(5) (5) Shower Valves. Shower and tub-shower combination valves shall be balanced pressure, thermostatic, or combination mixing valves that conform to the requirements of ASSE 1016, *Performance Requirements for Individual Thermostatic Pressure Balancing and Combination Control for Bathing Facilities*. Such valves shall be equipped with handle position stops that are	new material not currently addressed in 3280

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
11 97 cont.	**valves shall be equipped with handle position stops that are adjustable in accordance with the valve manufacturer's instructions to a maximum hot water setting of 120°F (49°C).**	equipped with handle position stops that are adjustable in accordance with the valve manufacturer's instructions to a maximum hot water setting of 120°F (49°C).	
12 99	7-7.3.6 **Hydromassage** Bathtub. 7-7.3.6.1 Access Panel. A door or panel of sufficient size shall be installed to provide access to the pump for repair and/or replacement. 7-7.3.6.2 Piping Drainage. The circulation pump shall be accessibly located above the crown weir of the trap. The pump drain line shall be properly sloped to drain the volute after fixture use. 7-7.3.6.3 Piping. **Hydromassage** bathtub circulation piping shall be installed so as to be self-draining.	607(c)(6) (6) Hydromassage bathtub — (i) Access panel. A door or panel of sufficient size shall be installed to provide access to the pump for repair and/or replacement. (ii) Piping drainage. The circulation pump shall be accessibly located above the crown weir of the trap. The pump drain line shall be properly sloped to drain the volute after fixture use. (iii) Piping. Hydromassage bathtub circulation piping shall be installed to be self-draining.	607(c)(6) (6) **Whirlpool** bathtub **appliances** — (i) Access panel. A door or panel of sufficient size shall be installed to provide access to the pump for repair and/or replacement. (ii) Piping drainage. The circulation pump shall be accessibly located above the crown weir of the trap. The pump drain line shall be properly sloped to drain the volute after fixture use. (iii) Piping. **Whirlpool** bathtub circulation piping shall be installed to be self-draining.
13 97	7-9.2.7 7-9.2.7 Hose Bibbs. When provided, all exterior hose bibbs and laundry sink hose connections shall be protected by a listed nonremovable backflow prevention device. This provision shall not be applicable to hose connections provided for automatic washing machines with built-in backflow prevention **or water heater drain valves.**	609(b)(7) (7) Hose Bibbs. When provided, all exterior hose bibbs and laundry sink hose connections shall be protected by a listed nonremovable backflow prevention device. This provision shall not be applicable to hose connections provided for automatic washing machines with built-in backflow prevention or water heater drain valves.	609(b)(7) (7) Hose bibbs. When provided, all exterior hose bibbs and laundry sink hose connections shall be protected by a listed non-removable backflow prevention device. This is not applicable to hose connections provided for automatic washing machines with built-in backflow prevention.
14 97	7-9.2.8 7-9.2.8 Flushometer Tanks. Flushometer tanks shall be equipped with an approved air gap **or** vacuum breaker assembly **that is** located above the flood level rim above the fixture.	609(b)(8) 7-9.2.8 Flushometer Tanks. Flushometer tanks shall be equipped with an approved air gap or vacuum breaker assembly that is located above the flood level rim above the fixture.	609(b)(8) (8) Flushometer tanks. Flushometer tanks shall be equipped with an approved air gap **on the** vacuum breaker assembly located above the flood level rim above the fixture.

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
15 97	7-10.2.1 7-10.2.1 Pipe. Drainage piping shall be standard weight **galvanized** steel; brass; copper; tube DWV; listed **Scheduled 40 ABS** plastic; **listed Scheduled 40 PVC plastic;** cast iron; or other listed or approved materials.	610(b)(1) (1) Pipe. Drainage piping shall be standard weight galvanized steel; brass; copper; tube DWV; listed Scheduled 40 ABS plastic; listed Scheduled 40 PVC plastic; cast iron; or other listed or approved materials.	610(b)(1) (1) Pipe. Drainage piping shall be standard weight steel, brass, copper tube DWV, listed plastic, cast iron, or other listed or approved materials.
16 97	8-2 Class 0 Air Ducts **and Air Connectors. Air** ducts and **air** connectors having a fire hazard classification of zero **when tested in accordance with UL 181, Standard for Safety Factory-Made Air Ducts and Air Connectors.** Class 1 Air Ducts **and Air Connectors. Air** ducts and **air** connectors having a flame spread rating of not over 25 without evidence of continued progressive combustion and a smoke developed rating of not over 50 **when tested in accordance with UL 181, Standard for Factory-Made Air Ducts and Air Connectors.**	702 (a) Class 0 Air Ducts and Air Connectors. Air ducts and air connectors having a fire hazard classification of zero when tested in accordance with UL 181, Standard for Safety Factory-Made Air Ducts and Air Connectors. Class 1 Air Ducts and Air Connectors. Air ducts and air connectors having a flame spread rating of not over 25 without evidence of continued progressive combustion and a smoke developed rating of not over 50 when tested in accordance with UL 181, Standard for Factory-Made Air Ducts and Air Connectors.	702(a) Class 0 air ducts **means ducts of materials** and connectors having a fire-hazard classification of zero. Class 1 air ducts **means ducts of materials** and connectors having a flame-spread rating of not over 25 without evidence of continued progressive combustion and a smoke-developed rating of not over 50.
17 97	8-14.1.1 8-14.1.1.1 Electric motor-driven unitary *air-cooled air conditioners and heat pumps in the cooling mode* with rated capacity less than 65,000 Btuh (19045 watts), when rated at the ARI standard rating conditions in ARI Standard 210/240, Unitary Air Conditioning and Air Source Heat Pump Equipment, **shall have seasonal energy efficiency (SEER) values not less than 10 for split systems and 9.7 for single package systems.**	714(1)(i) (i) 1 Electric motor-driven unitary *air-cooled air conditioners and heat pumps in the cooling mode* with rated capacity less than 65,000 Btuh (19045 watts), when rated at the ARI standard rating conditions in ARI Standard 210/240, Unitary Air Conditioning and Air Source Heat Pump Equipment, shall have seasonal energy efficiency (SEER) values not less than 10 for split systems and 9.7 for single package systems.	714(1)(i) (i) Electric motor-driven unitary *cooling systems* with rated capacity less than 65,000 BTU/Hr when rated at ARI Standard rating conditions in ARI Standard 210/240-89 Unitary Air-Conditioning and Air-Source Heat Pump Equipment, **shall show energy efficiency (EER) values not less than 7.2.**

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
17 97 cont.	8-14.1.1.2 **Air-cooled** heat pumps **in the heating mode** shall be certified to comply with all the requirements of ARI Standard 210/240, Unitary Air Conditioning and Air Source Heat Pump Equipment, **with HSPF efficiencies of not less than 6.8 for split systems and 6.6 for single package systems**. Electric motor-driven vapor compression heat pumps with supplemental electrical resistance heat shall be sized to provide by compression at least 60 percent of the calculated annual heating requirements for the manufactured home being served. A control shall be provided and set to prevent operation of supplemental electrical resistance heat at outdoor temperatures above 40°F (4°C), except for defrost operation. 8-14.1.1.3 Electric motor-driven vapor compression heat pumps with supplemental electric-resistance heat **of cooling capacity less than 65,000 Btuh (19045 watts)**, conforming to ARI Standard 210/240, Unitary Air Conditioning and Air Source Heat Pump Equipment, **shall have a cooling mode SEER of at least 10 for split systems and 9.7 for single package systems.**	(ii) Air-cooled heat pumps in the heating mode shall be certified to comply with all the requirements of ARI Standard 210/240, Unitary Air Conditioning and Air Source Heat Pump Equipment, with HSPF efficiencies of not less than 6.8 for split systems and 6.6 for single package systems. Electric motor-driven vapor compression heat pumps with supplemental electrical resistance heat shall be sized to provide by compression at least 60 percent of the calculated annual heating requirements for the manufactured home being served. A control shall be provided and set to prevent operation of supplemental electrical resistance heat at outdoor temperatures above 40°F (4°C), except for defrost operation. (iii) Electric motor-driven vapor compression heat pumps with supplemental electric-resistance heat of cooling capacity less than 65,000 Btuh (19045 watts), conforming to ARI Standard 210/240, Unitary Air Conditioning and Air Source Heat Pump Equipment, shall have a cooling mode SEER of at least 10 for split systems and 9.7 for single package systems.	(ii) Heat pumps shall be certified to comply with all the requirements of the ARI Standard 210/240-89 Unitary Air Conditioning and Air Source Unitary Heat Pump Equipment. Electric motor-driven vapor compression heat pumps with supplemental electrical resistance heat shall be sized to provide by compression at least 60 percent of the calculated annual heating requirements for the manufactured home being served. A control shall be provided and set to prevent operation of supplemental electrical resistance heat at outdoor temperatures above 40 F., except for defrost operation. (iii) Electric motor-driven vapor compression heat pumps with supplemental electric resistance heat conforming to ARI Standard 210/240-89 Unitary Air-Conditioning and Air-Source Heat Pump Equipment **shall show coefficient of performance ratios not less than shown below:** **COP** **Temperature degrees fahrenheit** — **Coefficient of performance** **47** ..... **... 2.25** **17** ..... **.. 1.7** **0** ..... **..... 1.0**
18 97	8-15.1.1 8-15.1.1 Supply ducts and any dampers contained therein shall be made from galvanized steel, tin-plated steel, or aluminum, or shall be listed in **accordance with UL 181, Factory-Made Air Ducts and Connectors,** Class 0, or Class 1 air ducts **and air connectors**. Class **1** air ducts **and air connectors** shall be located at least 3 ft (914 mm) from the furnace bonnet or plenum. **Air connectors**	715(a)(1) 8-15.1.1 Supply ducts and any dampers contained therein shall be made from galvanized steel, tin-plated steel, or aluminum, or shall be listed in accordance with UL 181, Factory-Made Air Ducts and Connectors, Class 0, or Class 1 air ducts and air connectors. Class 1 air ducts and air connectors shall be located at least 3 ft (914 mm) from the furnace bonnet or plenum. Air connectors shall not	715(a)(1) (1) Supply ducts and any dampers contained therein shall be made from galvanized steel, tin-plated steel, or aluminum, or shall be listed Class 0, Class 1, or **Class 2** air ducts. Class **2** air ducts shall be located at least 3 feet from the furnace bonnet or plenum. A duct system integral with the structure shall be of durable construction that can be demonstrated to be equally resistant to fire and

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
18 97 cont.	**shall not be used for exterior manufactured home duct connection**. A duct system integral with the structure shall be of durable construction that can be demonstrated to be equally resistant to fire and deterioration. Ducts constructed from sheet metal shall be in accordance with Table 8-15.1.1. Table 8-15.1.1 Minimum Metal Thickness for Ducts1 Duct Type Diameter Width 14 in. (356 mm) Or less / over 14 in. (356 mm) Round 0.013 (0.33 mm) 0.016 (0.41 mm) Enclosed rectangular 0.013 (0.33 mm) 0.016 (0.41 mm) Exposed rectangular 0.016 (0.41 mm) 0.019 (0.48 mm) 1 When "nominal" thicknesses are specified, 0.003 in. (0.08 mm) shall be added to these "minimum" metal thicknesses. 8-15.1.1.1 Furnace supply plenums shall be constructed of metal that extends a minimum of 3 ft (914 mm) from the heat exchanger measured along the centerline of airflow.	be used for exterior manufactured home duct connection. A duct system integral with the structure shall be of durable construction that can be demonstrated to be equally resistant to fire and deterioration. Ducts constructed from sheet metal shall be in accordance with Table 715(a)(1). Table 715(a)(1) Minimum Metal Thickness for Ducts1 Duct Type Diameter Width 14 in. (356 mm) Or less / over 14 in. (356 mm) Round 0.013 (0.33 mm) 0.016 (0.41 mm) Enclosed rectangular 0.013 (0.33 mm) 0.016 (0.41 mm) Exposed rectangular 0.016 (0.41 mm) 0.019 (0.48 mm) 1 When "nominal" thicknesses are specified, 0.003 in. (0.08 mm) shall be added to these "minimum" metal thicknesses. 8-15.1.1.1 Furnace supply plenums shall be constructed of metal that extends a minimum of 3 ft (914 mm) from the heat exchanger measured along the centerline of airflow.	deterioration. Ducts constructed from sheet metal shall be in accordance with the following table: Minimum Metal Thickness for Ducts Duct type Diameter or Width 14 in. or less / Diameter or over 14 in. Round ..... 0.013 / 0.016 Enclosed rectangular ..... .013 / .016 Exposed rectangular ..... .016 / .019 1When "nominal" thickness are specified, 0.003 in. shall be added to these "minimum" metal thicknesses.
19 99	9-3.6 9-3.6 The attachment plug cap shall be a 3-pole, 4-wire, grounding type, rated 50 amperes, 125/250 volts with a configuration as shown in Figure 9-3.6 and intended for use with the 50-ampere, 125/250-volt receptacle configuration shown in Figure 9-3.6. It shall **be listed, by itself or as part of a power supply cord assembly**, and shall be molded to **or installed** on the flexible cord so that it adheres tightly to the cord at the point where the cord enters the attachment plug or cap. If a right-angle cap is	803(f) (f) The attachment plug cap shall be a 3-pole, 4-wire, grounding type, rated 50 amperes, 125/250 volts with a configuration as shown in Figure 3280.803(f) and intended for use with the 50-ampere, 125/250-volt receptacle configuration shown in Figure 3280.803(f). It shall be listed, by itself or as part of a power supply cord assembly, and shall be molded to or installed on the flexible cord so that it adheres tightly to the cord at the point where the cord enters the attachment plug or cap. If	803(f) (f) The attachment plug cap shall be a 3-pole, 4-wire grounding type, rated 50 amperes, 125/250 volts with a configuration as shown herein and intended for use with the 50-ampere, 125/250 receptacle configuration shown. It shall be **molded of butyl rubber, neoprene, or other approved materials which have been found suitable for the purpose**, and shall be molded to the flexible cord so that it adheres tightly to the cord at the point where the cord enters the attachment-plug cap. If a

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
19 99 cont.	the attachment plug or cap. If a right-angle cap is used, the configuration shall be so oriented that the grounding member is farthest from the cord.	where the cord enters the attachment plug or cap. If a right-angle cap is used, the configuration shall be so oriented that the grounding member is farthest from the cord.	right-angle cap is used, the configuration shall be so oriented that the grounding member is farthest from the cord.
20 99	9-3.11 (b) (b) **A listed metal** raceway **or listed rigid nonmetallic** conduit from the disconnecting means in the manufactured home to the underside of the manufactured home, with provisions for the attachment of a suitable junction box of fitting to the raceway on the underside of the manufactured home. The manufacturer shall provide in his written installation instructions the proper feeder conductor sizes for the raceway and the size of the junction box to be used; or	803(k)(1) (b) A listed metal raceway or listed rigid nonmetallic conduit from the disconnecting means in the manufactured home to the underside of the manufactured home, with provisions for the attachment of a suitable junction box of fitting to the raceway on the underside of the manufactured home. The manufacturer shall provide in his written installation instructions the proper feeder conductor sizes for the raceway and the size of the junction box to be used; or	803(k)(1) (2) **An approved** raceway from the disconnecting means in the manufactured home to the underside of the manufactured home with provisions for the attachment of a suitable junction box or fitting to the raceway on the underside of the manufactured home. The manufacturer shall provide in his written installation instructions, the proper feeder conductor sizes for the raceway and the size of the junction box to be used; or
21 99	9-4.6 9-4.6 The distribution panelboard shall not be located in a bathroom or any other inaccessible location, but shall be permitted just inside a closet entry if the location is such that a clear space of 6 in. (152 mm) from any easily ignitable materials is maintained in front of the distribution panelboard and the distribution panelboard door can be extended to its full open position (at least 90 degrees). A clear working space at least 30 in. (762 mm) wide and 30 in. (762 mm) in front of the distribution panelboard shall be provided. This space shall extend from the floor to the top of the distribution panelboard. **Where used as switches, circuit breakers shall be so installed that the center of the grip of the operating handle of the circuit breaker, when in its highest position, will not be more than 6 ft 7 in. (2.0 m) above the floor.**	804(f) (f) The distribution panelboard shall not be located in a bathroom or any other inaccessible location, but shall be permitted just inside a closet entry if the location is such that a clear space of 6 in. (152 mm) from any easily ignitable materials is maintained in front of the distribution panelboard and the distribution panelboard door can be extended to its full open position (at least 90 degrees). A clear working space at least 30 in. (762 mm) wide and 30 in. (762 mm) in front of the distribution panelboard shall be provided. This space shall extend from the floor to the top of the distribution panelboard. Where used as switches, circuit breakers shall be so installed that the center of the grip of the operating handle of the circuit breaker, when in its highest position, will not be more than 6 ft 7 in. (2.0 m) above the floor.	804(f) (f) The distribution panelboard shall not be located in a bathroom, or in any other inaccessible location, but shall be permitted just inside a closet entry if the location is such that a clear space of 6 inches to easily ignitable materials is maintained in front of the distribution panelboard, and the distribution panelboard door can be extended to its full open position (at least 90 degrees). A clear working space at least 30 inches wide and 30 inches in front of the distribution panelboard shall be provided. This space shall extend from floor to the top of the distribution panelboard.

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
22 99	9-5(b) (b) *Small Appliances.* For the small appliance load in kitchens, pantries, dining rooms, and breakfast rooms of manufactured homes, two or more 20-ampere appliance branch circuits, in addition to the branch circuit specified in Section 9-5(a), shall be provided for all receptacle outlets in these rooms, and such circuits shall have no other outlets. Receptacle outlets supplied by at least two appliance receptacle branch circuits shall be installed in the kitchen. ***Exception No. 1: For a receptacle installed solely for the electrical supply to and support of an electric clock in any of the rooms specified in Section 9-5(b).*** ***Exception No 2: For receptacles installed to provide power for supplemental equipment and lighting on gas-fired ranges, ovens, or counter-mounted cooking units.***	805 (a)(2) (2) *Small Appliances.* For the small appliance load in kitchens, pantries, dining rooms, and breakfast rooms of manufactured homes, two or more 20-ampere appliance branch circuits, in addition to the branch circuit specified in Section 3280.805(a)(1) shall be provided for all receptacle outlets in these rooms, and such circuits shall have no other outlets. Receptacle outlets supplied by at least two appliance receptacle branch circuits shall be installed in the kitchen. *Exception No. 1: For a receptacle installed solely for the electrical supply to and support of an electric clock in any of the rooms specified in Section 3280-805(a)(2).* *Exception No 2: For receptacles installed to provide power for supplemental equipment and lighting on gas-fired ranges, ovens, or counter-mounted cooking units.*	805 (a)(2) (2) Small appliances. For the small appliance load in kitchen, pantry dining room and breakfast rooms of manufactured homes, two or more 20-ampere appliance branch circuits, in addition to the branch circuit specified in Section 3280.805(a)(1), shall be provided for all receptacle outlets in these rooms, and such circuits shall have no other outlets. Receptacle outlets supplied by at least two appliance receptacle branch circuits shall be installed in the kitchen.
23 99	9-5(c)(6) **6. Bathroom receptacle outlets shall be supplied by at least one 20-ampere branch circuit. Such circuits shall have no other outlets.** ***(See 9-6.2.)***	805(a)(3)(vi) new section (vi). Bathroom receptacle outlets shall be supplied by at least one 20-ampere branch circuit. Such circuits shall have no other outlets. *(See Section 3280.806(b)).*	New material not currently covered in 3280
24 99	9-6.2 **9-6.2** All **125**-volt, single-phase, 15- and 20-ampere receptacle outlets installed outdoors or in compartments accessible from outside the manufactured home, and in bathrooms, including receptacles in light fixtures, shall have ground-fault circuit-interrupter protection for personnel. Ground-fault circuit-interrupter protection for personnel shall be provided for receptacles serving countertops in kitchens and receptacle outlets	806(b) (b) All 125-volt, single-phase, 15- and 20-ampere receptacle outlets installed outdoors or in compartments accessible from outside the manufactured home, and in bathrooms, including receptacles in light fixtures, shall have ground-fault circuit-interrupter protection for personnel. Ground-fault circuit-interrupter protection for personnel shall be provided for receptacles serving countertops in kitchens and receptacle outlets	806(b) (b) All **120** volt single phase, 15 and 20 ampere receptacle outlets, including receptacles in light fixtures, installed outdoors, in compartments accessible from the outdoors, in bathrooms, and within 6 feet of a kitchen sink to serve counter top surfaces shall have ground-fault circuit protection for personnel. **Feeders supplying branch circuits may be protected by a ground-fault circuit-interrupter in lieu of the provision for such**

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
24 99 cont.	located within 6 ft (1.83 m) of a wet bar sink. *Exception: Receptacles **installed for appliances** in dedicated spaces, such as for dishwashers, disposals, refrigerators, freezers, and laundry equipment.*	located within 6 ft (1.83 m) of a wet bar sink. *Exception: Receptacles installed for appliances in dedicated spaces, such as for dishwashers, disposals, refrigerators, freezers, and laundry equipment.*	**interrupters specified above.** Receptacles dedicated for washer and dryers, also located in a bathroom, are exempt from this requirement.
25 99	9-6.4 Receptacle Outlets Required. Except in the bath**, closet,** and hall areas, receptacle outlets shall be installed at wall spaces 2 ft (610 mm) wide or more so that no point along the floor line is more than 6 ft (1.83 m) measured horizontally from an outlet in that space. **Receptacle outlets in floors shall not be counted as part of the required number of receptacle outlets unless located within 18 in. (457 mm) of the wall.** In addition, a receptacle outlet shall be installed in the following locations:	806(d) (d) Receptacle Outlets Required. Except in the bath, closet, and hall areas, receptacle outlets shall be installed at wall spaces 2 ft (610 mm) wide or more so that no point along the floor line is more than 6 ft (1.83 m) measured horizontally from an outlet in that space. Receptacle outlets in floors shall not be counted as part of the required number of receptacle outlets unless located within 18 in. (457 mm) of the wall. In addition, a receptacle outlet shall be installed in the following locations:	806(d) (d) Receptacle outlets required. Except in the bath and hall areas, receptacle outlets shall be installed at wall spaces 2 feet wide or more, so that no point along the floor line is more than 6 feet, measured horizontally, from an outlet in that space. In addition, a receptacle outlet shall be installed:
26 99	9-6.4(10) (10) On the underside of the unit for the connection of pipe heating cable(s), as follows: a. Located within 2 ft (610 mm) of the cold water inlet. b. Connected to an interior branch circuit, other than a small appliance branch circuit. It shall be permitted to utilize a bathroom receptacle circuit for this purpose. **c. Located on a circuit where all of the outlets are on the load side of the ground-fault circuit-interrupter protection for personnel.** **d. This outlet shall not be considered as the receptacle required by 9.6.4(8).**	**806(d)(11)** **(11) On the underside of the unit for the connection of pipe heating cable(s), as follows:** **(i)Located within 2 ft (610 mm) of the cold water inlet.** **(ii) Connected to an interior branch circuit, other than a small appliance branch circuit. It shall be permitted to utilize a bathroom receptacle circuit for this purpose.** **(iii) Located on a circuit where all of the outlets are on the load side of the ground-fault circuit-interrupter protection for personnel.** **(iv) This outlet shall not be considered as the receptacle required by Section 3280.806(d)(8).**	new material not currently addressed in 3280

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
27 99	**9-6.8** **9-6.8 Receptacles shall not be in a face-up position in any countertop.**	806(g) (g) Receptacles shall not be in a face-up position in any countertop.	new material not currently addressed in 3280
28 99	9-7.3 9-7.3 **Where** a lighting fixture is installed over a bathtub or in a shower stall, it shall be listed for wet locations. *[See also Article 410-4(d) of NFPA 70, National Electrical Code.]*	807(c) (c) Where a lighting fixture is installed over a bathtub or in a shower stall, it shall be listed for wet locations. *[See also Article 410-4(d) of NFPA 70, National Electrical Code.]*	807(c) (c) **If** a lighting fixture is provided over a bathtub or in a shower stall, it shall be **of the enclosed and gasketed type**, listed for wet locations. See also Article 410-4(d) of the National Electrical Code, NFPA No. 70-1993.
29 99	9-8.6 9-8.6 Where **metal** faceplates are used they shall be effectively grounded.	808(f) (f) Where metal faceplates are used they shall be effectively grounded.	808(f) (f) Where **metallic** faceplates are used they shall be effectively grounded.
30 99	9-8.8 **9-8.8 Where rigid metal conduit or intermediate metal conduit is terminated at an enclosure with a locknut and bushing connection, two locknuts shall be provided, one inside and one outside of the enclosure**. Rigid nonmetallic conduit or electrical nonmetallic tubing shall be permitted. **All cut ends of conduit and tubing shall be reamed or otherwise finished to remove rough edges**.	808(h) (h) Where rigid metal conduit or intermediate metal conduit is terminated at an enclosure with a locknut and bushing connection, two locknuts shall be provided, one inside and one outside of the enclosure. Rigid nonmetallic conduit or electrical nonmetallic tubing shall be permitted. All cut ends of conduit and tubing shall be reamed or otherwise finished to remove rough edges.	808(h) (h) **Threaded rigid metal conduit shall be provided with a locknut inside and outside the box, and a conduit bushing shall be used on the inside**. Rigid nonmetallic conduit shall be permitted. **Inside ends of the conduit shall be reamed.**
31 99	9-8.11 9-8.11 When outdoor or under-chassis line-voltage **(120 volts, nominal or higher)** wiring is exposed to moisture or physical damage, it shall be protected by rigid metal conduit **or intermediate metal conduit.** The conductors shall be suitable for wet locations. Electrical metallic tubing **or rigid nonmetallic conduit shall be permitted to** be used when closely routed against frames and equipment enclosures.	808(k) (k) When outdoor or under-chassis line-voltage (120 volts, nominal or higher) wiring is exposed to moisture or physical damage, it shall be protected by rigid metal conduit or intermediate metal conduit. The conductors shall be suitable for wet locations. Electrical metallic tubing or rigid nonmetallic conduit shall be permitted to be used when closely routed against frames and equipment enclosures.	808(k) (k) When outdoor or under-chassis line-voltage wiring is exposed to moisture or physical damage, it shall be protected by rigid metal conduit. The conductors shall be suitable for wet locations. Electrical metallic tubing **may** be used when closely routed against frames, and equipment enclosures.

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
32 97	9-11.1(a) (a) *Lighting and Small Appliance Load:* Lighting Volt-Amperes: Length times width of manufactured home (outside dimensions exclusive of coupler) times 3 volt-amperes per sq ft; e.g., length × width × 3 = lighting volt-amperes. **Lighting circuits shall be permitted to serve built-in gas ovens with electric service only for lights, clocks, or timers, or listed cord-connected garbage disposal units.**	811(a)(1)(i) (a) *Lighting and Small Appliance Load:* Lighting Volt-Amperes: Length times width of manufactured home (outside dimensions exclusive of coupler) times 3 volt-amperes per sq ft; e.g., length × width × 3 = lighting volt-amperes. Lighting circuits shall be permitted to serve built-in gas ovens with electric service only for lights, clocks, or timers, or listed cord-connected garbage disposal units.	811(a)(1)(i) (1) Lighting and small appliance <u>load **as calculated below:**</u> (i) Lighting volt-amperes: Length time width of manufactured home (outside dimensions exclusive of coupler) times 3 volt-amperes per square foot; e.g. Length x width x 3 = lighting volt-amperes.
33 99	9-13.2 9-13.2 A manufactured home provided with a **branch circuit** designed to energize outside heating equipment or air-conditioning equipment, or both, located outside the manufactured home, **other than room air conditioners, shall have such branch-circuit conductors terminate in a listed outlet box, or disconnecting means, located on the outside of the manufactured home**. A label shall be permanently affixed adjacent to the outlet box and shall contain the following information. THIS CONNECTION IS FOR HEATING AND/OR AIR-CONDITIONING EQUIPMENT. THE BRANCH CIRCUIT IS RATED AT NOT MORE THAN____AMPERES, AT_____VOLTS, 60-HERTZ,_____CONDUCTOR AMPACITY. A DISCONNECTING MEANS SHALL BE LOCATED WITHIN SIGHT OF THE EQUIPMENT. The correct voltage and ampere rating shall be given. The tag shall be not less than 0.020-in. (508-	813(b) (b) A manufactured home provided with a branch circuit designed to energize outside heating equipment or air-conditioning equipment, or both, located outside the manufactured home, other than room air conditioners, shall have such branch-circuit conductors terminate in a listed outlet box, or disconnecting means, located on the outside of the manufactured home. A label shall be permanently affixed adjacent to the outlet box and shall contain the following information. THIS CONNECTION IS FOR HEATING AND/OR AIR-CONDITIONING EQUIPMENT. THE BRANCH CIRCUIT IS RATED AT NOT MORE THAN____AMPERES, AT_____VOLTS, 60-HERTZ,_____CONDUCTOR AMPACITY. A DISCONNECTING MEANS SHALL BE LOCATED WITHIN SIGHT OF THE EQUIPMENT. The correct voltage and ampere rating shall be given. The tag shall be not less than 0.020-in. (508-	813(b) (b) A manufactured home provided with **an outlet** designed to energize heating and/or air conditioning equipment located outside the manufactured home, shall have permanently affixed, adjacent to the outlet, a metal tag which reads: This Connection Is for Air Conditioning Equipment Rated at Not More Than ------ Amperes, at ------ Volts, 60 Hertz. A disconnect shall be located within sight of the appliance. The correct voltage and ampere ratings shall be given. The tag shall not be less than 0.020 inch,

Ref	NFPA 501 reference	3280 reference as shown with changes	Current wording of 3280
33 99 cont.	mm) thick etched brass, stainless steel, anodized or alclad aluminum, or equivalent. The tag shall not be less than 3 in. x 1 3/4 in. (76 mm x 44.5 mm) minimum size.	mm) thick etched brass, stainless steel, anodized or alclad aluminum, or equivalent. The tag shall not be less than 3 in. x 1 3/4 in. (76 mm x 44.5 mm) minimum size.	etched Brass, stainless steel, anodized or alclad aluminum or equivalent or other approved material (e.g., .005 inch plastic laminates). The tag shall be not less than 3 inches by 1-3/4 inches minimum size.