

Construction Code Communicator



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Philip D. Murphy, Governor

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Lt. Governor Sheila Y. Oliver, Commissioner

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This edition...

2018 I-Codes Adoption,

2018 National Standard Plumbing Code Adoption,

2017 National Electrical Code Adoption,

and more!



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Grace Period for Model Codes

As you may be aware, the 2018 I-Codes, along with the 2018 National Standard Plumbing Code (NSPC) and 2017 National Electrical Code (NEC), were adopted on September 3, 2019. With this adoption comes a six-month grace period for the previous model codes. This means starting that from this date, applicants may submit a complete permit application, including all prior approvals, to be reviewed under the code in force immediately preceding the subcode revision. Provided that the application is complete, the construction official and applicable subcode officials should perform the plan review and issue construction permit(s) based on the code in force immediately prior to the operative date of the subcode revision. The last day for application submission under the 2015 I-Codes, 2015 NSPC, and 2014 NEC is March 2, 2020.

Therefore, if a complete permit application was submitted on or between the dates of September 3, 2019 and March 2, 2020, the project would be permitted to be reviewed under the old codes (2015/2014). The application should explicitly state which codes were used for the design. In the event the code edition is not explicitly stated, officials should ask what edition was used for the design of the project.

For completeness, the application would include items mentioned at NJAC 5:23-2.15, Construction permits—application, <https://www.nj.gov/dca/divisions/codes/codreg/ucc.html>. Section 2.15(a) is an absolute. However, Section 2.15(b) states, “In addition [to (a) above], the following information shall be required on any application for a construction permit when such information is available, but not later than the commencement of work.” Therefore, items listed in 2.15(b), such as the name of a sprinkler contractor to be used, would not be required at this time.

Note: Prototype plan releases based on the 2015 I-Codes, etc. remain valid until the end of the grace period. Therefore, March 2, 2020 would be the last day to apply for a permit with the released prototype.

Source: Rob Austin
Code Assistance/Development Unit
(609) 984-7609

Educational Occupancy Changes in the 2018 NJ IBC

An additional threshold was added in Section 903.2.3, Group E, of the 2018 International Building Code (2018/IBC). The new condition now requires the installation of an automatic fire sprinkler system when a school has a fire area that has an occupancy of 300 or greater.

In addition, a new section was added in Section 1010.1.4, Special doors, of the 2018/IBC. The specific subsection is 1010.1.4.4, Locking Arrangements in Educational Occupancies. This new section has an allowance for locking egress doors from classrooms, offices, and other occupied rooms for enhanced security measures. Group E (K-12) and Group B educational occupancies (example: tutoring centers) can provide additional locking requirements to keep intruders out and still continue to comply with the applicable means of egress requirements. The following conditions must be met:

1. The door must be able to be unlocked from the outside of the room with a key or other approved method;
2. A key, special knowledge or effort must not be needed to unlock the door from inside the room; and
3. Listed panic hardware, fire door hardware, or door closer devices must not be modified.

The final new part of this rule allows a door which complies with this section to be locked remotely and unlocked.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609



IBC/IRC 2018 NJ Editions Errata

Let me start out by saying, we are imperfect beings and mistakes happen. As much as we tried to make the NJ editions of the International Building Code (IBC)/2018 and the International Residential Code (IRC)/2018 perfect, we goofed. I would love to say that the following items will be the only mistakes, but I'm also a realist. So, without further ado:

- IBC/2018, NJ ed, Section 907.2.1.2, Group A-2 nightclubs.
 - At the end of the section text, just before the exception, Section 1006.2 should read Section 1008.2.
- IBC/2018, NJ ed, Table 1006.2.1, Spaces with one exit or exit access doorway.
 - Footnote references of "a" and "g" should be deleted at the "125" within the Group R-3 row.
- IRC/2018, NJ ed, Table R301.2(1), Climatic and Geographic Design Criteria
 - Under the heading of Frost line depth, 2'8" should be 2'6" for SNJ.

If you have purchased a NJ edition, please visit <https://www.nj.gov/dca/divisions/codes/codereg/> and click on "Corrected pages (NJ errata)" under both the Building Subcode and One- and Two-Family Dwelling Subcode headings. The displayed pages may be printed to update your NJ edition; the errata will be displayed in RED.

Source: Rob Austin, Code Assistance/Development Unit
(609) 984-7609

Attic Protection in Group R Occupancies

When fire sprinkler systems are installed in Group R-1 through R-4 occupancies per Section 903.3.1.2, NFPA 13R sprinkler systems, the attic space needs to comply with new Section 903.3.1.2.3, Attics, of the 2018 International Building Code (IBC). This was added into the code by the International Codes Council members to address the hazards associated with large multifamily residential occupancies with common attic spaces.

The new thresholds in this section that would require an attic to have additional protection are as follows:

First, when the roof assembly is located more than 55 feet above the lowest level of required fire department vehicle access in Type III, Type IV, and Type V construction, additional protection must be provided. The designer could pick from one of the 4 following methods to provide the additional protections; 1. provide an automatic sprinkler system; 2. construct the attic using noncombustible materials; 3. construct the attic using fire-retardant treated wood; or 4. filling the attic with noncombustible insulation.

Second, when fuel fired equipment is installed in the attic, at least one sprinkler head needs to be installed above the equipment.

Third, when the attic is being used for storage, it must be sprinklered.

This will impact all buildings, including "pedestal buildings," when the eave of the highest roof exceeds 55 feet above the lowest required fire vehicle access road. All heights are measured adjacent to the building to the eave as follows: 1. of the highest pitched roof; 2. the intersection of the highest roof to the exterior wall; or 3. the top of the highest parapet. These measurements are made from the required fire vehicle access roads necessary for compliance with Section 503, Fire Apparatus Access Roads, of the International Fire Code.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Energy Subcode Compliance as of September 3, 2019

As has been the case for at least 15 years now, the Department has issued an Energy Subcode compliance Bulletin with the adoption of a new model code. Because the 2018 International Energy Conservation Code (IECC) was adopted September 3, 2019, Bulletin 19-2 was issued along with it (see <https://www.nj.gov/dca/divisions/codes/resources/bulletins.html>). The following is an abridged version and some extra information.

Per N.J.A.C. 5:23-2.15(f)vi, the Uniform Construction Code (UCC) requires applicants to show compliance with the Energy Subcode as part of the permit application process for a newly-constructed building or an addition. Buildings undergoing a repair, renovation, alteration, reconstruction, or change of use must only meet the requirements provided for at N.J.A.C. 5:23-6, the Rehabilitation Subcode.

(continued on next page)

(Energy Subcode Compliance as of September 3, 2019)

Note: “Low-energy” buildings, or portions thereof (thermal separation required), do not have to meet the Thermal Envelope portion of the Energy Subcode. This includes the following buildings:

1. Those with a peak design rate of energy usage less than 3.4 Btu/h*² or 1.0 watt/ft² of floor area for space conditioning purposes; or
2. Those that do not contain conditioned space.

Compliance methods vary dependent on climate zone and building type. The Energy Subcode separates the State into two climates zones as follows:

Zone 4A – Atlantic, Burlington, Camden, Cape May, Cumberland, Essex, Gloucester, Hudson, Middlesex, Monmouth, Ocean, Salem and Union counties;

Zone 5A – Bergen, Hunterdon, Mercer, Morris, Passaic, Somerset, Sussex and Warren counties.

The Energy Subcode divides buildings into two categories: low-rise residential and commercial, which includes all buildings that are not low-rise residential.

The following is a description of the alternatives for documenting energy subcode compliance at the time of permit application.

Low-rise residential buildings are defined as one- and two-family dwellings or multiple-family buildings three stories or less in height. Compliance must be in accordance with the Energy Subcode and the residential portion of the 2018 International Energy Conservation Code (IECC-R), which parallels Chapter 11 of the 2018 International Residential Code (IRC-N). For purposes of this bulletin, IECC-R references will be made. Compliance for low-rise residential buildings may be demonstrated in one of four ways:

1. Compliance with traditional calculations - hand calculations in accordance with the American Society of Heating, Refrigerating, and Air-conditioning Engineers, Inc. (ASHRAE) handbook of fundamentals.
2. Compliance with REScheck software - software program calculations, <http://www.energycodes.gov>, that pass the 2018 IECC-R.
3. Compliance with clean energy program for residential new construction (formerly NJ EnergyStar homes): (program sponsored by the New Jersey Board of Public Utilities through its clean energy program (see <http://www.njcleanenergy.com/residential/>).
4. Compliance with prescriptive package (see below)

INSULATION & FENESTRATION REQUIREMENTS BY COMPONENT ^a										
Climate Zone	Fenestration U-Factor ^b	Skylight U-Factor ^b	Glazed Fenestration SHGC ^b	Ceiling R-Value	Wood Frame Wall R-Value	Mass Wall R-Value ⁱ	Floor R-Value	Basement Wall R-Value ^c	Slab R-Value ^d & Depth	Crawl Space Wall R-Value ^e
4A	0.32	0.55	0.40	49	20 or 13+5 ^h	8/13	19	10/13	10, 2 ft	10/13
5A	0.30	0.55	NR	49	20 or 13+5 ^h	13/17	30 ^g	15/19	10, 2 ft	15/19

a. R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.

b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.

c. “15/19” means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. “15/19” shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulated sheathing on the interior or exterior of the home. “10/13” means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.

d. R-5 insulation shall be provided under the full slab area of a heated slab in addition to the required slab edge R-value for slabs. The slab edge insulation for heated slabs shall not be required to extend below the slab.

g. Alternatively, insulation sufficient to fill the framing cavity providing not less than an R-value of R-19.

h. The first value is cavity insulation, the second value is continuous insulation. Therefore, “13+5” means R-13 cavity insulation plus R-5 continuous insulation.

i. Mass walls shall be in accordance with Section R402.2.5. The second R-value applies when more than half the of insulation is on the interior of the mass wall.

Commercial buildings are defined as all buildings other than low-rise residential buildings. Compliance must be in accordance with the Energy Subcode and the 2016 ASHRAE Standard 90.1; do not use the commercial portion of the International Energy Conservation Code (IECC-C), because it is deleted per N.J.A.C. 5:23-3.18. Compliance for commercial buildings may be demonstrated in one of two ways:

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(Energy Subcode Compliance as of September 3, 2019)

- 1. COMPLIANCE WITH traditional CALCULATIONS** (very much like the calculations for low-rise residential buildings mentioned above. However, the applicant must also provide information on the type of lighting installed and its usage.
- 2. COMPLIANCE WITH COMCHECK SOFTWARE:** software program calculations, <http://www.energycodes.gov>, that pass the 2016 ASHARE 90.1

Tip for 1 and 2 above: For building thermal envelope, use Tables 5.5-4 and 5.5-5, as applicable, for a starting point in your calculations (see below).

Table 5.5-4 Building Envelope Requirements for Climate Zone 4A

Opaque Elements	Nonresidential			Residential			Semi-heated ^a		
	Assembly Max		Insulation Min	Assembly Max		Insulation Min	Assembly Max		Insulation Min
ROOFS									
Insulation entirely above deck	U-0.032		R-30 ci	U-0.032		R-30 ci	U-0.093		R-10 ci
Metal building ^b	U-0.037		R-19 + R-11 Ls or R-25 + R-8 Ls	U-0.037		R-19+R-11 Ls or R-25 + R-8 Ls	U-0.082		R-19
Attic and other	U-0.021		R-49	U-0.021		R-49	U-0.034		R-30
WALLS, above grade									
Mass	U-0.104		R-9.5 ci	U-0.090		R-11.4 ci	U-0.580		NR
Metal building	U-0.060		R-0 + R-15.8 ci	U-0.050		R-0 + R-19 ci	U-0.162		R-13
Steel-framed	U-0.064		R-13 + R-7.5 ci	U-0.064		R-13 + R-7.5 ci	U-0.124		R-13
Wood-framed and other	U-0.064		R-13 + R-3.8 ci or R-20	U-0.064		R-13 + R-3.8 ci or R-20	U-0.089		R-13
WALLS, below grade									
Below-grade wall	C-0.119		R-7.5 ci	C-0.092		R-10 ci	C-1.140		NR
FLOORS									
Mass	U-0.057		R-14.6 ci	U-0.051		R-16.7 ci	U-0.107		R-6.3 ci
Steel joist	U-0.038		R-30	U-0.038		R-30	U-0.052		R-19
Wood-framed and other	U-0.033		R-30	U-0.033		R-30	U-0.051		R-19
SLAB-ON-GRADE floors									
Unheated	F-0.520		R-15 for 24 in	F-0.520		R-15 for 24 in	F-0.730		NR
Heated	F-0.843		R-20 for 24 in	F-0.688		R-20 for 48 in	F-0.900		R-10 for 24 in
OPAQUE DOORS									
Swinging	U-0.370			U-0.370			U-0.370		
Non-swinging	U-0.310			U-0.310			U-0.360		
Fenestration	<i>Assembly Max U</i>	<i>Assembly Max SHGC</i>	<i>Assembly Min VT/SHGC</i>	<i>Assembly Max U</i>	<i>Assembly Max SHGC</i>	<i>Assembly Min VT/SHGC</i>	<i>Assembly Max U</i>	<i>Assembly Max SHGC</i>	<i>Assembly Min VT/SHGC</i>
Vertical, 0% to 40% of wall		(for all frame types)			(for all frame types)			(for all frame types)	
Nonmetal framing, all	0.31	0.36	1.10	0.31	0.36	1.10	0.51	NR	NR
Metal framing, fixed	0.38			0.38			0.73		
Metal framing, operable	0.46			0.46			0.81		
Metal framing, entrance door	0.68			0.68			0.77		
Skylight, 0% to 3% of roof									
All types	0.50	0.40	NR	0.50	0.40	NR	1.15	NR	NR

* The following definitions apply: ci = continuous insulation (see Section 3.2), FC = filled cavity (see Section A2.3.2.5), Ls= liner system (see Section A2.3.2.4), NR = no (insulation) requirement.

a. Output capacity greater than or equal to 3.4 Btu/h*ft2 of floor area but is not a heated greater than 10 Btu/h*ft2 (see Table 3.2).

b. When using the R-value compliance method for metal building roofs, a thermal spacer block is required (see Section A2.3.2).



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(Energy Subcode Compliance as of September 3, 2019)

Table 5.5-5 Building Envelope Requirements for Climate Zone 5A

Opaque Elements	Nonresidential			Residential			Semi-heated ^d		
	Assembly Max	Insulation Min		Assembly Max	Insulation Min		Assembly Max	Insulation Min	
ROOFS									
Insulation entirely above deck	U-0.032	R-30 ci		U-0.032	R-30 ci		U-0.063	R-15 ci	
Metal building ^b	U-0.037	R-19 + R-11 Ls or R-25 + R-8 Ls		U-0.037	R-19+R-11 Ls or R-25 + R-8 Ls		U-0.082	R-19	
Attic and other	U-0.021	R-49		U-0.021	R-49		U-0.034	R-30	
WALLS, above grade									
Mass	U-0.090	R-11.4 ci		U-0.080	R-13.3 ci		U-0.151 ^c	R-5.7 ci ^c	
Metal building	U-0.050	R-0 + R-19 ci		U-0.050	R-0 + R-19 ci		U-0.094	R-0 + R-9.8 ci	
Steel-framed	U-0.055	R-13 + R-10 ci		U-0.055	R-13 + R-10 ci		U-0.084	R-13 + R-3.8 ci	
Wood-framed and other	U-0.051	R-13 + R-7.5 ci or R-19 + R-5 ci		U-0.051	R-13 + R-7.5 ci or R-19 + R-5 ci		U-0.089	R-13	
WALLS, below grade									
Below-grade wall	C-0.119	R-7.5 ci		C-0.092	R-10 ci		C-1.140	NR	
FLOORS									
Mass	U-0.057	R-14.6 ci		U-0.051	R-16.7 ci		U-0.107	R-6.3 ci	
Steel joist	U-0.038	R-30		U-0.038	R-30		U-0.052	R-19	
Wood-framed and other	U-0.033	R-30		U-0.033	R-30		U-0.051	R-19	
SLAB-ON-GRADE floors									
Unheated	F-0.520	R-15 for 24 in		F-0.510	R-20 for 24 in		F-0.730	NR	
Heated	F-0.688	R-20 for 48 in		F-0.688	R-20 for 48 in		F-0.900	R-10 for 24 in	
OPAQUE DOORS									
Swinging	U-0.370			U-0.370			U-0.370		
Non-swinging	U-0.310			U-0.310			U-0.360		
Fenestration	<i>Assembly Max U</i>	<i>Assembly Max SHGC</i>	<i>Assembly Min VT/SHGC</i>	<i>Assembly Max U</i>	<i>Assembly Max SHGC</i>	<i>Assembly Min VT/SHGC</i>	<i>Assembly Max U</i>	<i>Assembly Max SHGC</i>	<i>Assembly Min VT/SHGC</i>
Vertical, 0% to 40% of wall		(for all frame types)			(for all frame types)			(for all frame types)	
Nonmetal framing, all	0.31	0.38	1.10	0.31	0.38	1.10	0.45	NR	NR
Metal framing, fixed	0.38			0.38			0.62		
Metal framing, operable	0.46			0.46			0.70		
Metal framing, entrance door	0.68			0.68			0.77		
Skylight, 0% to 3% of roof									
All types	0.50	0.40	NR	0.50	0.40	NR	0.98	NR	NR

* The following definitions apply: ci = continuous insulation (see Section 3.2), FC = filled cavity (see Section A2.3.2.5), Ls= liner system (see Section A2.3.2.4), NR = no (insulation) requirement.
 a. Output capacity greater than or equal to 3.4 Btu/h*ft² of floor area but is not a heated greater than 12 Btu/h*ft² (see Table 3.2).
 b. When using the R-value compliance method for metal building roofs, a thermal spacer block is required (see Section A2.3.2).
 c. Exception to Section 5.5.3.2 applies to mass walls above grade.

Source: Rob Austin, Code Assistance/Development Unit
(609) 984-7609

Mass Notification Systems

Section 917.1, College and university campuses, was added to the 2018 International Building Code. The new section now requires, prior to construction, new buildings at college or university campuses which require a fire alarm system with an accumulative building occupant load of 1,000 or more, to conduct a mass notification risk analysis in accordance with NFPA 72. When the risk analysis determines a need for mass notification, an *approved* mass notification system must be provided in accordance with the findings of the risk analysis. Many, if not all, campuses throughout the State already have mass notification systems so this should not be a big lift for college and universities looking to add buildings.

Source: Michael Whalen, Code Assistance Unit
(609) 984-7609

Laundry Areas

With the September 3, 2019 adoption of the 2017 National Electrical Code, the Department has retained the requirements in the code for AFCI/GFCI protection in laundry areas. In the 2014 adoption the Department elected not to adopt the requirement for protection in “laundry areas” because it felt that the term laundry area was not well defined and could cause confusion and lead to enforcement that is not uniform.

In an effort to give guidance that should lead to more uniform enforcement, the Department offers the following description of a laundry area. Where laundry equipment is located in a room or space (closet) that is dedicated to the laundry equipment only, the room or space becomes the laundry area; the area does not extend outside of the space. Where laundry equipment is located in a space that serves additional functions like a basement, the laundry area is defined as any area within 6 feet of the outer edge of any laundry equipment or laundry plumbing fixture. Where the equipment has not been placed, but the laundry plumbing box has been placed, the laundry area is defined as any area within 10 feet of the plumbing box.

Source: Code Assistance Unit
(609) 984-7609

Fire Watch During Construction

A new section was added in Chapter 33, Safeguards During Construction, of the 2018 International Building Code (2018/IBC). Section 3314.1, Fire watch during combustible construction, Type III, IV, and V. This new provision authorizes the fire official to require a fire watch during nonworking hours when construction exceeds 40 feet in height above lowest adjacent grade. The purpose of the fire watch is to ensure that there is surveillance to identify and control fire hazards during construction while the structure is not occupied after hours. The Uniform Fire Code currently requires a fire prevention superintendent be provided on all construction sites. Part of their job is to develop a plan that will mitigate potential fires to avoid protentional conflagrations.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

New Jersey Code Adoptions – Elevator Safety Subcode

The following chart gives the adoption dates and the editions of the codes and standards used in connection with the Elevator Safety Subcode. The International Building Code/2018 has been adopted as of September 3, 2019 and the newest elevator, dumbwaiter, and conveyor standards may be used as shown in the table below. As with any code adoption, a six-month grace period starts the day of the adoption allowing the old codes to be used as long as a complete permit application is submitted before the grace period ends (i.e. March 2, 2020 is the last day for submittal under the old codes).

Note: The grace period is covered at N.J.A.C. 5:23-1.6(a).

- 1) Consult construction files to determine under which elevator or building code the permit was issued;
- 2) The following provides guidance on how to determine the applicable ASME A17.1 or ASME A90.1 codes (editions/supplements) when this information is not available for existing elevator devices. When performing cyclical inspections, if the permit — or installation — date precedes or is within the grace period, apply the code edition immediately preceding the adoption of the new subcode.

Example: A permit was issued on May 15, 1987. If the construction file does not have the information about the edition of the standard used, then ANSI A17.1 - 1984 is enforced. If the permit was issued on November 16, 1987, ANSI A17.1 - 1984 with the 1985 supplement applies.

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Copies may be read or downloaded from the division’s website at: www.nj.gov/dca/divisions/codes.

Please direct any comments or suggestions to the NJDCA, Division of Codes and Standards, Attention: Code Development Unit, PO Box 802, Trenton, NJ 08625-0802 or codeassist@dca.nj.gov.

(New Jersey Code Adoptions – Elevator Safety Subcode)

Edition Date for Building Subcode	Effective Date for Model Codes	BOCA/IBC Number for Elevators, Dumbwaiters, and Conveyor Equipment	ANSI A17 Safety Standard for Elevators and Escalators	ANSI A90.1 Safety Standard for Belt Manlifts	ASME A18.1 and A18.1a Safety Standard for Platform Lifts and Stairway Chairlifts
1975	01/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973	A90.1-1969	
1976/S	12/01/77	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1978	10/01/78	16	A17.1 - 1971; A17.1a - 1972; A17.1b - 1973; A17.1c - 1974; A17.1d, e, f - 1975	A90.1 - 1969; A90.1a - 1972	
1981	05/07/81	21	A17.1 - 1978	A90.1 - 1976	
1983/AS	02/22/83*	21	A17.1 - 1981	A90.1 - 1976	
1984	08/06/84	21	A17.1 - 1981; A17.1a - 1982	A90.1 - 1976	
1985/S	04/01/85	21	A17.1 - 1984	A90.1 - 1976	
1986/AS	09/22/86	21	A17.1 - 1984	A90.1 - 1976	
1987	04/01/87	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1988/S	06/20/88	26	A17.1 - 1984 and 1985 Supplement	A90.1 - 1985	
1989/AS	11/01/89	26	A17.1 - 1987	A90.1 - 1985	
1990	07/01/90	26	A17.1 - 1987	A90.1 - 1985	
1991/S	03/04/91	26	A17.1 - 1987		
1993	05/01/93	Chapter 30	A17.1 - 1990	A90.1 - 1985	
1996	07/06/98	Chapter 30	A17.1 - 1993 and 1994, 1995 Supplements	A90.1 - 1992	
IBC-2000 NJ Edition	05/05/03	Chapter 30	A17.1 - 1996 and 1997, 1998 Supplements	A90.1 - 1997	A18.1 - 1999 and A18.1a - 2001
IBC-2006 NJ Edition	02/20/07	Chapter 30	A17.1- (2004-2005), including A17.1.S-2005	A90.1-2003	A18.1-2003
IBC-2009 NJ Edition	09/07/10	Chapter 30	A17.1-2007	A90.1-2003	A18.1-2005
IBC-2015 NJ Edition	09/21/15	Chapter 30	A17.1-2013	A90.1-2009	A18.1- 2008
IBC-2018 NJ Edition	09/03/19	Chapter 30	A17.1-2016	A90.1-2015	A18.1-2014

S = Supplement AS = Accumulative Supplement * = Operative date

Source: Elevator Safety Unit, (609) 984-7833

Bureau of Housing Inspections Update

Please be advised that as of September 1, 2019, the Bureau of Housing Inspection within the New Jersey Division of Codes and Standards will implement a change to one of their standard practices. This is in response to Public Law 2019, Chapter 202, which amended Public Law 1967, Chapter 76 (C.55:13A-20).

The Bureau of Housing Inspection will no longer issue notices, orders, rules, and/or decisions via certified mail. All notices, orders, rules, and/or decisions will be mailed ordinary mail, and enforcement action may commence without a signed receipt of delivery. Please remind applicants of UCC permits for hotels and multiple dwellings within your jurisdiction to ensure the Bureau of Housing Inspections has their current ownership information. Owners can verify this information online https://www.nj.gov/dca/divisions/codes/RIMS_online.html or by contacting the Bureau of Housing Inspection.

Source: Bureau of Housing Inspection, (609) 633-6219

Section R324, Solar Energy System Pathways, Roof Access, and Setback Requirements

New Subsection R324.6, Roof access and pathways, was added to the 2018 International Residential Code (2018/IRC). Similar to the International Fire Code (IFC), photovoltaic array requirements, pathways, roof access, and setback requirements must be provided in accordance with Sections R324.6.1 through R324.6.2.1. The new rules provide pathways to specific areas of the roof, for smoke ventilation areas, and egress from emergency escape and rescue openings (EERO's) from the roof. These requirements were brought over from the IFC, Section 605.11, to provide minimum spacing and emergency access to the roof.

The following are exceptions to the new rules.

1. Detached, nonhabitable structures, such as detached garages, parking shade structures, carports, solar trellises and similar structures, are not required to provide roof access.
2. When the fire protection subcode official determines that rooftop operations will not be used on a set structure, roof access, pathways and setbacks may not be required.
3. Roofs with a slope of two units vertical in 12 units horizontal (17-percent slope) or less need not comply with these new rules.

There must be no fewer than two pathways on separate roof planes, not less than 36 inches wide, and extended from the lowest roof edge to the ridge. At least one pathway must be on the street or driveway side. Where more than one roof plane is present, additional 36-inch pathways need to be provided. Other considerations to be aware of are obstructions such as vent pipes and conduit and mechanical equipment, as well as the capability of the roof to support firefighter accessing the roof.

Setbacks at the ridge for photovoltaic arrays covering **not** more than 33% of the plan view total roof area must have at least 18 inches setback on both sides of the ridge. When areas are covered by more than 33% the setback must be 36 inches setback on both sides of the ridge. When an automatic fire sprinkler system is installed in accordance with NFPA 13D or Section P2904 the total coverage goes from 33% to 66% and the same setbacks would be applied.

Finally, panels and modules must not be placed below EERO's. The pathway must be 36 inches wide leading from an EEROs.

Source: Michael Whalen
Code Assistance Unit
(609) 984-7609

Pressure Reducing Valve (PRV) Replacements

On March 5, 2018, amendments to N.J.A.C. 5:23-2.7, Ordinary maintenance, and N.J.A.C. 5:23-2.17A, Minor work, were adopted. One of the items that has caused some confusion is "any valve replacement," which under ordinary maintenance does not require a permit.

The question is whether the replacement of a PRV falls under ordinary maintenance or if a minor work or full permit is required.

A pressure reducing valve (PRV) would be considered a valve and would be considered "ordinary maintenance." Therefore, a permit would not be required to replace it.

The installation of a new PRV where there was none installed previously would require a permit.

Source: Thomas C. Pitcherello
Code Assistance Unit
(609) 984-7609

Electrical Utility Point of Service

The Division has been working with the Board of Public Utilities to solve an issue that has caused some questions among electrical installers, inspectors, and building owners: Where is the electrical utility point of service? After several discussions, all parties came to a similar consensus as stated below:

(continued on next page)

(Electrical Utility Point of Service)

For certain voltages and larger commercial installations, the utility will require the customer to install a *disconnect* prior to the metering, that is to say, on the line-side of the meter. The **metering disconnect**, which may also serve as the customer's *service disconnect*, is owned, operated, and maintained by the customer. However, the utility will require unimpeded access to the *disconnect* to perform necessary work and maintenance. When multiple meters are involved at a site, with voltages greater than 250 volts nominal, a separate *disconnect* will be required to be installed for each meter or set of current transformers. The utility will not specify the type of interruptible device, the bonding, or grounding of the device as those decisions would fall under the jurisdiction of the local enforcing agency, after consultation with all parties concerned. Any equipment, conduits or conductors, owned, operated and maintained by the customer is subject to the requirements of the **Electrical Subcode**. Any conduits and/or conductors that the utility will be responsible for, remains their jurisdiction. However, bear in mind, that the point of service is now the utility side of any overcurrent protective (**OCP**) device, and the OCP device is to be provided and maintained by the customer after mutual consultation with utility supplying the **ampere interrupting capacity** (AIC) ratings.

Additionally, pole-top *disconnect* devices are owned, operated, and maintained by the utility, and are designed according to National Electrical Safety Code (NESC) Standards. The presence of a pole-top disconnect does not eliminate the need for a customer installed *disconnect*.

If you have further questions, please contact the Code Assistance Unit.

Source: Code Assistance Unit, (609) 984-7609

Accessible and Type A Dwelling Units – 2018

How many Type A dwellings units are required in a building with four or more dwelling units? What features may be adaptable within the Type A dwelling unit? These questions continue to be asked of the Code Assistance Unit. Let me take this opportunity to straighten out the requirements for accessible and Type A dwelling units.

New code, same (or nearly the same) code references

With the adoption of the 2018 International Building Code (IBC), Chapter 11 became the Barrier Free Subcode. The previous requirements at N.J.A.C. 5:23-7.1 through 7.14 were incorporated into N.J.A.C. 5:23-3.14 to integrate New Jersey's accessibility requirements into Chapter 11 of the 2018 IBC (minus the recreation portions remaining in NJAC 5:23-7.16 through 7.32). This remains the same for the 2018 IBC, and even the ICC/ANSI A117.1 stays the same, the 2009 edition (ANSI/2009).

What is the difference between accessible and Type A?

A Type A dwelling unit is a dwelling unit that meets Section 1003 of the ANSI/2009, as amended by Chapter 11 of the 2018 IBC at NJAC 5:23-3.14(b)10. This is a dwelling unit with an accessible entrance, accessible clear floor space, accessible route into and through the dwelling unit, and adaptable features in the kitchen and bathroom. Chapter 11 of the 2018 IBC and the ANSI/2009 specify that a Type A dwelling unit must have (1) an accessible entrance, (2) an accessible interior route throughout the dwelling unit, (3) one full adaptable bath on an accessible route, (4) maneuvering space at all doors, and (5) adaptable features in the kitchen and bathroom.

An accessible dwelling unit is a dwelling unit that meets Section 1002 of ANSI/2009. As with a Type A dwelling unit, an accessible dwelling unit must have an accessible entrance and an accessible route into and throughout the dwelling unit. In an accessible dwelling unit, however, the toilet and bathing facilities must comply with general requirements for toilet room and bathing facilities that are in ANSI/2009, Section 603 through Section 610 inclusive. Similarly, kitchens are required to comply with the general requirements in ANSI/2009 at Section 804, Kitchens and kitchenettes, and must also provide one 30-inch long work surface that meets the requirements of Section 902, Dining surfaces and work surfaces, regarding clear floor space and height. Finally, storage facilities must also meet the general requirements in ANSI/2009, which are at Section 905 for clear floor space, height, and operable controls.

Which dwelling units are required to be Type A?

- 1a. In a building with four or more dwelling units, if the building has an elevator, all (100 percent) of the dwelling units must be Type A (2018 IBC, Sections 1107.6.2, 3 and 4).
- 1b. In a building with four or more dwelling units, if there is no elevator, all (100 percent) of the ground-floor dwelling units must be Type A (2018 IBC, Sections 1107.6.2, 3 and 4).
- 1c. Ground-floor dwelling units: In a building with dwelling units, the first floor containing dwelling units must be accessible and must contain Type A dwelling units, regardless of whether that floor is at grade (2018 IBC, Sections 1107.6.2, 3 and 4). Keep in mind, a building may have more than one ground floor due to sloping grade.

**** When applying the three items above to a typical condo/apartment building, Group R-2, please see the end of the article for its specific application.**

(continued on next page)

(Accessible and Type A Dwelling Units)

2. Generally speaking, townhouses are exempt from Chapter 11 of 2018 IBC. There is one exception: Townhouses for which credit as a low- or moderate-income unit (COAH credit) is awarded are required to comply and are discussed below. A townhouse is a single dwelling unit with two or more stories of dwelling space, exclusive of basement or attic, where each dwelling unit extends from foundation to roof. This dwelling unit is to have an independent entrance that serves one dwelling unit only and that is at or near grade; most or all of the sleeping rooms are on one story; and most or all of the remaining habitable space, such as kitchen, living, and dining areas, are on another story (2018 IBC, Sections 1103.2.3.1 and 1107.6.5).
3. What level of accessibility is required for a townhouse that has "COAH credit?" When a townhouse or a multistory dwelling with fewer than four dwelling units in a single structure is being constructed with credit as low or moderate income housing, the dwelling unit must comply with the Chapter 11 of 2018 IBC. There are two unique requirements that apply to these buildings: each dwelling unit must have a room that could be used as a bedroom on the entry level and they may have either an accessible or an adaptable entrance. If an adaptable entrance is provided, the plans for making the adaptation to an accessible dwelling unit must be submitted and released through the standard plan review process. The funds to effect the adaptation of 10% of the entrances that are not accessible must be escrowed with the municipality. *Note: COAH is part of the Fair Housing Act Administration within the Office of Local Planning and can be reached by visiting <https://www.nj.gov/dca/divisions/lps/>, phone at (609) 292-3000, or email at LPSmail@dca.nj.gov.*

What features in the kitchen may be adaptable in a Type A dwelling unit?

1. Adaptable work surface: There must be a 30-inch length of counter that is either set at 34 inches or that can be adjusted to an accessible height. The base cabinets in this section must be removable and the floor must be finished all the way to the wall. The 30-inch section of the counter does not have to be precut; it can be "replaceable as a unit." This means that it must be able to be cut and either lowered or replaced (ANSI/2009, Sections 1003.12.3.1 and 1003.12.3.2, as amended at 2018 IBC, Section 1101.2, items 17 & 18).
2. Kitchen cabinets: Exempt as per the exception at ANSI/2009, Section 1003.14.
3. Kitchen sink: This is almost a combination of the above two. The cabinets below the sink must be removable, and the floor must be finished all the way to the wall. Also, the sink and the counter are required to be adjustable or replaceable as a unit to an accessible height; rough-in plumbing that allows connections of supply and drain piping for sinks mounted at heights of 29-inches must be provided (ANSI/2009, Sections 1003.12.4.1 and 1003.12.4.2, as amended at 2018 IBC, Section 1101.2, items 19 & 20).

What features in the bathroom may be adaptable in a Type A dwelling unit?

1. At least one bathroom on the accessible route is to comply with ANSI/2009, Section 1003.11.2. In all bathrooms, grab bars do not have to be installed, but the wall must be reinforced to permit their later installation as per ANSI/2009, Section 1003.11.1; this applies to shower seat reinforcement as well.
2. The threshold in a transfer shower may be adaptable as long as the adaptation can be made easily without undertaking a construction project (ANSI/2009, Sections 1003.11.2.5.2, as amended at 2018 IBC, Section 1102.1, item 16.2).
3. The mirror may be installed at a standard height as long as it is attached in such a way that it can be lowered without damaging the wall. Since the words "accessible lavatory" are used, the 40" maximum is not required until the lavatory is made accessible (ANSI/2009, Section 1003.11.2.3).
4. A vanity may be installed underneath the lavatory as long as it can be removed without requiring the removal or replacement of the lavatory (ANSI/2009, Section 1003.11.2.2).

Maneuvering Space at Doors.

There have been some projects that have been brought to the Department of Community Affairs' attention in which no maneuvering space has been provided at doors. Maneuvering space is critical to the usability of the dwelling unit. The requirements can be found in Section 1003.5, which requires compliance with Section 404, minus six exceptions.

In short, only those features that are provided with adaptive options may be adapted.

Lastly, please note that there is no reference to Type B dwelling units within this article. This is because the allowance of this type of dwelling unit is *not permitted* by N.J.A.C. 5:23.

** Example of application to a typical Condo/Apartment building

When applying the three items above to a typical condo/apartment building, Group R-2, Section 1107.6.2.2 is the "starting point" within the 2018 IBC, and more specifically Subsection 1107.6.2.2.1. Note that this subsection does not reference Table 1107.6.1.1 and states that a building containing 4 or more condo/apartments with:

- No elevator; units at ground level – all units at ground level must be Type A;
- No elevator; units not at ground level – vertical accessibility must be provided to at least the 1st level of residential units and be Type A units at this level;
- Elevator; all units must be Type A.

*Code references
updated 08/30/2022*

(continued on next page)

(Accessible and Type A Dwelling Units)

The table referenced would apply to such places like an extended-stay hotel/motel that exceeds the transient limitation set forth in the 2018 IBC, and what might seem like a Group R-1 is now a Group R-2, which would require a specific number or a percentage of rooms to be accessible.

Source: Rob Austin, Code Assistance/Development Unit
(609) 984-7609

Decommission of PermitsNJ Software

Letter to Code Officials, August 1, 2019

The Department has made the decision to decommission the PermitsNJ software effective June 30, 2020.

In 2017, Governor Christie signed Executive Order 225. This Executive Order decentralized software development and maintenance from the State's Office of Information Technology out to the individual State agencies. The software development resources were distributed to the state agencies with the largest software development needs, and the Department of Community Affairs did not acquire any of those software development resources. As a result, the Department can no longer enhance or maintain the PermitsNJ software; it has become outdated and has fallen out of pace with advancing technology.

A cost benefit analysis on the development or purchase of a replacement permitting software, to be offered to municipalities "free of charge," was conducted. Because there are so few local municipalities using the PermitsNJ software, it was found that it would be inefficient to develop or acquire new permitting software.

It is the Department's understanding that many municipalities using PermitsNJ have implemented municipal software elsewhere in the municipality. Most municipal government software suites include a permitting component. It is recommended that municipalities using PermitsNJ contact their municipal administrator as soon as possible to discuss replacing PermitsNJ with another permitting software.

Please note that, unlike UCCARS, municipalities will not be able to continue using PermitsNJ after June 30, 2020. If your office is still using the much older UCCARS software, be advised that this software has been out of support for many years and will not function on 64-bit versions of Windows 7 or higher. If your office issues fewer than 200 permits per year, you have the option of submitting monthly permit activity using the Municipal Monthly Activity Reports (UCC forms R811 and R812).

The Department will assist municipalities in any way possible to ensure a smooth transition to other permitting software. Should you have any questions or concerns, please email permitsnj@dca.nj.gov.

Source: PermitsNJ

Water Heater Replacements and The Mechanical Technical Section

The mechanical inspection technical section form can only be used for work in existing R-3 and R-5 dwelling units.

Replacement water heaters are listed on this form. The Code Assistance Unit has heard statements made that a mechanical contractor is permitted to replace a domestic water heater in R-3 and R-5 dwelling units without a New Jersey Master Plumbers license.

Just because water heaters are listed on the mechanical form does not permit a mechanical contractor to remove and replace a water heater. Water heaters can only be removed and installed by a New Jersey Licensed Master Plumber or the homeowner. The Master Plumber must sign and seal the mechanical form for a water heater replacement. The homeowner may also sign the form if they are doing the replacement themselves.

Should a New Jersey Licensed Master Plumbing Contractor submit the plumbing technical form for a water heater replacement in an R-3 or R-5 dwelling, the municipality should accept this form and advise the plumbing contractor that any future applications for a water heater replacement must be submitted on the mechanical technical form.

Also, as a reminder, the mechanical technical form **cannot** be used for any commercial projects or any **NEW** or **ADDITIONS TO** R-3 or R-5 dwelling units.

Source: Thomas C. Pitcherello
Code Assistance Unit
(609) 984-7609

GFCI Receptacle Location for Dishwashers

There seems to be some confusion and debate regarding Article 210.8(D) of National Electrical Code (NEC)/2017 (formerly 2014 – applies just the same) and the usage of the term “readily accessible.” In short, a ground-fault, circuit-interrupter (GFCI) receptacle under the sink for a cord-connected dishwasher is permitted. Sadly, we have received calls regarding officials not passing installations like this due to what a homeowner may be storing in that space. This installation would be no different than a GFCI receptacle behind the microwave or toaster oven; do we fail the counter top? No! Personally, I’d rather move a dishpan and/or soap detergent than move a microwave. In the event of a GFCI that needs to be reset but will not, then viola...the dishpan and soap are already out of the way so the dishes can be done by hand in the sink! All silliness aside, the dishpan and/or soap detergent stored in front of the GFCI receptacle are not an “obstacle” to be removed per the definition of “readily accessible.”

Source: Neil Nagy
Bureau of Construction Project Review

Manufactured (HUD) Homes - UCC Role

On August 5, 2019, the Uniform Construction Code (UCC) was modified regarding its role in manufactured (HUD) homes. The short version: initial installations of a HUD home are no longer regulated by the UCC. Now, for the long version...

N.J.A.C. 5:23-4B (Manufactured Homes and Manufactured Home Add-On Units) and NJAC 5:23-4C (Enforcement of Federal Manufactured Home Standards) have been deleted, and N.J.A.C. 5:23-2.22(b) has been modified to state, *“The appropriate subcode officials shall inspect the installation of any premanufactured unit or assembly **other than the initial installation** of manufactured homes to determine compliance with the regulations and the approved plans. Installation includes all utility connections and all work installed or completed on site.”*

The modifications to the UCC means the Federal government is responsible for oversight of the installation of manufactured homes in the State of New Jersey. Installation contractors are required to be licensed by HUD and are required to attend continuing education classes as required by HUD. Installations are inspected by third-party inspectors approved by HUD. Installations include, but are not limited to, any necessary site work for the installation of the HUD unit, permanent foundations, underground piping, electric, sewer, water, utility connections, etc. A certification that the installation meets the requirements of the Federal installation standards is required to be completed.

In addition, inquiries and any complaints regarding the installation of a manufactured home are to be referred to HUD for resolution.

Newark Field Office
One Newark Center
1085 Raymond Boulevard
13th Floor
Newark, NJ 07102-5260
Phone: (973) 776-7200
Email: NJ_Webmanager@hud.gov
Fax: (973) 645-2323
TTY: (973) 645-3298

In review, as of August 5, 2019, the Department no longer has any jurisdiction over the initial installation of manufactured (HUD) homes, including the utility connections. This means that local enforcing agencies will no longer perform plan review, issue permits or issue cut-in-cards for any utility connections. Owners will be required to obtain zoning approval and comply with HUD regulations. Utility companies are advised to contact HUD regarding cut-in-card procedures.

After completion of the initial installation, any relocation of a HUD home falls under the jurisdiction of the UCC, which will require all site work and connections to be reviewed and inspected by the local construction office. In addition, any modification to a HUD home falls under the jurisdiction of the UCC per the Rehabilitation Subcode; see NJAC 5:23-6.8 for the materials and methods.

Note: Permit applications received on or after August 5, 2019 for new installation are not under the jurisdiction of the UCC. Permit applications received prior to this date are to be followed out under the previous regulations of the UCC.

Source: Keith Makai, Code Assistance Unit
609-984-7609

Carnival and Amusement Rides: Permitting Update

Effective for the 2020 season, the Department will no longer be issuing carnival and amusement ride owners paper permit stickers to be affixed to the ride because we have upgraded to an electronic process. This article is intended to provide information in order to avoid and eliminate possible issues or mistakes in regard to identifying whether an amusement ride is permitted for use and has passed inspection.

To all local and State fire officials, electrical subcode officials, or concerned regulatory parties that may be at an amusement park, carnival, street fair, etc.: What you should look for this coming year to know if a ride is legal and permitted to operate is a green sticker affixed to each ride, including inflatables (still in pouch), that says 2020, has the state seal, and says passed inspection. The sticker will be filled out by the DCA inspector and will include the date ride passed inspection, the inspector number which identifies who did inspection, the ride's New Jersey serial number, and its electronically issued permit number. Without this green sticker, the ride cannot operate.

If there are questions, or if any jurisdiction thinks there may be an unpermitted ride in use, please contact the Carnival and Amusement Ride Safety Unit at (609) 292-2097 to speak with one of the Department's ride supervisors. If it is after hours, on a weekend, or needs immediate response, call the amusement ride hotline at (609) 292-2099.

Source: Daniel Troy, Supervisor, Carnival and Amusement Ride Inspections, Northern Region

Ordinary Maintenance/Minor Work, Continued...

(Deck portion updated from Summer 2018 edition)

The following are specific questions that the Code Assistance Unit has been receiving from code officials and the general public regarding the need for a permit.

Re-Roofing – No permit is required for existing detached one- or two-family dwellings for the roof covering materials. This includes all buildings such as garages, sheds, pool houses, and the like that are accessory to a detached one- or two-family home (Group R-5). Stripping the roof down to existing sheathing or putting on a second layer of roof covering does NOT require a permit. Townhouses and condos will require roof permits. Replacing sheathing will always require a permit.

Re-Siding – No permit is required for existing one- or two-family dwellings (Groups R-3 and R-5) for siding materials; this includes appurtenances such as garages, sheds, pool houses and the like that are accessory to the dwelling. Siding materials that do not require a permit are wood, vinyl, aluminum, etc. and replacing one for another would also be allowed without permit. However, the installation of any amount of polypropylene siding will require a permit, because it is tested to a different ASTM standard than vinyl. Although, stucco, stone, cultured stone, brick, etc. are exterior wall coverings per Section R703 of the 2015 International Residential Code (IRC), they are not specific siding materials listed as ordinary maintenance, and permits ARE required for their replacement or installation. Lastly, in the case where one would like to cover over old asbestos-type siding materials with siding materials listed in Section R703/IRC, this would not require a permit.

Interior finishes – No permit is required for replacing less than 25% of interior finishes on one- or two-family dwellings (Groups R-3 and R-5); this includes both walls and ceilings. Other than the additional square footage of the entire home versus the old per room, this is business as usual.

Decks – In all occupancies, no permit is required for the replacement of any part of a deck, porch or stoop that does not provide support to a building or structure. **Contrary to the publication date of this original article, the application of "any part" from N.J.A.C. 5:23-2.7(c)1xiii is modified by the preceding text at N.J.A.C. 5:23-2.7(b)2, in that any work affecting structural or fire safety is not to be considered ordinary maintenance. So, it would be safe to say that replacement of the structural portions of a deck, such as support posts or columns, headers or girders, floor joists, stair stringers, etc. would indeed require a permit. However, replacement of the decking, railings, stair treads/risers, etc. would not require a permit.**

A total replacement, from the existing foundation or footing on up, will require a full permit. A total replacement, expansion of an existing deck, or the new installation of a deck will require a full permit, not a minor work permit.

Insulation – No permit is required for the installation of insulation in any portion of an existing structure, with the exception of foam plastics. Even if someone would like to install new insulation over old insulation, this would be permitted without permit also. One should look at the insulation in the same way as any other ordinary maintenance item such as doors, windows, flooring, etc.-- No permit, no inspection. The owner/contractor is responsible for complying with the rehabilitation subcode thermal envelope requirements (i.e. fill the void if exposed) in the same manner as any other ordinary maintenance item that has code requirements connected to them.

Source: Code Assistance Unit, (609) 984-7609

Pool Construction and Equipotential Bonding

When it comes to bonded parts of a pool, there has been some confusion in terms of structural reinforcing steel (SRS) in a conductive pool shell and what it really is.

First, let's define conductive and non-conductive. Poured concrete, pneumatically applied or sprayed concrete, and concrete block with painted or plastered coatings are considered conductive materials; vinyl liners and fiberglass composite shells are non-conductive materials. In other words, this article does not apply to the non-conductive material pool shells. Now, onto SRS in a conductive pool shell...

For an inground pool, it's pretty easy to say that SRS is the rebar or woven-wire mesh that provides the shape and structure of the pool. The problem is, when one tries to apply the requirements of SRS to an above-ground pool. Does it apply to the metal supports? The short answer is no. The metal supports may be structural in the sense of providing shape and stability to the above-ground pool, but they are not reinforcing and have no relation to SRS.

So what does this mean in terms of Article 680.26(B) for the equipotential of the bonded parts of a pool? Pool shells for inground pools that utilize SRS not encapsulated in a nonconductive material are to be bonded at the perimeter at least four (4) times per Article 680.26(B)(2). Because pool shells for above-ground pools (non-portable) do not typically utilize SRS, and there are only structural metal supports for the non-conductive pool shell (again, not SRS), they may be bonded once at the perimeter per Article 680.26(B)(3), provided the supports are electrically continuous by metal to metal contact (i.e. bolted, screwed, etc.).

If you have further questions, please contact the Code Assistance Unit at (609) 984-7609.

Source: Neil Nagy, Bureau of Construction Project Plan Review

When to use the Mechanical Technical Section

The Division has received numerous phone calls regarding when a mechanical technical section is required. There is a misconception that the mechanical technical section is for when HVAC and duct work are installed in any use group; this is incorrect. N.J.A.C. 5:23-3.4(d) states that the mechanical technical section is to be used for existing R-3 and R-5 structures when mechanical equipment and other related apparatuses are being installed. So now the question is: What type of work is being done? Based on questions that have been asked most frequently, the Division has put together the following matrix as a guide. Remember, this is NOT an all-inclusive list, but it should provide officials with a starting point for when to require mechanical technical sections.

Source: William B. Schmidt, Office of Regulatory Affairs
(609) 984-7672

Work Category – Mechanical

Work Description	1 & 2 Family Dwellings						Notes	
	Groups R-3 & R-5							
Furnace - Central		B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a)	
Furnace - Central All Fuels	New Construction/ Addition	Tech Sheet:	X	X	X			X
		Plan Review:	X	X	X			X
		Inspection:	X	X	X			X
		Work type:	Full permit					
		Inspection type:	Rough and Final					
		B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(d)/ Form F-370 required	
Direct Replacement/New Installation, existing dwelling	Tech Sheet:		X		X			
	Plan Review:		X		X			
	Inspection:		X		X			
	Work type:	Minor Work						
	Inspection type:	Final Only						

(continued on next page)

(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes	
Boiler - Central			B	E	F	M	P		
Boiler – Central All Fuels	New Construction/ Addition	Tech Sheet:	*	X	X		X	* Building may be required depending on type of chimney installed	
		Plan Review:	*	X	X		X		
		Inspection:	*	X	X		X		
		Work type:	Full permit						
		Inspection type:	Rough & Final						
			B	E	F	M	P		
	Direct Replacement/New Installation, existing dwelling	Tech Sheet:		X		X	*	Responsibilities are as per N.J.A.C. 5:23-3.4(d)/ Form F-370 required. * Plumbing required if new backflow preventer installed and mechanical inspector is not a plumbing subcode official.	
		Plan Review:		X		X	*		
		Inspection:		X		X	*		
		Work type:	Minor Work						
Inspection type:		Final Only							

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes	
Gas Piping			B	E	F	M	P		
Gas Piping	New Construction/ Addition	Tech Sheet:					X	All responsibilities are as per N.J.A.C. 5:23-3.4(a)	
		Plan Review:					X		
		Inspection:					X		
		Work type:	Full permit						
		Inspection type:	Rough and Final						
			B	E	F	M	P		
	Direct Replacement/New installation, existing dwelling	Tech Sheet:				X		All responsibilities are as per N.J.A.C. 5:23-3.4(d)	
		Plan Review:				X			
		Inspection:				X			
		Work type:	Full permit						
Inspection type:		Rough & Final							

(continued on next page)

(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5					Notes		
Condensing Unit			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a)	
Condensing Unit	New Construction/ Addition	Tech Sheet:		X			X		
		Plan Review:		X			X		
		Inspection:		X			X		
		Work type:	Full permit						
		Inspection type:	Rough and Final						
			B	E	F	M	P		All responsibilities are as per N.J.A.C. 5:23-3.4(d)
Direct Replacement/New Installation, existing dwelling	Tech Sheet:		X			X			
	Plan Review:		X			X			
	Inspection:		X			X			
	Work type:	Minor Work							
	Inspection type:	Final Only							

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5					Notes		
Water heater - Gas			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a) * Building & Electric, as applicable	
Water Heater - Gas	New Construction/ Addition	Tech Sheet:	*	*	X		X		
		Plan Review:	*	*	X		X		
		Inspection:	*	*	X		X		
		Work type:	Full permit						
		Inspection type:	Rough and Final						
			B	E	F	M	P		All responsibilities are as per N.J.A.C. 5:23-3.4(d)/ Form F-370 required * Electric if replacement is power vent exhaust
Direct Replacement/New Installation, existing dwelling	Tech Sheet:		*			X			
	Plan Review:		*			X			
	Inspection:		*			X			
	Work type:	Minor Work							
	Inspection type:	Final Only							

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(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5					Notes		
Water heater - Electric			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a)	
Water Heater - Electric	New Construction/ Addition	Tech Sheet:		X			X		
		Plan Review:		X			X		
		Inspection:		X			X		
		Work type:	Full permit						
		Inspection type:	Rough and Final						
			B	E	F	M	P		All responsibilities are as per N.J.A.C. 5:23-3.4(d)
Direct Replacement/New Installation, existing dwelling	Tech Sheet:		X			X			
	Plan Review:		X			X			
	Inspection:		X			X			
	Work type:	Minor Work							
	Inspection type:	Final Only							

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5					Notes		
Oil Piping			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a)	
Oil Piping	New Construction/ Addition	Tech Sheet:					X		
		Plan Review:					X		
		Inspection:					X		
		Work type:	Full permit						
		Inspection type:	Rough and Final						
			B	E	F	M	P		All responsibilities are as per N.J.A.C. 5:23-3.4(d)
Direct Replacement/New Installation, existing dwelling	Tech Sheet:				X				
	Plan Review:				X				
	Inspection:				X				
	Work type:	Full permit							
	Inspection type:	Rough & Final							

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(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Oil Tank - Install/Removal			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a) * In addition to Fire, Building and Plumbing if underground tank
Oil Tank - Install/Removal	New Construction/ Addition	Tech Sheet:	*		X		*	
		Plan Review:	*		X		*	
		Inspection:	*		X		*	
		Work type:	Full permit					
		Inspection type:	Rough and Final					
			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a) / Applies to above & underground tanks
Direct Replacement/New Installation, existing dwelling	Tech Sheet:			X				
	Plan Review:			X				
	Inspection:			X				
	Work type:	Minor Work						
	Inspection type:	Final only						

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5						Notes
Heating Venting System			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
Heating Venting System	New Construction/ Addition	Tech Sheet:			X		X	
		Plan Review:			X		X	
		Inspection:			X		X	
		Work type:	Full permit					
		Inspection type:	Rough and Final					
			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(d)
Direct Replacement/New Installation, existing dwelling	Tech Sheet:				X			
	Plan Review:				X			
	Inspection:				X			
	Work type:	Minor Work						
	Inspection type:	Final Only						

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(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5					Notes	
Duct System			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
Duct System	New Construction/ Addition	Tech Sheet:	X					
		Plan Review:	X					
		Inspection:	X					
		Work type:	Full permit					
		Inspection type:	Rough and Final					
			B	E	F	M	P	Per N.J.A.C. 5:23-2.7(c)5iii, this is Ordinary Maintenance
Duct System	Direct Replacement, existing dwelling	Tech Sheet:						
		Plan Review:						
		Inspection:						
		Work type:	NO PERMIT					
		Inspection type:						
			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(d)
Duct System	New Installation, existing dwelling	Tech Sheet:				X		
		Plan Review:				X		
		Inspection:				X		
		Work type:	Minor Work					
		Inspection type:	Final Only					

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5					Notes	
Fire Place Logs			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
Fire Place logs	New Construction/ Addition	Tech Sheet:					X	
		Plan Review:					X	
		Inspection:					X	
		Work type:	Full permit					
		Inspection type:	Rough and Final					
			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(d)
Fire Place logs	Direct Replacement/ New Installation, existing dwelling	Tech Sheet:				X		
		Plan Review:				X		
		Inspection:				X		
		Work type:	Minor Work					
		Inspection type:	Final Only					

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(When to use the Mechanical Technical Section)

Work Description		1 & 2 Family Dwellings Groups R-3 & R-5					Notes	
Generator			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(a)
Generator	New Construction/ Addition	Tech Sheet:		X	X		X	
		Plan Review:		X	X		X	
		Inspection:		X	X		X	
		Work type:	Full permit					
		Inspection type:	Rough and Final					
			B	E	F	M	P	All responsibilities are as per N.J.A.C. 5:23-3.4(d)
Direct Replacement/New installation, existing dwelling	Tech Sheet:		X		X			
	Plan Review:		X		X			
	Inspection:		X		X			
	Work type:	Minor Work						
	Inspection type:	Final Only						



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