

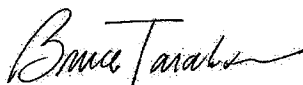


CODE AMENDMENT SUBMITTAL
ND DIVISION OF COMMUNITY SERVICES
 SFN 50180 (9/18)

Name James Schmidt		Jurisdiction/Company/Organization North Dakota State Electrical Board	
Signature 		Address 1929 N. Washington St. Ste A-1	
City Bismarck		State ND	ZIP Code 58507-7335
Telephone Number (701) 328-9522		Email jameschmidt@nd.gov	
Code to be Revised			
<input type="checkbox"/> 2015 International Building Code		<input checked="" type="checkbox"/> 2018 International Building Code	
<input type="checkbox"/> 2015 International Residential Code		<input checked="" type="checkbox"/> 2018 International Residential Code	
<input type="checkbox"/> 2015 International Mechanical Code		<input checked="" type="checkbox"/> 2018 International Mechanical Code	
<input type="checkbox"/> 2015 International Fuel Gas Code		<input checked="" type="checkbox"/> 2018 International Fuel Gas Code	
<input type="checkbox"/> 2015 International Energy Conservation Code		<input checked="" type="checkbox"/> 2018 International Energy Conservation Code	
		<input checked="" type="checkbox"/> Other <u>2018 International Existing Building Code</u>	
Revision Sections 201.3			
Check One and Complete (attach additional pages if necessary)			
<input checked="" type="checkbox"/> Revise as follows: <input type="checkbox"/> Add as follows: <input type="checkbox"/> Delete and substitute as follows: <input type="checkbox"/> Delete			
<p>201.3 Where terms are not defined in this code such terms shall have meanings ascribed to them as in other code publications of the International Code Council. Whenever electrical codes are referenced by the International Code Council (ICC) in the International Building Code, International Residential Code, International Mechanical Code, International Fuel Gas Code, International Energy Conservation Code, International Existing Building Code, it shall mean the most recent versions of the National Electrical Code and the North Dakota State Wiring Standards adopted by the North Dakota State Electrical Board and the most recent versions of the Uniform Plumbing Code and the <u>Laws, Rules and Plumbing Installation Standards of North Dakota adopted by the North Dakota State</u> </p> <p>Plumbing Board. Wherever reference is made to flood plain requirements, it shall mean the local flood plain management ordinance.</p> <p>Reason: (attach additional pages if necessary)</p> <p>Existing amendment clarifies references to applicable electrical codes and wiring standards which are adopted by the North Dakota State Electrical Board and to the applicable plumbing standards which are adopted by the North Dakota State Plumbing Board.</p>			
<p>SEND TO: Department of Commerce Division of Community Service PO Box 2057 Bismarck, ND 58502-2057 (701) 665-4496</p>			

CODE AMENDMENT SUBMITTAL
ND DIVISION OF COMMUNITY SERVICES
 SFN 50180 (9/18)

Name Bruce Taralson	Jurisdiction/Company/Organization City of Fargo	
Signature 	Address 225 4 th Street N	
City Fargo	State ND	ZIP Code 58102
Telephone Number 701-241-1561	Email inspections@cityoffargo.com	

Code to be Revised

<input type="checkbox"/> 2015 International Building Code	<input type="checkbox"/> 2018 International Building Code
<input type="checkbox"/> 2015 International Residential Code	<input type="checkbox"/> 2018 International Residential Code
<input type="checkbox"/> 2015 International Mechanical Code	<input type="checkbox"/> 2018 International Mechanical Code
<input type="checkbox"/> 2015 International Fuel Gas Code	<input type="checkbox"/> 2018 International Fuel Gas Code
<input type="checkbox"/> 2015 International Energy Conservation Code	<input checked="" type="checkbox"/> 2018 International Energy Conservation Code
	<input type="checkbox"/> Other _____

Revision of: Table R402.1.2

Check One and Complete (attach additional pages if necessary)

Revise as follows: Add as follows: Delete and substitute as follows: Delete

Table R402.1.2 is hereby amended to read as follows:

Insulation and Fenestration Requirements By Component				
Climate Zone	###	Wood Frame Wall R-Value	###	Basement ^c Wall R-Value
6	###	20 or 13+5 _{h,i} 20+5 or 13+10 _{h,i}	###	15/19 10/13
7 and 8	###	20 or 13+5 _{h,i} 20+5 or 13+10 _{h,i}	###	15/19 10/13

(Balance of Table remains the same.)

Reason: (attach additional pages if necessary)

Previously existing state amendment retains the Wall R-Values currently used in new homes. The prescriptive wall requirement increased to R-20+R5 in climate zones 6, 7 and 8 of the 2012 IRC, Chapter 11. The additional cost for this is estimated at \$1,819 for 1,016 square feet of wall. This makes the simple payback between 26 and 55 years depending on the climate zone. This also will create a negative cash flow for the consumer in all cases.

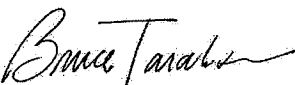
Climate Zone	Representative City	Basement Wall R-Value Change	-Energy Savings	Incremental Cost	Simple Payback
6	Minneapolis, MN	R-20->R-20+5	\$33/yr	\$1,819 (\$1.79/ft ²)	55 years
7	Bemidji, MN	R-20->R-20+5	\$41/yr	\$1,819 (1.79/ft ²)	44 years
8	Fairbanks, AK	R-20->R-20+5	\$71/yr	\$1,819 (1.79/ft ²)	26 years

The energy modeling was done using the Energy Plus simulation engine and BEopt version 1.4, Cost figures came from ASHRAE RP-1481.

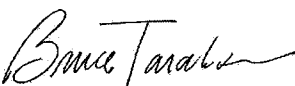
SEND TO:

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Division of Community Service
PO Box 2057
Bismarck, ND 58502-2057
701-665-4496

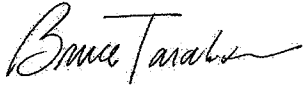
CODE AMENDMENT SUBMITTAL
ND DIVISION OF COMMUNITY SERVICES
 SFN 50180 (9/18)

Name Bruce Taralson		Jurisdiction/Company/Organization City of Fargo																						
Signature 		Address 225 4 th Street N																						
City Fargo		State ND	ZIP Code 58102																					
Telephone Number 701-241-1561		Email inspections@cityoffargo.com																						
Code to be Revised																								
<input type="checkbox"/> 2015 International Building Code <input type="checkbox"/> 2018 International Building Code <input type="checkbox"/> 2015 International Residential Code <input type="checkbox"/> 2018 International Residential Code <input type="checkbox"/> 2015 International Mechanical Code <input type="checkbox"/> 2018 International Mechanical Code <input type="checkbox"/> 2015 International Fuel Gas Code <input type="checkbox"/> 2018 International Fuel Gas Code <input type="checkbox"/> 2015 International Energy Conservation Code <input checked="" type="checkbox"/> 2018 International Energy Conservation Code <input type="checkbox"/> Other _____																								
Revision of: Table R402.1.4																								
Check One and Complete (attach additional pages if necessary)																								
<input checked="" type="checkbox"/> Revise as follows: <input type="checkbox"/> Add as follows: <input type="checkbox"/> Delete and substitute as follows: <input type="checkbox"/> Delete																								
Table R402.1.4 is hereby amended to read as follows:																								
<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th colspan="5">Equivalent U-Factors</th> </tr> <tr> <th style="width:20%;">Climate Zone</th> <th style="width:20%;">###</th> <th style="width:20%;">Frame Wall U-Factor</th> <th style="width:20%;">###</th> <th style="width:20%;">Basement Wall U-Factor</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>###</td> <td style="text-align: center;">0.048 <u>0.057</u></td> <td>###</td> <td style="text-align: center;">0.050 <u>0.059</u></td> </tr> <tr> <td>7 and 8</td> <td>###</td> <td style="text-align: center;">0.048 <u>0.057</u></td> <td>###</td> <td style="text-align: center;">0.050 <u>0.059</u></td> </tr> </tbody> </table>					Equivalent U-Factors					Climate Zone	###	Frame Wall U-Factor	###	Basement Wall U-Factor	6	###	0.048 <u>0.057</u>	###	0.050 <u>0.059</u>	7 and 8	###	0.048 <u>0.057</u>	###	0.050 <u>0.059</u>
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(Balance of Table remains the same.)																								
Reason: (attach additional pages if necessary)																								
<p>Previously existing local amendment. U Values adjusted to coincide amended R Values in Table R402.1.2.</p>																								
<p>SEND TO: Department of Commerce Division of Community Service PO Box 2057 Bismarck, ND 58502-2057 701-665-4496</p>																								

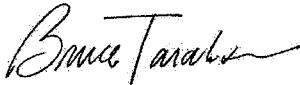
CODE AMENDMENT SUBMITTAL
ND DIVISION OF COMMUNITY SERVICES
SFN 50180 (9/18)

Name Bruce Taralson		Jurisdiction/Company/Organization City of Fargo	
Signature 		Address 225 4 th Street N	
City Fargo		State ND	ZIP Code 58102
Telephone Number 701-241-1561		Email inspections@cityoffargo.com	
Code to be Revised			
<input type="checkbox"/> 2015 International Building Code		<input type="checkbox"/> 2018 International Building Code	
<input type="checkbox"/> 2015 International Residential Code		<input type="checkbox"/> 2018 International Residential Code	
<input type="checkbox"/> 2015 International Mechanical Code		<input type="checkbox"/> 2018 International Mechanical Code	
<input type="checkbox"/> 2015 International Fuel Gas Code		<input type="checkbox"/> 2018 International Fuel Gas Code	
<input type="checkbox"/> 2015 International Energy Conservation Code		<input checked="" type="checkbox"/> 2018 International Energy Conservation Code	
		<input type="checkbox"/> Other _____	
Revision of: Section R402.4			
Check One and Complete (attach additional pages if necessary)			
<input checked="" type="checkbox"/> Revise as follows: <input type="checkbox"/> Add as follows: <input type="checkbox"/> Delete and substitute as follows: <input type="checkbox"/> Delete			
Section R402.4 is hereby amended to read as follows:			
<p>R402.4 Air leakage (Mandatory). The building thermal envelope shall be constructed to limit air leakage in accordance with the requirements of Section R402.4.1 through R402.4.4. <u>Exception: Dwelling units of R-2 Occupancies and multiple single family dwellings shall be permitted to comply with IECC Section C402.5.</u></p>			
Reason: (attach additional pages if necessary)			
<p>Previously existing state amendment. Air tightness testing for single-family detached homes is very straightforward; however, it is much more difficult to accurately test attached dwelling units, including multifamily buildings. Currently the IECC treats low-rise multifamily buildings of three stories or less like single-family homes and multifamily buildings of four stories or more like commercial buildings. Regardless of height, all multifamily buildings have the same air-tightness testing complications, such as: Does the entire building need to be tested at one time? What about multifamily buildings with open corridors? Does every dwelling need to be tested? Can the leakages be averaged between units? Is the leakage tested only to the "outside" or should it include leakage to adjacent units?</p> <p>By approving this change, low-rise multifamily buildings and attached single-family dwelling will avoid these complications, but still held to the same level or performance as high-rise (R-2) residential as well as all commercial buildings.</p>			
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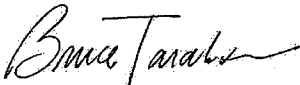
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Revision of: Section R402.4.1.2			
Check One and Complete (attach additional pages if necessary)			
<input checked="" type="checkbox"/> Revise as follows: <input type="checkbox"/> Add as follows: <input type="checkbox"/> Delete and substitute as follows: <input type="checkbox"/> Delete			
Section R402.4.1.2 is hereby amended to read as follows:			
<p>R402.4.1.2 Testing. The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding five air changes per hour in Climate Zones 1 through 8. and 2, and three air changes per hour in Climate Zones 3 through 8. ...</p>			
Reason: (attach additional pages if necessary)			
<p>Previously existing state amendment. Building tightness is an important part of an energy-efficient and comfortable house. However, 3 air changes (ACH) per hour at 50 Pascals is an extremely low target tightness, especially for smaller homes. The ASHRAE Handbook of Fundamentals shows that around 8% of U.S. homes achieve 3 ACH or less, 13% achieve 4, and less than 23% achieve 5. The proposed 5 ACH, while still an aggressive tightness level, will provide a tight, comfortable, energy-efficient home.</p>			
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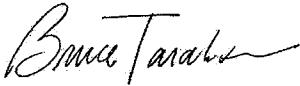
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<input type="checkbox"/> 2015 International Energy Conservation Code		<input checked="" type="checkbox"/> 2018 International Energy Conservation Code	
		<input type="checkbox"/> Other _____	
Revision of: Section R402.4.1.3			
Check One and Complete (attach additional pages if necessary)			
<input type="checkbox"/> Revise as follows: <input checked="" type="checkbox"/> Add as follows: <input type="checkbox"/> Delete and substitute as follows: <input type="checkbox"/> Delete			
Section R402.4.1.3 is hereby adopted to read as follows:			
<p><u>R402.4.1.3 Visual Inspection Option. Building envelope tightness and insulation shall be considered acceptable when installed in accordance with Table R402.4.1.1 - "Air Barrier and Insulation" and has been field verified.</u></p>			
Reason: (attach additional pages if necessary)			
<p>Previously existing state amendment that retains the visual inspection option that was deleted from the 2012 code. Homes passing the visual inspection would not be required to have a blower door test.</p>			
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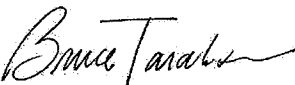
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<input type="checkbox"/> 2015 International Energy Conservation Code		<input checked="" type="checkbox"/> 2018 International Energy Conservation Code	
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Revision of: Section R403.3.5			
Check One and Complete (attach additional pages if necessary)			
<input checked="" type="checkbox"/> Revise as follows: <input type="checkbox"/> Add as follows: <input type="checkbox"/> Delete and substitute as follows: <input type="checkbox"/> Delete			
Section R403.3.5 is hereby amended to read as follows: R403.3.5 Building Cavities (Mandatory). Building framing cavities shall not be used as <u>supply</u> ducts and plenums .			
Reason: (attach additional pages if necessary) Previously existing state amendment that allows building framing cavities to be used as return air ducts.			
SEND TO: Department of Commerce Division of Community Service PO Box 2057 Bismarck, ND 58502-2057 701-665-4496			

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<input type="checkbox"/> 2015 International Energy Conservation Code		<input checked="" type="checkbox"/> 2018 International Energy Conservation Code	
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Revision of: Section R403.6			
Check One and Complete (attach additional pages if necessary)			
<input checked="" type="checkbox"/> Revise as follows: <input type="checkbox"/> Add as follows: <input type="checkbox"/> Delete and substitute as follows: <input type="checkbox"/> Delete			
Section R403.6 is hereby amended to read as follows: R403.6 Mechanical <u>V</u> entilation (Mandatory). (balance unchanged)			
Reason: (attach additional pages if necessary) Previously existing state amendment. This section addresses more than just mechanical ventilation.			
SEND TO: Department of Commerce Division of Community Service PO Box 2057 Bismarck, ND 58502-2057 701-665-4496			

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<input type="checkbox"/> 2015 International Energy Conservation Code		<input checked="" type="checkbox"/> 2018 International Energy Conservation Code	
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Revision of: Table R405.5.2(1)			
Check One and Complete (attach additional pages if necessary)			
<input checked="" type="checkbox"/> Revise as follows: <input type="checkbox"/> Add as follows: <input type="checkbox"/> Delete and substitute as follows: <input type="checkbox"/> Delete			
Table R405.5.2(1) is hereby amended to read as follows:			
Specifications for the Standard Reference and Proposed Design			
Building Component	Standard Reference Design	Proposed Design	
Air exchange rate	Air leakage rate of 5 air changes per hour in Climate Zones 1 and 2, and 3 air changes per hour in Climate Zones 3 through 8 at a pressure of 0.2 inches w.g (50 Pa). BalanceT is unchanged.	For residences that are not tested, the same air leakage rate as the standard reference design. For tested residences, the measured air exchange rate ^a . The mechanical ventilation rated shall be in addition to the air leakage rate and shall be as proposed.	

Reason: (attach additional pages if necessary)

Previously existing state amendment. Table will coincide with Section R402.4.1.2.

SEND TO:

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