

## APPENDIX 13-D

[Combine into one form and change page 2 of Form 400C to read as shown:]

### FORM 400C-08 AllClimateZones

Opaque Elements	Nonresidential		Residential		Semiheated	
	Assembly Maximum	Insulation Min. R-Value	Assembly Maximum	Insulation Min. R-Value	Assembly Maximum	Insulation Min. R-Value
<b>Roofs</b>						
Insulation Entirely above Deck	U-0.048	R-20 c.i.	U-0.048	R-20 c.i.	U-0.218	R-3.8 c.i.
Metal Building	U-0.065	R-19	U-0.065	R-19.0	U-0.167	R-6.0
Attic and Other	U-0.027	R-38	U-0.034	R-30.0	U0.081	R-13.0
<b>Walls, Above-Grade</b>						
Mass	U-0.123 <sup>1</sup>	R-7.6 c.i. <sup>1</sup>	U-0.123	R-7.6 c.i.	U-0.580	NR
Metal Building	U-0.113	R-13	U-0.113	R-13.0	U-0.184	R-6.0
Steel-Framed	U-0.124	R-13	U-0.064	R-13+R-7.5c.i.	U-0.124	R-13
Wood-Framed and Other	U-0.089	R-13	U-0.089	R-13.0	U-0.089	R-13
<b>Walls, Below-Grade</b>						
Below-Grade Wall	C1.140	NR	C1.140	NR	C1.140	NR
<b>Floors</b>						
Mass	U-0.107	R-6.3 c.i.	U-0.087	R-8.3 c.i.	U-0.322	NR
Steel-Joist	U-0.052	R-19	U-0.052	R-19	U-0.069	R-13
Wood-Framed and Other	U-0.051	R-19	U-0.033	R-30	U-0.066	R-13
<b>Slab-On-Grade Floors</b>						
Unheated	F-0.730	NR	F-0.730	NR	F-0.730	NR
Heated	F-1.020	R-7.5 for 12"	F-0.730	NR	F-0.730	NR
<b>Opaque Doors</b>						
Swinging	U-0.70		U-0.70		U-0.70	
Nonswinging	U-1.45		U-0.500		U-1.45	
<b>Fenestration</b>						
	<b>Assembly Max. U</b>	<b>Assembly Max. SHGC</b>	<b>Assembly Max. U</b>	<b>Assembly Max. SHGC</b>	<b>Assembly Max. U</b>	<b>Assembly Max. SHGC</b>
Vertical Glazing, 0%-40% of Wall						
Nonmetal framing (all) <sup>2</sup>	U-0.75	SHGC 0.25	U-0.75	SHGC 0.25	U-1.2	SHGC NR
Metal framing (curtainwall/storefront) <sup>3</sup>	U-0.70	SHGC 0.25	U-0.70	SHGC 0.25	U-1.2	SHGC NR
Metal framing (entrance door) <sup>3</sup>	U-1.10	SHGC 0.25	U-1.10	SHGC 0.25	U-1.2	SHGC NR
Metal framing (all other) <sup>3</sup>	U-0.75	SHGC 0.25	U-0.75	SHGC 0.25	U-1.2	SHGC NR
<b>Skylight</b>						
	<b>Assembly Max. U</b>	<b>Assembly Max. SHGC</b>	<b>Assembly Max. U</b>	<b>Assembly Max. SHGC</b>	<b>Assembly Max. U</b>	<b>Assembly Max. SHGC</b>
Skylight with Curb, Glass, % of Roof						
0% - 5.0%	U-1.36	SHGC 0.19	U <sub>All</sub> -1.98	SHGC <sub>All</sub> 0.19	U <sub>All</sub> -1.98	SHGC <sub>All</sub> NR
Skylight with Curb, Plastic, % of Roof						
0% - 5.0%	U-1.36	SHGC 0.19	U <sub>All</sub> -1.90	SHGC <sub>All</sub> 0.27	U <sub>All</sub> -1.90	SHGC <sub>All</sub> NR
Skylight without Curb, All, % of Roof						
0% - 5.0%	U-1.36	SHGC 0.19	U <sub>All</sub> -1.36	SHGC <sub>All</sub> 0.19	U <sub>All</sub> -1.36	SHGC <sub>All</sub> NR
<b>NONRESIDENTIAL ONLY</b>						
<b>HAC Equipment</b>						
Air conditioner (0-65KBtuh)	SEER 13.0		Gas furnace (0-225 KBtuh - SP)		80% AFUE or E <sub>t</sub>	
Air conditioner (>65-135KBtuh)	11.3EER, 11.5IPLV		Gas furnace (0-225 KBtuh-split)		80% AFUE or E <sub>t</sub>	
Air conditioner (>135-240 KBtuh)	11EER, 11.5IPLV		Gas furnace (>225 KBtuh)		80% E <sub>c</sub>	
Air conditioner (>240 KBtuh)	10.6EER, 11.2IPLV		Heat pump (0 – 65 KBtuh)		13.0 SEER/ 7.7 HSPF	
			Heat pump (>65 – 135 KBtuh)		10.6 EER/ 11.0 IPLV/ 3.2 COP	
			Heat pump (>135 KBtuh)		10.1 EER/ 11.5 IPLV/ 3.1 COP	
<b>Service Hot Water</b>						
Gas storage	90% E <sub>t</sub>					
Gas instantaneous	0.81 EF or 81% E <sub>t</sub>					
Electric storage 12 kW	EF > 0.99 – 0.0012xV					
Pipe insulation (d < 1.5", d ≥ 1.5")	1", 1.5"					
<b>Lighting</b>	1.1 W/ft <sup>2</sup>					

The following definitions apply: c.i.=continuous insulation; NR = No requirement.

<sup>1</sup> Exception to Section B2.2.1.1 of Appendix 13-B applies.

<sup>2</sup> Nonmetal framing includes framing materials other than metal with or without metal reinforcing or cladding.

<sup>3</sup> Metal framing includes metal framing with or without thermal break. The "all other" subcategory includes operable windows, fixed windows and non-entrance doors.

# APPENDIX 13-D and SUBAPPENDIX G-D FORMS

## Form 600A-08 7, All climate zones

[Modify Form 600A North 123, Central 456 and South 789, page 4, **Baseline totals box** to read as follows. Note that brackets should surround the entire first part of the equation so that the sum of Base Cooling Points, Base Heating Points and Base Hot Water Points is multiplied by 0.85 to get Total Base Points]

$$\begin{array}{rclcl}
 \text{BASE COOLING} & & \text{BASE} & & \text{BASE HOT} & & & & \text{TOTAL BASE} \\
 \text{POINTS} & + & \text{HEATING} & + & \text{WATER POINTS} & \times & \underline{0.85} & = & \text{POINTS} \\
 \text{(From P. 2)} & & \text{POINTS} & & \text{(From P. 2)} & & & & \text{(Enter on P. 1)}
 \end{array}$$

## Form 1100B-08 7

[Combine forms for Climate Zones North (1,2,3), Central (4,5,6) and South (7,8,9) into the same form]

[Change Page 1 as follows:]

### 13. Air distribution system: Duct insulation, location Test report (attach if ducts not in conditioned space)

[Change Page 2 as follows:]

**Table 11B-1 Minimum Requirements (See Note 1) All Climate Zones ~~1,2,3 4,5,6 7,8,9~~**

Building Component	Performance Criteria	Installed Values:
Windows (see Note 2):	U-Factor = <del>0.40</del> <u>0.75</u> SHGC = <del>0.30</del> <u>0.40</u> % of CFA <= <del>14</del> <u>16</u> %	U-Factor = SHGC = % of CFA =
Exterior door type	Wood or insulated	Type:
Walls – Ext. and Adj. (see Note 3): Frame Mass <u>Interior of wall</u> <u>Exterior of wall</u>	All-zones: R-13 North: Int: <del>R-6</del> ; Ext: <del>R-4</del> Central: Int: R-6 ; Ext: <del>R-4</del> South: Int: R-4 ; Ext: <del>R-3</del>	R-Value = R-Value = R-Value = R-Value =
Ceilings (see Notes 3 & 4):	R=30	R-Value =
Floors: Slab-on-Grade Over unconditioned spaces (see Note 3)	No requirement R-13	R-Value =
Hot water systems (storage type): Electric (see Note 5):  Natural gas fired (see Note 6):	40 gal: EF = 0.92 50 gal: EF = 0.90  40 gal: EF = 0.59 50 gal: EF = 0.58	Gallons = EF =  Gallons = EF =

Air conditioning systems (see Note 7)	SEER = 13.0	SEER =
Heat pump systems (see Note 8)	SEER = 13.0 HSPF = 7.7	SEER = HSPF =
Natural gas furnaces	AFUE = 78%	AFUE =
Oil furnaces	AFUE = 78%	AFUE =
Ductwork: (see Note 9) <u>Conditioned space</u> <u>Unconditioned space</u>	<u>Unconditioned: R-6</u> <u>Conditioned: R-4.2 NA</u> <u>R-6, TESTED</u>	Location: R-Value = <u>Test Report:</u>
Air Handler location:	Garage, Attic or Interior	Location:

**Table 11B-1 Notes:**

- (1) Each component present in the As-Built home must meet or exceed each of the applicable performance criteria in order to comply with this code using this method; otherwise Method A compliance must be used.
- (2) Windows and doors qualifying as glazed fenestration areas must comply with both the maximum U-Factor and the maximum SHGC (solar Heat Gain Coefficient) criteria and have a maximum total window area equal to or less than 14.46% of the conditioned floor area (CFA), otherwise Method A must be used for compliance.
- (3) R-Values are for insulation material only as applied in accordance manufacturers' installation instructions. For mass walls, the interior (Int) requirement must be met unless at least 50% of the insulation value is on the exterior (Ext) or integral to the wall.
- (4) Attic knee walls shall be insulated to same level as ceilings and shall have a positive means of maintaining insulation in place. Such means may include rigid insulation board or air barrier sheet materials adequately fastened to the attic sides of knee wall framing materials.
- (5) For other electric storage volumes, minimum EF = 0.97 - (0.00132 \* volume)
- (6) For other natural gas storage volumes, minimum EF = 0.67 - (0.0019 \* volume)
- (7) For all conventional units with capacities greater than 30,000 Btu/hr. For Small-Duct, High-Velocity units, Space Constrained units, and units with capacities less than 30,000 Btu/hr see Table 13-607.ABC.3.2A of the *Florida Building Code, Building*, or Table N1107.ABC.3.2A of the *Florida Building Code, Residential*.
- (8) For all conventional units with capacities greater than 30,000 Btu/hr. For Small-Duct, High-Velocity units, Space Constrained units, and units with capacities less than 30,000 Btu/hr see Table 13-607.ABC.3.2B of the *Florida Building Code, Building*, or Table N1107.ABC.3.2B of the *Florida Building Code, Residential*.
- (9) All ducts and air handling units shall be either located in conditioned space or tested by a Class 1 BERS rater to be leak free according to the criteria in Section 13-610.A.2 of the *Florida Building Code, Building*, or Section N1110.A.2 of the *Florida Building Code, Residential*.

**Table 11B-2 [Change as shown:]**

**Combustion Heating** N1108.ABC.3.2E Combustion space and water heating systems must be provided with outside combustion air, except for direct vent appliances. Combustion heaters shall have an interrupted or intermittent ignition device (IID) and have either power venting or an automatic flue damper.

**Swimming Pools and Spas.** N1112.ABC.2.3.4 Spas & heated pools must have covers (except solar heated). Noncommercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%. Heat pump pool heaters shall have a minimum COP of 4.0.

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**Table 11C-1 [Change table as shown for all climate zones:]**

**Walls**

<b>Concrete Block</b>	<b><u>R-6</u></b>	<b><u>R-5</u></b>
<b>Frame, 2"-x4"-</b>	<b><u>R-13</u></b>	<b><u>R-11</u></b>
<b>Frame, 2"-x6"-</b>	<b><u>R-19</u></b>	
<b>Common, Frame</b>	<b><u>R-13</u></b>	<b><u>R-11</u></b>

**Table 11C-3 [Change as shown:]**

**Combustion Heating** N1108.ABC.3.2E Combustion space and water heating systems must be provided with outside combustion air , except for direct vent appliances. Combusion heaters shall have an interrupted or intermittent ignition device (IID) and have either power venting or an automatic flue damper.

**Swimming Pools and Spas.** N1112.ABC.2.3.4 Spas & heated pools must have covers (except solar heated). Noncommercial pools must have a pump timer. Gas spa & pool heaters must have a minimum thermal efficiency of 78%. Heat pump pool heaters shall have a minimum COP of 4.0.