

**ERRATA SHEET FOR
ANSI/ASHRAE/IESNA STANDARD 90.1-2007 (I-P edition)
Energy Standard for Buildings Except Low-Rise Residential Buildings**

March 8, 2018

The corrections listed in this errata sheet apply to ANSI/ASHRAE/IESNA Standard 90.1-2007, I-P edition. The first printing is identified on the outside back cover of the standard as “86147 PC 12/07”, the second printing is identified on the outside back cover as “86147 PC 11/08 *Errata noted in list dated 10/10/2008 have been incorporated.*”, the third printing is identified on the outside back cover as “Product Code: 86147 10/09 *Errata noted in the list dated 9/24/09 have been corrected.*”, the fourth printing is identified as “Product Code: 86147 05/10 *Errata noted in the list dated 3/8/10 have been corrected.*”, and the fifth printing is identified as “Product Code: 86147 03/11 *Errata noted in the list dated 2/20/10 have been corrected.*” The shaded item has been added since the previously published errata sheet dated August 15, 2011 was distributed.

- Only the items identified with a superscript “^a” apply to the second printing of ANSI/ASHRAE/IESNA Standard 90.1-2007. All other errata have been incorporated into the second printing.
- Only the items identified with a superscript “^b” apply to the third printing of ANSI/ASHRAE/IESNA Standard 90.1-2007. All other errata have been incorporated into the third printing.
- Only the items identified with a superscript “^c” apply to the fourth printing of ANSI/ASHRAE/IESNA Standard 90.1-2007. All other errata have been incorporated into the fourth printing.
- Only the items identified with a superscript “^d” apply to the fifth printing of ANSI/ASHRAE/IESNA Standard 90.1-2007. All other errata have been incorporated into the fifth printing.

NOTICE: ASHRAE now has a list server for Standing Standards Project Committee 90.1 (SSPC 90.1). Interested parties can now subscribe and unsubscribe to the list server and be automatically notified via e-mail when activities and information related to the Standard and the User’s Manual is available. To sign up for the list server please visit **Project Committee List Servers for Standard** on the Technology / Standards section of the ASHRAE website at <http://www.ashrae.org/publications/detail/15620>.

Page(s) Erratum

11^a **Section 3.2 Definitions.** On page 11 delete the following definition:
(Note: the standard does not include a definition for lamp wattage, rated and this term is not used in the standard.)

rated lamp wattage: see lamp wattage, rated.

22^{a,b,c,d} **TABLE 5.5-4 Building Envelope Requirements for Climate Zone 4 (A, B, C).** In Table 5.5-4, for *Opaque Doors*, Nonswinging, Nonresidential, change the Assembly Maximum from “U-1.500” to “U-0.500”.

23^{a,b} **Table 5.5-5 Building Envelope Requirements for Climate Zone 5 (A, B, C).** In the first

column of Table 5.5-5 under the heading “**Fenestration**” change “*Vertical Glazing, % of Wall*” to read “*Vertical Glazing, 0% - 40% of Wall*”.

- 23^a **5.5.3.3 Below-Grade Wall Insulation.** Change the first sentence in Section 5.5.3.3 as follows:

(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

5.5.3.3 Below-Grade Wall Insulation. *Below-grade walls shall have a rated R-value of insulation not less ~~than~~ the insulation- values specified in Tables 5.5-1 through 5.5-8.*

- 27^a **5.5.4.2.1 Vertical Fenestration Area.** Change the Exception to 5.5.4.2.1 as follows:

(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

Exception: *Vertical fenestration complying with Exception (c)~~(b)~~ to Section 5.5.4.4.1.*

- 32 **6.4.1.4 Verification of Equipment Efficiencies.** Delete the following from Section 6.4.1.4:

(Note: Deletions shown in ~~strikethrough~~.)

6.4.1.4 Verification of Equipment Efficiencies. Equipment *efficiency* information supplied by *manufacturers* shall be verified as follows:

~~f. Products covered in Table 6.8.1G shall have efficiency ratings supported by data furnished by the manufacturer.~~

- 43 **TABLE 6.8.1A.** The following was removed from Table 6.8.1A by Addendum f to 90.1-2004 and should not be included in 90.1-2007. (Note: Deletions shown in ~~strikethrough~~.)

Small duct high-velocity, air-cooled	<65,000 Btu/h ^e	All	Split system	10 SEER
--------------------------------------	----------------------------	-----	--------------	---------

- 45 **TABLE 6.8.1B.** The following was removed from Table 6.8.1B by Addendum f to 90.1-2004 and should not be included in 90.1-2007. (Note: Deletions shown in ~~strikethrough~~.)

Small duct high-velocity (air-cooled, cooling mode)	< 65,000 Btu/h ^e	All	Split system	10 SEER
---	-----------------------------	-----	--------------	---------

Small duct high-velocity (air-cooled, heating mode)	< 65,000 Btu/h ^e (cooling capacity)	—	Split system	6.8 HSPF
---	--	---	--------------	----------

- 52 **TABLE 6.8.1I.** Change the title of Table 6.8.1I to read as follows:

TABLE 6.8.1I Minimum Efficiencies for Centrifugal Chillers ≥150 tons, <300 tons
Centrifugal Chillers ≥150 tons, <300 tons
COP_{std} = 5.55; IPLV_{std} = 5.90

53 **TABLE 6.8.1J.** Change the title of Table 6.8.1J to read as follows:

TABLE 6.8.1J Minimum Efficiencies for Centrifugal Chillers ≥300 tons
Centrifugal Chillers ≥300 tons
COP_{std}= 6.10; IPLV_{std}=6.40

64 **TABLE 9.6.1 Lighting Power Densities Using the Space-by-Space Method (continued).** In the second column of Table 9.6.1, under Retail Sales Area, change the reference from “Section 9.6.3(c)” to “Section 9.6.2(b).”

87 **A3.3.1 General. (Steel-Framed Walls)** In the fourth sentence of Section A3.3.1 (top of first column on page 87) change “Table A-21” to “Table A9.2B”.

97^{b,c} **Table A6.3 Assembly F-Factors for Slab-on-Grade Floors.** In the second set of values for both unheated and heated slabs (12, 24, 36, and 48 in.) change the word “horizontal” to “vertical”. See attached Table A6.3 for changes. *This erratum does not apply to the first and second printings of 90.1-2007 (I-P).*

113 **Table B-3 International Climate Zones.** Inadvertent omission of the climate zones for New Zealand. Insert the following climate zone numbers as published in Addendum “am” to 90.1-2001:

Country		
City (Providence or Region)	Zone	
New Zealand		
Auckland Airport	4	
Christchurch	4	
Wellington	4	

125 **TABLE D-1 US and US Territory Climate Data (continued).** The last two columns in the table are incorrect; the two existing columns have shifted to the right and there is a column of data missing. Replace the last two columns with the three columns below.

State City	Cooling Design Temperature		
	Dry-Bulb	Wet-Bulb	No. Hrs. 8 a.m. - 4 p.m.
	1.0%	1.0%	55 < Tdb < 69
(California cont.)			
Napa State Hospital	N.A.	N.A.	N.A.
Needles FAA Airport	N.A.	N.A.	N.A.
Oakland/Intl	N.A.	N.A.	1905
Oceanside Marina	N.A.	N.A.	N.A.
Ontario/Intl	98	70	N.A.
Oxnard	79	64	N.A.
Palm Springs	N.A.	N.A.	N.A.
Palmdale	N.A.	N.A.	N.A.
Pasadena	N.A.	N.A.	N.A.
Petaluma Fire Stn 3	N.A.	N.A.	N.A.
Pomona Cal Poly	N.A.	N.A.	N.A.

Redding WSO	N.A.	N.A.	N.A.
Redlands	N.A.	N.A.	N.A.
Richmond	N.A.	N.A.	N.A.
Riverside/March AFB	98	68	N.A.
Sacramento FAA AP	97	68	990
Salinas FAA AP	78	62	N.A.
San Bernardino/Norton	101	70	N.A.
San Diego WSO AP	81	67	1911
San Francisco WSO AP	78	62	1796
San Jose	89	66	N.A.
San Luis Obispo Poly	N.A.	N.A.	N.A.
Santa Ana Fire Station	N.A.	N.A.	N.A.
Santa Barbara FAA AP	80	64	N.A.
Santa Cruz	N.A.	N.A.	N.A.
Santa Maria WSO AP	82	62	2016
Santa Monica Pier	N.A.	N.A.	N.A.
Santa Paula	N.A.	N.A.	N.A.
Santa Rosa	N.A.	N.A.	N.A.
Stockton WSO AP	97	68	N.A.
Ukiah	N.A.	N.A.	N.A.

- 152^{a,b,c} **Table D-3 International Climate Data (continued).** For **China**, Beijing/Peking, under the seventh column titled “CDD50” change “4,15” to 4115”.
- 152^{a,b,c} **Table D-3 International Climate Data (continued).** For **China**, Cangzhou, under the second column titled “Providence or Region” change “Municipalities” to “Hebei” and relocate this row (Cangzhou) to Table D-3, page 154, and place between “Baoding” and “Chengde” which are also located (and alphabetically listed) in Hebei.
- 171^a **Informative Appendix F Addenda Description Information.** For Addendum “ad” in Table F-1, in the column titled “Description of Changes”, change Section “5.3.1.1” to Section “5.5.3.1”.
- 172^a **Informative Appendix F Addenda Description Information.** For Addendum 90.1ak in Table F-1, in the column titled “Description of Changes”, change Table “6.2.1G” to Table “6.8.1G”.

TABLE A6.3 Assembly F-Factors for Slab-on-Grade Floors

Insulation Description	Rated R-Value of Insulation												
	R-0	R-5	R-7.5	R-10	R-15	R-20	R-25	R-30	R-35	R-40	R-45	R-50	R-55
Unheated Slabs													
None	0.73												
12 in. horizontal		0.72	0.71	0.71	0.71								
24 in. horizontal		0.70	0.70	0.70	0.69								
36 in. horizontal		0.68	0.67	0.66	0.66								
48 in. horizontal		0.67	0.65	0.64	0.63								
12 in. vertical horizontal		0.61	0.60	0.58	0.57	0.567	0.565	0.564					
24 in. vertical horizontal		0.58	0.56	0.54	0.52	0.510	0.505	0.502					
36 in. vertical horizontal		0.56	0.53	0.51	0.48	0.472	0.464	0.460					
48 in. vertical horizontal		0.54	0.51	0.48	0.45	0.434	0.424	0.419					
Fully insulated slab		0.46	0.41	0.36	0.30	0.261	0.233	0.213	0.198	0.186	0.176	0.168	0.161
Heated Slabs													
None	1.35												
12 in. horizontal		1.31	1.31	1.30	1.30								
24 in. horizontal		1.28	1.27	1.26	1.25								
36 in. horizontal		1.24	1.21	1.20	1.18								
48 in. horizontal		1.20	1.17	1.13	1.11								
12 in. vertical horizontal		1.06	1.02	1.00	0.98	0.968	0.964	0.961					
24 in. vertical horizontal		0.99	0.95	0.90	0.86	0.843	0.832	0.827					
36 in. vertical horizontal		0.95	0.89	0.84	0.79	0.762	0.747	0.740					
48 in. vertical horizontal		0.91	0.85	0.78	0.72	0.688	0.671	0.659					
Fully insulated slab		0.74	0.64	0.55	0.44	0.373	0.326	0.296	0.273	0.255	0.239	0.227	0.217