

**ERRATA SHEET FOR ANSI/ASHRAE STANDARD 55-2010**  
**Thermal Environmental Conditions for Human Occupancy**

**August 28, 2012**

The corrections listed in this errata sheet apply to ANSI/ASHRAE Standard 55-2010. The first printing is identified on the outside back cover as “Product Code: 86150 PC 10/10”. Shaded items have been added since the previously published errata sheet dated March 22, 2011 was distributed.

**Page    Erratum**

- 2    Foreword.** In the Foreword, second column, third bullet, second sentence, change “Informative appendix H” to “Informative Appendix G”.
- 3    3. Definitions.** In the definition of “*temperature, mean monthly outdoor air* ( $t_{a(out)}$ )” change “ $t_{a(out)}$ ” to “ $\overline{t_{a(out)}}$ ” (added line above  $t_{a(out)}$ ).
- 3    3. Definitions.** In the definition of “*temperature, mean radiant* ( $t_r$ )” change “ $t_r$ ” to “ $\overline{t_r}$ ” (added line above  $t_r$ ).
- 4    3 Definitions.** In the definition of “*temperature, standard effective (SET)*” change “ $t_r = t_a$ ” to “ $\overline{t_r} = t_a$ ” (added line above  $t_r$ ).
- 4    3 Definitions.** In the definition of “*velocity, mean* ( $v_a$ )” change “ $v_a$ ” to “ $\overline{v_a}$ ” (added line above  $v_a$ ).
- 6    Figure 5.2.1.1 Graphic Comfort Zone Method: Acceptable range of operative temperature and humidity for spaces that meet the criteria specified in Section 5.2.1.1 (1.1 met; 0.5 and 1.0 clo).** Replace the current Figure 5.2.1.1, I-P and SI editions, on page 6 of the standard with the attached page. Also attached are landscape versions for clarity.

Explanation of the changes to Figure 5.2.1.1:

*The top left corner of the 1 clo comfort zone was erroneously plotted for a 1.0 met metabolic rate. It has been corrected for the correct 1.1 met rate in new IP and SI versions of the figure. The top left corner of the extended ‘computer model analysis required’ comfort zone is also corrected.*

*The top right corner of the 1clo comfort zone has been shifted slightly so that the figure matches the values in the table given in Appendix D. This shift is small and without engineering significance. It resulted from the table using relative humidity rather than humidity ratio in determining the comfort zone corners.*

- 13    5.4 Description of Thermal Environmental Variables.** In the equation for operative temperature change the variable “ $t_r$ ” to “ $\overline{t_r}$ ” so the equation reads as follows:

$$t_o = (t_a + \overline{t_r}) / 2$$

$\overline{t_r}$  = mean radiant temperature.

- 22    Informative Appendix C.** In the equation for operative temperature change “ $t_r$ ” to “ $\overline{t_r}$ ”

so the equation reads as follows:

$$t_{op} = A t_a + (1-A) \bar{t}_r$$

$\bar{t}_r$  = mean radiant temperature.

- 23 Normative Appendix D Computer Program for Calculation of PMV-PPD.** In Line 200 of the computer program change “645” to “.645” so the equation now reads:

IF ICL < .078 THEN FCL = 1 + 1.29 \* ICL ELSE FCL = 1.05 + .645 \* ICL

- 23 Normative Appendix D Computer Program for Calculation of PMV-PPD.** In Line 370 of the computer program change “IF HCF<HCN” to “IF HCF>HCN”. In Line 510 change “0.28” to “.028”.

- 33 Informative Appendix H Bibliography.** Delete the following duplicate reference in Informative Appendix H as follows:  
(Note: Deletions are shown in ~~strikethrough~~.)

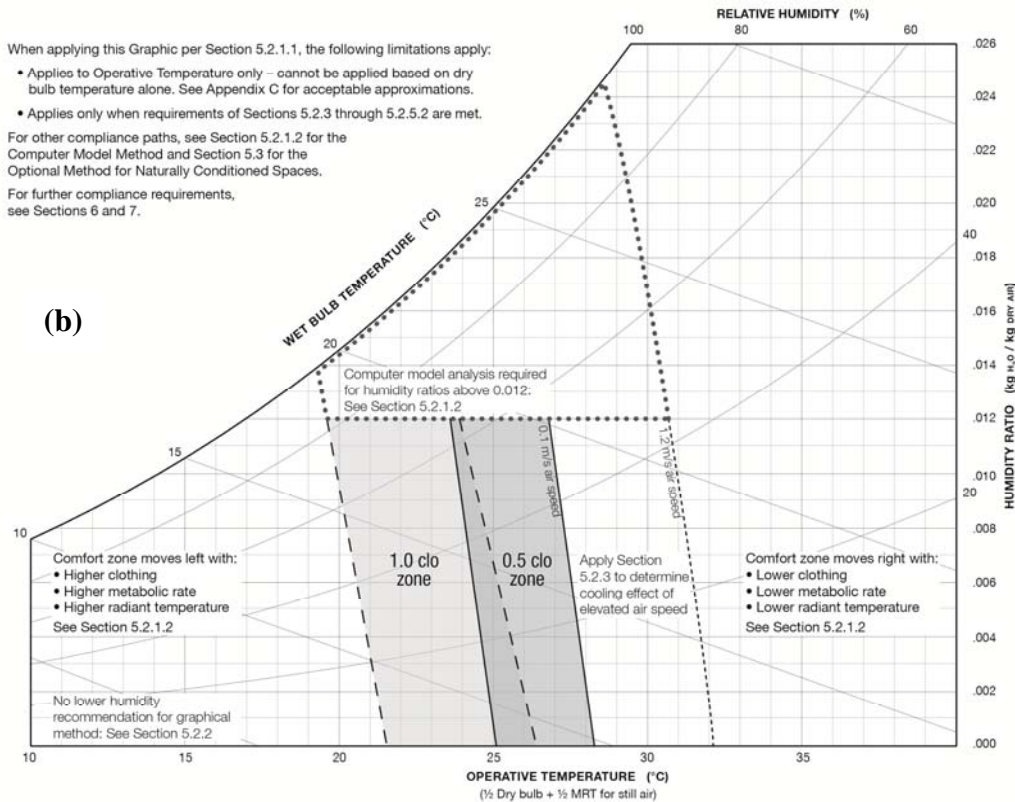
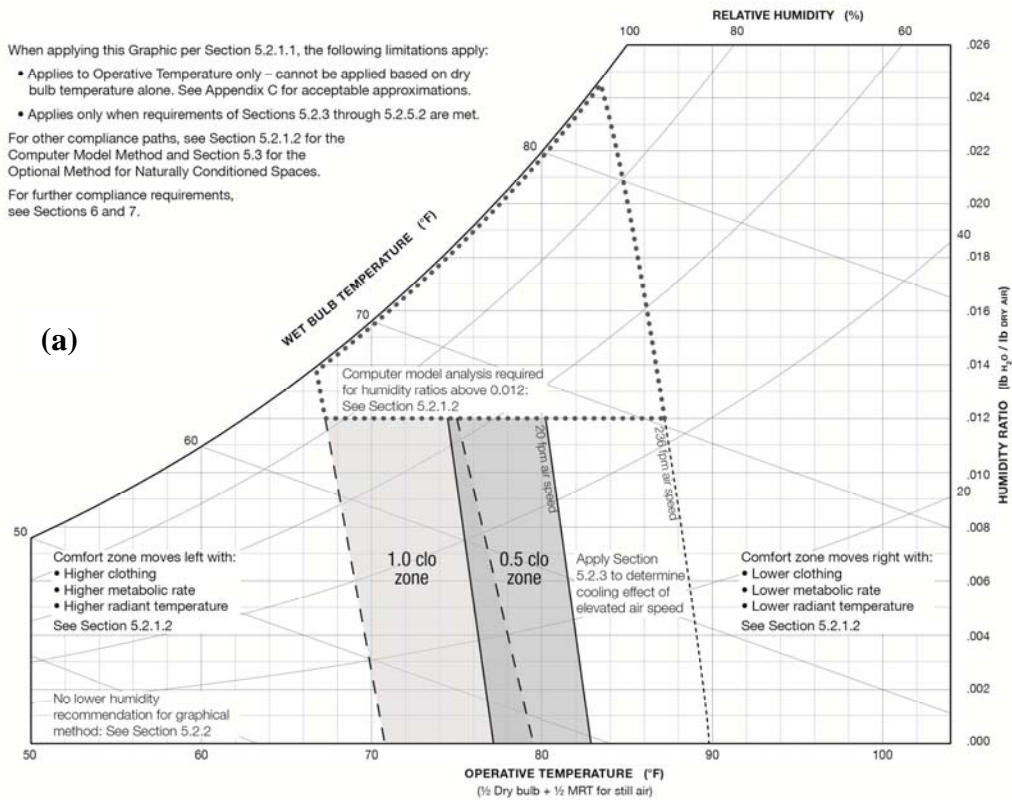
~~Fanger, P.O., A.K. Melikov, H. Hanzawa, and J. Ring. 1988. Air turbulence and sensation of draught. *Energy and Buildings* 12:21–9.~~

*Note:* Duplicate reference from Informative Appendix H shown correctly below.

Fanger, P.O., A. K. Melikov, H. Hanzawa, and J. Ring. 1988. Air turbulence and sensation of draught. *Energy and Buildings* 12:21–39.

- 34 Informative Appendix H Bibliography.** Revise the following reference in Informative Appendix H as follows:  
(Note: Additions are shown in underline and deletions are shown in ~~strikethrough~~.)

Olesen, B.W. 1977. Thermal comfort requirements for floors. *Proceedings of The Meeting of Commissions B1, B2, E1 of IIR*, Belgrade, pp. 337-343 ~~307–13~~.



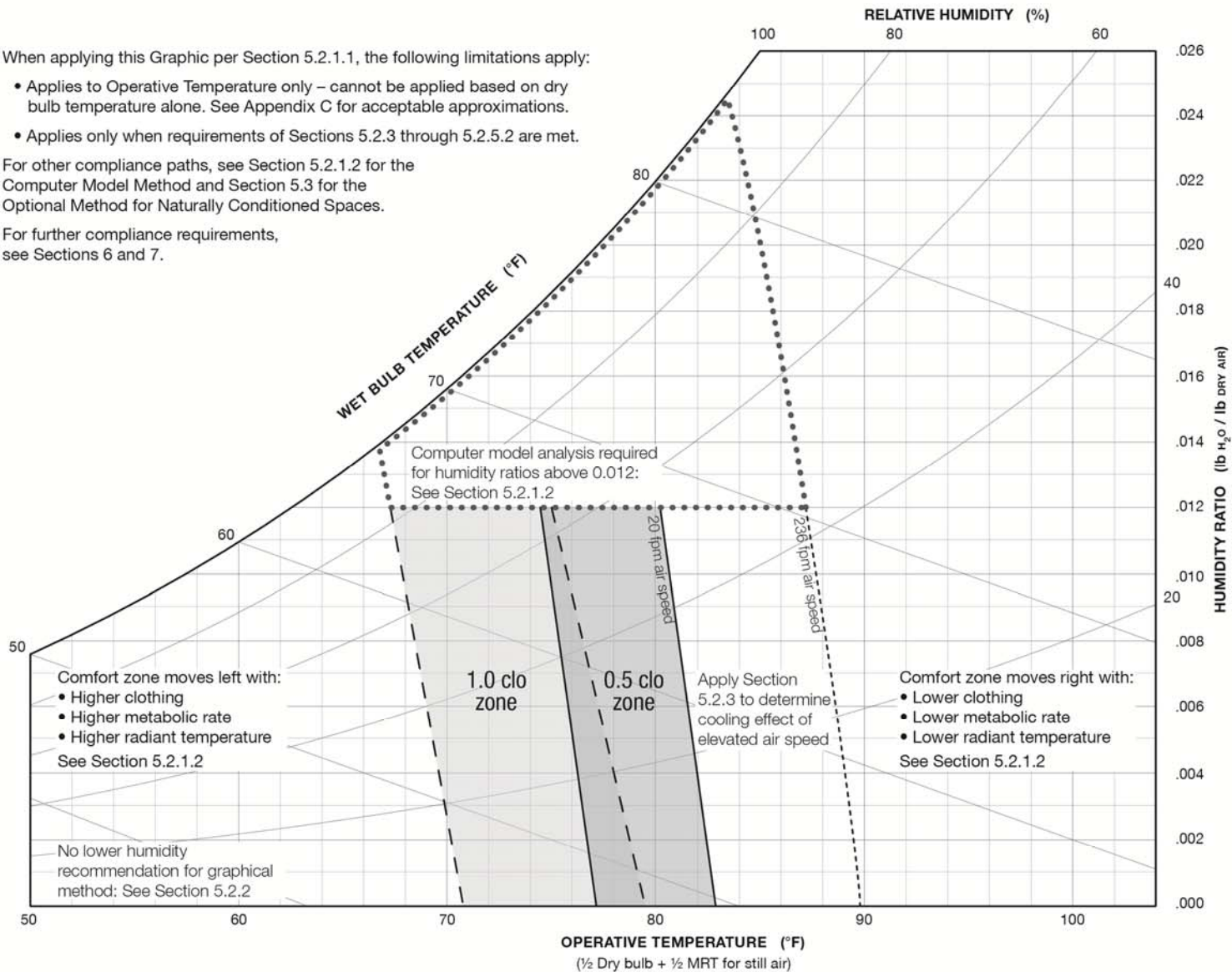
**Figure 5.2.1.1 Graphic Comfort Zone Method: Acceptable range of operative temperature and humidity for spaces that meet the criteria specified in Section 5.2.1.1 (1.1 met; 0.5 and 1.0 clo)—(a) I-P and (b) SI.**

When applying this Graphic per Section 5.2.1.1, the following limitations apply:

- Applies to Operative Temperature only – cannot be applied based on dry bulb temperature alone. See Appendix C for acceptable approximations.
- Applies only when requirements of Sections 5.2.3 through 5.2.5.2 are met.

For other compliance paths, see Section 5.2.1.2 for the Computer Model Method and Section 5.3 for the Optional Method for Naturally Conditioned Spaces.

For further compliance requirements, see Sections 6 and 7.



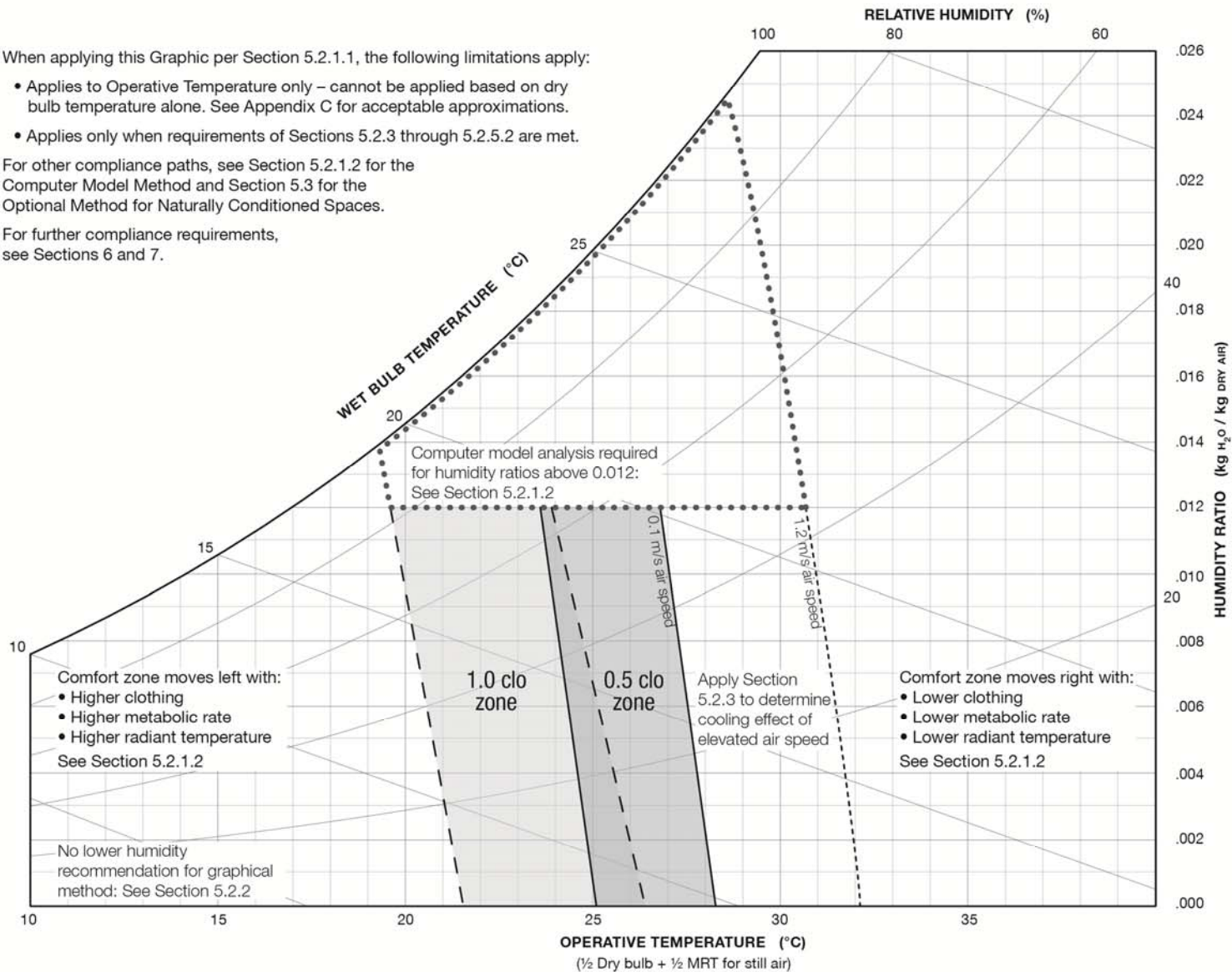
**Figure 5.2.1.1 (IP) Acceptable range of operative temperature and humidity for spaces that meet the criteria specified in Section 5.2.1.1. 1.1 met, 0.5 & 1.0 clo**

When applying this Graphic per Section 5.2.1.1, the following limitations apply:

- Applies to Operative Temperature only – cannot be applied based on dry bulb temperature alone. See Appendix C for acceptable approximations.
- Applies only when requirements of Sections 5.2.3 through 5.2.5.2 are met.

For other compliance paths, see Section 5.2.1.2 for the Computer Model Method and Section 5.3 for the Optional Method for Naturally Conditioned Spaces.

For further compliance requirements, see Sections 6 and 7.



**Figure 5.2.1.1 (SI) Acceptable range of operative temperature and humidity for spaces that meet the criteria specified in Section 5.2.1.1. 1.1 met, 0.5 & 1.0 clo**