

GSA P100 ASHRAE Updates

See [link](#) for current version of P100 standard

Section/Page	Comment	Justification
1.4.8	<p>The latest version approved by the Department of Energy is ASHRAE 90.1 – 2019.</p> <p>To</p> <p>The latest version approved by the Department of Energy is ASHRAE 90.1 – 2022.</p>	<p>Determination will probably be completed before you republish so perhaps you can conditionally approve this change based upon that being finished in time.</p>
1.9.3.1	<p>EPA 2005 requires new buildings to be designed to be at least 30 percent more efficient if life cycle cost effective than the energy model baseline design required by 10 CFR §433.100.</p>	<p>Based on Section 1.4.8, isn't this a more accurate statement about new GSA buildings? Suggest aligning the language.</p>
5.1 Mechanical Performance Table, P. 165	<p>Fan Energy Performance ➔ Calculations & Analysis</p> <p>Provide fan power limitation calculation per 90.1 Table 6.5.3.1.1.A.</p> <p>To</p> <p>Provide fan power limitation calculation per 90.1 Table 6.5.3.1-1, footnote a.</p>	<p>This is a more accurate description of where to locate that information in 90.1-2019 (and 2022)</p>
5.3.1.2	<p>5.3.1.2 ENERGY ANALYSIS...</p> <p>The compliance methodology must be in accordance with Sections 5 (except Section 5.6), 6, 7, 8, 9, and 10 of ASHRAE Standard 90.1.</p> <p>To</p> <p>The compliance methodology must be in accordance with Section 11.2 of ASHRAE Standard 90.1-2019 (or Section 12.2 of ASHRAE Standard 90.1-2022 *if determination complete*)</p>	<p>This is better than listing out the other sections that are mandatory with energy modeling compliance. By saying Section 11.2 (or 12.2 for 90.1-2022), you are encompassing the mandatory requirements from Sections 5-10 (or in 2022, Sections 5-11.)</p> <p>If you leave it at Section 5, 6, 7, etc. the text implies that compliance with the entire section is required, which is not the case. It is really only the *.4 mandatory provisions that apply.</p>

6.2.3	<p>ENERGY USE If life cycle cost-effective, new federal buildings must be designed to be 30% more efficient than ASHRAE 90.1 energy consumption levels.</p> <p>+ in the latest DOE-approved version of the standard.</p>	I believe this accurately communicate what was already your intent.
	<p>Variable Frequency Drives Use on motors up to 25 Hp (18.7kW) where ASHRAE 90.1 requires motors to operate at reduced speeds</p> <p>(general request to clarify)</p>	It is unclear which part of 90.1 you are directing readers to check for compliance. We are wondering if this could be rephrased with a citation to 90.1-2022 Section 6.5.5.2.1, which covers fan motor power demand for heat rejection devices.
p. 216, 311, 313, 315	ASHRAE Standard 90.1, Energy Standard for Sites and Buildings Except Low-Rise Residential Buildings	Name was changed for 90.1-2022 publication. If GSA is modified to recognize 2022 after the next determination is completed, the title should be updated accordingly
p. 310, 313	Standard 62.1—Ventilation and Acceptable Indoor Air Quality	Title modified for 2022 publication
p. 170	ASHRAE Standard 62.1 is the consensus standard prescribing ventilation requirements in the United States. It has been 62.1-2019 is the latest version integrated into the International Mechanical Code.	<p>If you plan to cite the latest 62.1 that is referenced in the IMC, that is 62.1-2019.</p> <p>Or use 62.1-2022 which likely will become the reference when the i-codes are next updated</p>
68, 78, 311	ASHRAE 160-2021, Criteria for Moisture Control Design Analysis in Buildings, is an acceptable basis of design.	
313	<p>Modify</p> <p>ASHRAE Guideline 0-20052019</p> <p>Standard 113-20052022: Method of Testing for Room Air Diffusion</p>	
313	<p>Add</p> <p>Standard 202-2018: Commissioning Process for Buildings and Systems</p> <p>Standard 55-2020: Thermal Environmental Conditions for Human Occupancy</p>	

	<p>Standard 111-2008 (RA 2017): Testing, Adjusting, and Balancing of Building HVAC Systems</p> <p>ANSI/ASHRAE 140-2020: Method Of Test For Evaluating Building Performance Simulation Software</p>	
165	<p>In the table where it shows: ASHRAE Handbook – HVAC Fundamentals</p> <p>There is no such name. There are: 2023 Handbook of Fundamentals 2022 Handbook of Refrigeration 2021 Handbook of HVAC Applications 2020 Handbook of HVAC Systems and Equipment</p>	
309	<p>ASHRAE Fundamentals Handbook</p> <p>Change to</p> <p>2021 ASHRAE Handbook – Fundamentals</p> <p>(or 2021 ASHRAE Handbook of Fundamentals for consistency with other sections)</p>	
312	<p>2023 Handbook of Fundamentals 2022 Handbook of Refrigeration 2021 Handbook of HVAC Applications 2020 Handbook of HVAC Systems and Equipment</p>	Update all to latest
8.1.4.1	<p>HVAC SPECIFIC DESIGN CRITERIA Outdoor winter temperature equal to ASHRAE 1-percent design dry bulb and mean coincident wet bulb (Handbook of Fundamentals.) Outdoor summer temperatures equal to ASHRAE 99-percent design dry bulb/97.5 percent wet bulb (Handbook of Fundamentals.)</p>	Clarification
<p>1.10.3 (new section)</p> <p>Needs SSPC approval later</p>	<p>Pathogen Control Requirements</p> <p>Controls for maintaining the equivalent clean airflow rate required during periods of increased risk for airborne transmission of pathogens, as in a pandemic or other public</p>	<p>This is an important section to include so it becomes available as needed. It can be triggered at the discretion of public health officials when there is an</p>

	<p>health crisis, shall be installed and documented in accordance with ASHRAE Standard 241, Control of Infectious Aerosols.</p> <p>Add to page 313: ASHRAE Standard 241-2023, Control of Infectious Aerosols.</p>	<p>emergency or pandemic that requires tighter control of indoor air quality. Standard 241 was completed by ASHRAE's foremost experts on the subject of IAQ, with direction from the White House COVID-19 Response Team. It should be recognized by GSA as a leader for establishing best practices in building resiliency.</p>
<p>1.4.2</p> <p>pp. 33, 34, 56, 57, 69, 70, 73, 77, 78, 84, 100, 101, 103, 105, 109, 111, 113, 117, 120, 121, 122, 123, 125, 127, 130, 168, 184, 185</p>	<p>ICC INTERNATIONAL CODES GSA has adopted the technical requirements of the International Codes, or I-Codes published by the International Code Council (ICC). The latest International Green Construction Code (IGCC-2021) is required as referenced in specific sections of P100.</p>	<p>Current pages show IgCC-2018 or no year. To avoid having to make mass updates in the future when the publication is revised, recommend to specify the year in one place as shown</p>
<p>IgCC general updates</p>	<p>p. 33; there is only 1 exception to 7.4.1.1 if you update to IgCC-2021</p> <p>pp. 69, 84; building envelope airtightness became Section 10.6 (1001.6) in IgCC-2021</p> <p>p. 168. 701.5 (7.5) Currently does not show the ASHRAE 189.1 section number in parenthesis like you have done elsewhere.</p>	
<p>p. 47</p> <p>2.2 Urban Planning</p>	<p>Note that as with other sections of the International Green Construction Code (IgCC), the IgCC requirements for sustainable sites are encouraged, but not required, for P100 compliance.</p>	<p>Clarification needed so it doesn't sound like the IgCC itself considers these to be optional requirements</p>
<p>p. 170</p>	<p>5.2.8 TREATING BIOLOGICAL GROWTH IN BUILDING WATER SYSTEMS Building water systems must comply with the requirements of ASHRAE Standard 188 – 2021, Legionellosis: Risk Management for Building Water Systems, and ASHRAE Guideline 12 – 2023, Managing the Risk of</p>	<p>Standard 188 provides minimum legionellosis risk management requirements for the design, construction, commissioning, operation, maintenance, repair, replacement, and expansion of</p>

	Legionellosis Associated with Building Water Systems.	<p>new and existing buildings and their associated (potable and non-potable) water systems and components. Guideline 12 provides detailed guidance for water management program teams to develop the necessary elements of an effective water management plan.</p> <p>ASHRAE Standard 188 has been in development for over 12 years by a cross-section of expert stakeholders. It has been supported by the CDC and was adopted as the basis for their Legionella Toolkit. It is increasingly being adopted by state and local jurisdictions, for example New York and Michigan. Additionally, the Alliance to Prevent Legionnaires' Disease endorses the use of ASHRAE Standard 188 by building owners and operators holistically to support risk management against legionella for the entire building.</p> <p>Together with Guideline 12, ASHRAE Standard 188 gives building owners a structured approach to develop water management plans designed for their specific facility to assist with legionella prevention. Further, it takes into consideration the risks of incoming water quality that can result in building and residential water quality and bacterial issues, which is sometimes overlooked.</p>
pp. 166-67	5.1 MECHANICAL PERFORMANCE TABLE Ventilation (Baseline, Tier 1, and Tier 2): Standard 62.1 Ventilation Rate Procedure only or Indoor Air Quality Procedure	 <p>GSA P100 Change Proposal - Sept 2023</p>

	<p><i>We also propose adding a Tech Tip in Section 5.2.5 like the Tech Tip that is currently on page 172 (Section 5.3.2). The Section 5.2.5 Tech Tip would say:</i></p> <ul style="list-style-type: none"> • Consider the Ventilation Rate Procedure and the Indoor Air Quality Procedure ventilation design method and use the most energy efficient procedure considering lifecycle cost implications. • The Indoor Air Quality Procedure can reduce energy use intensity (EUI) by 7% and reduce capacity requirements by 9-20%, depending on climate zone. <p><i>Note: 7% and 9-20% come from GSA's Published Findings from a Green Proving Ground evaluation of the IAQP and sorbent air cleaning technology, which can be found at https://www.gsa.gov/climate-action-and-sustainability/center-for-emerging-building-technologies/completed-assessments/hvac/sorbent-air-cleaning.</i></p>	See attached document
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Motion 6 (approve as modified). Johnson/Tremblay. 6-0-0