GSA's 2022 Sustainable Design Checklist for New Construction and Major Modernization Projects

Meeting all of these Sustainable Design Criteria (SDCs) qualifies a building as "sustainable" for Federal Real Property Portfolio reporting.

2022 GSA SDC #	2020 NC&M Guiding Principle	Criteria Names	Sustainable Design Criteria (SDC) Language
I. Third-Party CERTIFICATION			
1	Multiple. 2020 Guiding Principles Appendix C details "Using Third-Party Building Certification Systems": https://www.sustainability.gov/pdfs/guiding_principles_for_sustainable_federal_buildings.pdf#page=45	***LEED***	Certify building as: LEED® v4 or later BD+C, at Silver level or higher. Upload LEED submittals and scorecards in GSA's Kahua project management software, and report certification details in Kahua> Sustainability> Goals> LEED. (Per P100 § 1.9.2.1: "all BA51 (new construction) and BA55 (major repairs and alterations that include work to a majority of the systems) must achieve, at a minimum, a Gold rating" through LEED version 4 BD+C or later.) Reference: - 2020 Guiding Principles for Sustainable Federal Buildings and Associated Instructions, Appendix C - Assessing a New Construction, Modernization, Major Renovation or Existing Building Using Third-Party Building Certification System: https://www.sustainability.gov/pdfs/guiding_principles_for_sustainable_federal_buildings.pdf
II. Optimize ENERGY Performance			
2	2.1 - Energy Efficiency (mandatory, statutory)	***Energy Efficient Products***	Specify and install Energy Star and FEMP-designated energy efficient products, e.g. windows, roof products, boilers, and appliances. (Per EISA 2007 § 323 [40 U.S.C. 3307(b) and § 525 [42 U.S.C. 8259(b)(1)], EPAct 2005 § 104(a) [42 U.S.C. § 8259b], and FAR clause 52.223-15) References: - Energy Star Certified Products: https://www.energystar.gov/products - Energy-Efficient Product Categories: https://www.energy.gov/eere/femp/search-energy-efficient-products - LEED credit EAc14 "High-Efficiency Appliances": https://www.usgbc.org/credits/homes/v4-draft/eac14
3	2.1 - Energy Efficiency (mandatory, statutory)	***Energy Efficient Buildings***	(a) Earn at least seven (7) points within LEED v4.1 credit EAc2 "Optimize Energy Performance", using Option 1 "Energy Performance Compliance"; OR (b) ensure that the project's energy performance target is at least 30% more efficient than ASHRAE 90.1-2019; OR (c) the project's energy performance target meets ASHRAE 90.1-2019, AND is the highest efficiency that is life cycle cost-effective. (Per 10 CFR § 433.100 Energy Efficiency Standards, and P100 § 1.9.3 "Energy Use Targets") Reference: - GSA Energy Use Target Guidance: gsa.gov/sustainabledesign
4	2.2 - Energy Metering (mandatory, statutory)	***Energy Metering***	Earn LEED credit EAc3 "Advanced Energy Metering". This will ensure the project installs advanced meters for all whole-building energy sources. (Per EISA 2007 § 434 [42 U.S.C. § 8253(e)] and P100 § 6.5.3.4 "Advanced Building Metering and Control") Reference: - Federal Energy Management Program Metering Guidance: https://www.energy.gov/eere/femp/downloads/federal-building-metering-guidance-usc-8253e-metering-energy-use
5	2.3 - Renewable Energy (optional, statutory)	***Renewable Energy***	(a) Earn at least one LEED EAc5 "Renewable Energy" credit by installing an onsite renewable energy system; OR (b) provide analysis showing that onsite renewable energy was evaluated (including solar thermal to meet 30% of building's anticipated hot water demand), and found not to be life cycle cost-effective. This will ensure that the project evaluates and implements life cycle cost-effective onsite renewable energy projects. (Per EISA 2007 § 523 [42 USC 6834 (a)(3)(A)(iii)], P100 § 1.7.2 "Sustainable Performance Requirements" and P100 § 5.4.4 "Solar Water Heating".) References: - PV Watts evaluation tool: https://pvwatts.nrel.gov/ - Solar Hot Water Cost and Efficiency Estimation Guide: http://energy.gov/energysaver/estimating-cost-and-energy-efficiency-solar-water-heater - Integrating Renewable Energy in Federal Construction: http://www.wbdg.org/ffc/doe/criteria/guide-integrating-renewable-energy-federal-construction - Renewable Energy Projects and Resources: http://energy.gov/eere/femp/federal-renewable-energy-projects-and-technologies

GSA's 2022 Sustainable Design Checklist for New Construction and Major Modernization Projects

Meeting all of these Sustainable Design Criteria (SDCs) qualifies a building as "sustainable" for Federal Real Property Portfolio reporting.

2022 GSA SDC #	2020 NC&M Guiding Principle	Criteria Names	Sustainable Design Criteria (SDC) Language
III. Protect and Conserve WATER			
6	3.1 - Indoor Water Use (mandatory, statutory)	***Cooling Towers***	Earn LEED credit WEc3: "Cooling Tower Water Use". This will ensure that the project (a) does not use single-pass cooling with potable water; and (b) optimizes cooling tower operations to minimize makeup water -- e.g. by using condensate recovery, limiting discharge water, and/or using efficient drift eliminators. (Per EPAct 2005 § 109 [42 U.S.C. §6834(a)(3)] - Use of water conservation technologies (cooling towers)) Reference: - Water Conservation (Cooling Equipment and Cooling Tower Management): http://www.wbdg.org/resources/water_conservation.php?r=fhpsb_new
7	1.3 - Stormwater Management (mandatory, statutory)	***Stormwater Management***	Earn LEED credit SSc4: "Rainwater Management" OR six points for Sustainable SITES credit 3.3 "Manage precipitation beyond baseline". This will ensure that projects disturbing at least 5,000 SF of site surface area manage the 95th percentile rain event onsite through infiltration, reuse, and/or evapotranspiration. Design strategies include permeable paving, vegetated roofs, rain gardens, or other low-impact development techniques. (Per EISA 2007 § 438 [42 U.S.C. § 17094] and P100 § 2.4 "Landscape Performance Table") References: - Stormwater Runoff Mitigation: http://www.wbdg.org/references/mou_sw.php - EPA Stormwater Technical Guidance: https://www.epa.gov/sites/production/files/2015-09/documents/eisa-438.pdf
IV. Reduce the Environmental Impact of MATERIALS			
8	5.1 - Materials - Recycled Content, and 5.2 - Materials - Biobased Content (mandatory, statutory)	***Materials and Embodied Carbon***	(a) Follow GSA's standards for low embodied carbon concrete and environmentally preferable asphalt by providing an environmental product declaration and specified material details. (gsa.gov/p100). (b) Specify products that GSA's material specifications in P100 §§ 1.9.2.10 "GSA Buy Clean Product Standards" and 3.4 "Interior Performance Table". (c) Earn at least one Building Life-Cycle Impact Reduction LEED BD+C: NC credit. Use Option 2 “Whole-Building Life-Cycle Assessment” to conduct a cradle-to-grave life-cycle assessment of the project’s structure and enclosure. Target a 20% reduction in whole-building embodied carbon from materials, compared to a standard baseline building design. (Per P100 §§ 1.9.2.10 "Key Sustainable Products", 1.9.2.9 "Decarbonization", 4.8.5 "Low Embodied Carbon Concrete", and 4.8.6 "Environmentally Preferable Asphalt") References: - Key Sustainable Product list: https://sftool.gov/greenprocurement/green-products/1037/key-sustainable-products/9 - GSA Embodied Carbon Reduction Measure - Green Procurement Compilation (lists all Federal green purchasing requirements): https://sftool.gov/greenprocurement
V. Assess and Consider Building RESILIENCE			
9	6.1 - Risk Assessment, and 6.2 - Building Resilience and Adaptation	***Resilience***	Earn LEED pilot credit "Assessment and Planning for Resilience" and/or "Design for Enhanced Resilience". (Per P100 § 1.10.1 "Management of Climate Related and Extreme Weather Risks") Reference: Executive Order 14008 "Tackling the Climate Crisis at Home and Abroad" § 211 "Climate Action Plans . . . to Improve Adaptation and Increase Resilience"

GSA's new construction and major modernization projects must follow this checklist to the maximum feasible extent during design and construction, per GSA's 2021 P100 Facilities Standards for the Public Buildings Service § 1.9.2.6 "Guiding Principles for Sustainable Federal Buildings", and Executive Order 14057 "Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability" § 205(c)(iii).

New construction and major modernization project delivery teams must report which of these Criteria are being implemented, and how, in GSA's Kahua Sustainability App. This checklist does not capture all P100 sustainability requirements.

Reference: Guiding Principles on SFTool.gov: https://sftool.gov/guidingprinciples
Crosswalk between all Guiding Principles and each relevant LEED prerequisite or credit: https://sftool.gov/learn/GRScrosswalk