Renovations: 2020 Guiding Principles Recommendations May 1, 2025

Modernizations* over 25,000 gross square feet are required to meet Appendix A of the 2020 Guiding Principles for Sustainable Federal Buildings (GP). However, LANL is required to continue certifying existing buildings under Appendix B of the GP, meaning renovation projects can assist by complying when the project scope of work correlates with a GP. The following list are often more than recommendations due to the fact they are frequently statutory or regulatory. For further assistance, contact Utility Resource Management Team and include a Sustainability SME in your project team.

*Modernization is defined in Chapter 14 of the ESM as: The comprehensive replacement or restoration of virtually all major systems (such as plumbing, mechanical, electrical), interior finishes (such as ceilings, partitions, doors, and floor finishes), and building features (as in space reconfiguration or exterior wall, window, or roof replacement).

Recommendations:

GP 1.1 Integrated Design and Management

Ensure that sustainability goals, to meet the Guiding Principles, have been developed as part of the project and are incorporated into applicable project design documents, AND

To meet Option 1 or 2: Use a collaborative, integrated process and team tailored to the size and function of the building to plan, program, design, construct, commission, and transition the building renovation to operation. Identify team members and roles. Ensure opportunities to optimize energy, water, materials, indoor environmental quality, recycling and composting, occupant health and wellness, transportation (including public transit, safety, parking, and electric vehicle charging), siting and landscape, the protection of historic properties and other cultural resources, community integration, and building resilience continue are considered in the project.

In addition, each FOD has buildings covered by the Energy Independence and Security Act (EISA), which means that energy and water conservation projects are required. Determine if the building is covered and include conservation planning as needed. In addition, see GP 2.1 below.

GP 1.2 Sustainable Siting

Follow all relevant requirements of 41 CFR § 102-76.20 of the Federal Management Regulation to make a positive contribution to the surrounding landscape, and comply with the National Environmental Policy Act of 1969, as amended, 42 U.S.C. § 4321 et seq., and the National Historic Preservation Act of 1966, as amended, 54 U.S.C. Subtitle III, Division A.

GP 1.3 Stormwater Management

Option 2: For buildings with renovation projects disturbing a surface area of 5,000 or greater square feet, use planning, design, construction, and maintenance strategies to maintain or restore the predevelopment hydrology of the property in terms of temperature, rate, volume, and duration of flow, in accordance with statutory requirements (42 U.S.C. § 17094), OR

Option 3: For buildings with renovation projects disturbing fewer than 5,000 square feet, use strategies such as Low Impact Development (LID) to manage on-site stormwater and to maintain

or restore hydrologic conditions after development, to the maximum extent that is technically practicable.

GP 2.1 Energy Efficiency

Employ strategies to improve energy performance and reduce energy usage, and, for all procurements involving energy-consuming products and services, incorporate energy-efficiency criteria consistent with ENERGY STAR and FEMP-designated energy-efficient products, AND

Option 1: Ensure that the building energy use is 20 percent below a FY 2015 energy use baseline. Engineering or energy estimates based on the size, function, and complexity of the building may be used in cases where the building is part of a facility that shares a meter per DOE's *Federal Building Metering Guidance*, OR

Option 3 or 4: Ensure the building has an ENERGY STAR score of 75 or higher. Contact Utility Resource Management Team and inquire if the building is already benchmarked in ENERGY STAR Portfolio Manager. Over 75 buildings already are benchmarked there or, for laboratories, benchmarked in the I2SL benchmarking tool.

Options 2 and 5 in the GP are likely not applicable due to lack of data or the expense to create an energy model.

GP 2.2 Energy Metering and GP 3.2 Water Metering

Verify the use of existing meters or, if no meter exists, install building-level meters in accordance to Chapter 14 Attachment 2-Utility Metering Requirements.

GP 4.1 Ventilation and Thermal Comfort

In accordance with 41 CFR §§ 102-74.195 and 102-74.185 of the Federal Management Regulation:

(a) Operate heating and cooling systems in the most overall energy efficient and economical manner;
(b) Maintain temperatures to maximize customer satisfaction by conforming to local commercial equivalent temperature levels and operating practices;
(c) Set heating temperatures no higher than 55 degrees Fahrenheit during non-working hours;
(d) Not provide air-conditioning during non-working hours, except as necessary to return space temperatures to a suitable level for the beginning of working hours;
(e) Not permit reheating, humidification and simultaneous heating and cooling; and
(f) Operate building systems as necessary during extreme weather conditions to protect the physical condition of the building.
(g) Provide ventilation in accordance with ASHRAE Standard 62, Ventilation for Acceptable Indoor Air Quality, where physically practical. Where not physically practical, Federal agencies must provide the maximum allowable amount of ventilation during periods of heating and cooling and pursue opportunities to increase ventilation up to current standards.

GP 4.2 Daylighting and Lighting Controls

Verify the building maintains all required illumination levels, in accordance with 41 CFR § 102-74.180 of the Federal Management Regulation, and maximize the use of automatic dimming controls or accessible manual controls in regularly occupied spaces, AND

Option 1: Maximize access to and benefits of daylight by ensuring that regularly occupied spaces along the exterior wall control solar gain, daylight transmittance, and glare. Evaluate and assess occupant workplaces to allow more open space around windows with appropriate glare controls, except where not appropriate because of building function, mission, or structural constraints, OR

Option 3: Conform to 2018 IgCC Sections 801.3.7 (8.3.7) Glare Control, 801.4.1 (8.4.1) Daylighting, 801.4.1.1.1 (8.4.1.1.1) Minimum Daylight Area, 801.4.1.2 (8.4.1.2) Minimum Sidelighting Effective Aperture for Office Spaces and Classrooms, and 801.4.1.3 (8.4.1.3) Shading for Offices; or 801.5.1 (8.5.1) Daylight Simulation.

GP 4.5 Moisture and Mold Control

Option 1: Verify a moisture control and mitigation strategy is in place (may be part of operations and maintenance protocols) for controlling moisture flows and condensation to prevent building damage, minimize mold contamination, and reduce health risks related to moisture, OR

Option 2: Conform to 2018 IgCC Section 801.3.6 (8.3.6) Moisture Control.

GP 4.6 Indoor Air Quality during Construction

Option 1: Implement a policy is in place to protect indoor air quality during operations as well as during any applicable renovations. This may include strategies for having permanent entryway systems in place to capture dirt and particulates entering the building and specific procedures to protect occupants during renovations, OR

Option 2: Conform to 2018 IgCC Sections 1001.3.1.5 (10.3.1.5) IAQ Construction Management, and 1001.3.1.8 (10.3.1.8) Construction Activity Pollution Prevention: Protection of Occupied Areas.

GP 5.1, 2 &3 Products

Use products that conform with the following (A comprehensive list of products required and recommended is found in Chapter 14 Attachment 1-Environmental Preferable Products for Specifications):

- Resource Conservation and Recovery Act (RCRA) section 6002. Products should meet or exceed EPA's Comprehensive Procurement Guideline Program, which provides recycled content recommendations, for operations and maintenance, in accordance with 42 U.S.C. § 6962 et seq.
- USDA BioPreferred products, which are designated products with the highest biobased content level per USDA's recommendations, in accordance with 7 U.S.C. § 8102.

GP 5.4 Ozone Depleting Substances

Option 1: Use safe alternatives for ozone depleting substances, in accordance with 42 U.S.C. § 7671k and 42 U.S.C. § 7671/. Maximize the use of safe alternatives, where EPA's Significant New Alternative Policy (SNAP) Program has identified acceptable substitutes and alternatives. Don't forget to email refrig_approval@lanl.gov for 410 approvals prior to purchase.

GP 5.6 Solid Waste Management

Option 4: For buildings with renovation projects, develop and implement a construction and demolition waste management plan for construction projects. Work with the appropriate LANL Waste Management Coordinator.