

This is a guidance document with sample specification language intended to be inserted into project specifications on this subject as appropriate to the agency's environmental goals. Certain provisions, where indicated, are required for U.S. federal agency projects. Sample specification language is numbered to clearly distinguish it from advisory or discussion material. Each sample is preceded by identification of the typical location in a specification section where it would appear using the SectionFormat™ of the Construction Specifications Institute; the six digit section number cited is per CSI Masterformat™ 2004 and the five digit section number cited parenthetically is per CSI Masterformat™ 1995.

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SECTION 01 10 00 (SECTION 01100) - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY OF WORK

- A. The Project consists of **[deconstruction] [renovation] [construction]** for:

1. Project Location: **xxxxxxxxxxxxxx**.
2. Owner: **xxxxxxxxxxxxxx**.

- B. Contractor's use of premises:

- 1.

1.2 DEFINITIONS

- A. Definitions pertaining to sustainable development: As defined in ASTM E2114 and as specified herein.
- B. Biobased Materials: As defined in the Farm Security and Rural Investment Act, for purposes of Federal procurement of biobased products, "biobased" means a "commercial or industrial product (other than food or feed) that is composed, in whole or in significant part, of biological products or renewable domestic agricultural materials (including plant, animal, and marine materials) or forestry materials." Biobased materials also include fuels, chemicals, building materials, or electric power or heat produced from biomass as defined by The Biomass Research and Development Act of 2000.

SPECIFIER NOTE:

According to the January 11, 2005 U.S. Department of Agriculture (USDA) Guidelines for Designating Biobased Products for Federal Procurement, biobased content is a percentage of the carbon in the product. The USDA will recommend the minimum biobased content of biobased products designated in the Federal Biobased Products Preferred Procurement Program, 7 CFR Part 2902. For current designations under the Federal Biobased Products Preferred Procurement Program (FB4P), refer to www.biobased.oce.usda.gov.

1. Biobased content: The amount of biobased carbon in the material or product as a percentage of weight (mass) of the total organic carbon in the material or product.

- C. Deconstruction: Disassembly of buildings for the purpose of recovering materials.

SPECIFIER NOTE:

Refer to ISO Guide 64 and EPA's website at www.epa.gov/dfe for additional clarification on Design for the Environment.

- D. DfE (Design for the Environment): A technique that includes elements of resource conservation and pollution prevention as applied in various product sectors. A technique that incorporates approaches which are part of product (or assembly) concept, need and design. Considerations involve material selection, material and energy efficiency, reuse,

maintainability and design for disassembly and recyclability.

- E. Non-Renewable Resource: A resource that exists in a fixed amount that cannot be replenished on a human time scale. Non-renewable resources have the potential for renewal only by geological, physical, and chemical processes taking place over of millions of years. Examples include: iron ore, coal, and oil.
- F. Perpetual Resource: A resource that is virtually inexhaustible on a human time scale. Examples include solar energy, tidal energy, and wind energy.
- G. Recycled Content Materials: Products that contain preconsumer or post-consumer materials as all or part of their feedstock. Recycled content claim shall be consistent with Federal Trade Commission (FTC) Guide for the Use of Environmental Marketing Claims.

SPECIFIER NOTE:

A renewable resource can be exhausted if improperly managed. However, a renewable resource can last indefinitely with proper stewardship. Examples include: trees in forests, grasses in grasslands, and fertile soil. USGBC-LEED uses the term in reference to plants.

- H. Renewable resource: a resource that is grown, naturally replenished, or cleansed, at a rate which exceeds depletion of the usable supply of that resource.
 - 1. Rapidly renewable material: Material made from plants that are typically harvested within a ten-year cycle.
- I. Stewardship: Responsible use and management of resources in support of sustainability.

SPECIFIER NOTE:

Under EO 13423, sustainable' means "to create and maintain conditions, under which humans and nature can exist in productive harmony, that permit fulfilling the social, economic, and other requirements of present and future generations of Americans"

The following definition is consistent with the EO and with ASTM E2114.

- J. Sustainability: The maintenance of ecosystem components and functions for future generations.

SPECIFIER NOTE:

It is not typical to cite project goals in construction specifications as the specifications are intended to delineate the specific requirements for the contractor. It is difficult, if not impossible, to enforce goals. Goals generally pertain to design decisions (typically the responsibility of the architect/engineer) or functional parameters (typically the decision of the owner).

However, it may be helpful to identify project environmental goals as contractor means and methods (the determination and implementation of which is often entirely within the contractor's responsibility) may have significant environmental impacts. Additionally, it may be helpful to identify the environmental goals that framed design decisions so that if the contractor wishes to propose alternatives, such alternatives can be consistent with the project environmental goals.

Edit below to suit project.

1.3 ENVIRONMENTAL GOALS

- A. General: Support implementation of federal policy and programs for sustainable building, in accordance with EO13423, EO13514, and Guiding Principles for Federal Leadership in High Performance and Sustainable Building as per the Memorandum of Understanding updated December 2008, as follows:
 - 1. Employing integrated design: As specified and as follows:
 - a. ASTM E2348, Standard Guide for Framework for a Consensus-based Environmental Decision making Process

- b. ASTM E2432 Standard Guide for General Principles of Sustainability Relative to Buildings
 2. Optimizing energy performance: As specified and as follows:
 - a. Energy Efficiency: EO 13423, EO 13514 and Energy Policy Act of 2005; 10 CFR 435 - Energy Performance Standards for New Buildings; and, FAR Part 23, 48 CFR 23 - building equipment and lighting
 - b. Energy Star
 - c. Federal Energy Management Program (FEMP)
 3. Protecting and conserving water: As specified and as follows:
 - a. Water stewardship: EPA WaterSense, and FEMP Best Management Practices for Water Conservation
 4. Enhancing indoor environmental quality: As specified and as follows:
 - a. Sheet Metal and Air Conditioning Contractor's National Association Indoor Air Quality Guidelines for Occupied Buildings under Construction
 5. Reducing the environmental impact of materials: As specified and as follows:
 - a. Recycled Content Products: EPA Comprehensive Procurement guidelines
 - b. Biobased Content Products: USDA Biopreferred
 - c. Electronics stewardship: Federal Electronics Challenge; Electronic Product Environmental Assessment Tool (EPEAT)
 - d. Environmental Management System protocols: ISO 14001 or equivalent

SPECIFIER NOTE:

Edit Independent Verification requirements as appropriate to project goals and location. Coordinate with submittal requirements in Divisions 02 – 49 (2-16) as necessary to facilitate documentation necessary for application to Independent Verification program.

Following are examples.

B. Independent Verification:

SPECIFIER NOTE:

OMB A-11 as modified in 2002, states: "Agencies are encouraged to incorporate Energy Star or LEED building standards into up front design concepts for new construction and/or building renovations."

As of January 2003, GSA supports new construction to conform to USGBC-LEED™ certified level.

Refer to to view the "Federal Commitment to Green Building: Experience and Expectations."

Other green building rating systems are also available, including local programs such as the Austin Green Building Program as well as national programs such as Green Globes –US. Green Globes – US is the newest addition to the BREEAM/Green Leaf suite of environmental assessment tools. BREEAM (BRE Environmental Assessment Method) is one of the world's most widely used means of reviewing and improving the environmental performance of buildings.

Typically, the final responsibility for verifying/submitting to a green building program will belong to the Architect or Owner. Depending on the roles and responsibilities of the project team members, attaining certification to a green building program may be beyond the contractual limitations of the Contractor. In such circumstances, where the Contractor is not responsible for design decisions, edit below to read that the work shall be performed "consistent with" green building program requirements.

1. US Green Building Council (USGBC) - LEED™ rating system: Provide **[final structure in compliance] [work consistent]** with USGBC-LEED™ v3, level **[certified] [silver] [xxxx]** requirements.
2. ASTM E2432: Provide documentation that work is consistent with the **[environmental,] [social,] [and, economic]** principles of sustainability relative to building as identified in ASTM E2432.
3. Green Globes – US. Provide **[final structure in compliance] [work consistent]** with Green Globes –US level **[Two Globes] [Three Globes] [xxxx]** requirements.
4. ICC-700-2008 National Green Building Standard: Provide **[final structure in compliance] [work consistent]** with ICC-700 **[Bronze] [Silver] [Gold]**

[Emerald] requirements.

SPECIFIER NOTE:

GSA requires completed new buildings to apply for the ENERGY STAR Building Label within one year after reaching 95 percent occupancy. Refer to December 13, 2002 Memorandum for all Real Property Leasing Activities for additional information.

5. EPA Energy Performance Rating: Determine energy use target rating that meets or exceeds ENERGY STAR. Provide ENERGY STAR target using EPA Target Finder. Use Target Finder to rate estimated energy use for the completed design. If design achieves a rating of 75 or higher, provide Statement of Energy Design Intent (SEDI) generated from Target Finder to document results. Architect of Record submits the SEDI to EPA and receives the "Designed to Earn the ENERGY STAR" graphic to place on drawings to show that the energy use for the design meets EPA criteria for energy efficiency.

SPECIFIER NOTE:

In November 2009, the Sustainable Sites Initiative released a rating system for the design, construction and maintenance of sustainable landscapes, with or without buildings. Sustainable Sites Initiative is an interdisciplinary partnership led by the American Society of Landscape Architects, the Lady Bird Johnson Wildflower Center at The University of Texas at Austin and the United States Botanic Garden. The rating system can apply to projects ranging from corporate campuses, transportation corridors, public parks and single-family residences.

<http://www.sustainablesites.org/report/>

To test the rating system, the Sustainable Sites Initiative opened a call for pilot projects in conjunction with the release of the rating system. The call will remain open until February 15, 2010, and the initiative will work with and oversee the projects during the two-year process. The Sustainable Sites Initiative anticipates refining the 2009 rating system after the completion of the pilot project program.

6. Sustainable Sites Initiative - Guidelines and Performance Benchmarks 2009: Provide final landscaping **[in compliance with]** **[work consistent with]** with Sustainable Sites Initiative, level **[one star]** **[two star]** **[three star]** **[four star]** requirements.

SPECIFIER NOTE:

EPA created Indoor airPLUS program to recognize residential construction designed to promote good indoor air quality. Homes that comply with program specifications, qualified under ENERGY STAR, and verified in accordance with Residential Energy Services Network (RESNET) Standards by a RESNET-accredited provider earn the label. The Indoor airPLUS program is expanding to include commercial construction as well.

<http://www.epa.gov/indoorairplus/about.html>

7. EPA Indoor AirPLUS: Provide certification demonstrating **[house]** **[xxxx]** has received in Indoor AirPLUS label from the EPA.

PART 2 - PRODUCTS

PART 3 - EXECUTION

END OF SECTION