



# Green Building Standards

Dallas Fort Worth International Airport



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## SECTION 1 OVERVIEW

### Introduction

Dallas Fort Worth International Airport (DFW) opened in 1974 and covers 29.8 square miles. DFW has been at the forefront of integrating environmental standards into decision-making and daily operations for over 20 years. To meet the needs of a vast group of stakeholders, DFW prioritizes sound sustainability principles as part of its operations and culture. The implementation of Green Building Standards ensures the Airport continues to grow responsibly.

### DFW Sustainability Program

In August 2008, DFW Airport launched an airport-wide Sustainability Policy and Program under the auspices of DFW's Executive Vice President's Operations Division. DFW's Sustainability Program is a key element in the Airport's Strategic Plan designed to positively impact the environment, the community, the Airport, and its employees. DFW's Sustainability Program applies the EONS framework to decision-making, a holistic approach that entails consideration of Economic viability, Operational efficiency, Natural resource conservation, and Social responsibility (Figure 1).



Figure 1. EONS framework for sustainable decision-making

In 2020, DFW committed to an ambitious goal to achieve Net Zero carbon emissions by 2030, two decades ahead of the Intergovernmental Panel on Climate Change (IPCC) recommendation. DFW's strategy requires action now to achieve this target, and the design of new energy efficient facilities and infrastructure is critical to the reduction of energy and fuel consumption across DFW's operations.

### GBS Intent

The Green Building Standards (GBS) were developed to provide project teams with guidelines for sustainable design and construction. By developing a rigorous GBS framework, DFW will be able to measure and report over time on the implementation of sustainable design strategies.

## GBS Development

The GBS was developed using the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) green building rating system.

Although earlier versions of the GBS established a one-point-per-credit scoring system and required projects to achieve a combination of both LEED credits and DFW Baseline Credits, this revision to the GBS is intended to streamline the credit process. This revision to the GBS adopts the credit values of the LEED rating system.

Project teams shall utilize the LEED Reference Guide for the appropriate rating system and comply with the credit intent and requirements. Most projects are anticipated to fall into one of the following LEED rating systems:

- **LEED BD+C: New Construction and Major Renovation.** New construction or major renovation of buildings that do not primarily serve K-12 educational, retail, data centers, warehouses and distribution centers, hospitality, or healthcare uses.
- **LEED BD+C: Core and Shell Development.** Buildings that are new construction or major renovation for the exterior shell and core mechanical, electrical, and plumbing units, but not a complete interior fit-out. LEED BD+C: Core and Shell is the appropriate rating system to use if more than 40% of the gross floor area is incomplete at the time of certification.
- **LEED BD+C: Warehouses and Distribution Centers.** Buildings used to store goods, manufactured products, merchandise, raw materials, or personal belongings, such as self-storage.
- **LEED ID+C: Commercial Interiors.** Interior spaces dedicated to functions other than retail or hospitality.
- **LEED ID+C: Retail.** Interior spaces used to conduct the retail sale of consumer product goods. Includes both direct customer service areas (a showroom) and preparation or storage areas that support customer service.
- **LEED ID+C: Hospitality.** Interior spaces dedicated to hotels, motels, inns, or other businesses within the service industry that provide transitional or short-term lodging with or without food.

Future revisions to the GBS will incorporate elements from other certification programs, such as the WELL Building Standard and Envision.

## SECTION 2 APPLICABILITY AND ADMINISTRATION

### Applicability

This document is incorporated by reference into DFW's *Design Criteria Manual* and required by the Division 01 specifications in DFW's *Standard Specification Book, Version 2*. All Board-controlled projects are required to implement the GBS. The June 2020 revision to the DFW Development Design Guidelines (DDG) now requires Commercial Development projects to comply with the GBS as well. Questions related GBS applicability should be directed to the DFW Sustainability team.

This update to the GBS applies to new construction and major renovation of buildings as well as complete interior fit-outs that meet the LEED Minimum Program Requirements.

The USGBC defines a major renovation as:

*extensive alteration work in addition to work on the exterior shell of the building and/or primary structural components and/or the core and peripheral MEP and service systems and/or site work. Typically, the extent and nature of the work is such that the primary function space cannot be used for its intended purpose while the work is in progress and where a new certificate of occupancy is required before the work area can be reoccupied.*

Minor renovation projects and infrastructure projects are not required to implement the GBS requirements at this time; however, such projects are encouraged to consult with the Sustainability team to incorporate sustainability best practices into design and construction. Future updates to the GBS will establish requirements for minor renovation and infrastructure projects.

### **Request for GBS Variance**

If it is determined that compliance with a requirement of the GBS is not feasible, the project team may submit a Request for GBS Variance to the DFW Sustainability team (**Appendix A**). The variance application shall include:

- Project scope and budget
- Justification for why the requirement(s) cannot be fulfilled

The DFW Sustainability team will evaluate the application and issue a variance that will include confirmation of which requirements, if any, will be waived for the project.

### **Codes and Regulations**

The GBS shall not supersede any federal, state and local code or regulatory requirements.

### **LEED Rating System Version**

Projects shall utilize the most current version of the LEED rating system. If the LEED rating system is updated or amended during project design and/or construction, the project team may elect to continue using the version the project registered under or switch to the newly released version.

As of this revision to the GBS, LEED version 4 and version 4.1 are the most current protocols. Projects may use a combination of v4 and v4.1 credits to meet the requirements.

### **Scoring and Rating**

Projects shall use the scorecard from the appropriate LEED rating system. Scorecards can be downloaded at <https://www.usgbc.org/leed> and <https://www.usgbc.org/leed/v41>.

Projects shall achieve a minimum of *50 points*, the equivalent of LEED Silver.

### **DFW Required Credits**

The Sustainability team has identified a selection of LEED credits that it has deemed critical in meeting the Airport's enterprise sustainability goals, particularly its Net Zero Carbon by 2030 target. Projects are required to achieve these high priority credits. A table of the required credits is included in **Appendix B**.

It is understood that some projects, due to project scope or location, will not be able to achieve all required credits or that some credits may not be applicable (e.g., Sustainable Sites credits may not apply to an interior finish-out). In these instances, the Project Team may submit a Request for GBS Variance (**Appendix A**).

### **LEED Certification**

For projects that meet the LEED Minimum Program Requirements (i.e., new facilities and major renovations, including complete interior fit-outs), the project shall achieve LEED Silver certification or higher. Registration and certification fees shall be paid by the project. If it is determined that formal certification is not feasible, the project team may submit Request for GBS Variance to the DFW Sustainability team (**Appendix A**). The variance application shall include:

- Project scope and budget
- Reasons why certification is not feasible

The DFW Sustainability team will evaluate the application and issue a variance if appropriate.

### **Submittal and Review Process**

All projects shall complete and submit the Project Description Form, located in **Appendix C**.

If the project is pursuing LEED certification, completion of the official LEED review process shall fulfill DFW GBS requirements. The project shall designate a representative from the DFW Sustainability team as a Project Team Member in the LEED-Online portal. This will provide the DFW Sustainability team with access to the project's submittals. An updated scorecard showing anticipated credits should be provided to the DFW Sustainability team monthly. Upon certification, the project shall provide the DFW Sustainability team with a copy of the results of the final review, project scorecard, and certificate.

If the project is not pursuing LEED certification, the project shall engage a LEED consultant to provide an independent third-party review of all credits. The LEED consultant shall review all submittals and credit documentation in lieu of the U.S. Green Building Council and shall ensure the project meets the intent and requirements of each credit. The DFW Sustainability team will coordinate with the project and its LEED consultant to review select credits at their discretion; however, the DFW Sustainability team will not be responsible for and will not conduct a full review of all credits. The project shall provide the DFW Sustainability team and the LEED

consultant access to all credit submittals. The project team is encouraged to use a cloud storage platform, such as SharePoint, in place of email for submittals. An updated scorecard showing anticipated credits should be provided to the DFW Sustainability team monthly.

All LEED registration and certification fees and/or consultant fees shall be paid by the project.

### **GBS Certificate**

After all project documentation has been submitted and approved by the DFW Sustainability team, a DFW Green Building Standards certificate will be issued to commemorate the achievement of the project team in sustainable design and construction.

# **APPENDIX A**

## ***Request for GBS Variance***



## ***Request for GBS Variance***

<b>Date</b>	
<b>Project Name</b>	
<b>DFW Project Number</b>	
<b>Brief Project Scope and Description</b>	
<b>Variance Type</b>  <i>Select which requirement(s) the project is unable to fulfill.</i>	<input type="checkbox"/> Projects shall achieve a minimum of 50 points.  <input type="checkbox"/> Projects that meet the LEED Minimum Program Requirements shall achieve LEED Silver certification or higher.  <input type="checkbox"/> Projects shall achieve the required credits identified in Appendix B of the DFW GBS.  <input type="checkbox"/> Other: _____
<b>Justification for why the GBS requirement(s) cannot be fulfilled</b>  <i>Attach additional documentation as necessary.</i>	

# **APPENDIX B**

## ***DFW Required Credits***

<b>LEED v4.1 Credits</b>		
<b>CREDIT</b>		<b>DFW Status: Required or Optional</b>
Credit	Integrative Process	R
<b>Location and Transportation</b>		
Credit	Sensitive Land Protection	O
Credit	High Priority Site	O
Credit	Surrounding Density and Diverse Uses	O
Credit	Access to Quality Transit	O
Credit	Bicycle Facilities	O
Credit	Reduced Parking Footprint	O
Credit	Electric Vehicles	R
<b>Sustainable Sites</b>		
Prerequisite	Construction Activity Pollution Prevention	R
Prerequisite	Site Assessment	R
Credit	Protect or Restore Habitat	O
Credit	Open Space	O
Credit	Rainwater Management	O
Credit	Heat Island Reduction	R
Credit	Light Pollution Reduction	R
<b>Water Efficiency</b>		
Prerequisite	Outdoor Water Use Reduction	R
Prerequisite	Indoor Water Use Reduction	R
Prerequisite	Building-Level Water Metering	R
Credit	Outdoor Water Use Reduction	R
Credit	Indoor Water Use Reduction	R
Credit	Cooling Tower Water Use	O
Credit	Water Metering	R
<b>Energy and Atmosphere</b>		
Prerequisite	Fundamental Commissioning and Verification	R
Prerequisite	Minimum Energy Performance	R
Prerequisite	Building-Level Energy Metering	R
Prerequisite	Fundamental Refrigerant Management	R
Credit	Enhanced Commissioning	R
Credit	Optimize Energy Performance	R
Credit	Advanced Energy Metering	R
Credit	Grid Harmonization	R
Credit	Renewable Energy	R
Credit	Enhanced Refrigerant Management	R
<b>Materials and Resources</b>		
Prerequisite	Storage and Collection of Recyclables	R
Prerequisite	Construction and Demolition Waste Management Planning	R
Credit	Building Life-Cycle Impact Reduction	O
Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	R
Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	O
Credit	Building Product Disclosure and Optimization - Material Ingredients	O
Credit	Construction and Demolition Waste Management	R
<b>Indoor Environmental Quality</b>		
Prerequisite	Minimum Indoor Air Quality Performance	R
Prerequisite	Environmental Tobacco Smoke Control	R
Credit	Enhanced Indoor Air Quality Strategies	R
Credit	Low-Emitting Materials	R
Credit	Construction Indoor Air Quality Management Plan	R
Credit	Indoor Air Quality Assessment	R
Credit	Thermal Comfort	R
Credit	Interior Lighting	R
Credit	Daylight	R
Credit	Quality Views	R
Credit	Acoustic Performance	O
<b>Innovation and Design Process</b>		
Credit	Innovation	O
Credit	LEED Accredited Professional	R
<b>Regional Priority</b>		
Credit	Regional Priority: Specific Credit	O
Credit	Regional Priority: Specific Credit	O
Credit	Regional Priority: Specific Credit	O
Credit	Regional Priority: Specific Credit	O

# **APPENDIX C**

## ***Project Description Form***

## Project Description Form

<b>Date</b>	
<b>Project Name</b>	
<b>DFW Project Number</b>	
<b>Brief Project Scope and Description</b>	
<b>Project Sustainability Liason</b> (submittals completed by)	
<b>LEED Rating System</b> (e.g., LEED BD+C: New Construction and Major Renovation, LEED BD+C: Core and Shell Development, etc.)	
<b>LEED Version</b>	
<b>Is the project pursuing formal LEED certification?</b> <i>If yes, provide the date registered, project ID, and the name of the DFW Sustainability team member with access to the project in the LEED-Online portal.</i>	
<b>LEED/Green Building Consultant</b>	
<b>Lead Architect/Engineer</b>	
<b>Commissioning Agent(s)</b>	
<b>Energy Modeler</b>	
<b>General Contractor</b>	
<b>Estimated Construction Cost and Completion Date</b>	
<b>Project Area (SF)</b>	
<b>Building Area (SF)</b>	
<b>Pervious Area (SF)</b>	
<b>Impervious Area (SF)</b> <i>(note parking area if applicable)</i>	
<b>Occupancy</b> <i>(include male and female breakdown)</i>	