

NOTE: Denver's Green Buildings Ordinance applies to all new commercial buildings with 25,000 GSF or larger including additions and campuses. For all permits issued after January 1, 2021, the effective code is 2019 Denver Building Code including 2018 IBC & 2018 IECC and all Denver Amendments.

1. Required & Reference Documents

[Click here to view the Green Buildings Ordinance](#)

[Click here to download the GBO Rules & Regulations PDF](#)

[Click here to download the Green Building Declaration Form for New Buildings](#)

[Click here for Denver's Commercial Energy Modeling Report](#)

Abbreviations

GBO = Green Buildings Ordinance
R+Rs = Rules & Regulations
GBDF = Green Building Declaration Form
SDP = Site Development Plan
IBC = International Building Code
IECC = International Energy Conservation Code
DBCA = Denver Building Code Amendments

2. Project Compliance

- A. All projects must address two areas of compliance:
 - i. Provide a cool roof, and
 - ii. Select an additional green building option (A through I) from the GBDF.
- B. Exemptions are available for certain types of projects. See Section 10-301(c) in the GBO R+Rs for a complete list of available exemptions.

3. Site Development Plans

- A. All Site Development Plans must include identification of the selected GBO additional green building option, and any full or partial exemptions taken, on the cover sheet.
 - i. If providing green space, specific GBO notes as defined below in the submittal requirements and final green space calculations after the superstructure CDs are approved, must be included in the SDP for SDP approval.
 - ii. If providing photovoltaics (PV), the superstructure CD approved PV layout and area coverage must be included in the SDP for SDP approval.
- B. A [GBDF for New Buildings](#), including the owner's signature, must be provided with the SDP submittal.

4. Construction Permits

- A. At the time of superstructure permit submittal, provide all applicable materials listed in the submittal requirements table below necessary to demonstrate conformance with requirements specifically outlined in the GBO R+Rs Article III pertaining to cool roof requirements and R+Rs Article IV Section 4.06(a) pertaining to Green Space and Renewable Energy requirements.
- B. Note – Roof Permits – Once the superstructure CD submittal has been approved for GBO compliance and construction permit, the roof permit may be issued without any additional GBO review required. In the roof permit submittal, please include the superstructure (COMMCON) permit number and a note that the project has already been reviewed and approved for GBO compliance.

- C. Note – Separate Permits – Please note that beyond the general construction permit, for vegetated roof construction and for at-grade green space included in the selected compliance pathway separate approvals and permits must be received as outlined in the Green Buildings Ordinance (GBO) Rules and Regulations (R+Rs) including but not limited to: roofing, fire protection systems, plumbing, irrigation systems, and Zoning. The permit for the vegetated roof must be issued to a Denver licensed green roof installer per GBO R+Rs Article II Section 2.03(e).
- D. Note – Renewable System Permit - Submit full photovoltaic system construction documents, signed and stamped, for Structural, Electrical, Fire and Zoning reviews and a separate renewable system permit. Green Buildings Ordinance compliance, overall project permitting, and roof permitting may precede these approvals and the associated permit; however, installation of this system to provide compliance with the GBO is required prior to overall building TCO or CO being issued.
- E. Projects in a historic or landmark district will need approval from Landmark Preservation before applying for electrical, zoning, or building permits.
- F. A zoning permit will be required for all solar panels that do not meet the definition in the Denver Zoning Code for “solar panels, flush-mounted”.

5. Project Requirements for Option H(i):

Green Space (Vegetated Roofs + At-Grade Green Space) AND On-Site Renewable Energy

- A. Select a coverage area (choose one combination):
 - i. Green Space = 3% of Gross Floor Area – AND – Solar = 7% of Gross Floor Area
 - ii. Green Space = 18% of Total Roof Area – AND – Solar = 42% of Total Roof Area
 - iii. Green Space = 30% of Available Roof Area – AND – Solar = 70% of Available Roof Area
- B. For Vegetated Roofs, reference R+Rs for specifics including those related to:
 - ❖ Professional qualifications
 - ❖ Irrigation
 - ❖ 80% coverage of vegetated roof within 3 years
 - ❖ Plant selection lists
 - ❖ PVs and vegetation
 - ❖ Trees and groundcover
 - ❖ Maintenance plan
 - ❖ 4” growing media
 - ❖ IBC, IFC, IPC Denver amendments
 - ❖ Standpipes, fire zones, fire clearances, and exit stairs
 - ❖ Wind and gravity loads
- C. For At-Grade Green Space, reference R+Rs for specifics including those related to:
 - ❖ Trees and groundcover
 - ❖ Zoning
 - ❖ Water quality treatment
 - ❖ Right of way
 - ❖ Must be new
 - ❖ Soil quality
 - ❖ Drainage

- ❖ Tree standards
- ❖ Turfgrass
- ❖ Urban agriculture

D. For On-Site Renewable Energy, reference R+Rs for specifics including those related to:

- ❖ 16% minimum efficiency
- ❖ Clearances
- ❖ Providing an energy model
- ❖ Other renewable equivalency to solar output *if applicable*

Mandatory Cool Roof Requirements for All New Buildings:

#	Construction Phase	Applicable Code Section	Submittal Item	Requirement
1	SDP	R+Rs 2.03(c)	Green Building Declaration Form	Provide a Green Building Declaration Form for New Buildings with all fields infilled including the owner's signature.
2	Permit	R+Rs 2.03(a)	Roof plan	Provide a roof plan with the total roof area quantified.
3	Permit	R+Rs 3.02(a) R+Rs 3.03(a) R+Rs 3.03(b)	Solar reflectance data	Provide cool roof covering and paver solar reflectance data in conformance with Table 1 - Reflectance Requirements in the GBO R+Rs. This information may be included in the construction document specifications or on the roof plan.
4	Permit		Roof assembly section details	Provide roof assembly section details for all roof types.
5	Permit	IBC 1202.2 IBC 1202.3	Ventilation details (steep slope only)	Provide a roof plan illustrating locations, sizing, and calculations.
6	Permit	R+Rs 3.04	Exemptions	For any exemptions claimed, please provide substantiation.
7	Permit	R+Rs 3.04(a)	Exemptions - Character defining roofs	See applicable GBO R+Rs Section 3.04(a) for additional submittal requirements if claiming a character defining roof. It is recommended that any project considering applying for a character defining cool roof exemption, contact us first at stephen.sanderson@denvergov.org or christy.collins@denvergov.org .

Option H(i): Combination Green Space & On-Site Renewable Energy – Additional Requirements:

Green Space – Additional Green Buildings Requirements

8	SDP	R+Rs 4.02(b)(v)	GBO sheet	Provide a GBO sheet that includes the building area calculation, site plan, landscape plan and the following note: <i>Green space is shown on this site development plan for compliance with Article XIII of Chapter 10, must be maintained, and cannot be used for purposes other than that shown on this site development plan. Should a future amendment change the amount or location of this green space, then additional green space must be provided to document compliance or payment of cash-in-lieu fees will be required.</i>
9	SDP		GBO sheet	Provide the required green space calculations and diagrammatic plan (identical to approved landscape CDs).
10	SDP		Landscape sheet	Statement signed by landscape architect stating design is per GBO.
11	Permit		Green space calculations	Provide detailed calculations of green space required including dimensioned roof plan(s) if applicable.
12	Permit		General note	Provide a general note in the landscape documents underscoring the applicability of GBO landscape requirements.
13	Permit	R+Rs 4.02 (d)(ii)(2)(b)	Vegetated roof clearances	Provide a roof plan identifying and dimensioning all GBO R+Rs required clearances.
14	Permit	R+Rs 4.02 (d)(vi)	Vegetated details and specifications	Provide details and system specifications.

15	Permit		Applicable construction documents	Provide applicable landscape, irrigation, plumbing, and fire protection plans.
16	Separate Permits	R+Rs 4.02 (d)(i)(1)(b)	Separate CD submittals and permits	<i>If applicable</i> , separate CD submittals are required for fire protection systems; plumbing/backflow preventer; irrigation system; zoning; or vegetated roof system (must include a maintenance plan).

On-Site Renewable Energy – Additional Green Buildings Requirements:

17	SDP	R+Rs 4.03(a)(i)	PV coverage requirements	Required PV coverage calculations and diagrammatic site and/or roof plan (identical to approved CDs)
18	Permit	R+Rs 4.03(a)(i)	PV coverage requirements	Detailed calculations of PV coverage required including dimensioned building and/or roof plan(s) as applicable
19	Permit	R+Rs 4.03 (a)(iv) & (viii)	PV clearances	Roof plan identifying and dimensioning all GBO R+Rs required clearances
20	Permit	R+Rs 4.03(a)(iii)	PV system information	PV panel product data including efficiency rating and system capacity (kW)
21	Permit	R+Rs 4.03(a)(vi)	Energy model	Denver's Commercial Energy Modeling Report data showing estimated annual average electricity usage including pEUI
22	Permit		Energy model	Statement identifying limiters to energy model accuracy and ROM estimate for swing inaccuracy of pEUI
23	Permit		General	Additional materials as required to illustrate compliance with GBO R+Rs Section 4.03(a)(i), (iii) through (iv), (vi), (vii), and (viii)
24	Separate Permits	R+Rs 2.03(g)	Separate CD submittals and permits	If applicable, separate CD submittals are required for fire protection systems; photovoltaic system; zoning.
25	Post C.O.		Inspections	PV system must be installed and inspected within 12 months of final roof inspection
26	Post C.O.	R+Rs 4.03(c)	Net zero energy buildings	Net zero energy buildings must submit actual energy use data 12 months after certificate of occupancy, showing actual use to be within 10% of predicted