

NOTE: Denver's Green Buildings Ordinance applies to all existing commercial buildings with 25,000 GSF or larger upon roof replacement or roof recover. 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 Existing Buildings](#)

[Denver Roof Permit Application](#)

### 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) on the GBDF.
- B. Exemptions are available for certain types of projects. See Section 10-302(d) in the GBO R+Rs for a complete list of available exemptions.

## 3. Site Development Plans (Green Space Option Only)

- A. A Site Development Plan minor modification must be created/included if providing green space is the chosen additional green building option. The SDP 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 permit CDs are approved, must be included in the SDP for SDP approval.
- B. Submit a [GBDF for Existing Buildings](#), including the owner's signature, with the SDP submittal.

## 4. Construction Permits

- A. At the time of the 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 4.02 pertaining to Green Space requirements.
- B. 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).

## 5. Project Requirements for Option A:

**Green Space (Vegetated Roofs + At-Grade Green Space)** *Note - Existing green space cannot be used to meet the Green Buildings Ordinance, unless it is improved with trees or an above-grade, vegetated, water quality facility. Review the Rules and Regulations for details.*

- A. Total roof replacement/additions, select a coverage area (choose one):
- i. 2% of Gross Floor Area
  - ii. 18% of Total Roof Area
  - iii. All Available Roof Area (see GBO R+Rs definition for more information on All Available Roof Area)
- B. Replacing roof section(s), select a coverage area (choose one):
- i.  $(2\% \text{ of the building GFA} \times \text{roof section area}) \div \text{total roof area of the building}$
  - ii. 18% of the roof section(s)
  - iii. All Available Roof Area on the roof section(s)
- C. 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
- D. 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

### Mandatory Cool Roof Requirements for All Existing Buildings:

#	Construction Phase	Applicable Code Section	Submittal Item	Requirement
1	Roof Permit	R+Rs 2.03(c)	Green Building Declaration Form	Provide a <a href="#">Green Building Declaration Form for Existing Buildings</a> with all fields infilled including the owner's signature.
2	Roof Permit		Roof permit application	Provide a <a href="#">roof permit application</a> with the project valuation.
3	Roof Permit	R+Rs 2.03(a)	Roof plan	Provide a roof plan with the total roof area quantified.
4	Roof Permit	R+Rs 3.02(a) R+Rs 3.03(a) R+Rs 3.03(b)	Roof product & solar reflectance data	Provide cool roof covering and paver solar reflectance data with the color circled, highlighted, or otherwise identified 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.
5	Roof Permit		Roof assembly section details	<u>Roof section detail</u> - OR - <u>a detailed, layer-by-layer description</u> of the roof assembly. Please provide both a detail for the existing assembly AND the proposed assembly.
6	Roof Permit	R+Rs 3.03(b)(i)	Condensation avoidance strategy	Provide one of the following options: (1) Air barrier AND vapor retarder product data if the low-slope prescriptive assembly is being provided, OR (2) A dew point analysis from a registered professional if a prescriptive assembly is NOT being provided, OR (3) A note stating that an existing cool roof is being replaced; if a note is provided, then the prescriptive assembly or the dew point analysis does NOT need to be provided.
7	Roof Permit	IBC 1202.2 IBC 1202.3	Ventilation details (steep slope only)	Provide a roof plan illustrating locations, sizing, and calculations.
8	Roof Permit	R+Rs 3.04	Exemptions	For any exemptions claimed, please provide substantiation.
9	Roof 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 <a href="mailto:stephen.sanderson@denvergov.org">stephen.sanderson@denvergov.org</a> or <a href="mailto:christy.collins@denvergov.org">christy.collins@denvergov.org</a> .
10	Roof Permit		Exemptions – Existing cool roof	Simply provide a note on the roof plan or roof assembly description submittal document.
11	Roof Permit	R+Rs Section 10-302(d)(3)(a)	Exemptions – Residential building below 5 stories OR 62.5' in height	Provide photos and/or drawings substantiating the claimed exemption as a residential property <5 stories OR 62.5' or less in height with measurements.

### Option A: Green Space – Additional Green Buildings Requirements:

#	Construction Phase	Applicable Code Section	Submittal Item	Requirement
12	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>
13	SDP		GBO sheet	Provide the required green space calculations and diagrammatic plan (identical to approved landscape CDs).
14	SDP		Landscape sheet	Statement signed by landscape architect stating design is per GBO.
15	Roof Permit		Green space calculations	Provide detailed calculations of green space required including dimensioned roof plan(s) if applicable.
16	Roof Permit		General note	Provide a general note in the landscape documents underscoring the applicability of GBO landscape requirements.
17	Roof 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.
18	Roof Permit	R+Rs 4.02 (d)(vi)	Vegetated details and specifications	Provide details and system specifications.
19	Roof Permit		Applicable construction documents	Provide applicable landscape, irrigation, plumbing, zoning, and fire protection plans.
20	Separate Permits	R+Rs 4.02 (d)(i)(1)(b)	Separate CD submittals and permits	If applicable, separate CD submittals are required for fire protection systems; plumbing/backflow preventer; irrigation system; zoning; vegetated roof system (must include a maintenance plan).