

**NC Department of Insurance
Office of the State Fire Marshal - Engineering Division
1202 Mail Service Center, Raleigh, NC 27699-1202
919-647-0000**

Shell Buildings and upfits

Code: NC Energy Code

Date: September 16, 2021

Section: C101.2, Exception 2, Appendix Bⁱ

Question:

Can a permit holder use the C101.2ⁱⁱ, Exception 2 exemptionⁱⁱⁱ of the Energy Code for a speculative building, (a shell building) before the tenant spaces are upfit?

Answer:

No.

At the time of plan submission, an occupancy classification is not required for a speculative building to receive a *Certificate of Compliance (CC)*. If a *Certificate of Occupancy (CO)* is to be issued for the building, the building must be finished out and comply with the entirety of the NC Building Codes for the proposed occupancy classification.

Since it cannot be determined from a CC if the overall occupancy, post-upfits, will exceed the 50% threshold required for the C101.2 exception 2 exemption for F, S, and U occupancies, the speculative building cannot be exempt from the Energy Code.

This does not mean the shell building has to meet the energy code for the thermal envelope at the time of shell completion, only that since no occupancy category has been defined, there is not a code path to claim an exemption at the time of a CC for the shell.

Follow-up question #1:

Can a permit holder use the C101.2 Exception 2 exemption for an F, S, or U occupancy if the first upfit is 50% or less of the shell building's square footage? See **Figure 1** of a 100,000 SF shell building, and **Figure 2** of this same building upfit with 50,000 SF of S-occupancy space

Figure 1: Shell Building

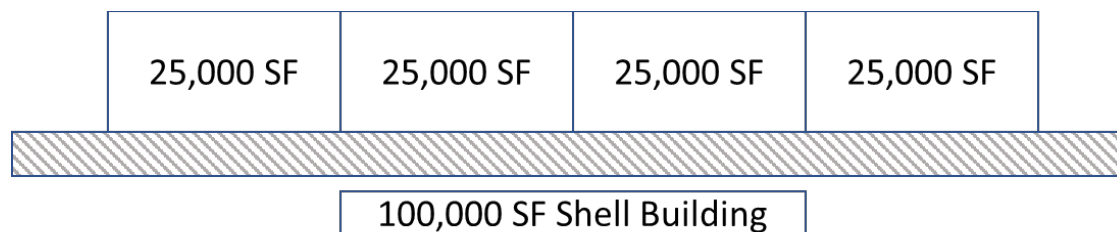
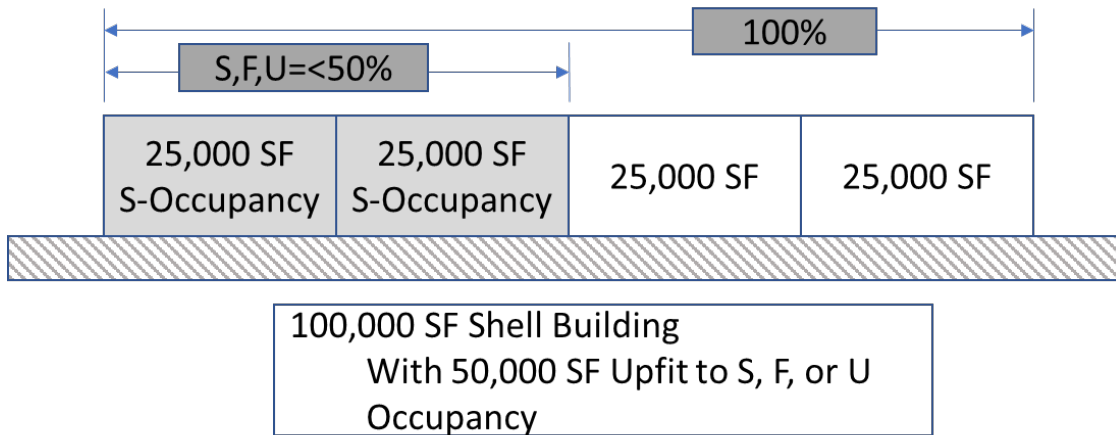


Figure 2: Tenant Upfit



Answer:

No.

At the time of first upfit, if it is 50% or less of the shell building area, the C101.2 Exception 2 exemption cannot be claimed for F, S, or U occupancies, because it is still unknown what the overall percent of the building will be. Therefore, although the occupancy category of the first upfit may be exempt if it were to exceed 50% of the building area, it is unknown if the overall building area will be exceeded yet or not. The thermal envelope will have to be met for the commercial provisions of the Energy Code for this first upfit in this scenario.

Alternately, the permit holder can upfit the remaining space as an exempt occupancy (F, S, or U), but would need to perform the upfit to the extent of minimal compliance to achieve a CO for an exempt occupancy category. These buildings that are finished to the point of a CO, even though they may not have a tenant, are sometimes referred to as a “white box”. There is not a defined category for a “white box” in the NC Building Code, and it should be used with caution as it does not have a consistent meaning to all people.

Follow-up question #2:

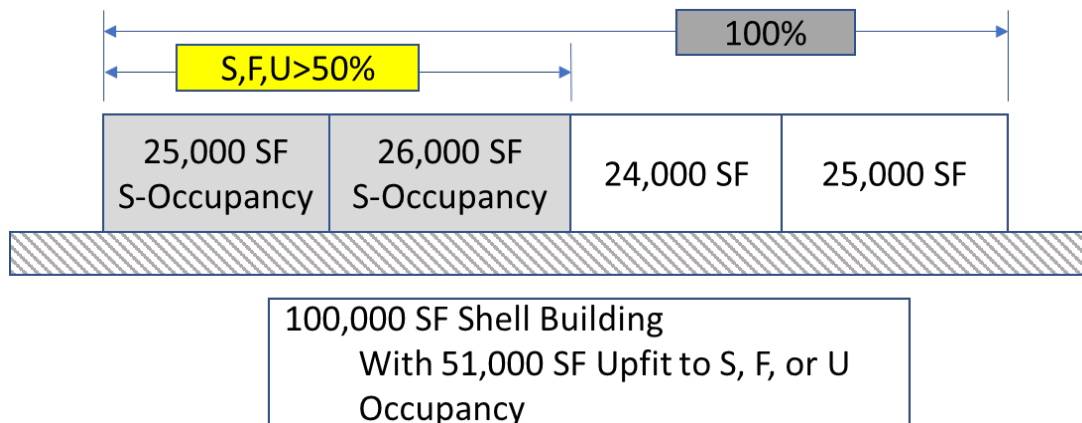
Can a permit holder use the C101.2 Exception 2 exemption for an F, S, or U occupancy if the first upfit is greater than 50% of the shell building’s square footage?

Answer:

Yes.

Since the area receiving the Certificate of Occupancy now exceeds 50% of the area of the building, the upfit space can use the C101.2 Exception 2 for F, S, or U occupancies. See **Figure 3** for an example.

Figure 3: Upfit Building Greater than 50% F, S, or U



Existing Building Code Path analysis:

Question:

When a shell building has its first upfit completed, and that space receives a *Certificate of Occupancy*, future alterations within that space can use the Existing Building Code provisions. Does this make all other tenant spaces available for the Existing Building Code, including the Energy Code Provisions for the Building Envelope?

Answer:

No.

Until a space receives a certificate of occupancy, it is not an existing building for purposes of code compliance. A space that does receive a *Certificate of Occupancy* is receiving it only for that space, and that does not extend beyond that space.

ⁱ[2018 Appendix B | OSFM \(ncosfm.gov\)](#) - .pdf version. There is a slight difference between the MS Word version and the .pdf version, but the .pdf version has dedicated provisions to address shell buildings and upfits

ⁱⁱNCECC C101.2, Exception 2. Per N.C.G.S. 143-138 (b18), no energy conservation code provisions shall apply to any structure for which the primary occupancy classification is Group F, S, or U pursuant to Chapter 3 of the 2018 *North Carolina Building Code*. This exclusion shall apply to the entire building area.

ⁱⁱⁱNCDOI Interpretation for NCGS 143-138(b18)
<https://www.ncosfm.gov/media/1337/open>

Excerpt of Online Interpretation:

The Group F, Group S, or Group U “primary occupancy of a building” is defined as the summation of the floor areas of a building classified with these occupancies being greater than the summation of the floor areas associated with other occupancy classifications that are support functions of the primary occupancy. The legislation indicates that the exemption shall apply to the entire floor area of any structure for which the primary use or occupancy is Factory Group F, Storage Group S, or Utility and Miscellaneous Group U, which exempts all other secondary occupancies of the building from energy efficiency requirements, as applicable. Building areas including office/administration areas are exempt if the primary use of the building is any of the occupancies listed above. The approved code

provisions apply to new work for both new and existing buildings. With respect to existing buildings, the code provisions apply to new work for additions, alterations, repairs, and change of use.

G.S. 143-138 is amended by adding a new subsection to read: “(b18) Exclusion From Energy Efficiency Code Requirements For Certain Use and Occupancy Classifications. - The Council shall provide for an exemption from any requirements in the energy efficiency standards pursuant to Chapter 13 of the 2012 NC Building Code and the 2012 Energy Conservation Code, and any subsequent amendments to the Building Code and the Energy Conservation Code, for the following use and occupancy classifications pursuant to Chapter 3 of the 2012 North Carolina Building Code: Section 306, Factory Group F; Section 311, Storage Group S; and Section 312, Utility and Miscellaneous Group U. This exclusion shall apply to the entire floor area of any structure for which the primary use or occupancy is listed herein.”

Filename

C101.2 - Shell Buildings-Upfits-and Energy Code Applicability