

A/C installation under Chapter 13

Q. How does Chapter 13 relate to a new packaged A/C installation on an existing building? Specifically, is the minimum EER rating 12.5 or 10.9? The footnotes to Table 13-N on page 140.36 of the 4/1/04 version of Chapter 13 refer to "New Construction" and "replacements." It is not clear which category would apply in our case. This is not a replacement but a new system, including all new ducts, to be installed in an existing building. This unit will provide additional cooling and ventilation for an existing tenant space and serve a newly created tenant space within an existing building.

Use the calculation for new construction. (*Tri-County Code Forum, December 2004*)

Allowable area

Q. The IBC, 502.1 defines Building Area as "The area included within surrounding exterior walls..." In calculating the allowable area, is the area of the exterior walls to be included, or just the interior area exclusive of the exterior walls?

A. For the purposes of calculating the allowable area in OSSC section 503, the IBC Commentary says that the allowable area is the inside face of the exterior wall. However, the panel refers this question to the state for interpretation:

www.bcd.oregon.gov/programs/structural/interps/OSSC_Interp_503_area_of_building.pdf

(*Tri-County Code Forum, June 2005*)

Assembly spaces as accessory uses to Group E

Q. Will the text given in 302.2.1, which states that assembly spaces that are accessory uses to Group E are not required to be considered separate occupancies be interpreted in Tri-County to mean that there is no occupancy separation required? Table 302.3.2 indicates separation is required (2-Hour) which seems to be in conflict with 302.2.1. The spaces we are curious about typically include gymnasiums, school cafeteria, and possibly school library.

A. The code section refers to assembly occupancies that are accessory to Group E, in which case they are not required to be separated. If, by chance, there was an A occupancy adjacent to the E, but under separate control, then they would need the appropriate occupancy separation. (*Tri-County Code Forum, September 2004*)

Q. Paragraph 303.1 states that assembly spaces which are accessory to Group E in accordance with 302.2 are not considered assembly occupancies. Will that be the case for K-12 public school buildings in Tri-County? If yes, are these uses classified as E for the purposes of determining occupant load, egress width, etc.?

A. Section 302.3.1 states that for non-separated uses, all other code requirements shall apply to each portion of the building based on the use of that space. The exiting requirements for the assembly portions of the building need to meet the requirements based on that use. (*Tri-County Code Forum, September 2004*)

Atrium-definition

Q. Please clarify the definition of atrium per 404.1.1 as it relates to an opening in a two-story building.

A. The definition in the 2004 OSSC of what constitutes an "atrium" is nearly identical to that found in section 202 of the 1998 OSSC. However, the companion provisions for "shafts" and "vertical exit enclosures" in the respective code editions have changed considerably.

For example, section 711.3 of the 1998 OSSC stated that; "*In other than Group I Occupancies, openings that penetrate only one floor and are not connected with openings communicating with other stories or basements and that are not concealed within building construction assemblies need not be enclosed.*" As such, most required stairways were permitted to atmospherically connect two floors.

In contrast, section 707.2, exception 7.2 of the 2004 OSSC will not allow the "*required means of egress system*" to be unenclosed between floors except as permitted in section 1019.1. A cursory look at section 1019.1 reveals that the required stairways in the means of egress must be enclosed except for the following circumstances:

In other than Group H and I occupancies, a stairway serving an occupant load of less than 10 not more than one story above the level of exit discharge.

In other than occupancy Groups H and I, a maximum of 50 percent of egress stairways serving one adjacent floor are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Any two such interconnected floors shall not be open to other floors.

In other than occupancy Groups H and I, interior egress stairways serving only the first and second stories of a building equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 are not required to be enclosed, provided at least two means of egress are provided from both floors served by the unenclosed stairways. Such interconnected stories shall not be open to other stories.

In short, where a sprinkler system is installed, stairways serving the first and second stories may be unenclosed. In unsprinklered buildings, 50 percent of the egress stairways and stairways serving 10 or less persons above the level of exit discharge may be unenclosed.

As noted, this is only one example of the differences. Sections 404, 707.2 and 1019.1 contain additional exceptions that warrant further examination and application. (*Tri-County Code Forum, March 2005*)

Bedroom and den requirements in high rise construction.

1-4. Code References:

Section 310.4 Basements in dwelling units and every sleeping room below the fourth story shall have at least one operable window or door approved for emergency escape or rescue that shall open directly to a public street, public alley, yard or exit court.

Section 1204.2 Guest rooms and habitable rooms within a dwelling unit or congregate residence shall be provided with natural light by means of exterior glazed openings with an area not less than one tenth the floor area of such rooms with a minimum of 10 square feet.

Section 1204.3 Guest rooms and habitable rooms within a dwelling unit or congregate residence shall be provided with natural ventilation as specified in section 1203.2.4 or by a mechanical

ventilation system which shall be capable of supplying ventilation air in accordance with Table 12-A.

Section 1204.1 For the purpose of determining the light or ventilation and source control ventilation for Group R Occupancies required by this section and Table 12-A, any room may be considered as a portion of an adjoining room when one half of the area of the common wall is open and unobstructed and provides an opening of not less than one tenth of the floor area of the interior room or 25 square feet, whichever is greater.

The floor plans for dwelling units each have an interior room labeled as a "den." In one unit the "den" has a clothes closet. The "den" in the other unit does not have a closet. Assuming these units are not in a building complying with the requirements of chapter 4 for a high rise building, please respond to the following questions:

Q. Is the "den" containing the clothes closet considered a sleeping room for purposes of applying emergency egress requirements? Is the "den" that does not contain a closet considered a sleeping room for purposes of applying emergency egress requirements?

A. The applicant is required to label the rooms accurately. If the room has a closet and is labeled "den," building departments should accept the designation and make no assumption that it will be used other than how it is labeled. For example, many living rooms have closets but are not treated as sleeping rooms. (*Tri-County Code Forum, September 2004*)

Bedroom and den requirements in high rise construction-natural light.

Q For purposes of applying the requirements for natural light, can the opening between the "den" and the "entry" hallway be considered to meet the qualifications of section 1204.1 such that the "den" can be considered a portion of the living/dining area and can borrow natural light from the living/dining area?

A. Yes, if it meets the qualifications of the opening described in Section 1205.2.1. of the 2004 OSSC. (*Tri-County Code Forum, September 2004*)

Bedroom and den requirements in high rise construction-ventilation.

Q. Assuming the "den" is not provided with mechanical ventilation, can the opening between the "den" and the "entry" hallway be considered to meet the qualifications of section 1204.1 such that the "den" can be considered a portion of the living/dining area and can borrow natural ventilation from the living/dining area?

A. Yes, if the opening meets the minimum opening requirements of Section 1203.4.1.1 of the 2004 OSSC. (*Tri-County Code Forum, September 2004*)

Equine facilities code citation

Q. We have a clarification request for the next Building Code Forum. One of our colleagues recently found the following: Under section 105.2 Exceptions 13 (Agricultural Structures) and 14 (Equine Facilities), the new code refers to ORS 455.310. ORS 455.310 covers exempt residential construction, not agricultural structures. ORS 455.315 covers exempt agricultural structures. See ORS index at <http://www.leg.state.or.us/ors/455.html>

You may want to point this out so that it is addressed in future issueances of the Code.

The wrong statute was cited in the code and will be corrected. (*Tri-County Code Forum, March 2005*)

Firewall requirements in apartments

Q. What are the new OSSC requirements for firewalls in apartments?

A. The new code requires the dwelling unit separation to be one hour, unless the building is sprinkled; then unit separation can be 30 minutes. See also section 708. (*Tri-County Code Forum, June 2005*)

Firewall-definition of a 30-minute wall

Q. Is there a definition for a 30-minute wall?

A. Table 721.6.2 of the OSSC assigns a fire-resistive time period to various wall components. Using this table, a designer is able to establish an overall fire-resistive time period for a given assembly by adding up the times assigned to interior and exterior membranes, the wood frame and the addition of certain insulations (unique to wood frame construction). (*Tri-County Code Forum, June 2005*)

Panic hardware and ADA access

Q. For ADA access, the code requires 12 inches adjacent to the “push” side of a door equipped with a closer and a latch. If the latch is panic hardware, is the 12 inches of adjacent space still required?

A. Yes. (*Tri-County Code Forum, June 2005*)

Property lines

Q. When there are several properties under the same ownership how do you treat property lines?

A. Contact your local jurisdiction. The answer depends on which jurisdiction you’re in and must be judged on a case by case basis. Suggestions from the panel included the use of a covenant (not to sell separately) or a lot line adjustment. (*Tri-County Code Forum, September 2004*)

Restaurant bars and accessibility requirements

Q: Are there situations in which an accessible table located adjacent to a bar counter can be provided instead of a 60-inch long portion of the bar counter lowered to 34 inches?

Bar counters in restaurants and lounges are usually 36 to 44 inches high where patrons sit on raised seats. Ice and drink dispensers, coolers, sinks, and other equipment are typically built into the barkeep side of the casework. It is common for small restaurants to propose a 6 to 8 foot long bar. Section 1108.4.5 completely eliminates raised bar counters that are 5 feet long or less. Bar counters less than 10 feet long are impractical because the remaining raised portion is less than 5 feet long. The end result is the restaurant does not have a raised bar, which seems overly restrictive.

Note that The Americans with Disabilities Act Accessibility Guidelines (ADAAG) Section 5.2 allows bar service to be provided at accessible tables within the same area as the raised counter.

A. Section 1101.6 references ORS 447.250 and allows waivers or modifications if the code section is more restrictive than ADA guidelines or the Fair Housing Act. If the new ADAAG guidelines allow this alternate method, the applicant may be able to appeal to the state. It could also be approved at the local level as an alternate method, but jurisdictions may be hesitant to make this approval without guidance from the state.

It would seem that if a table is assigned for use as an "accessible table" and is made available for use when needed that it could fulfill the requirement. However, if the table was in use and was then needed, it could create a slight inconvenience as the current patrons would have to be relocated to make room for the physically challenged user. (*Tri-County Code Forum, September 2004*)

Restoration—repair, addition or alteration?

Q. Our current project is the restoration of a fire-damaged school. Would this work be considered a "repair," an "addition," or an "alteration"? While most of the project consists of rebuilding the classrooms and does not include adding any new space, the original structure is more than 65 years old and could use some structural updates, as well as the addition of an smoke alarm system. Would such additions change the category of construction?

A. The work to restore the fire-damaged area would be considered a repair, even if new trusses must be added to be sufficient to carry the load. The fire code has a retroactive provision that requires smoke alarms in all such buildings. Work with your local building official to discuss details. (*Tri-County Code Forum, June 2005*)

S2 parking structures and sprinkler systems

Q. Do S2 parking structures need to be sprinklered?

A. 406.4 and 903.2.9 Open, no; enclosed, yes. (*Tri-County Code Forum, June 2005*)

Suspended ceilings

Q. We were at the September meeting and presented a question about the attachment of non-load bearing partition walls through a suspended ceiling tile system. It was the last item discussed and while the building officials indicated that it was OK, apparently there was no final ruling on the item. Reviewing the Newslines, question/answer section, we noticed that our question was not listed with the board ruling. Can you follow up on this item so that we can get this resolved?

The panel considers this a cosmetic installation. At this time, the panel finds this installation acceptable for the Tri-County region with the understanding that a final determination will be made as the new ASME standard to suspended ceiling becomes available. (*Tri-County Code Forum, December 2004*)

Q. Does the shape of the ceiling tiles—whether they are flat or regular – have a bearing on the grid requirements?

A. No. (*Tri-County Code Forum, June 2005*)

Q. Can tiles be scribed in at all sides and not affect the deflection of the grid?

A. Yes. (*Tri-County Code Forum, June 2005*)

Q. If a ceiling grid system has no tiles or lights directly attached to the grid, does it then become an aesthetic system and not need to meet any of the ceiling grid code requirements?

A. Any such grid system must meet the structural code requirements. (*Tri-County Code Forum, June 2005*)

Suspended ceilings and sprinkler head design

Q. Please clarify 1621 and referenced ASCE 9.6.2.6.2.2 as it relates to suspended ceiling tile and sprinkler head design.

A. The panel refers this question to the Building Codes Division for interpretation. It appears that it is extremely difficult for builders to locate sprinklers or seismic joints that are the correct size. (*Tri-County Code Forum, March 2005*)

Upper cabinet height

Q. What is the requirement for upper cabinet height?

A. UFAS (Kitchen storage) states that "Max. height shall be 48 inches for at least one shelf of all cabinets & storage shelves mounted above work counters." Does that mean one shelf of EACH upper cabinet? Or does that mean just one shelf is required to be mounted at 48 inches and the others can be mounted higher?

UFAS is not the adopted accessibility standard in the State of Oregon. However, OSSC 1109.11.2, which is based on the Americans with Disabilities Act Architectural Guidelines (ADAAG), requires 50 percent of the cabinets to have at least one shelf within the height limitation. (*Tri-County Code Forum, June 2005*)

Ventilation requirements under the OSSC

Q. I have a question for further clarification on a ventilation question related to the Q&A posed during the April 8 forum and answered in the August-October 2004 News Site, specifically Oregon Structural Specialty Code, Section 1505. Can alternate ventilation (gable end vents or extra vents in non-vaulted areas) be installed to compensate for any blocked or restricted soffit vents, due to insulation filled rafter or scissor truss cavities, and achieve a 150:1 venting requirement? Any 2x6, 2x8, 2x10 rafter, for a vaulted ceiling, is simply too small to allow for R-30 Fiberglass Batt insulation and allow 1" air gap. (R-30= 9-1/4(one quarter)" for high density fiberglass insulation, 2x10 =9-1/4(one quarter)" there is no room for air gap) Any scissor truss is only 3-1/2(one half)" at the soffit vent, and there is no possible way to achieve either R-30 or the required air gap for the first 18" to 36" of the scissor truss cavity (depending upon pitches) There is a conflict between structural codes allowing 2x4 trusses, 2x6, 2x8 and 2x10 rafters, the insulation requirements and ventilation requirements. The insulation gets crammed into rafter spaces and venting is blocked off. When scissor trusses or less than 2x12 rafters are used, the plans examiner should be able to know that mathematically the soffit vents will be blocked. Shouldn't this be the step when alternate venting should be called out? How do we meet all three requirements? We have had call-back on houses that "meet codes" and were signed off, but now have high moisture build-up in the attic and mold growth on the roof sheeting. Obviously the current venting is not working!

The code allows for the compression of roof insulation in sloped roof assemblies in proximity to eave vents. The code also requires the installation of "baffles" in order to maintain cross ventilation. (*Tri-County Code Forum, December 2004*)

Walls directly attached to the structure

Q. Please clarify the definition of "walls directly attached to structure." Do walls that are braced to the structure meet his requirement?

A. If the wall is bracing a building, or it is relying on the building for its support, it is a part of the structure. (*Tri-County Code Forum, June 2005*)

Wood elements of a concrete or masonry wall anchorage system

Q. The 1998 Structural Specialty Code based on the 1997 UBC Section 1633.2.8.1. Item 5 requires that wood elements of a concrete or masonry wall anchorage system "have a minimum actual net thickness of 2 1/2 inches." Does the current 2004 Structural Specialty Code based on the 2003 IBC have an equivalent requirement? If yes, where is the citation requiring 2-1/2 inch (3x) wood elements for the anchorage of concrete or masonry wall systems?

A. No. There is nothing in the current code that addresses this issue. (*Tri-County Code Forum, June 2005*)

Masonry or concrete wall anchors

Q If the 2-1/2 inch net section is still required by the 2004 Structural Specialty Code, does the minimum net section apply to metal plate connected pre-engineered roof trusses used to anchor masonry or concrete walls?

A. The prescriptive provisions have been replaced with design provisions. (*Tri-County Code Forum, June 2005*)