

STATE BUILDING CODE OPINION 20-June03

CODE: 2018 Washington State Energy Code-Commercial

SECTION: C401.1 & 406 Efficiency Packages

BACKGROUND: *Per Section C401.1, the provisions of chapter 4 are “applicable to commercial buildings and their sites”.*

Per Section C406.1, the provisions for additional efficiency package credits apply to “new buildings and changes in space conditioning, change of occupancy, and building additional” and apply to “each area... provided all areas in the building comply”. Additionally, “areas included in the same permit within mixed use buildings shall be permitted to demonstrate compliance by an area weighted average number of credits”.

QUESTION 1: Do the Section C406 additional efficiency package credit requirements only apply to the any area on the site?

ANSWER 1: **No. Section C406 does not apply to site areas such as surface parking lots, landscape areas, outdoor plaza areas, transit bus or light rail station unenclosed covered platform areas or other similar outdoor spaces. It only applies to the enclosed areas of buildings.**

QUESTION 2: Do the Section C406 additional efficiency package credit requirements only apply to the conditioned space and low energy space areas of the building?

ANSWER 2: **No. Section C406 applies to all enclosed building areas such as enclosed unconditioned storage spaces, enclosed parking garages, enclosed loading docks and other similar spaces. Section C406 does not apply to areas such as exterior entries covered by canopies, exterior courtyards under building overhangs, exterior loading docks, exterior covered transit station platforms, exterior roof decks (open or enclosed), or other similar unenclosed exterior spaces outside the building.**

QUESTION 3: If unconditioned areas of the building are required to comply with Section C406 additional efficiency package credit requirements (See answer to Question 2 above) then how many credits need to be achieved for unconditioned spaces?

ANSWER 3: **Enclosed, unconditioned building areas may utilize Section C406.1 exception 1 for low energy spaces and therefore only require a minimum of three Section C406 credits.**

QUESTION 4: If unconditioned areas of the building are required to comply with Section C406 additional efficiency package credit requirements (See answer to Question 2 above) which occupancy category per Table 406.1 shall be used?

ANSWER 4: **Enclosed, unconditioned building areas shall utilize the “All Other” category of Table C406.1 regardless of occupancy.**

QUESTION 5: Do the Section C406 additional efficiency package credit requirements apply to an open parking garage building?

ANSWER 5: **Yes. Any conditioned or enclosed spaces for elevator machine rooms, electrical rooms, etc would be subject to six credit requirements of Section C406.1 and would utilize the “All Other” category of Table C406.1. Open, unconditioned parking garage areas may utilize Section C406.1 exception 1 for low energy spaces and therefore only require a minimum of three Section C406 credits. The area of the upper deck of the parking structure if used for parking where it is not enclosed would be excluded from the area weighted average calculation and would not need to comply with Section C406.**

BACKGROUND: *Per Section C406.1, "areas included in the same permit within mixed use buildings shall be permitted to demonstrate compliance by an area weighted average number of credits".*

QUESTION 6: Is it allowable to include different additional efficiency package options within the same occupancy type if the areas are tracked separately per Section C406.1?

ANSWER 6: **Yes. As an example, a 20 story high-rise apartment building could utilize a set of Section C406 package options for the lower 10 floors of Group R-2 dwelling units and a second group of options for the upper 10 floors of Group R-2 dwelling units as long as the entire conditioned and enclosed building area is included and the area weighed average is greater than the minimum number of credits required.**

QUESTION 7: Do tenant spaces require an additional six credits when built out per Section C406.1.1?

ANSWER 7: **No. The intent of Sections C406.1.1 and C406.1.1.1 is to require a total of six credits for the initial core shell permit and the tenant improvement permit. It does not matter whether the building is constructed all at once or phased as core shell with separate tenant space improvements if the minimum of six credits is achieved for the total buildout.**

Alternate Possible Answer:

Yes. The intent of Section C406.1.1 is that a minimum of an additional six Section C406 credits are required for the tenant improvement in addition to the six required for the core shell initial building permit. Therefore, a total of twelve credits are required for phased construction where only six for spaces that are completely built out in a single building permit.

QUESTION 8: Can residential corridors or other accessory spaces to the Group R-2 occupancy be included in the Group R-2 occupancy category for compliance with minimum number of efficiency package credits per Section C406.1 and Table C406.1?

ANSWER 8: **Yes, residential corridors and other accessory spaces to the Group R-2 (as accessory per 2018 IBC Section 302) may be grouped either with the Group R-2 occupancy category or with the "All Other" occupancy category as long as the areas tracked consistently through the building.**

QUESTION 9: Do credits from Section C406.3 reduced lighting power and Section C406.4 enhanced digital lighting controls apply to all interior lighting for both conditioned and unconditioned areas in the building?

ANSWER 9: **Yes. Sections C406.3 and C406.4 apply to all interior lighting as governed by Section C405.4, but does not apply to exterior lighting governed by Section C405.5.**

BACKGROUND: ***C406.5 On-site renewable energy.** A whole building, building addition or tenant space shall be provided with on-site renewable energy systems with an annual production per square foot of no less than the value specified in Table C406.5 based on the total conditioned floor area of the whole building. The on-site renewable used in this option shall be separate from on-site renewables used as part of Section C406.7 or used to qualify for any exception in this code. [Emphasis added]*

QUESTION 10: Can the credit from Section C406.5 on-site renewable energy be applied to unconditioned areas of a building by using the “other” building area type category of Table C406.5?

ANSWER 10: **Yes. Even though Section C406.5 states that it only applies to the total conditioned floor areas of a building, in the case of a building with open or enclosed parking garage areas that are outside the building envelope, these building areas may use the “other” space type building area type category of Table C406.5 to comply with area weighted credit calculation of Section C406.1**

BACKGROUND: ***C406.6 Dedicated outdoor air system (DOAS).** No less than 90 percent of the total conditioned floor area of the whole building, building addition or tenant space, excluding floor area of unoccupied spaces that do not require ventilation per the International Mechanical Code, shall be served by DOAS installed in accordance with Section C403.3.5. This option is not available to buildings subject to the prescriptive requirements of Section C403.3.5. [Emphasis added]*

QUESTION 11: Is the reference to “unoccupied spaces that do not require ventilation per IMC” meant to refer to spaces that do not require outdoor airflow rates per IMC Table 403.3.1.1.

ANSWER 11: **Yes. This is meant to refer to unoccupied spaces in IMC Table 403.3.1.1 that do not require outdoor airflow. It is not meant to refer to spaces that require exhaust airflow without outdoor airflow requirements.**

QUESTION 12: For a mixed occupancy building, does credit from Section C406.6 dedicated outdoor air system (DOAS) require the ventilation system to serve the 90% or more of the total conditioned area of the building?

ANSWER 12: **No. Per Section C406.1, the credit may be applied to just 90% of the conditioned floor area of the occupancy categories that are claiming this credit. The dedicated outdoor air system does not have to serve 90% of the total building conditioned floor area.**

QUESTION 13: Is credit from Section C406.6 not applicable to an entire mixed occupancy building where some occupancies are subject to the prescriptive requirements of C403.3.5?

ANSWER 13: **No, Section C406.6 may be tracked by occupancy type. For example, in a mixed occupancy building including Group R-1 hotel areas and Group A meeting rooms areas, credit from Section C406.6 could be applied to the Group R-1 hotel areas that are not required to comply with Section C403.3.5.**

QUESTION 14: Can Group R-2 dwelling and sleeping units that are required to have balanced ventilation systems with heat recovery (with minimum 60% sensible effectiveness) per Section C403.3.6 claim the Section C406.5 credit?

ANSWER 14: **Yes, as long as the heat recovery system meets the requirements of Sections C406.6 and C403.3.5.**

STATE BUILDING CODE OPINION 20-June03 (continued)

QUESTION 15: Does credit Section C406.7 high performance dedicated outdoor air system (DOAS) credit apply to 100% of the total conditioned floor area of building occupancy category?

ANSWER 15: **Yes. Unlike credit from Section C406.6, the high-performance DOAS must serve 100% of the spaces requiring outdoor air per IMC Table 403.3.1.1 with the occupancy category that is claiming this credit.**

QUESTION 16: Can the credit from Section C406.8 reduced energy use in service water heating only be pursued by buildings with 90% of the conditioned floor area in the occupancy categories of listed in Section C406.8.1?

ANSWER 16: **No. For R-1 and R-2 occupancy categories of Table C406.1, credit from Section C406.8 can be applied where 90% of the R-1 or R-2 occupancy is served by the service water heating system.**

Note: All other occupancies listed in Section C406.8.1 (I-2, A-3 Restaurants, F Laundries, A-3 Health Clubs) would fall under the “All other” occupancy category of Table C406.1 and therefore may want to be tracked in a separate area group from other “All other” occupancies in the Section C406.1 area weighed calculation.

QUESTION 17: Must credits from Sections C406.10 enhanced envelope performance and C406.11 reduced air infiltration be applied to the whole building conditioned envelope?

ANSWER 17: **No, credits from Sections C406.10 and C406.11 may be applied to just an occupancy area in a mixed occupancy building. In the case of Section C406.11 reduced air leakage for the building envelope the occupancy area may need to be isolated from other occupancies to show compliance with this credit.**

QUESTION 18: Can credit from Section C406.11 reduced air infiltration be applied to a low energy space that complies with Section C402.1.1.1 even though the credit refers to the Section C406.11?

ANSWER 18: **Yes, credit from Section C406.11 may be applied to low energy spaces.**

QUESTION 19: Can a separate “All Other” occupancy area be set up for the Group A-2 commercial kitchen areas to show compliance with the Section C406.12 enhanced commercial kitchen equipment credit?

ANSWER 19: **Yes. It is recommended that a separate “All Other” area category is set up for the Group A-2 commercial kitchens to track all Section C406 credits that apply to that building area.**

QUESTION 20: If areas of a building were permitted as core shell spaces under the 2015 WSEC and tenant improvements are built out under the 2018 WSEC, does the 2018 WSEC apply?

ANSWER 20: **Yes, the 2018 WSEC would apply to the tenant buildout. See response to question 7 for further details. Credits achieved for the core shell construction may be applied to the tenant space build out per 2015 WSEC Section C406.1.1 and may count toward the 2018 WSEC point total using the credit weighting in 2018 WSEC Table C406.1.**

STATE BUILDING CODE OPINION 20-June03 (continued)

SUPERSEDES: None

REQUESTED BY: City of Bellevue