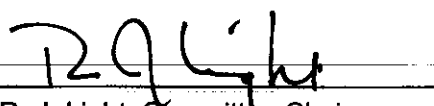


BC BUILDING CODE INTERPRETATION COMMITTEE
AIBC, APEGBC, BOABC, POABC

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| File No: 06-0050 | INTERPRETATION | Page 1 of 3 |
| Interpretation Date: | September 15, 2009 | |
| Building Code Edition: | BC Building Code 2006 | |
| Subject: | Fire dampers waived in horizontal fire separations and ceiling membranes | |
| Keywords: | fire dampers, fire rated floor assembly, horizontal fire separation, membrane ceiling, openings in ceiling | |
| Building Code Reference(s): | 3.1.8.7.(1), 3.1.8.8.(3), 3.1.9.5.(1), Division B, Appendix D, D-2.3.10, 11 & 12 | |
| Question: | <p>Sentence 3.1.8.7.(1) requires fire dampers to be provided where ducts penetrate any fire separation. Amongst the various exceptions to this, Sentence 3.1.8.8.(3) indicates a fire damper is not required where a noncombustible duct penetrates a horizontal fire separation not required to have a fire-resistance rating. This could be an unrated floor or roof assembly fire separation with or without a ceiling membrane.</p> <ol style="list-style-type: none">1. Sentence 3.1.8.8.(3) refers only to fire dampers being waived for unrated horizontal fire separations. Can Division B, Appendix D, D-2.3.10 & 11 be used to waive fire dampers in horizontal fire separations which require a fire-resistance rating?2. Can Sentence 3.1.8.8.(3) be used for an unrated floor or roof assembly that is not a continuous horizontal fire separation (such as a mezzanine floor assembly, for example)?3. Does Division B, Appendix D, D-2.3.10 & 11 refer only to continuous horizontal fire separations with a fire-resistance rating; or also to assemblies having a fire-resistance rating but which are not necessarily a continuous fire separation (such as for example, a fire rated mezzanine floor assembly). | |
| Interpretation: | <ol style="list-style-type: none">1. No. Articles 3.1.8.7 and 3.1.8.8 do not reference Appendix D. It is not the intent of Appendix D, D-2.3.10 & 11 to waive fire dampers in ducts penetrating | |
|  _____ R. J. Light, Committee Chair | | |
| <small>The views expressed are the consensus of the joint committee of AIBC, APEGBC, BOABC, and POABC, which form the BC Building Code Interpretation Committee. The purpose of the committee is to encourage uniform province wide interpretation of the BC Building Code. These views should not be considered as the official interpretation of legislated requirements based on the BC Building Code, as final responsibility for an interpretation rests with the local Authority Having Jurisdiction. The views of the joint committee should not be construed as legal advice.</small> | | |

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vertically through horizontal fire separations. According to Sentence 3.1.9.5.(1) which does refer to Appendix D, such provisions are only intended to allow a certain extent of openings in specific membrane ceilings, where the ceiling is a component which forms an integral part of a fire rated floor assembly or horizontal fire separation. This is subject to meeting the specified limitations and configuration set out in Appendix D, D-2.3.10 & 11.

2. Not applicable.

Sentence 3.1.8.8.(3) addresses only unrated horizontal fire separations. This particular Sentence is not literally intended to be applied to unrated assemblies that are not continuous horizontal fire separations. However for an unrated floor assembly that is not a continuous fire separation, additional floor openings created by noncombustible duct penetrations are considered acceptable.

3. Yes.

Sentence 3.1.9.5.(1) indicates a membrane ceiling forming part of an assembly assigned a fire-resistance rating on the basis of Appendix D or Sentence 3.1.7.1.(3), is permitted to be penetrated by openings as set out in Appendix D, D-2.3.10 & 11. This is subject to meeting the specified limitations and configuration set out in Appendix D, D-2.3.10 & 11.

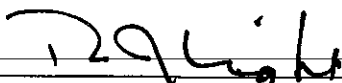
This code provision can be applied only to assemblies where a ceiling membrane is provided, on the basis of Appendix D or Sentence 3.1.7.1.(3), used to contribute entirely or partially to the overall floor or roof assembly fire rating (whether continuous as a fire separation or not). This would apply to any of the following assemblies having membrane ceilings forming part of the assembly fire-resistance rating:

- continuous horizontal fire separations with a fire-resistance rating and having a ceiling membrane as part of the fire-resistance rating derived from Appendix D or Sentence 3.1.7.1.(3).
- floor or roof assemblies with a ceiling membrane as part of the fire-resistance rating, having a fire-resistance rating derived from Appendix D or Sentence 3.1.7.1.(3), but which are not necessarily a continuous fire separation (such as a mezzanine fire rated floor assembly).

Note that Sentences 3.1.7.1.(3) and 3.1.9.5.(1) were amended in October 2008 by BC Housing and Social Development Ministerial Order M 277 under the Local Government Act.

The drawings on the following page illustrate schematically the various conditions discussed above.

Refer also to previous interpretations 06-0014A, 06-0014B and 06-0020.



R. J. Light, Committee Chair

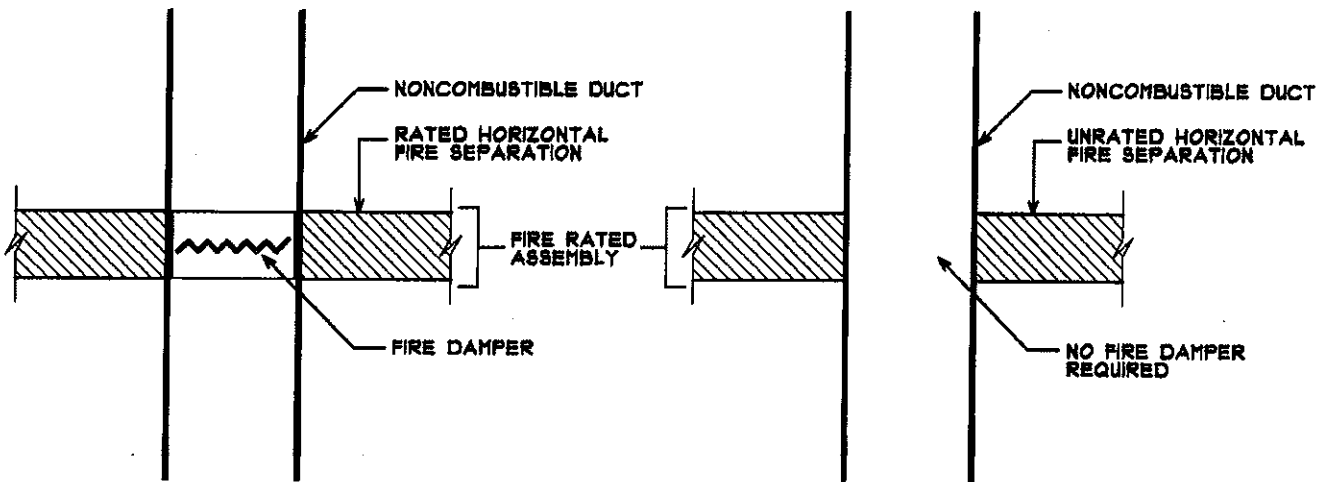
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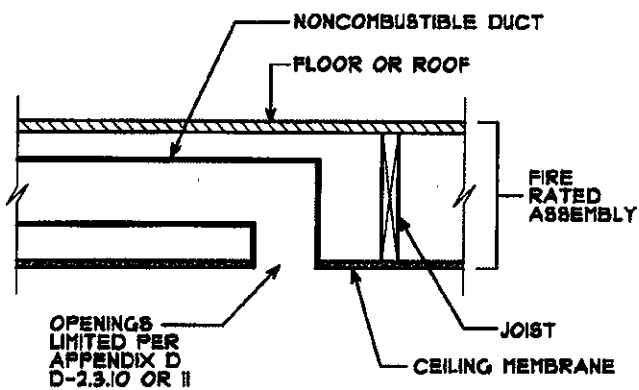
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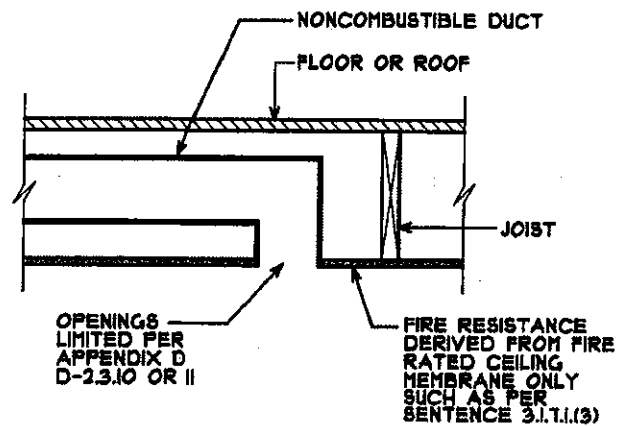


3.1.8.7.(1)

3.1.8.8.(3)



3.1.9.5.(1)
Appendix D



3.1.9.5.(1)
Appendix D