

Proposed Draft Language for 2009 ECCCNY

Common/Party/Fire Wall Insulation and Air Sealing

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Background:

The residential building community has received many comments and complaints from the field about the NYS Energy Code and IECC shortcomings with respect to the treatment (or lack thereof) of Common/Party/Fire Wall details in Low-Rise Multifamily dwellings. These come to us primarily from the NYSEERDA Energy Star Labeled Homes (ESLH) and Home Performance with Energy Star (HPwES) Programs, but also from US-DOE's Building America and Energy Star programs as well.

The problem is that these common walls are overlooked for their lack of insulation and air sealing, as they are not considered to be exterior walls or part of the Building Envelope for the purposes of the codes.

We know, however, from past experience with the NYS-ECCC and in real-time performance testing of these common walls that they are often direct connections between the outside, unconditioned crawlspaces or basement, and unconditioned attics. This, as we know from performance-testing experience, results in tremendous air infiltration/exfiltration issues, as well as conductive heat loss, since these walls are no longer insulated either. The end result is energy loss and appurtenant utility bill increases and major comfort issues associated with these "cold" walls. This is why the EPA and NYSEERDA energy star Homes programs require air sealing of these walls as well. (Note – Pages 63-65, Energy star Thermal Bypass checklist, a requirement of the program)

We used to have language in the NYS-ECCC to deal with this issue, as follows; **the language from the '91 NYS-ECCC**. This was used as the basis for many staff and official interpretations to also include air sealing of these Common/Party/Fire Walls, and generally to detail with these problem areas just as one would detail an exterior wall. It met the 10-year simple payback in '89 and '91

7815.2 Building Envelope systems

© Insulation shall be installed in a manner that provides continuity of insulation at plate lines, sill lines, band joists and corners. Whenever continuity of insulation is broken at

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walls separating dwelling units, such walls shall be insulated to no less than R-10 on each side of the break in insulation continuity.

As indicated above, the Codes Division at the NY-SEO always had related interpretations That promoted dealing with these common walls as if they were exterior walls for purposes of air sealing and insulation, to a minimum R-10. Again, this met the same 10-year simple payback in '89 and '91.

Therefore, I would like to propose to the group that we consider the following addition to this next code change proposal (Note – the actual Code section numbering may change when the full updating of the ESolutions version is done, and this may require staff coordination with the IRC Cmte);

Proposed addition to Chapter 4:

402.2 Specific Insulation requirements (Prescriptive).

Add:

402.2.10 Common, Party, and Fire Walls

Whenever continuity of the Building Thermal Envelope is broken at walls separating dwelling units, including Common, Party, and Fire Walls, such walls shall be insulated to no less than R-10 on each side of the break in insulation continuity, and the walls shall be air sealed in accordance with Section 402.4.1 of this Chapter.