



9.36.2.9 Airtightness

Module 3
BCBC 9.36.
2014



9.36.2.9. Airtightness

- **9.25.3. currently requires an airtight building envelope.**
 - But does not get into details, although appendix notes clarify intent.
- **9.36. addresses construction of air barrier details (9.36.2.10.) because of the heat loss implications.**



9.36.2.9. Airtightness

- **Air barriers must be continuous**
 - Across construction, control and expansion joints
 - Across junctions between different *building* materials and assemblies, and
 - Around penetrations through all *building* assemblies.



9.36.2.10. Construction of Air Barrier Details

- **Air barrier systems can be:**
 - **Rigid panels or materials**
 - Air-tight drywall
 - Spray applied foam insulation
 - Rigid panel materials (e.g. extruded polystyrene; sheathing panels)
 - **Membrane sheets**
 - Sealed polyethylene
 - Exterior house wrap
 - **A combination of these**



9.36.2.10. Construction of Air Barrier Details

- Flexible sheet air barrier materials require all joints to be
 - lapped at least 50 mm (2")
 - Sealed and
 - structurally supported
- Sealants must be non-hardening





9.36.2.10. Construction of Air Barrier Details

- 9.36.2.10. (7)
Penetrations by electrical wiring, outlets, switches or recessed light fixtures through the air barrier must be sealed.



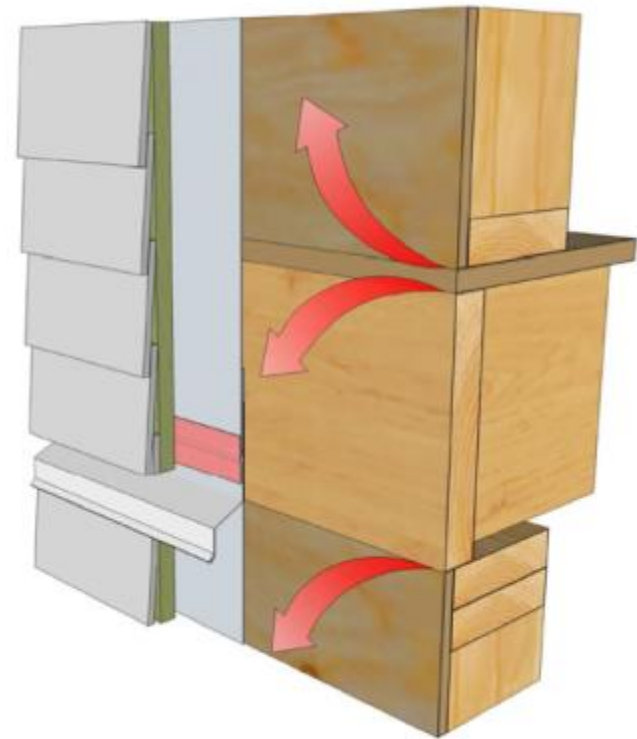


9.36.2.10. Construction of Air Barrier Details

- **9.36.2.10. (8) Joints between foundation wall and framing must be sealed**
 - Sill plate
 - Sill plate & rim joist
 - Rim joist and subfloor
 - Bottom plate and subfloor



9.36.2.10. Construction of Air Barrier Details



9.36.2.10. Construction of Air Barrier Details

- 9.36.2.10. (8) sealing can be done by
 - Sealing joints between structural elements
 - Covering the structural elements with an air barrier material and sealing it





9.36.2.10. Construction of Air Barrier Details

- 9.36.2.10.(12) steel lined chimneys must be airtight where they penetrate air barrier
 - Void between chimney and framing must be blocked
 - Sheet metal flashing plate must be caulked at chimney with high temperature sealant

