# Building Code Amendments

## The following information is applicable to permits *applied for after* December 20, 2014

The Design, General Contracting, Framing, Insulation, Mechanical and Plumbing Contracting communities and their respective suppliers will all be impacted by the following changes:

- The code has divided the province by Climate Zone. Construction in the RDCK occurs in Climate Zone 5.
- The code has added Section 9.36 that focuses on energy efficiency. HRV's are not required, but reduce the above grade exterior building envelope *effective* insulation requirements, while also functioning as the continuously operating Principal Fan now required by Section 9.32.
- Insulated exterior building envelope assemblies (wall, slabs, ceilings / roofs) shall meet minimum *effective* insulation values. The *effective* values account for the reduction in insulation value of the assembly caused by the thermal bridging effect of framing. Previous codes ignored this loss; these amendments require it to be accounted for. Typical insulated exterior wall framing assemblies of 2" x 6" @ 16" oc (23% wood), require replacement with either 2" x 6" @ 24"oc assemblies (20% wood) or advanced framing assemblies 2" x 6" @ 16" oc (19% wood) or @ 24" oc (16% wood). The specifics of advanced framing systems will be the subject of a future bulletin or your local Building Official can describe the requirements now.
- Above grade exterior walls shall meet minimum *effective* RSI values of 2.97 (R16.85) *with* an HRV or 3.08 (R17.48) *without* an HRV. **See page 2 for typical assemblies.**
- The *effective* insulation value of building envelope assemblies shall not be reduced by DWV and water service piping or heating and cooling ducting. Ducting and piping pathways shall be inboard of the exterior assemblies in interior walls, furred out walls inboard of exterior walls and framed drops. Alternatively, when design constraints make it impossible for heating and cooling ducts to be located within conditioned space, they shall now be insulated to the effective value required for the exterior walls.
- Windows and Exterior Doors: maximum U value of 1.80 permitted (approximately equivalent to an RSI value of 0.55 (R3.15), in addition to the NAFS CSA A440.08 requirements of previous code amendments.
- Radon mitigation shall now include passive systems piped from a 4" gravel underslab layer through to exterior termination. Active inline fans are not required, but their future installation should be anticipated with the installation of wiring roughed-in to a suitable fan location.

# Effective Thermal Resistance of Above Grade Wall Assemblies

| Exterior Cladding Type, Thickness & RSI Value | Stud Spacing | Insulation Value *(Batt or blanket: glass or rock mineral fiber)* | Effective RSI Of Assembly | Compliant Yes / No Min. Req'd RSI 2.97 with HRV *(RSI to be made up for with other materials)* | Compliant Yes / No Min. Req'd RSI 3.08 without HRV *(RSI to be made up for with other materials)* |
|---|---|---|---|---|---|
| Fiber cement 1/4", 6.35mm **(0.019)** | 2x6@16"o/c | R-22 | 2.89 | **No (0.08)** | **No (0.19)** |
| Fiber cement 1/4", 6.35mm **(0.019)** | 2x6@24"o/c | R-22 | 3.01 | Yes | **No (0.07)** |
| Fiber cement 1/4", 6.35mm **(0.019)** | 2x6@16"o/c | R-24 | 3.00 | Yes | **No (0.08)** |
| Fiber cement 1/4", 6.35mm **(0.019)** | 2x6@24"o/c | R-24 | 3.14 | Yes | Yes |
| Fiber cement 5/16 ", 8mm **(0.024)** | 2x6@16"o/c | R-22 | 2.90 | **No (0.07)** | **No (0.18)** |
| Fiber cement 5/16 ", 8mm **(0.024)** | 2x6@24"o/c | R-22 | 3.02 | Yes | **No (0.06)** |
| Fiber cement 5/16 ", 8mm **(0.024)** | 2x6@16"o/c | R-24 | 3.01 | Yes | **No (0.07)** |
| Fiber cement 5/16 ", 8mm **(0.024)** | 2x6@24"o/c | R-24 | 3.15 | Yes | Yes |
| Stucco 3/4",19.05mm **(0.017)** | 2x6@16"o/c | R-22 | 2.89 | **No (0.08)** | **No (0.19)** |
| Stucco 3/4",19.05mm **(0.017)** | 2x6@24"o/c | R-22 | 3.01 | Yes | **No (0.07)** |
| Stucco 3/4",19.05mm **(0.017)** | 2x6@16"o/c | R-24 | 3.00 | Yes | **No (0.08)** |
| Stucco 3/4",19.05mm **(0.017)** | 2x6@24"o/c | R-24 | 3.14 | Yes | Yes |
| Hollow Backed Vinyl **(0.11)** | 2x6@16"o/c | R-22 | 2.98 | Yes | **No (0.10)** |
| Hollow Backed Vinyl **(0.11)** | 2x6@24"o/c | R-22 | 3. 10 | Yes | Yes |
| Hollow Backed Vinyl **(0.11)** | 2x6@16"o/c | R-24 | 3.09 | Yes | Yes |
| Hollow Backed Vinyl **(0.11)** | 2x6@24"o/c | R-24 | 3.23 | Yes | Yes |
| Wood Shingles 16" with 7.5 " exp **(0.15)** | 2x6@16"o/c | R-22 | 3.02 | Yes | **No (0.06)*** |
| Wood Siding 8" 1/2", 13mm **(0. 14)** | 2x6@ 16"o/c | R-22 | 3.01 | Yes | **No (0.07)*** |
| Wood Siding 10" 3/4", 20 mm **(0.18)** | 2x6@16"o/c | R-22 | 3.05 | Yes | **No (0.03)*** |
| Cultured Stone 0.003/mm | 2x6@ 16"o/c | See Stucco | | | |

The constant values in this table include interior air film (0.12), GWB (008), 3/8" OSB sheathing (0.093), exterior air film (0.03) =Total 0.323

RSI. Batt insulation is as per values given

7/16" OSB sheathing= 0.108 RSI

Fiber cement siding is a composite material made of sand, cement and cellulose fibers Common industry trade names include but are not limited to Hardie, Certain Teed, Geo rgia Pa cific, Cerber. Do not confuse Hardie siding with Hardboard Siding (pressed wood/wax resins).

The RSI value given to vinyl siding is equivalent to metal siding profiles at least as far as itelates to this table .

*This assembly is compliant with the use of **R24** batt or blanket, glass or rock mineral fibre

R value = RSI x 5.68