



Julie Villard

Christchurch City Council

**BRINGING YOUR WINDOWS IN FROM
THE COLD:
RECESSING THE FRAME**

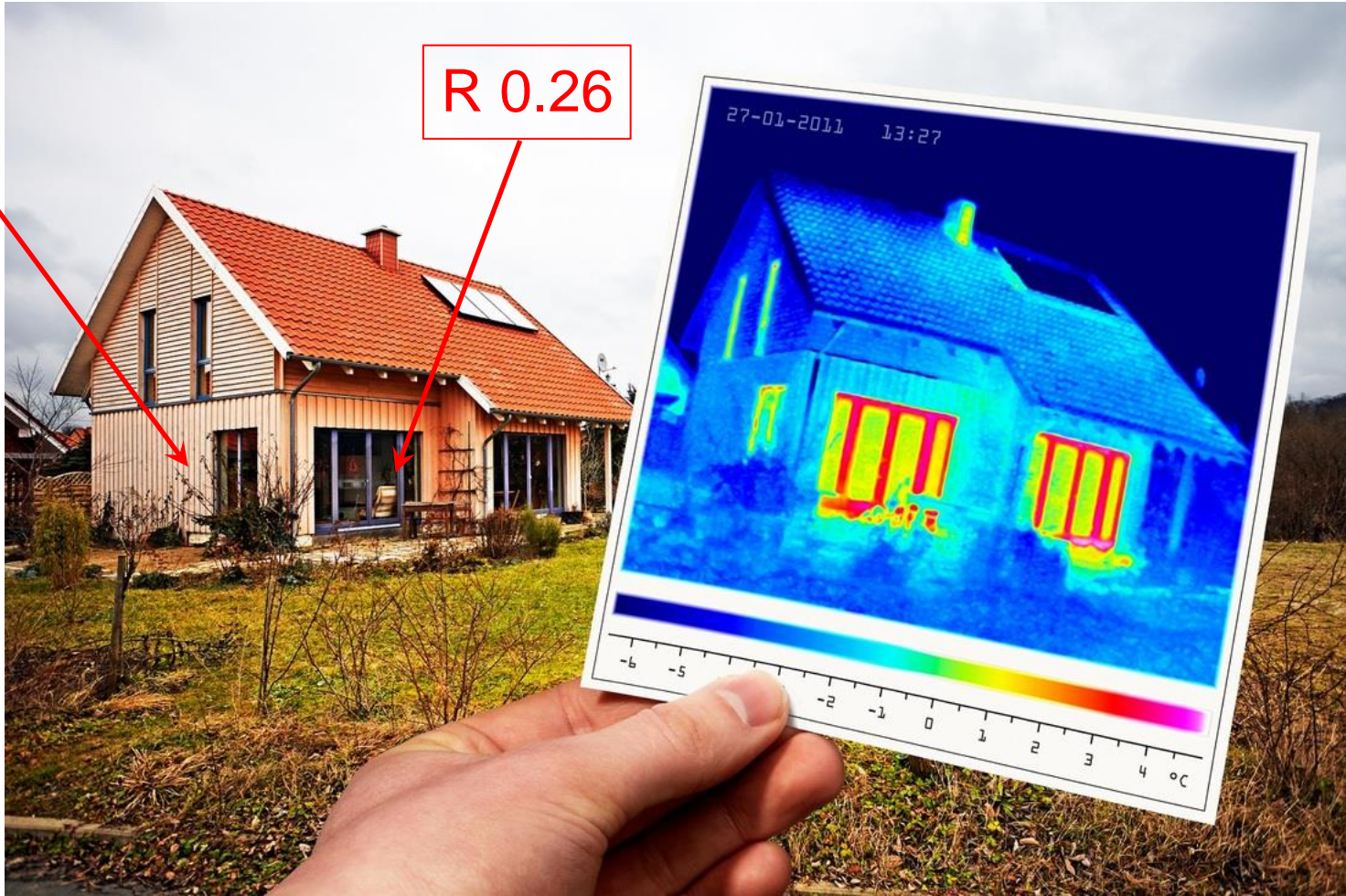
4.15pm



IN FROM THE COLD

R 4

R 0.26

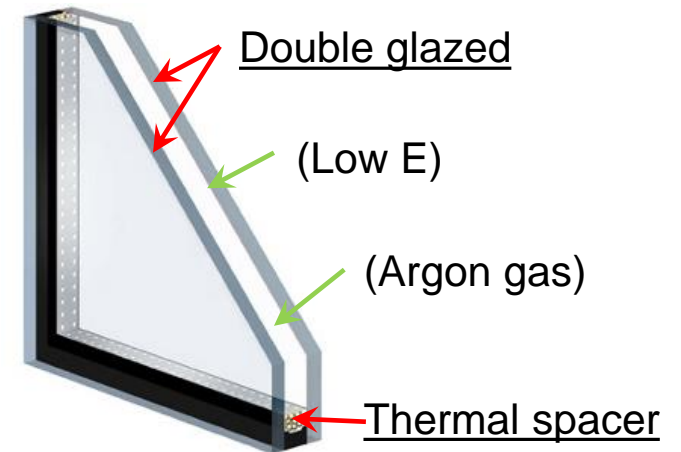
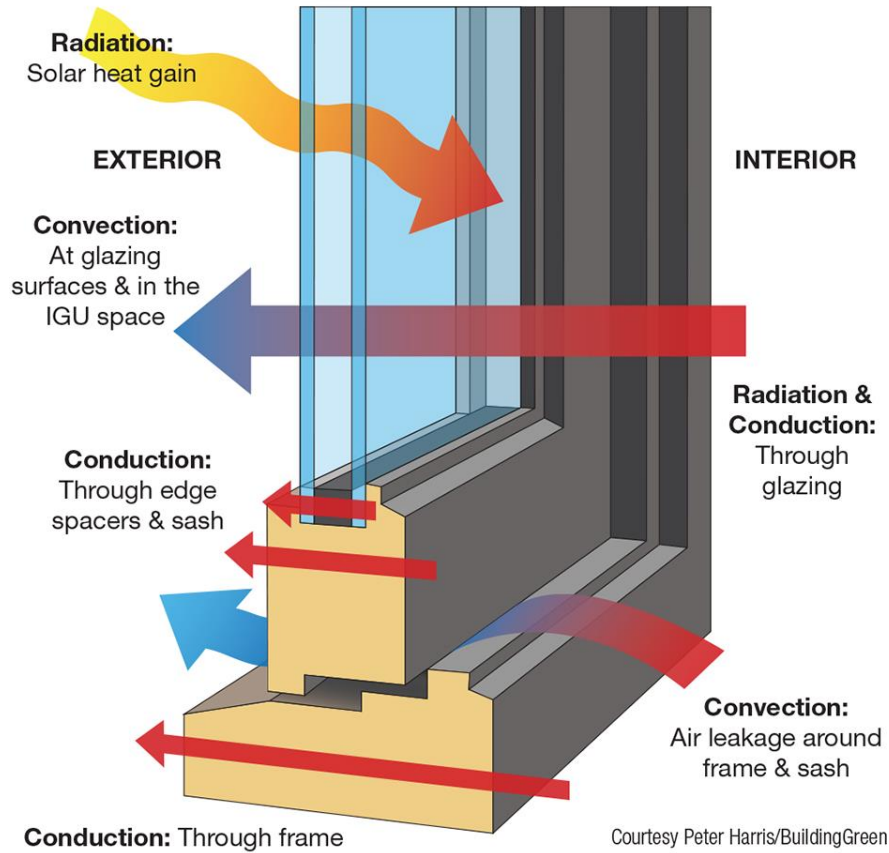


Let's talk about the window



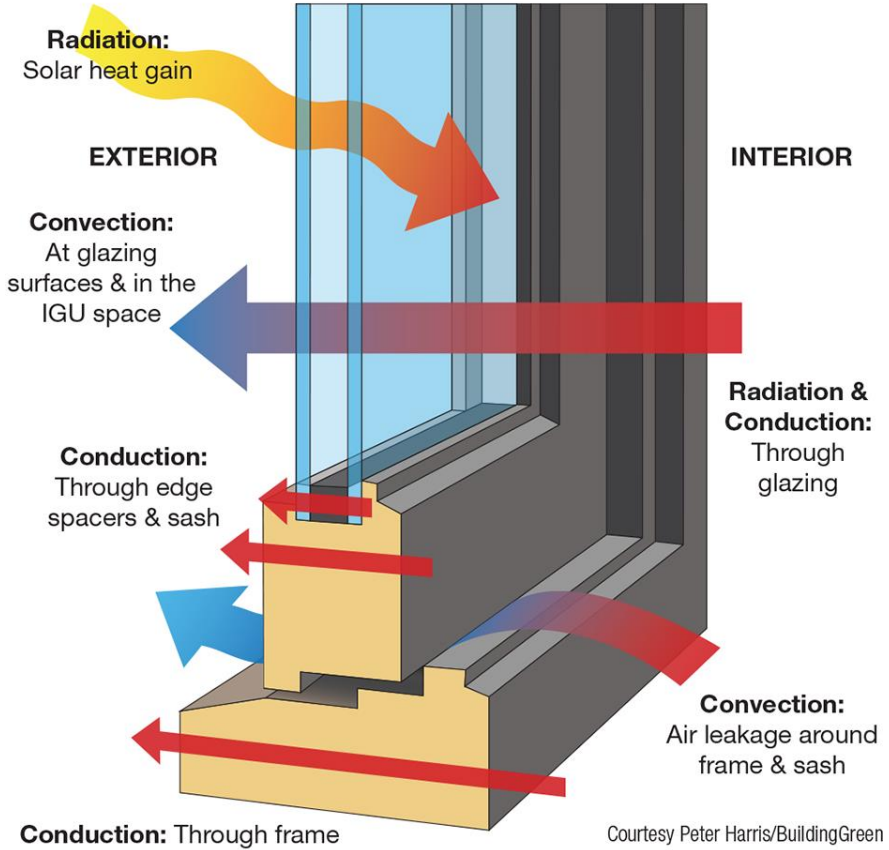
Heat Transfer Through a Window

THE GLAZING

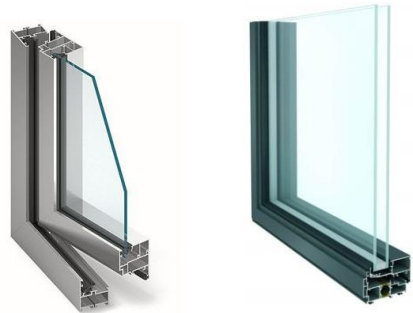


THE FRAMING

Heat Transfer Through a Window



Aluminium

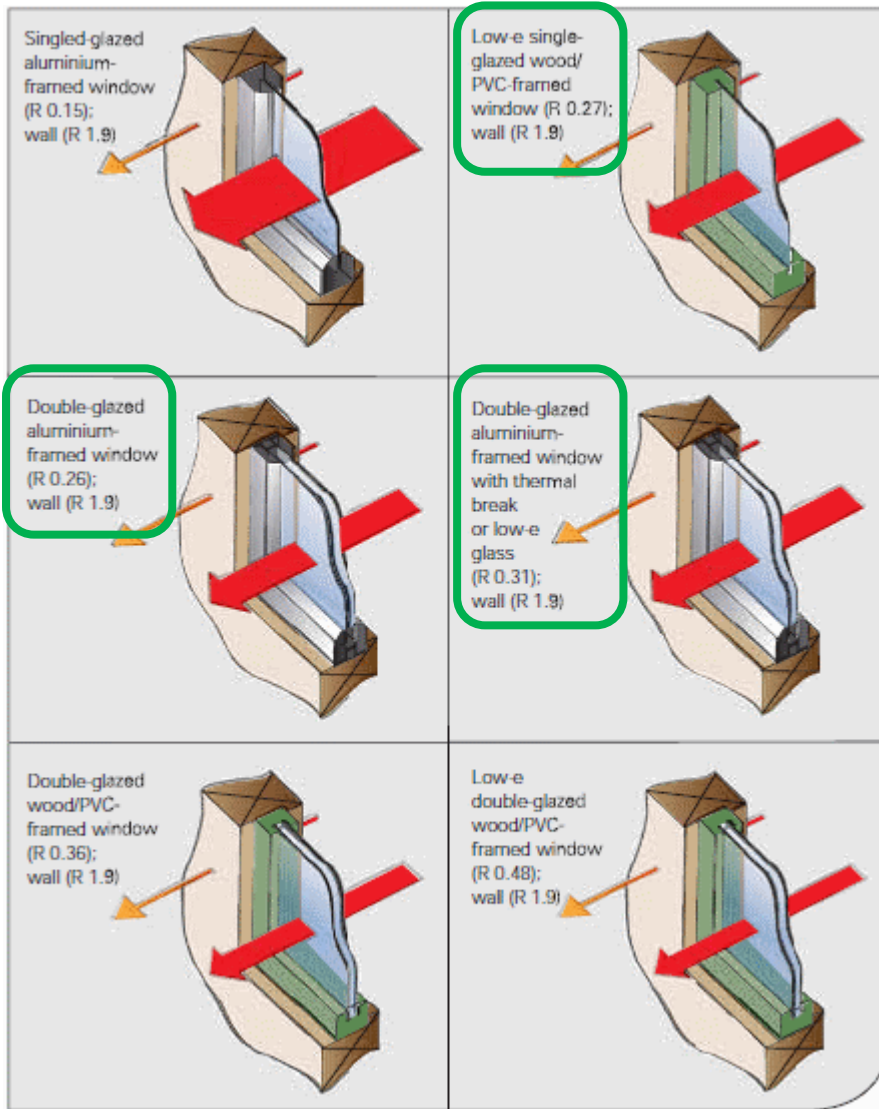


PVC



Wooden

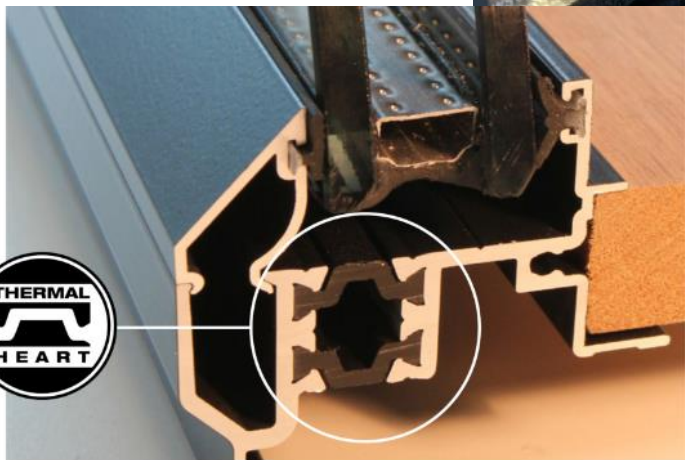




LATEST NEWS



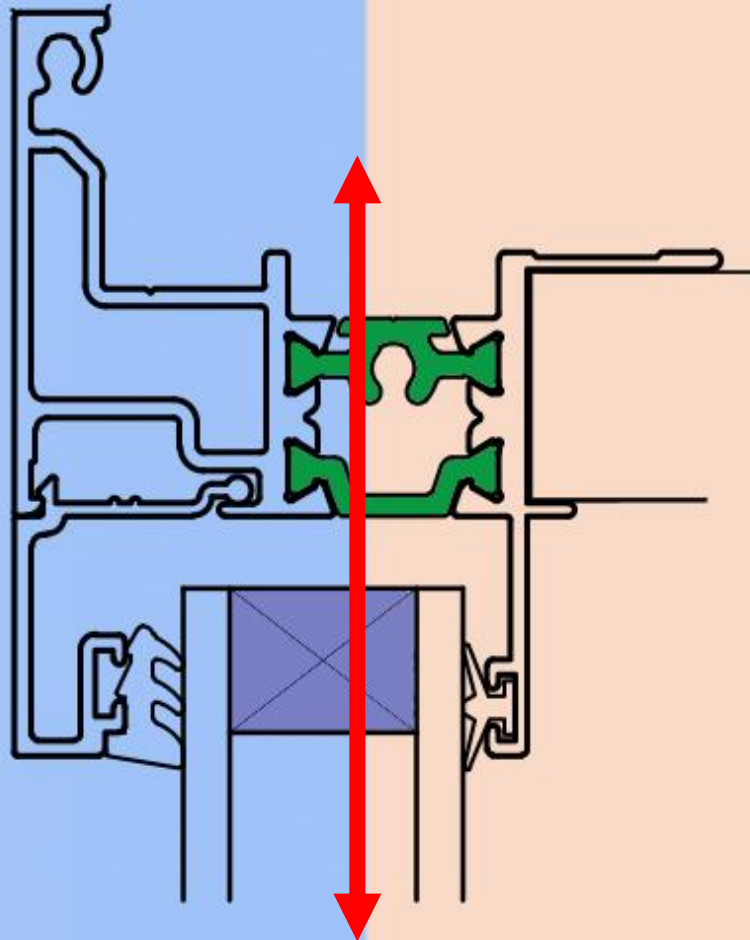
Accurate energy efficiency ratings for the windows and doors you specify

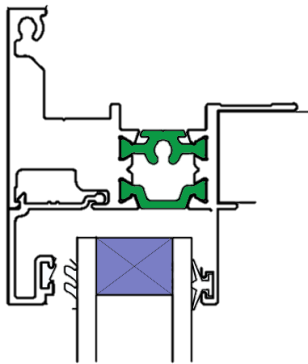


Thermal Heart creates a break in the conductive process of the Aluminum.

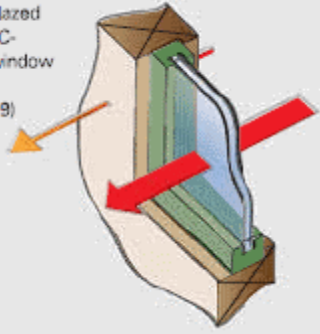
EXT.

INT.



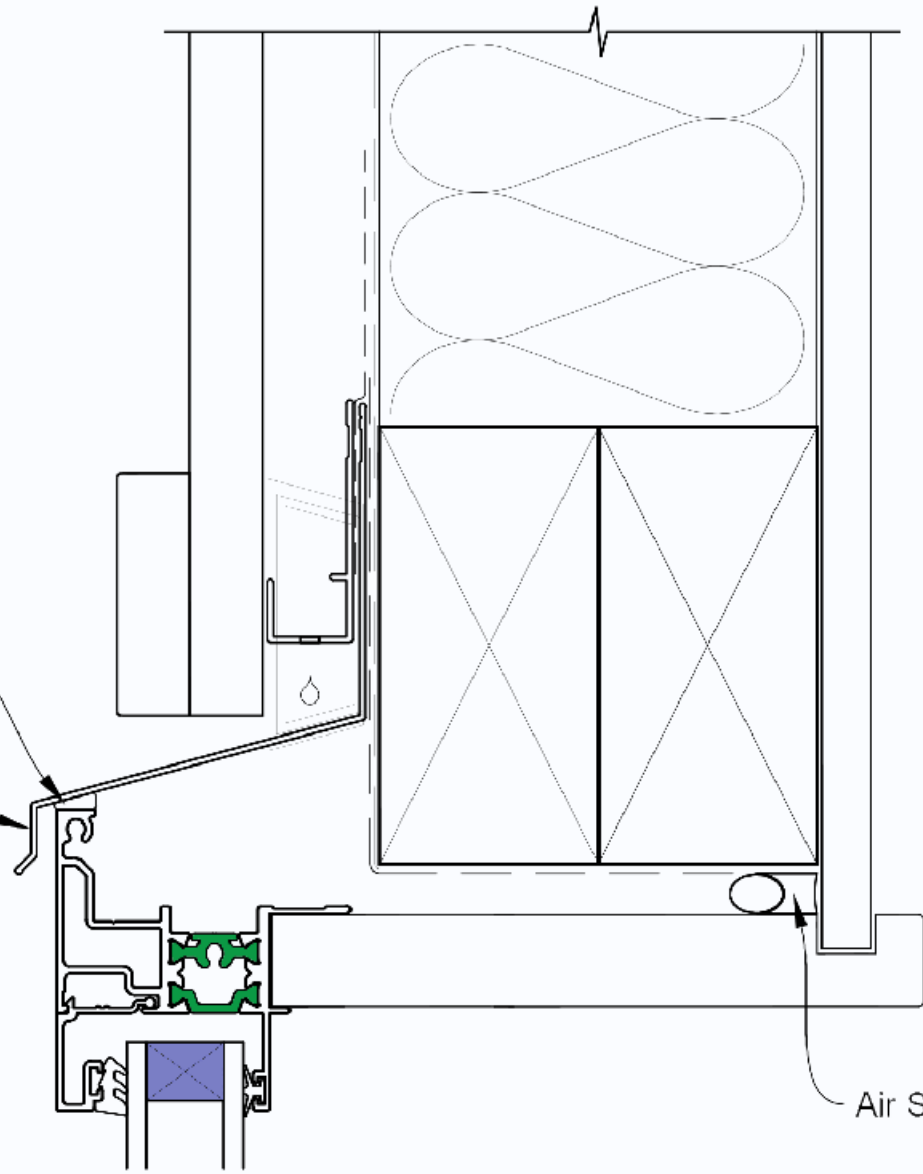


Double-glazed
wood/PVC-
framed window
(R 0.36);
wall (R 1.9)



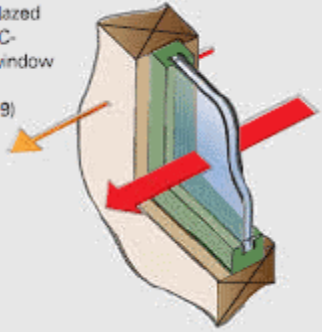
Head Seal for Very High
Wind Zone and above

Head Flashing with
Stop End inside cavity



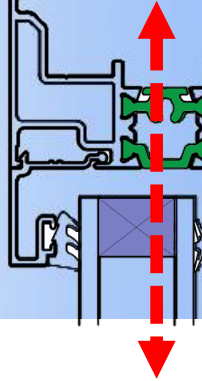
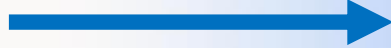
Air Seal

Double-glazed
wood/PVC-
framed window
(R 0.36);
wall (R 1.9)



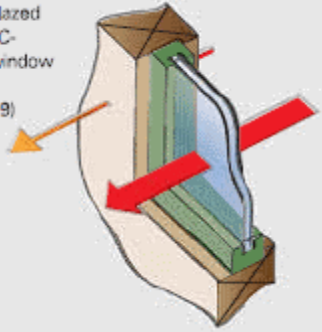
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Air Seal

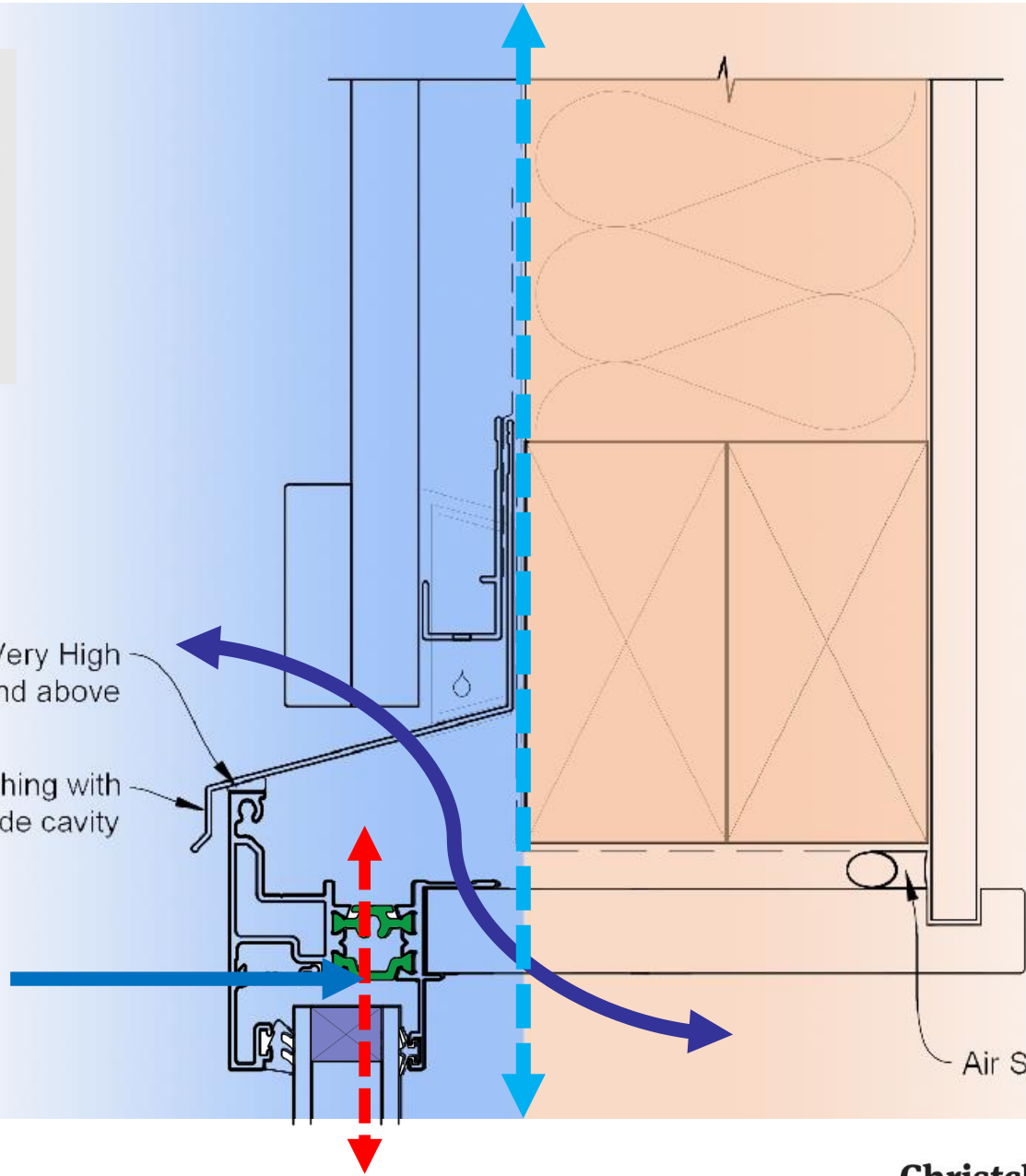
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Head Seal for Very High
Wind Zone and above

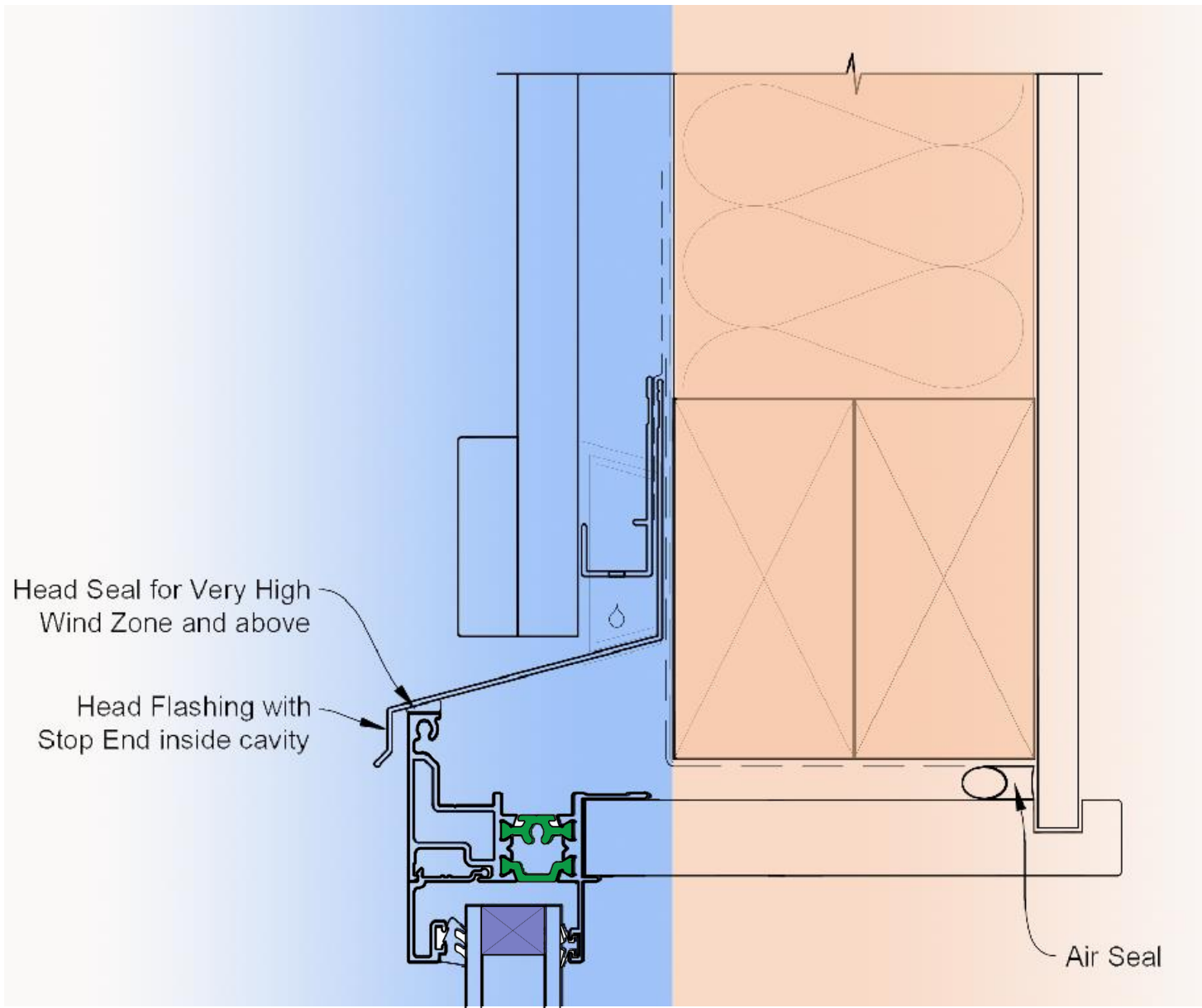
Head Flashing with
Stop End inside cavity

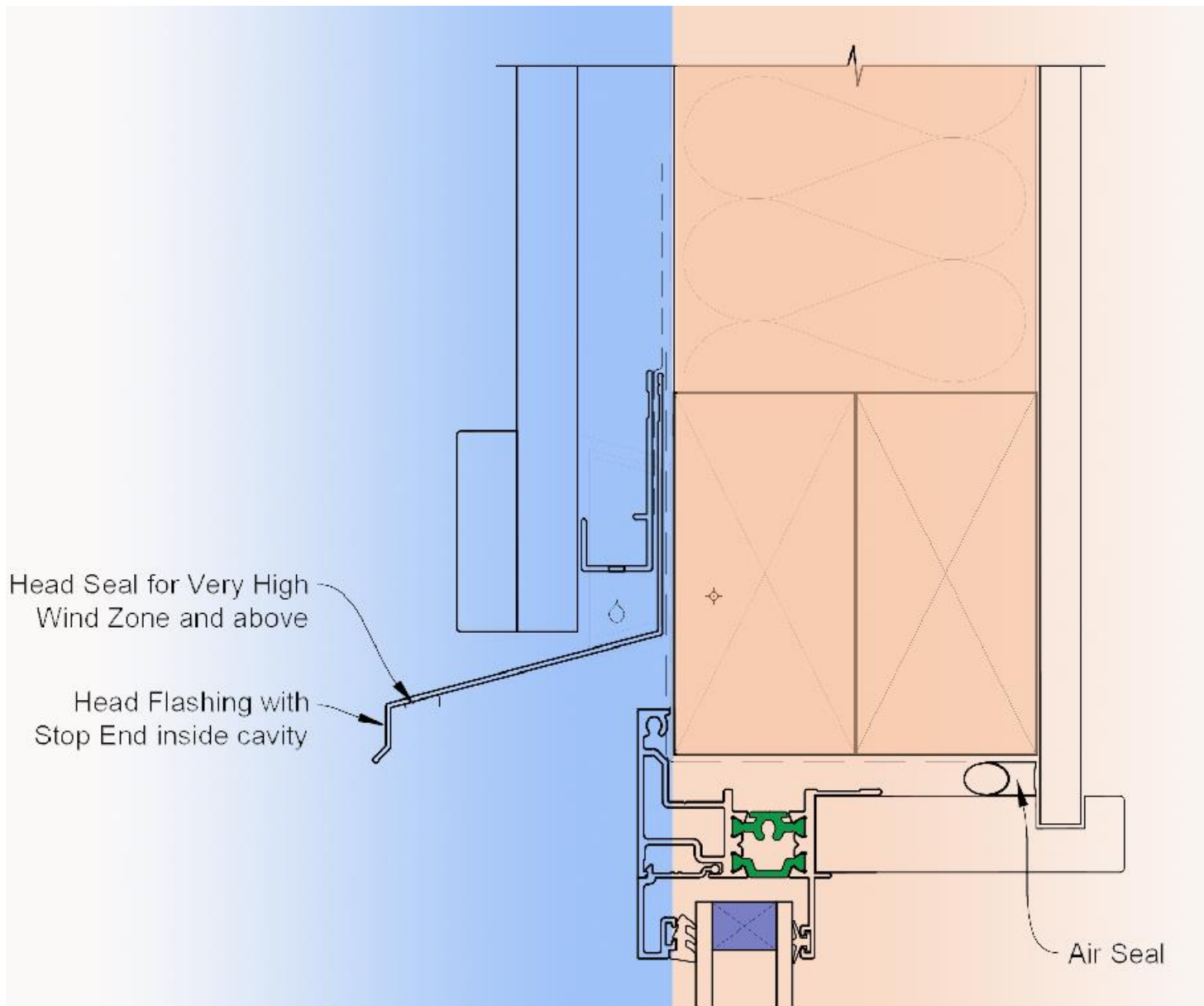
Air Seal

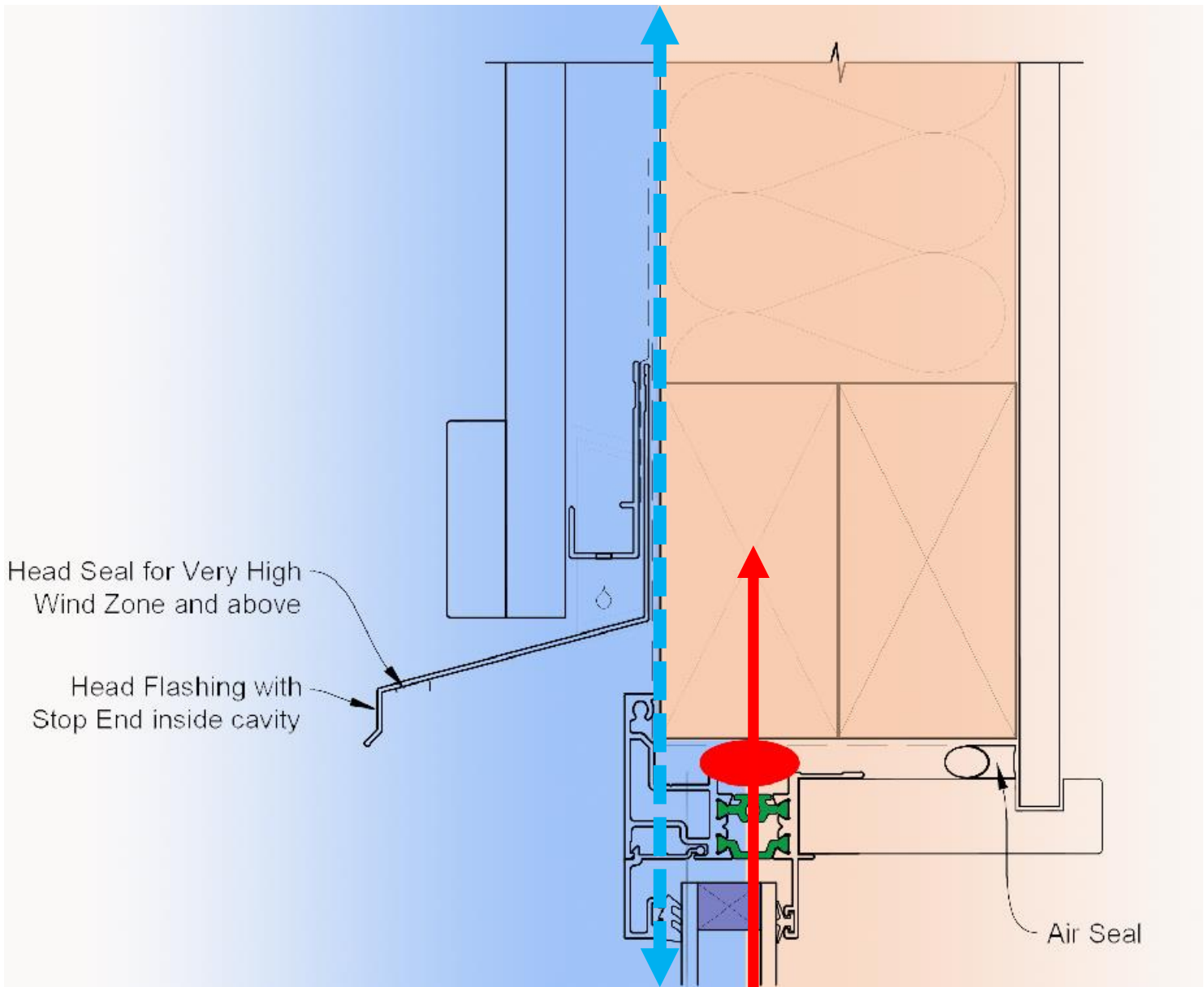


So, how do we fix this ?

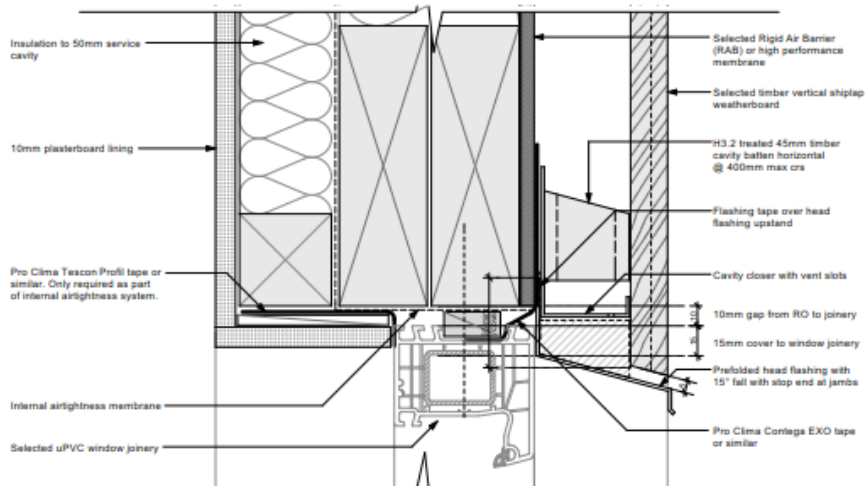




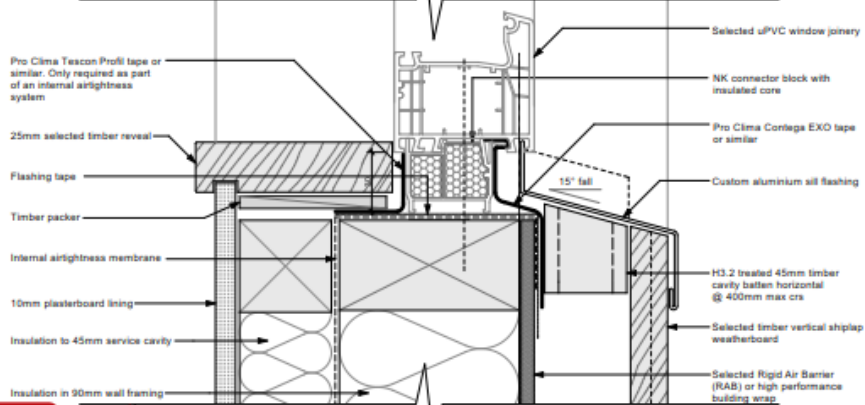




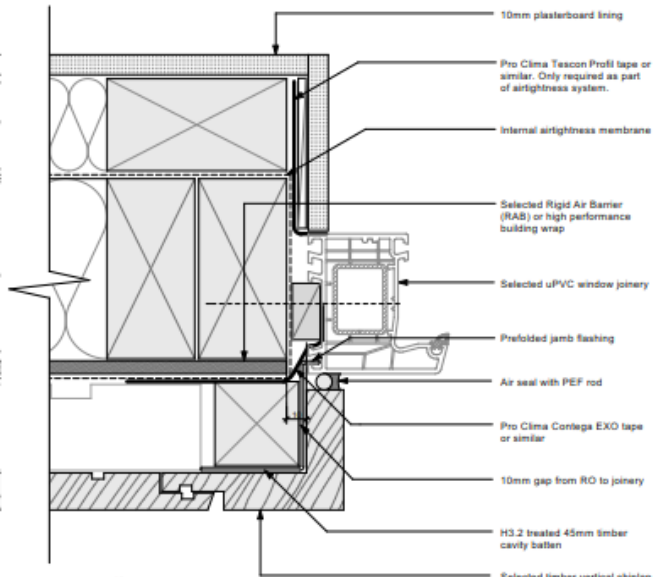




01 Window Head - Vertical Shiplap
Scale 1:5 @A3



01 Window Sill - Vertical Shiplap
Scale 1:5 @A3



01 Window Jamb - Vertical Shiplap
Scale 1:5 @A3

SUPERHOME
MOVEMENT



bob burnett
ARCHITECTURE



SUPERWindow
Details

Rev#	Date	Revisions	Initials	Job no.	Date	Drawn by	Set of	Rev #
A	20/03/17	issue		XXXX	24/03/2017	BB	XX	X

Created by: BOB Burnett

Construction Details A4.01

*Consider to verify dimensions & site conditions. All work to comply with New Zealand Building Code & amendments (www.db.govt.nz) & NZ Standards specified. copyright of Bob Burnett Architecture 2016 ©

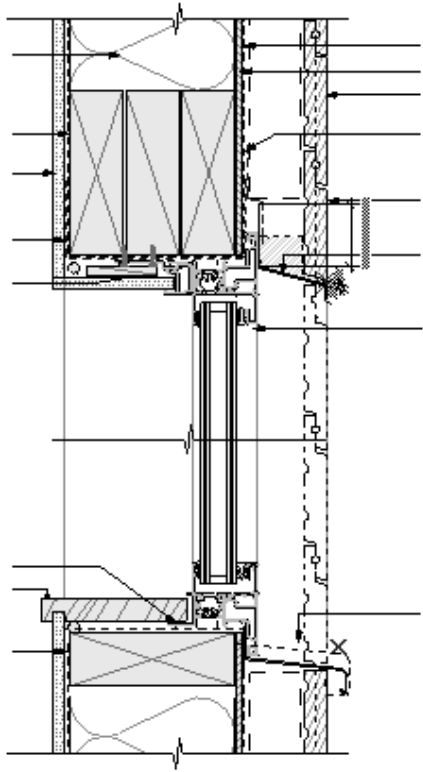
Insulation
140mm timber framing

Vapour barrier if required
10mm plasterboard lining

Additional flashing tape applied to the entire window opening
Air seal with PEF rod & timber packer to suit

Air seal with PEF rod & timber packer to suit
19mm grooved timber reveal

Additional flashing tape applied to the entire window opening



Weatherproof membrane if required
Solid air barrier / building paper
Selected timber vertical rusticated weatherboard
Flashing tape over head flashing upstand

Aluminium window joinery

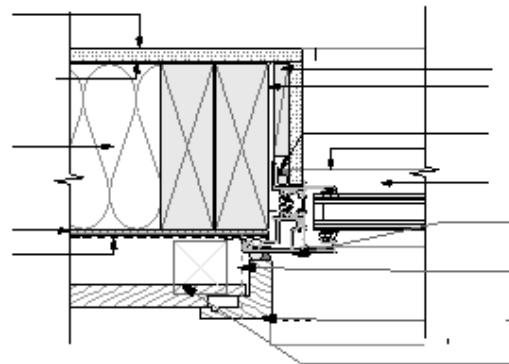
Aluminium sill flashing

10mm plasterboard lining

vapour barrier if required

Insulation

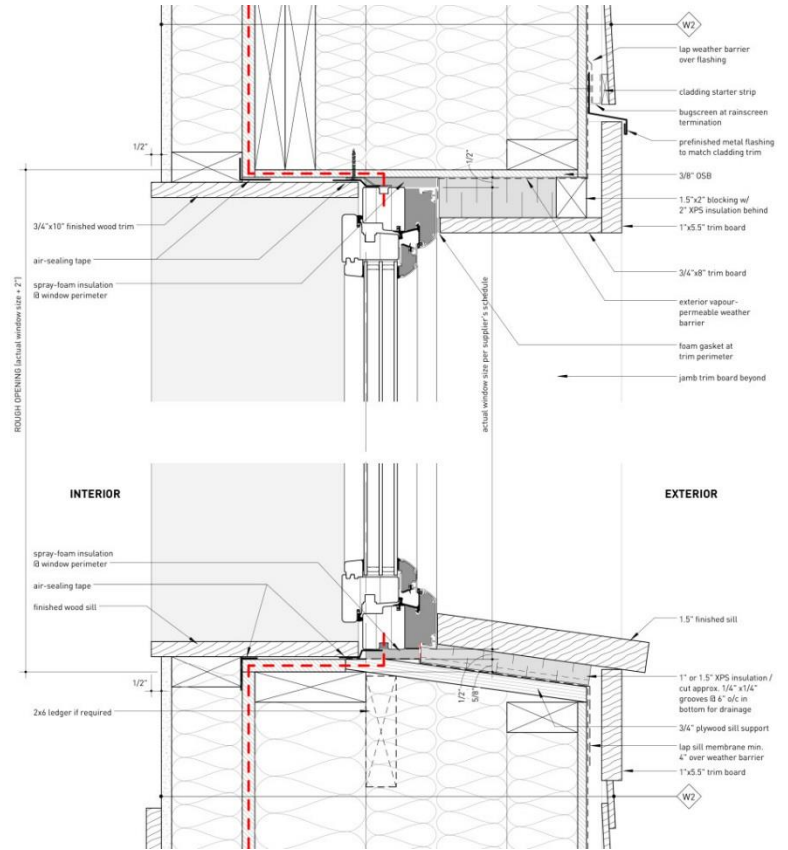
Rigid air barrier / building paper
Weather tight membrane is required



10mm plasterboard lining returned to form reveal with packer.
Additional flashing tape applied to the entire window opening

Air seal with PEF rod & timber packer to suit

Timber window joinery



ROUGH (OPENING) actual window size - 21"

INTERIOR

EXTERIOR

3/4"x10" finished wood trim
air-sealing tape
spray-foam insulation @ window perimeter
finished wood sill
2x6 ledger if required

lap weather barrier over flashing
cladding starter strip
backscreen at rainscreen termination
prefinished metal flashing to match cladding trim
3/8" OSB
1.5"x2" blocking w/ 2" XPS insulation behind
1"x5.5" trim board
3/4"x8" trim board
exterior vapour-permeable weather barrier
foam gasket at trim perimeter
jamb trim board beyond

1.5" finished sill
1" or 1.5" XPS insulation / cut approx. 3/4" x 1/4" grooves @ 6" o/c in bottom for drainage
3/4" plywood sill support
lap sill membrane min. 4" over weather barrier
1"x5.5" trim board

The aim of all of this ?

- Less thermal bridges,
- Less heat loss,
- Less draught
- Less condensation



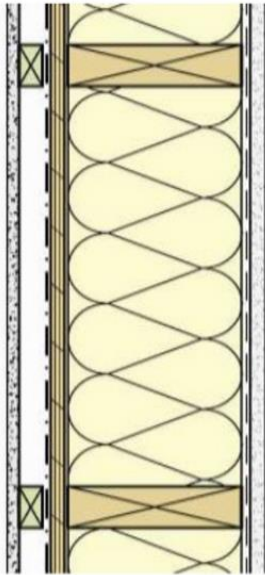
For cheaper, better & healthier homes

Few more things....

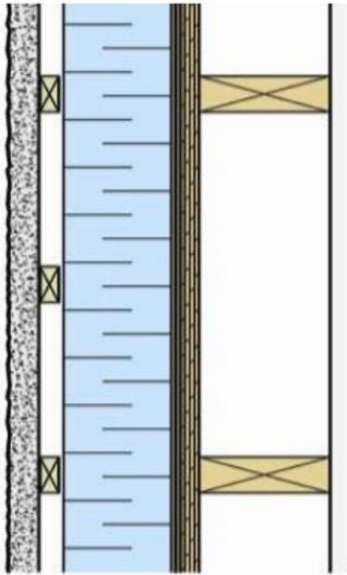




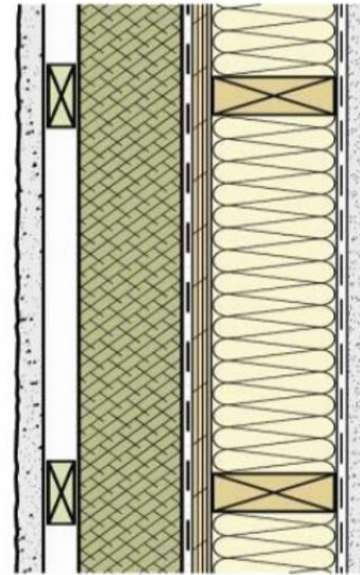
Insulation Placement & Wall Design Considerations



Interior
Insulation

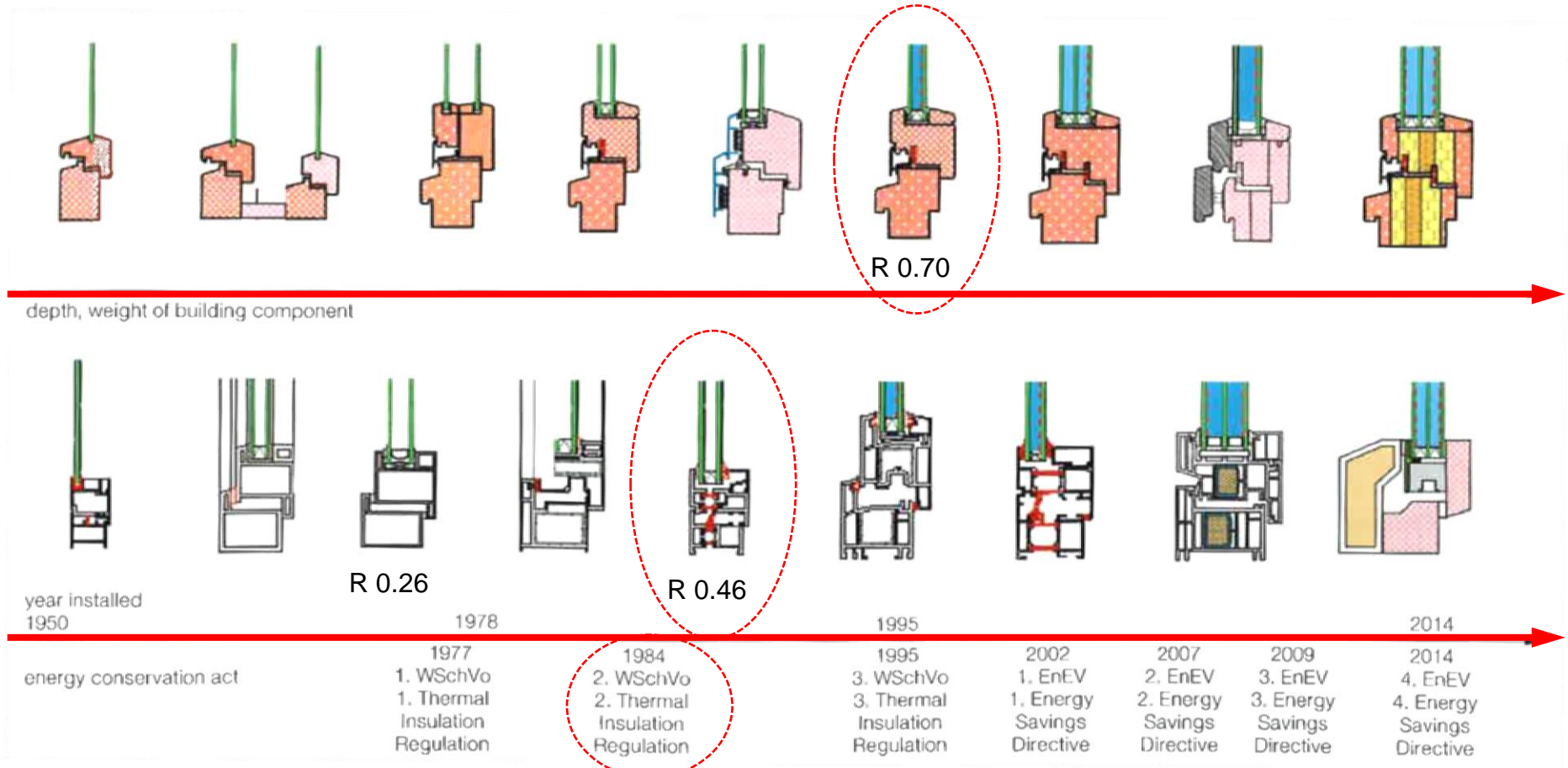


Exterior
Insulation

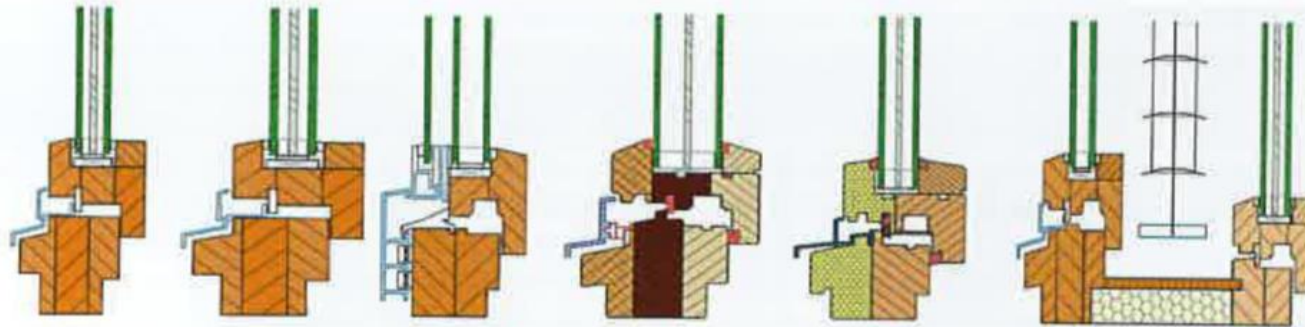


Split
Insulation

Windows profiles:



Windows R-values:



starting point
68 mm

R 1

enlarged frame
85 mm

R1.1

hinged panel window

R 1.40

wood type optimisation

R 1.25

integrated insulation

R 1.40

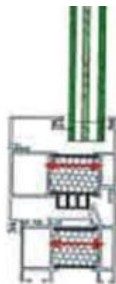
optimised box-type window

R 1.6



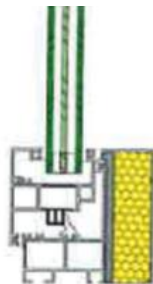
basic profile

R 1



enlargement of insulation zone

R1.1



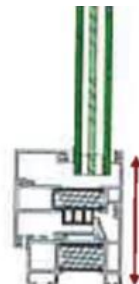
position of insulation

R 1.1



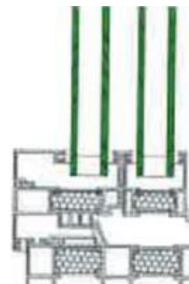
enlargement and optimisation of insulation

R 1.1



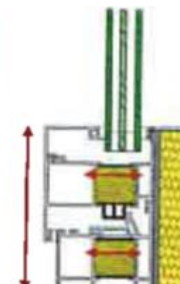
reduction of visible frame

R1.25



hinged panel window
(U_g 2x
1,1 W/m²K)

R 1.26



combined measures

R 1.36

Cold homes are not a curse....

They are by design

So let's change it !

**Thank you...
Any questions?**