MONCTON | Building Inspection / Inspection des bâtiments

Below Grade Wall Assembly

Assembly # MB-07

Description: ICF wall consisting of 152.4mm (6") concrete core with 63.5mm (2.5") expanded polystyrene (Type 2) insulation each side. Interior finished with 12.7mm (1/2") gypsum board.

Layer	Assembly Components (layer listed from exterior to interior)	RSI Value	R Value
1	63.5mm (2.5") expanded polystyrene (Type 2)	1.778	10.09595
2	152.4mm (6") Concrete core	0.06096	0.346147
3	63.5mm (2.5") expanded polystyrene (Type 2)	1.778	9.374812
4	12.7mm (1/2") gypsum board	0.07747	10.09595
5	Inside Air Film	0.12	0.681392
	Total	3.81	30.6

Note:
The thermal resistance values of each continuous layer incorporated in the assembly are from A-9.36.2.4.(1)D.

Parallel Heat Flow Calculation:

$$RSI_{parallel} = \frac{100}{\frac{\%\text{ area of framing}}{RSI_F} + \frac{\%\text{ area of cavity}}{RSI_C}}$$

% Area of Framing	N/A	Value of the area of framing member obtained from Table A-9.36.2.4.(1)A
% Area of Cavity	N/A	Values of the area of cavity obtained from Table A-9.36.2.4.(1)A
RSI Framing	N/A	
RSI Cavity	N/A	
RSI Parrallel *	N/A	

Note: The above values and references are from the 2010 National Building Code of Canada.This document is intended to be used for reference purposes. The assembly components shall be detailed in a cross section on the submitted plans.

RSI_{eff} = 3.81 $(m^2 \cdot K)/W$	**R_{eff} = 30.6 $(h \cdot ft^2 \cdot {}^oF)/Btu$**

eff = effective thermal resistance