

**Below Grade Wall Assembly** 

## Building Inspection Inspection des bâtiments

## Assembly # MB-06

Description: 203.2mm (8") Concrete wall with 38x140 (2x6) studs at 610mm (24") o/c with 140mm (5.5") 1/2lb sprayed polyurethane foam cavity insulation. Interior finished with 12.7mm (1/2") gypsum board.

| Layer | Assembly Components (layer listed from exterior to interior)                           | <b>RSI Value</b> | R Value  |
|-------|--|------------------|----------|
| 1     | 203.2mm (8") concrete wall   | 0.08128          | 0.461529 |
| 2     | 38x140 (2X6) @ 610mm (24") o/c with RSI 3.64 (R 20.7) 1/2lb sprayed polyurethane foam* | 2.871462         | 16.30492 |
| 4     | 6 mil. Polyethylene  | N/A              | N/A      |
| 3     | 12.7mm (1/2") gypsum board   | 0.07747          | 0.439895 |
| 4     | Inside Air Film  | 0.12             | 0.681392 |
|       |  |                  |          |
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|       |  |                  |          |
|       |  |                  |          |
|       |  |                  |          |
|       |  |                  |          |
|       | Total  | 3.15             | 17.9     |
| Note: |  |                  |          |

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

|   |   | RSI <sub>parallel</sub> =   |                         | 100                      |                  |  |  |  |
|---|---|---|-------------------------|--------------------------|------------------|--|--|--|
| Parallel Heat Flow Calculation:   |   |   | % area of framing       | +                        | % area of cavity |  |  |  |
|   |   |   | RSI <sub>F</sub>        |                          | RSI <sub>C</sub> |  |  |  |
| % Area of Framing   | 13%   | Value of the area of framing member obtained from Table A-9.36.2.4.(1)A |                         |                          |                  |  |  |  |
| % Area of Cavity  | Area of Cavity 87% Values of the area of cavity obtained from Table A-9.36.2.4.(1)A |   |                         |                          |                  |  |  |  |
| RSI Framing 1.19  |   |   |                         |                          |                  |  |  |  |
| RSI Cavity 3.64   |   |   |                         |                          |                  |  |  |  |
| RSI Parrallel *   | 2.871462  |   |                         |                          |                  |  |  |  |
|   |   | -   |                         |                          |                  |  |  |  |
| 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 <sub>eff</sub> = 3.15   | (m²·K)/W  |   | R <sub>eff</sub> = 17.9 | (h·ft <sup>2</sup> ·°F)/ | Btu              |  |  |  |

eff = effective thermal resistance