



COMcheck Software Version 4.1.0.0

# Envelope Compliance Certificate



Reviewed for Code Compliance  
Permitting and Inspections Department  
Approved with Conditions

02/21/2019

## CONDITIONALLY APPROVED

REVIEW BY:

**SAFEbuilt.**

APPROVED THIRD PARTY PLAN REVIEW AGENCY  
BY THE CITY OF PORTLAND, MAINE.

SEE REVIEW LETTER FOR MORE INFORMATION.

01/16/2019

## Section 1: Project Information

Energy Code: **2009 IECC**

Project Title:

Project Type: New Construction

Construction Site:

Owner/Agent:

Designer/Contractor:

Building Location (for weather data):

Portland, Maine

Climate Zone:

6a

Vertical Glazing / Wall Area Pct.:

6%

### Building Use: Activity Type(s)

### Floor Area

1-Warehouse : Nonresidential	19962
2-Warehouse : Nonresidential	4838
3-Retail : Nonresidential	4838

## Section 2: Envelope Assemblies and Requirements Checklist

**Envelope PASSES:** Design 5% better than code.

### Envelope Assemblies:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor <sup>(a)</sup>
north wall B: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 1 - Warehouse]	3718	13.0	7.5	0.061	0.069
Window 1: Metal Frame, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, PF 0.19, [Bldg. Use 1 - Warehouse]	121	---	---	1.200	0.550
south wall B: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 1 - Warehouse]	4792	13.0	7.5	0.061	0.069
Window 2: Metal Frame, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, [Bldg. Use 1 - Warehouse]	83	---	---	1.200	0.550
Door 1: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Warehouse]	320	---	---	0.057	0.500
Door 2: Insulated Metal, Swinging, [Bldg. Use 1 - Warehouse]	20	---	---	0.090	0.700
west wall b: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 1 - Warehouse]	3042	13.0	7.5	0.061	0.069
Window 6: Metal Frame, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, PF 0.19, [Bldg. Use 1 - Warehouse]	30	---	---	1.200	0.550
Window 7: Metal Frame, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, PF 0.48, [Bldg. Use 1 - Warehouse]	37	---	---	1.200	0.550
Door 5: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Warehouse]	616	---	---	0.057	0.500
Door 6: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, PF 0.16, [Bldg. Use 1 - Warehouse]	120	---	---	1.200	0.800
east wall b: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 1 - Warehouse]	857	13.0	7.5	0.061	0.069
Door 7: Insulated Metal, Non-Swinging, [Bldg. Use 1 - Warehouse]	616	---	---	0.057	0.500
north wall a: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 3 - Retail]	942	13.0	7.5	0.061	0.069
Window 8: Metal Frame, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, PF 2.29, [Bldg. Use 3 - Retail]	272	---	---	1.200	0.550
Door 8: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Type: Energy code default, Single Pane, Clear , SHGC 0.80, PF 2.29, [Bldg. Use 3 - Retail]	63	---	---	1.200	0.800



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north wall a: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 2 - Warehouse]	387	13.0	7.5	0.061	0.069
west wall a: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 3 - Retail]	296	13.0	7.5	0.061	0.069
south wall a: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 3 - Retail]	2451	13.0	7.5	0.061	0.069
Window 3: Metal Frame, Perf. Type: Energy code default, Single Pane, Clear, SHGC 0.80, [Bldg. Use 3 - Retail]	140	---	---	1.200	0.550
Window 4: Metal Frame, Perf. Type: Energy code default, Single Pane, Clear, SHGC 0.80, [Bldg. Use 3 - Retail]	56	---	---	1.200	0.550
south wall a: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 2 - Warehouse]	1028	13.0	7.5	0.061	0.069
Window 5: Metal Frame, Perf. Type: Energy code default, Single Pane, Clear, SHGC 0.80, [Bldg. Use 2 - Warehouse]	28	---	---	1.200	0.550
Door 3: Insulated Metal, Non-Swinging, [Bldg. Use 2 - Warehouse]	160	---	---	0.057	0.500
Door 4: Insulated Metal, Swinging, [Bldg. Use 2 - Warehouse]	40	---	---	0.090	0.700
east wall a: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 3 - Retail]	1254	16.0	7.5	0.061	0.069
Window 9: Metal Frame, Perf. Type: Energy code default, Single Pane, Clear, SHGC 0.80, [Bldg. Use 3 - Retail]	121	---	---	1.200	0.550
Door 9: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Type: Energy code default, Single Pane, Clear, SHGC 0.80, [Bldg. Use 3 - Retail]	108	---	---	1.200	0.800
east wall a: Metal Building Wall, Single Layer Mineral Fiber, [Bldg. Use 2 - Warehouse]	390	13.0	7.5	0.061	0.069
Roof 1: Metal Building, Standing Seam, [Bldg. Use 3 - Retail]	5399	32.0	0.0	0.049	0.049
Roof 2: Metal Building, Standing Seam, [Bldg. Use 3 - Retail]	20526	32.0	0.0	0.049	0.049
Floor 1: Slab-On-Grade:Unheated, Vertical 2 ft., [Bldg. Use 1 - Warehouse]	580	---	15.0	---	---
Floor 2: Slab-On-Grade:Unheated, Vertical 4 ft., [Bldg. Use 2 - Warehouse]	281	---	15.0	---	---

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.

### Air Leakage, Component Certification, and Vapor Retarder Requirements:

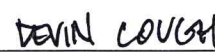

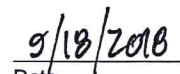
- 1. All joints and penetrations are caulked, gasketed or covered with a moisture vapor-permeable wrapping material installed in accordance with the manufacturer's installation instructions.
- 2. Windows, doors, and skylights certified as meeting leakage requirements.
- 3. Component R-values & U-factors labeled as certified.
- 4. No roof insulation is installed on a suspended ceiling with removable ceiling panels.
- 5. 'Other' components have supporting documentation for proposed U-Factors.
- 6. Insulation installed according to manufacturer's instructions, in substantial contact with the surface being insulated, and in a manner that achieves the rated R-value without compressing the insulation.
- 7. Stair, elevator shaft vents, and other outdoor air intake and exhaust openings in the building envelope are equipped with motorized dampers.
- 8. Cargo doors and loading dock doors are weather sealed.
- 9. Recessed lighting fixtures installed in the building envelope are Type IC rated as meeting ASTM E283, are sealed with gasket or caulk.
- 10. Building entrance doors have a vestibule equipped with self-closing devices.

Exceptions:

- Building entrances with revolving doors.
- Doors not intended to be used as a building entrance.
- Doors that open directly from a space less than 3000 sq. ft. in area.
- Doors used primarily to facilitate vehicular movement or materials handling and adjacent personnel doors.
- Doors opening directly from a sleeping/dwelling unit.

### Section 3: Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications and other calculations submitted with this permit application. The proposed envelope system has been designed to meet the 2009 IECC requirements in COMcheck Version 4.1.0.0 and to comply with the mandatory requirements in the Requirements Checklist.

  
 Name - Title
   
 Signature
   
 Date