Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 02/07/17

COM*check* Software Version 4.0.5.0

Envelope Compliance Certificate

Section 1: Project Information

Energy Code: **2009 IECC**
Project Title: Clark Insurance - Building Shell
Project Type: New Construction

Construction Site:
1945 Congress St
Portland, ME 04102
Permit No. BP#2016-02711

Owner/Agent:
Brad Fries
Northland Management Corp.
17 South Street
3rd Floor
Portland, ME 04101
207-780-0223
brad@northlandus.com

Designer/Contractor:
Kevin Gough
Archetype Architects
48 Union Wharf
Portland, ME 04101
207-772-6022
gough@archetypepa.com

Building Location (for weather data): Portland, Maine
Climate Zone: 6a
Vertical Glazing / Wall Area Pct.: **22%**

Building Use: Activity Type(s)	Floor Area
1-Roof - Flat (Office) : Nonresidential	23959
2-Slab on Grade (Office) : Nonresidential	24966
3-North Wall (Office) : Nonresidential	2357
4-East Wall (Office) : Nonresidential	3888
5-West Wall (Office) : Nonresidential	4143
6-South Wall (Office) : Nonresidential	2355
7-Roof - Pitched (Office) : Nonresidential	1029

Section 2: Envelope Assemblies and Requirements Checklist

Envelope PASSES: Design 2% better than code.

Envelope Assemblies:

Component Name/Description	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor(a)
Roof 1: Insulation Entirely Above Deck, [Bldg. Use 1 - Roof - Flat]	23959	---	30.0	0.032	0.048
Roof 2: Attic Roof with Wood Joists, [Bldg. Use 7 - Roof - Pitched]	1029	38.0	0.0	0.027	0.027
Floor 1: Slab-On-Grade:Unheated, Vertical 4 ft., [Bldg. Use 2 - Slab on Grade]	709	---	15.0	---	---
Exterior Wall 1: Wood-Framed, 16" o.c., [Bldg. Use 3 - North Wall]	2357	13.0	10.0	0.045	0.051
Window 1: Vinyl/Fiberglass Frame, Perf. Specs.: Product ID NC8300-PIC, SHGC 0.41, [Bldg. Use 3 - North Wall] (b)	215	---	---	0.260	0.350
Window 7: Metal Frame Curtain Wall/Storefront, Perf. Type: Energy code default, Double Pane with Low-E, Clear , SHGC 0.70, [Bldg. Use 3 - North Wall]	184	---	---	0.800	0.450
Exterior Wall 2: Wood-Framed, 16" o.c., [Bldg. Use 4 - East Wall]	3888	13.0	10.0	0.045	0.051
Window 2: Vinyl/Fiberglass Frame, Perf. Specs.: Product ID NC8300-PIC, SHGC 0.41, [Bldg. Use 4 - East Wall] (b)	383	---	---	0.260	0.350
Window 6: Metal Frame Curtain Wall/Storefront, Perf. Type: Energy code default, Double Pane with Low-E, Clear , SHGC 0.70, [Bldg. Use 4 - East Wall]	991	---	---	0.800	0.450
Exterior Wall 3: Wood-Framed, 16" o.c., [Bldg. Use 5 - West Wall]	4143	13.0	10.0	0.045	0.051
Window 3: Vinyl/Fiberglass Frame, Perf. Specs.: Product ID NC8300-PIC, SHGC 0.41, [Bldg. Use 5 - West Wall] (b)	574	---	---	0.260	0.350
Door 1: Insulated Metal, Swinging, [Bldg. Use 5 - West Wall]	24	---	---	0.498	0.700

Exterior Wall 4: Wood-Framed, 16" o.c., [Bldg. Use 6 - South Wall]	2355	13.0	10.0	0.045	0.051
Window 4: Vinyl/Fiberglass Frame, Perf. Specs.: Product ID NC8300-PIC, SHGC 0.41, [Bldg. Use 6 - South Wall] (b)	96	---	---	0.260	0.350
Window 5: Metal Frame Curtain Wall/Storefront, Perf. Type: Energy code default, Double Pane with Low-E, Clear , SHGC 0.70, [Bldg. Use 6 - South Wall]	316	---	---	0.800	0.450
Door 2: Insulated Metal, Swinging, [Bldg. Use 6 - South Wall]	48	---	---	0.498	0.700

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

(b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.

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.
- N/A ☐ 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.
- N/A ☐ 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 COM*check* Version 4.0.5.0 and to comply with the mandatory requirements in the Requirements Checklist.

KEVIN GOUGH, ARCHITECT		31 JAN 2017
Name - Title	Signature	Date