



Envelope Compliance Certificate

Section 1: Project Information

Energy Code: **2012 North Carolina Energy Conservation Code**
Project Title: 18144 BISCUITVILLE
Project Type: New Construction

Construction Site:
NC Highway 24 and Andrews Dr.
Spout Springs, NC 28326

Owner/Agent:

Designer/Contractor:
National Restaurant Designers
3005 Carrington Mill Blvd.
Suite 150
Morrisville, NC 27560
919-544-0087

Building Location (for weather data): Spring Lake, North Carolina
Climate Zone: 3a
Vertical Glazing / Wall Area Pct.: 19%

Building Use: Area Type **Floor Area**
1-Dining: Family : Nonresidential 2745

Section 2: Envelope Assemblies and Requirements Checklist

Envelope PASSES: Design 0.4% 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 - Dining: Family]	2035	---	25.0	0.039	0.039
Roof 2: Attic Roof with Wood Joists, [Bldg. Use 1 - Dining: Family]	822	19.0	0.0	0.053	0.027
Floor 1: Slab-On-Grade:Unheated, [Bldg. Use 1 - Dining: Family]	264	---	---	---	---
Exterior Wall - Right Side: Wood-Framed, 16" o.c., [Bldg. Use 1 - Dining: Family]	854	19.0	0.0	0.067	0.064
Window 1: Metal Frame with Thermal Break, Perf. Specs.: Product ID n/a, SHGC 0.28, PF 0.50, [Bldg. Use 1 - Dining: Family] (b)	203	---	---	0.280	0.450
Door 1: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Specs.: Product ID n/a, SHGC 0.33, PF 0.39, [Bldg. Use 1 - Dining: Family] (b)	21	---	---	0.290	0.770
Door 2: Insulated Metal, Swinging, [Bldg. Use 1 - Dining: Family]	27	---	---	0.700	0.700
Exterior Wall - Rear: Wood-Framed, 16" o.c., [Bldg. Use 1 - Dining: Family]	480	19.0	0.0	0.067	0.064
Exterior Wall - Front: Wood-Framed, 16" o.c., [Bldg. Use 1 - Dining: Family]	267	19.0	0.0	0.067	0.064
Window 2: Metal Frame with Thermal Break, Perf. Specs.: Product ID n/a, SHGC 0.28, PF 0.39, [Bldg. Use 1 - Dining: Family] (b)	103	---	---	0.280	0.450
Door 3: Glass (> 50% glazing):Metal Frame, Entrance Door, Perf. Specs.: Product ID n/a, SHGC 0.33, PF 0.23, [Bldg. Use 1 - Dining: Family] (b)	21	---	---	0.290	0.770
Exterior Wall - Left: Wood-Framed, 16" o.c., [Bldg. Use 1 - Dining: Family]	990	19.0	0.0	0.067	0.064
Window 3: Metal Frame with Thermal Break, Perf. Specs.: Product ID n/a, SHGC 0.28, PF 0.39, [Bldg. Use 1 - Dining: Family] (b)	152	---	---	0.280	0.450

(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.
- 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. Shaft vents serving stairs and elevators integral to the building envelope are equipped with motorized dampers.

Exceptions:

- Buildings without fire alarm system.
- Stairway vents open to the exterior.
- 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.
- Buildings less than four stories above grade and less than 10,000 ft² in area.

Additional Efficiency Package Requirements:

- 1. The reduced interior lighting power option has been selected as the additional efficiency package required by this energy code. Requirements for this package are applied to the interior lighting allowance calculations. Full compliance with this efficiency option requires inspection and verification that the interior lighting allowances and fixture schedule found in the interior lighting report are compliant and deemed to pass.

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 2012 North Carolina Energy Conservation Code requirements in COMcheck Version 4.0.8.1 and to comply with the mandatory requirements in the Requirements Checklist.

Tyler Alderson - Senior Designer

Name - Title

Tyler Alderson

Signature

10/23/18

Date