Additional Forms Required

- Appendix R-1 Energy Efficiency Certificate
  - From 2018 NC Residential Code, Pg R-37
- Appendix E-3A Air Sealing: Visual Inspection Option
  - From 2018 NC Residential Code, Pg 641
- Appendix E Duct Sealing: Duct Air Leakage Test
  - From 2018 NC Residential Code, Pg 650

These are required prior to issuance of Certificate of Occupancy.
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Appendix R1

RESIDENTIAL REQUIREMENTS
(Appendix exclusive to the State of North Carolina)

Appendix R1.1 Energy Efficiency Certificate (Section R401.3)

<table>
<thead>
<tr>
<th>TABLE R401.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY EFFICIENCY CERTIFICATE</td>
</tr>
</tbody>
</table>

Builder, Permit Holder or Registered Design Professional

Print Name: ____________________________________________

Signature: ____________________________________________

Property Address: ______________________________________

Date: ________________________________________________

Insulation Rating - List the value covering largest area to all that apply | R-Value
---|---
Ceiling/roof: | R-
Wall: | R-
Floor: | R-
Closed Crawl Space Wall: | R-
Closed Crawl Space Floor: | R-
Slab: | R-
Basement Wall: | R-
Fenestration: | 

U-Factor

Solar Heat Gain Coefficient (SHGC)

Building Air Leakage

- Visually inspected according to R402.4.2.1 OR

- Building Air Leakage Test Results (Sec. R402.4.2.2)
  ACH50 [Target: 5.0] or CFM50/SFSA [Target: 0.30]

Name of Tester / Company: ________________________________

Date: ______________________________________ Phone: ____________________________

Ducts:

Insulation | R-
---|---
Total Duct Leakage Test Result (Sect. R403.3.3)
Check One (Total duct leakage test)
- (CFM25 Total/100SF) [Target: 5]
- (CFM25 Total/100SF) [Target: 4]

Name of Tester / Company: ________________________________

Date: ______________________________________ Phone: ____________________________

Certificate to be displayed permanently
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APPENDIX E:
SAMPLE WORKSHEETS FOR RESIDENTIAL AIR AND DUCT LEAKAGE TESTING

APPENDIX E-3A: Air sealing: Visual inspection option (Section N1102.4.2.1)

Sample Worksheet

N1102.4.2 Air sealing. Building envelope air tightness shall be demonstrated by Section N1102.4.2.1 or N1102.4.2.2.

N1102.4.2.1 Visual inspection option. Building envelope tightness shall be considered acceptable when items providing insulation enclosure in Section N1102.2.14 and enclosure and air sealing in Section N1102.2.15 and air sealing in Section N1102.4.1 are addressed and when the items listed in Table N1102.4.2, applicable to the method of construction, are certified by the builder, permit holder or registered design professional via the certificate in Appendix E-1.

### TABLE N1102.4.2
AIR BARRIER INSPECTION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CRITERIA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ceiling/attic</td>
<td>Sealants or gaskets provide a continuous air barrier system joining the top plate of framed walls with either the ceiling drywall or the top edge of wall drywall to prevent air leakage.</td>
</tr>
<tr>
<td></td>
<td>Top plate penetrations are sealed.</td>
</tr>
<tr>
<td></td>
<td>For ceiling finishes that are not air barrier systems such as tongue-and-groove planks, air barrier systems, (for example, taped house wrap), shall be used above the finish.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> It is acceptable that sealants or gaskets applied as part of the application of the drywall will not be observable by the code official.</td>
</tr>
<tr>
<td>Walls</td>
<td>Sill plate is gasketed or sealed to subfloor or slab.</td>
</tr>
<tr>
<td>Windows and doors</td>
<td>Space between window and exterior door jambs and framing is sealed.</td>
</tr>
<tr>
<td>Floors (including above-garage and cantilevered floors)</td>
<td>Air barrier system is installed at any exposed edge of insulation.</td>
</tr>
<tr>
<td>Penetrations</td>
<td>Utility penetrations through the building thermal envelope, including those for plumbing, electrical wiring, ductwork, security and fire alarm wiring, and control wiring, shall be sealed.</td>
</tr>
<tr>
<td>Garage separation</td>
<td>Air sealing is provided between the garage and conditioned spaces. An air barrier system shall be installed between the ceiling system above the garage and the ceiling system of interior spaces.</td>
</tr>
<tr>
<td>Ceiling penetrations</td>
<td>Ceiling electrical box penetrations and ceiling mechanical box penetrations shall be caulked, gasketed, or sealed at the penetration of the ceiling finish. See Appendix E-2.4.</td>
</tr>
<tr>
<td></td>
<td><strong>Exception:</strong> Ceiling electrical boxes and ceiling mechanical boxes not penetrating the building thermal envelope.</td>
</tr>
<tr>
<td>Recessed lighting</td>
<td>Recessed light fixtures are air tight, IC rated, and sealed to drywall. All fixtures not penetrating the building envelope.</td>
</tr>
</tbody>
</table>

Property Address: __________________________________________________________________________

N1102.4.2.1 Visual Inspection Option. The inspection information including tester name, date, and contact shall be included on the certificate described in Section N1101.14.

Signature __________________________ Date __________________________
APPENDIX E

Complete one duct leakage report for each HVAC system serving the home:

Property Address: __________________________________________________________

HVAC System Number: __________ Describe area of home served: _____________________________

CFM25 Total: _________ Conditioned Floor Area (CFA) served by system: _________________ s.f.

CFM25 x 100 divided by CFA = _______ CFM25/100SF (e.g. 50 CFM25 x 100/2,000 CFA = 2.5 CFM25/100SF)

Fan attachment location: __________________________

Company Name: ____________________________________________________________

Contact Information: __________________________________________________________

_____________________________________________________________________________

Signature of Tester __________________________ Date ________________

I am a (check one):

☐ Permit Holder Permit # ______________

☐ NC Licensed General Contractor License # ______________

☐ NC Licensed HVAC Contractor License # ______________

☐ NC Licensed Home Inspector License # ______________

☐ Registered Design Professional Registration # ______________

☐ Certified BPI Envelope Professional Certification # ______________

☐ Certified HERS Rater Certification # ______________