

# Plan Review Checklist

## 1 & 2 Family Residential

8th edition , Massachusetts with 2012 IECC Review



Property Address: \_\_\_\_\_

Review by: \_\_\_\_\_

Review Date Started: \_\_\_\_\_ Completed Review Date \_\_\_\_\_

E-Mail Address \_\_\_\_\_ Phone Number \_\_\_\_\_

### **PROCEDURE FOR OBTAINING A BUILDING PERMIT FOR 1 OR 2 FAMILY (ADDITIONS, ALTERATIONS AND ACCESSORY STRUCTURES)**

#### **GENERAL SUBMISSION INFORMATION:**

- 1. Massachusetts State Building Code, 780 CMR 8th Edition,**
  - 2. Application form page 1**
    - o Property Address
    - o Zoning District
    - o Building Setbacks
    - o Water Supply, Flood Zone Information, Sewage Disposal Information
    - o Property Ownership / Authorized Agent
    - o Authorized Agent
  - 3. Complete page 2 and 3 of application form**
  - 4. Plot Plan §R106.2 (separate from building plans) required for additions and accessory buildings to include;**
    - o This plan shall be prepared by an Engineer or Registered Land Surveyor in accordance with the Massachusetts Registration Laws, and submitted to the Inspector of Buildings prior to framing
    - o Location of existing and proposed construction with dimensioned setbacks
    - o Location of lot lines, dimensions of lot & frontage
    - o Property address: map & lot number, zoning district & overlays
    - o Statement that the lot and proposed building shown on this plan is located on the ground as shown and does, does not conform to the present zoning bylaws.
    - o Statement that existing condition does / does not lie within a Flood Hazard Zone as shown on the F.E.M.A map of the Town of Grafton
    - o Septic System location with reserve area
    - o Well location if applicable
    - o Wetland delineation if applicable
    - o North Arrow
    - o Drawing scale
    - o Date of Document
    - o Location & dimensions of public easements, public utility easements, railroad right-of-ways, and established zoning setback requirements.
    - o Location & dimensions of primary & accessory buildings & structure also street access drives and walks or other conditions rendering the land surface impervious
    - o §R403.1.7.2 Foundation Clearance from Slopes
- The Plan Submitted to Have**
- Original Seal (wet seal)
  - Original signature

# Plan Review Checklist

## 1 & 2 Family Residential

8th edition , Massachusetts



Property Address: \_\_\_\_\_

Review by: \_\_\_\_\_

Review Date Started: \_\_\_\_\_ Completed Review Date \_\_\_\_\_

Building Department Notes on Item 5



2012 IECC Section #	Foundation Inspection	Prescriptive Code Value	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1 [FO1] <sup>1</sup> 	Slab edge insulation R-value.	Unheated: R-10 Heated: R-15	R-____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	R-____ <input type="checkbox"/> Unheated <input type="checkbox"/> Heated	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.2, 402.2.9 [FO2] <sup>1</sup> 	Slab edge insulation installed per manufacturer's instructions.			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1 [FO3] <sup>1</sup> 	Slab edge insulation depth/length.	2 ft	____ ft	____ ft	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1 [FO4] <sup>1</sup> 	Conditioned basement wall insulation R-value. Where internal insulation is used, verification may need to occur during Insulation Inspection. Not required in warm-humid locations in Climate Zone 3.	Continuous: R-15 Cavity: R-19	R-____ R-____	R-____ R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.2 [FO5] <sup>1</sup> 	Conditioned basement wall insulation installed per manufacturer's instructions.			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.8 [FO6] <sup>1</sup> 	Conditioned basement wall insulation depth of burial or distance from top of wall.	10 ft or to basement floor	____ ft	____ ft	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.10 [FO7] <sup>1</sup> 	Unvented crawl space wall insulation R-value.	Continuous: R-15 Cavity: R-19	R-____ R-____	R-____ R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.2 [FO8] <sup>1</sup> 	Unvented crawl space wall insulation installed per manufacturer's instructions.			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.10 [FO9] <sup>1</sup> 	Unvented crawl space continuous vapor retarder installed over exposed earth, joints overlapped by 6 in. and sealed, extending at least 6 in. up and attached to the wall.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.10 [FO10] <sup>1</sup> 	Unvented crawl space wall insulation depth of burial or distance from top of wall.	To finished grade + 24 in. vertical and/or horizontal	____ in.	____ in.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.2.1 [FO11] <sup>2</sup> 	A protective covering is installed to protect exposed exterior insulation and extends a minimum of 6 in. below grade.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.8 [FO12] <sup>2</sup> 	Snow- and ice-melting system controls installed.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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2012 IECC Section #	Framing / Rough-In Inspection	Prescriptive Code Value	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.3.4 [FR1] <sup>1</sup> 	Door U-factor.	U-0.32 (24 ft <sup>2</sup> exemption)	U-_____	U-_____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1, 402.3.1, 402.3.3, 402.3.6, 402.5 [FR2] <sup>1</sup> 	Glazing U-factor (area-weighted average).	U-0.32 (15 ft <sup>2</sup> exemption)	U-_____	U-_____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1, 402.3.2, 402.3.3, 402.3.6, 402.5 [FR3] <sup>1</sup> 	Glazing SHGC value (area-weighted average).	N/A	SHGC:_____	SHGC:_____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.1.3 [FR4] <sup>1</sup> 	U-factors of fenestration products are determined in accordance with the NFRC test procedure or taken from the default table.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1, 402.3.3, 402.3.6, 402.5 [FR5] <sup>1</sup> 	Skylight U-factor.	U-0.55 (15 ft <sup>2</sup> exemption)	U-_____	U-_____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1, 402.3.3, 402.3.6, 402.5 [FR6] <sup>1</sup> 	Skylight SHGC value.	N/A	SHGC:_____	SHGC:_____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.1.3 [FR7] <sup>1</sup> 	SHGC values are determined in accordance with the NFRC test procedure or taken from the default table.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1 [FR10] <sup>1</sup> 	Mass wall exterior insulation R-value. If more than 1/2 of the insulation is on the wall interior, the interior insulation requirement applies and verification may need to occur during Insulation Inspection.	R-13 exterior R-17 interior	R-_____	R-_____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.2 [FR11] <sup>1</sup> 	Mass wall exterior insulation installed per manufacturer's instructions.			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.3.5 [FR8] <sup>1</sup> 	Fenestration in thermally isolated sunrooms has a maximum U-factor of 0.45 in Climate Zones 4-8. All other sunroom fenestration must meet code requirements.	Isolated: U-0.45 Not Isolated: U-0.32	U-_____ <input type="checkbox"/> Isolated <input type="checkbox"/> Not Isolated	U-_____ <input type="checkbox"/> Isolated <input type="checkbox"/> Not Isolated	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.3.5 [FR9] <sup>1</sup> 	Skylights in thermally isolated sunrooms have a maximum skylight U-factor of 0.70. All other sunroom skylights must meet code requirements.	Isolated: U-0.70 Not Isolated: U-0.55	U-_____ <input type="checkbox"/> Isolated <input type="checkbox"/> Not Isolated	U-_____ <input type="checkbox"/> Isolated <input type="checkbox"/> Not Isolated	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

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Version 3.0

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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2012 IECC Section #	Framing / Rough-In Inspection	Prescriptive Code Value	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.4.1.1 [FR23] <sup>1</sup>	Air barrier and thermal barrier installed per manufacturer's instructions.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.3 [FR20] <sup>1</sup>	Fenestration that is not site built is listed and labeled as meeting AAMA /WDMA/CSA 101/I.S. 2/A440 or has infiltration rates per NFRC 400 that do not exceed code limits.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.4 [FR16] <sup>2</sup>	IC-rated recessed lighting fixtures sealed at housing/interior finish and labeled to indicate <= 2.0 cfm leakage at 75 Pa.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.1 [FR12] <sup>1</sup>	Supply ducts in attics are insulated to >=R-8. All other ducts in unconditioned spaces or outside the building envelope are insulated to >=R-6.	Attic Supply: R-8 Other: R-6	R-____ R-____	R-____ R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.2 [FR13] <sup>1</sup>	All joints and seams of air ducts, air handlers, and filter boxes are sealed.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.3 [FR15] <sup>3</sup>	Building cavities are not used as ducts or plenums.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.3 [FR17] <sup>2</sup>	HVAC piping conveying fluids above 105 °F or chilled fluids below 55 °F are insulated to >=R-3.	R-3	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.3.1 [FR24] <sup>2</sup>	Protection of insulation on HVAC piping.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4.2 [FR18] <sup>2</sup>	Hot water pipes are insulated to >=R-3.	R-3	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.5 [FR19] <sup>2</sup>	Automatic or gravity dampers are installed on all outdoor air intakes and exhausts.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

2012 IECC Section #	Insulation Inspection	Prescriptive Code Value	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
303.1 [IN13] <sup>2</sup>	All installed insulation labeled or installed R-values provided.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1, 402.2.6 [IN1] <sup>1</sup>	Floor insulation R-value.	Wood: R-30 Steel: U-0.033 (calculations required)	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.2, 402.2.7 [IN2] <sup>1</sup>	Floor insulation installed per manufacturer's instructions, and in substantial contact with the underside of the subfloor.			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.1.1, 402.2.5, 402.2.6 [IN3] <sup>1</sup>	Wall insulation R-value. If this is a mass wall with at least 1/2 of the wall insulation on the wall exterior, the exterior insulation requirement applies (see FR10).	Wood: R-20 or R-13+5 Mass: R-13 exterior R-17 interior Steel: R-0+14; R-13+8.9; R-15+8.5; R-19+7.8; R-19+6.2; R-21+7.5	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	R-_____ <input type="checkbox"/> Wood <input type="checkbox"/> Mass <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.2 [IN4] <sup>1</sup>	Wall insulation installed per manufacturer's instructions.			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.12 [IN8] <sup>1</sup>	Walls of thermally isolated sunrooms have a minimum R-value of R-13. All other sunroom walls must meet code requirements.	Thermally Isolated: R-13	R-_____ <input type="checkbox"/> Isolated <input type="checkbox"/> Not Isolated	R-_____ <input type="checkbox"/> Isolated <input type="checkbox"/> Not Isolated	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.2 [IN9] <sup>1</sup>	Sunroom wall insulation installed per manufacturer's instructions.			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.12 [IN10] <sup>1</sup>	Ceilings of thermally isolated sunrooms have a minimum R-value of R-19 in Climate Zones 1-4 and R-24 in Climate Zones 5-8. All other sunroom ceilings must meet code requirements.	Thermally Isolated: R-24	R-_____ <input type="checkbox"/> Isolated <input type="checkbox"/> Not Isolated	R-_____ <input type="checkbox"/> Isolated <input type="checkbox"/> Not Isolated	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.2 [IN11] <sup>1</sup>	Sunroom ceiling insulation installed per manufacturer's instructions.			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:1

1	High Impact (Tier 1)	2	Medium Impact (Tier 2)	3	Low Impact (Tier 3)
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2012 IECC Section #	Final Inspection Provisions	Prescriptive Code Value	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
402.1.1, 402.2.1, 402.2.2, 402.2.6 [F11] <sup>1</sup>	Ceiling insulation R-value.	Wood: R-49 Steel Truss: R-38+5 Steel Joist: U-0.026 (calculations required)	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	R-____ <input type="checkbox"/> Wood <input type="checkbox"/> Steel	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.1.1.1, 303.2 [F12] <sup>1</sup>	Ceiling insulation installed per manufacturer's instructions. Blown insulation marked every 300 ft <sup>2</sup> .			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.3 [F122] <sup>2</sup>	Baffle over air permeable insulation adjacent to soffit and eave vents.			If complies: <input type="checkbox"/> Good <input type="checkbox"/> Fair <input type="checkbox"/> Poor	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.2.4 [F13] <sup>1</sup>	Attic access hatch and door insulation >=R-value of the adjacent assembly.	>=R-value of the adjacent assembly	R-____	R-____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.1.2 [F117] <sup>1</sup>	Blower door test @ 50 Pa. <=5 ach in Climate Zones 1-2, and <=3 ach in Climate Zones 3-8.	ACH 50 <=3.0	ACH 50 = ____	ACH 50 = ____	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
402.4.2 [F18] <sup>2</sup>	Wood burning fireplaces have tight fitting flue dampers and outdoor air for combustion.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.2 [F14] <sup>1</sup>	Duct tightness test result of <=4 cfm/100 ft <sup>2</sup> across the system or <=3 cfm/100 ft <sup>2</sup> without air handler @ 25 Pa. For rough-in tests, verification may need to occur during Framing Inspection.	Across System: 4 cfm/100 ft <sup>2</sup> No Air Handler: 3 cfm/100 ft <sup>2</sup>	____ cfm/100 ft <sup>2</sup>	____ cfm/100 ft <sup>2</sup>	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.2.2.1 [F124] <sup>1</sup>	Air handler leakage designated by manufacturer at <=2% of design air flow.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.6 [F15] <sup>1</sup>	Heating and cooling equipment type and capacity as per plans.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.1 [F19] <sup>2</sup>	Programmable thermostats installed on forced air furnaces.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.1.2 [F110] <sup>2</sup>	Heat pump thermostat installed on heat pumps.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.4.1 [F111] <sup>2</sup>	Circulating service hot water systems have automatic or accessible manual controls.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

2012 IECC Section #	Final Inspection Provisions	Prescriptive Code Value	Plans Verified Value	Field Verified Value	Complies?	Comments/Assumptions
403.5.1 [F125] <sup>2</sup>	All mechanical ventilation system fans not part of tested and listed HVAC equipment meet efficacy and air flow limits.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.9.1 [F112] <sup>3</sup> 	Readily accessible switch on heaters for swimming pools or permanent in-ground spas.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.9.2 [F119] <sup>3</sup> 	Timer switches on heaters and pumps serving pools and permanent spas.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
403.9.3 [F120] <sup>3</sup> 	Heated pools and permanent spas have a vapor retardant cover.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
404.1 [F16] <sup>1</sup> 	75% of lamps in permanent fixtures or 75% of permanent fixtures have high efficacy lamps.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
404.1.1 [F123] <sup>3</sup>	Fuel gas lighting systems have no continuous pilot light.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
401.3 [F17] <sup>2</sup> 	Compliance certificate posted.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
303.3 [F118] <sup>3</sup> 	Manufacturer manuals for mechanical and water heating systems have been provided.				<input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

**Additional Comments/Assumptions:**

**7. Three sets of plans** and specifications showing the proposed work

- o Temporary structures applications shall indicate begin and end time, and size of structure.
- Tents and similar structures must produce a Certificate of Flame Retardant

**SEE TABLE §R301.2(1) FOR FOOTNOTES**

Ground Snow Load	Wind Speed (mph)	Seismic Design	Weathering	Frost Line Depth	Termite	Decay	Winter Design Temp	Ice Shield Underlayment Required	Flood Hazard	Air Freezing Index	Mean Annual Temp
<i>Table 5301.2 (5)</i>	<i>Table 5301.2.(4)</i>	<i>N/A</i>	<i>Figure 5301.2 (3)</i>	<i>4ft. minimum unless engineered data shows otherwise</i>	<i>Figure 5301.2 (6)</i>	<i>Figure 5301.2 (7)</i>	<i>Appendix 780 CMR 120.J Table 120.J.3.2.1</i>	<i>As required by the exterior roof covering manufacturer; roof pitch and local climate must also be considered</i>	<i>Refer to applicable Flood Insurance Rate Map (FIRM)</i>	<i>Only utilized in the design and construction of frost protected shallow foundations</i>	<i>Only utilized in the design and construction of frost protected shallow foundations</i>
<b>40 psf</b>	<b>100 mph</b>	<b>NA</b>	<b>Severe</b>	<b>§5403.1.4</b>	<i>Moderate to Heavy</i>	<i>Slight to Moderate</i>	<b>NA</b>	<b>§5905.0</b>	<b>FIRM MAPS</b>	See note J Table 5301.2(1)	See note K Table 5301.2(1)

**PROCEDURE FOR OBTAINING A BUILDING PERMIT FOR 1 OR 2 FAMILY  
NEW CONSTRUCTION FOR UNDEVELOPED LOT & ADDITIONS, ALTERATIONS,  
ACCESSORY STRUCTURES  
(In addition to the above requirements)**

**8. Building Construction Documents**

- **General**
  - o Three complete sets of construction documents §R106.1
  - o Construction documents for structures to be constructed in flood hazard areas are required to be prepared by a design professional pursuant to § R106.1.3
  - o Also see Grafton Zoning Bylaws
  - o Documentation concerning disturbed / fill soils that support foundations shall be in accordance with §R401.2
- **Construction Drawings**

**Cover Sheet**

  - o Address with Assessor Map and Parcel
  - o Date of latest revision
  - o Tabulated Square Foot Area all levels (and spaces if applicable)
  - o Design live load all spaces and levels
  - o Building height above grade
  - o Wind Exposure category each building side
  - o Window, door, skylight and cladding schedule showing associated positive and negative design pressure and zone number.
  - o Identify class of material Table §R401.4.1 and Table §R405.1 **Construction documents** (<sup>1</sup>/<sub>4</sub>" scale minimum)
  - o Floor Plan (all levels)
  - o Building dimensions Space designation – (ie: living room, kitchen, bedroom, storage, etc.)
  - o Demonstrate light and ventilation compliance §R303.1
  - o Door and window location per schedule on cover sheet, identifying egress windows and safety glazing
  - o Show attic access size and location
  - o Location and type of smoke detectors and carbon monoxide detectors
  - o Emergency escape and rescue required. Basements, habitable attics and every sleeping room shall have at least one operable emergency escape and rescue opening.

- o If utilizing existing equipment, you MUST submit a heat loss calculation showing existing loads and also proposed new loads
- o Heating system location, size (BTU), location of fuel source and method of combustion air make-up
- o Solid fuel burning appliance location, size, installation manual and method of combustion air make-up
- o Location of ductwork...if installed in exterior wall, the Energy Conservation Application Form noted above must reflect decreased R-value or indicate method of maintaining exterior wall integrity.

#### **Foundation Plan**

- o Show dimensions and location of all footings, pads and columns
- o Footing sections and elevations where steps are intended
- o Show size and location of all steel reinforcement bars if applicable
- o Wall height and thickness with concrete PSI rating
- o Anchor bolt size, spacing and embedded depth
- o Show basement / crawl space ventilation method
- o Show basement / crawl space access size and location
- o Foundation hold down devices type and location when used with the alternative braced wall panels for braced wall requirements as allowed by FIGURE R602.10.3.2
- o Location and framing size of all cripple walls, with detail of walls less than 14 inch stud height
- o Passive Radon Control Requirements Appendix F101.0
- o Location of foundation drain exhaust or sump pit...drainage exclusion exception must be approved by building official §R405

#### **Framing plan**

- o Conventional framing plan all levels including roof, showing size, spacing and direction of structural members
- o Conventional header and beam sizes, spans and bearing clearly showing load path to foundation (ie: doorways, windows, archways, overhead doors, covered porches and decks and structural ridges). Detail showing insulated headers.
- o Engineered floor framing and roof truss plans stamped by a professional registered engineer in the Commonwealth of Massachusetts.
- o Raised rafter construction details stamped by a professional registered engineer in the Commonwealth of Massachusetts.
- o Floor Fire Protection §R107.1.2
- o Roof truss layout shall show type of uplift protection, bearing location, hangers and any other unique application. Multiple roof layouts shall require separate roof sectionals.
- o Engineered manufactured beams and columns stamped by a registered professional engineer in the Commonwealth of Massachusetts. Calculations shall be site specific verifying they generated the loads indicated and that the input and output data provided is site specific to include verification of load path and column adequacy to foundation...disclaimers of any kind shall be rejected.
- o Provide stamped engineered analysis for bearing stud wall height greater than 10 feet, and for non-load bearing stud walls in excess of heights listed in Table §R602.3(5).
- o Show exterior and interior wall bracing locations supporting wall brace method identified on cover sheet.

#### **Elevations**

- o Exterior building elevations all sides to include final grade
- o Exterior siding material – provide evaluation report for types of exterior wall cladding in conformance with the design pressure schedule provided on the cover sheet Exterior roofing material l– provide evaluation report for types of exterior roofing material in conformance with the design pressure schedule provided on the cover sheet

### **Cross sections**

- o Complete cross section of all unique sections of building, detailing method of construction from undisturbed soil to roof, including changes in floor levels.
- o Stair detail showing type of material, rise and run, headroom height, handrail and guardrail.
- o Masonry fireplace section showing fireplace opening size, throat size, damper location, smoke shelf, flue type and size and height of chimney above hearth level.
- o Finished ceiling height all levels

### **9) Wall Bracing Plan Layout**

- o Clearly identify on separate sheet the method number and location of all bracing on each wall line, all levels, including interior partitions if necessary §R602.10...the following is an aid to assist in complying with §R602.10 and is not intended to replace the written text of the code;
- o Identify wall lines (§R602.10)
- o Start with the exterior wall lines
- o Wall lines spacing cannot exceed 35 feet (TABLE R602.10.1.5)  
There are exceptions...if used, provide calculations
- o Identify interior wall lines if necessary to satisfy the 35 foot rule
- o Wall lines are permitted to have offsets provided that each offset is no greater than 4 feet and the total aggregate of offsets do not exceed 8 feet within a wall line

### **10) Choose one wall method per wall line (§R602. 10.3)**

- o **Do not mix methods per wall lines**
- o Clearly identify the method on the plan for each wall line
- o Identify all alternative braced wall methods or provide APA narrow wall bracing method)

### **Provide elevations, sections and details as required to clearly demonstrate application**

#### **11) Show location of all braced panels on plans**

- o There shall be at least one braced panel at each end of a wall line
- o Braced wall panels are allowed to be located no greater than 12 feet 6 inches from the end of a wall line
- o There shall be at least one braced wall panel every 25 feet

#### **12) Any component that does not comply with the code prescriptive design shall bear the seal of a registered professional engineer**

- ⇒ Approved construction documents shall remain attached to the permit card for the duration of the scope of work indicated on the permit...failure to have intact permit package onsite for all inspections may result in a failed inspection §R106.3.1
- ⇒ Permit shall expire within six months from the issuance date if the work authorized by the permit has not commenced or unless extensions have been granted by the Building Official. §R105.5
- ⇒ Field modification to the approved plans will not be allowed unless authorized by the Building Official §R106.4 prior to the modification

- ⇒ The permit card shall identify required inspection phases and inspector contact information...it is the responsibility of the permit holder to secure the proper signatures to completion.

**PLAN AHEAD...New house construction with the intent to make habitable the basement area at a later date must comply with 2009 IECC**

## CHECKLIST FOR APPLICATION

1.  Zoning Application Included
2.  Signed contract between homeowner and the registered home improvement contractor subject to MGL c 142
3.  In lieu of submitting a signed contract as the owner of record, the owner shall submit Signed Affidavit for Home Improvement Contractor Required Contract Terms
4.  3 Sets of plans for the building or structure
5.  Mechanical Application (If applicable)
6.  Site Plan prepared by Engineer or Registered Land Surveyor showing location of buildings or structure to lot lines also proposed location of new structures as per 780 CMR 110.10
7.  Sewer Department Approval or Approved Septic Plan
8.  Water District Approval Letter
9.  Well Water Quantity & Quality Approval certificate from the Board of Health
10.  Smoke Detector Application From The Fire Department
11.  Driveway Permit from The Highway Department (If applicable)
12.  Copies of Variances or Special Permits Granted by The Planning Board or Zoning Board of Appeals or any other Town Boards
13.  Worker's Compensation Certificate
14.  Insurance Binder from Insurance Company made out to the Town of Grafton
15.  Homeowner License Exemption (If applicable)
16.  Copy of Construction Supervisor License  
Type Description
  - U Unrestricted (up to 35,000 Cu. Ft.)
  - R Restricted 1&2 Family Dwelling
  - M Masonry Only
  - RC Residential Roofing Covering
  - WS Residential Window and Siding
  - SF Residential Solid Fuel Burning Appliance Installation
  - D Residential Demolition
17.  Copy of Home Improvement Registration (If applicable)
18.  Statement for disposal of debris (If applicable)
19.  Massachusetts Energy Compliance Report
20.  All monies due to the town must be paid (Certificate of Good Standing)
21.  Copies of Construction Control Forms
22.  Modular Homes: All of the above and see special requirements for Modular Home Written certification from the manufacturer for the person responsible for setting the units. Construction supervisor to obtain permit--homeowner cannot obtain the building permit

Building Notes: