

# **Basement remodel**

## **Renovating or turning a basement into habitable space**

- Pressure Treated lumber must be used against any concrete surfaces.
- 2x studs must be either 16" or 24" on center, depending on the product used to cover it, (sheetrock, wood)
- Insulation must be a minimum of EITHER:
  1. R-19 in the stud bays.
  2. R-15 continuous on the walls (not in the stud bays).
- Fire Stopping is required where ANY item (plumbing pipes, wires) go through the top plates of the walls.
- Fire stopping is also required at the gap at the top of the stud wall and the foundation (mineral wool is acceptable).
- Ventilation is required in habitable spaces when occupied:
  1. Via natural ventilation, 4% of the space for operable windows (100 sq. ft. of habitable space, 4% of openable windows required).
  2. If this is available, then a mechanical system must be provided. (similar to a bathroom fan that brings air in).
- If there are any combustible fuel burning appliances (not direct vent) in the basement area, then open combustion air ducting is required. This ductwork opening must be located outside the building thermal envelope.
- The rooms containing fuel burning appliances must be sealed and insulated in accordance with envelope requirements for the basement wall R-values. This includes all walls and ceilings within this space.
- The door must be fully-gasketed and any water lines and ducts must be fully insulated per code.
- The above information can be found in the following:
  - 2015 IBC and Mass amendments.
  - 2018 IECC
  - 2015 IMC