

SAMPLE GUIDE FOR FINISHED BASEMENT REQUIREMENTS IN ONE AND TWO FAMILY DWELLINGS

EFFECTIVE Jan 1, 2006 all contractors performing residential home improvements are required to be registered with the State as a Home Improvement Contractor. A copy of this registration shall be submitted with each Construction Permit Application. Please see the NJ Div. of Consumer Affairs web site for further information.

<http://www.state.nj.us/lps/ca/contractor.htm>

1. Complete the following forms and technical sections as applicable
 - (a) Construction permit application folder.
 - (b) Construction permit form.
 - (c) Building Subcode technical section. (include estimated cost of building work)
 - (d) Electrical Subcode technical section. (See note below. *)
 - (e) Plumbing Subcode technical section. (See note below. *)
 - (f) Fire Subcode technical section. (See section 9 also.)

***NOTE:** If anyone other than the homeowner performed Electrical or Plumbing work, the applicable technical section **MUST BE SEALED** by the contractor who is performing the work.

2. Submit two sets of scaled drawings. All drawings should indicate owner's name, address of job site, block and lot number. To draw your own plans, you must be the owner and occupant of said property. If not, you will need drawings by a New Jersey Registered Architect. **The homeowner's signature must be on the plans that they prepare.**
3. The drawings submitted shall include the following information:
 - (a) Show entire basement floor plan, indicating partitions, doors, windows, stairways, guardrails, handrails, closets, columns, electric layout, heating layout, furnace, hot water heater, chimney, floor covering, smoke detectors, plumbing and or gas riser diagram if applicable.
 - (b) Show wall cross section, indicating stud sizes, stud spacing, fire stopping, insulation, wall covering materials, ceiling material, ceiling height, height to girders, and height to heat ducts, if applicable. (See sample)
4. When constructing walls, if using wood, any wood in contact with concrete must be treated. Unless separated by an impervious moisture barrier.

5. A room in the basement may not be used as a bedroom unless the room has a means of egress, an approved door, directly to the outside, or a means of egress window.
6. Guards: Any newly created walking surfaces and open sides of stairs more than 30" above grade shall have guards not less than 34" measured vertically from the **stair nosing** and not less than 36" above a **walking surface**. Balusters or spindles shall be constructed so a 4" sphere cannot pass. (Exception: The triangular opening at the bottom rail of a guard and stair shall not allow the passage of a 6" sphere. Guards shall be constructed to withstand a 200 pound load in any direction along the top rail.
7. Handrails: All newly created stairways with three or more risers require continuous handrails. Handrails shall not be less than 30" or greater than 38" measured vertically from the stair nosing. Handrails shall be continuous the full length of the stairs. Handrails shall be returned or shall terminate to a wall or post. Grip sizes shall have a cross section of 1 1/4" min. to 2 5/8" max. Other shapes that provide equivalent grasping surface are permissible.
8. Draft stopping is required in dropped ceilings that have an area of 550 square feet or larger. The space shall be divided into approximately equal areas. Draft stopping materials shall not be less than 1/2 inch gypsum board, 3/8 inch plywood or other approved materials adequately supported and shall be air tight.
9. Combustion air is required to keep your furnace and hot water heater burning properly. Consult the manufacturer's instruction manual. The minimum combustion air which must be provided is based on the **Combustion Air Calculation Sheet**

To assist you in planning and providing enough combustion air we are providing you with a **Combustion Air Calculation sheet**. Complete this form and submit it along with your plans.

10. Clearance to combustibles must be maintained for the equipment and the venting. Consult the manufacturer's instructions or provide a minimum of 2" clearance to all vents.
11. Every space intended for human occupancy shall be ventilated by natural or mechanical means.

Natural Ventilation: The minimum open area to the outdoors shall be 4 percent of the floor area being ventilated. If natural ventilation cannot be accomplished, mechanical ventilation shall be provided or a combination of both natural and mechanical ventilation can be used.
12. Interior finish to be not less than class III material which has a maximum flame spread between 76 - 200 and smoke-developed rating not greater than 450. Check packaging of material to be used for specifications. For paneling the label is on the back. Finished materials less than 1/4" must be installed directly against a non-combustible backing.
13. Smoke Detectors and Carbon Monoxide Detectors must be installed in accordance with the Rehabilitation Subcode.

14. Required inspections: Call (908) 766-3850 between the hours of 8:30 a.m. and 4:30 p.m. to schedule inspections.

CALL ONLY WHEN YOU ARE READY FOR INSPECTION.

- (a) Rough electric
- (b) Rough plumbing (if applicable)
- (c) Rough fire i.e.: Fire Stopping, Draft Stopping etc.
- (d) Framing, rough mechanical i.e.: Exhaust fans
- (e) Insulation
- (f) Final electric
- (g) Final plumbing (if applicable)
- (h) Final fire protection
- (i) Final building

If you have any questions about these or any other requirements please call Len Perre, Construction Official @ 908-766-3850 x- 143.

COMBUSTION AIR CALCULATION-Gas & Oil Fired Appliances

Date: _____ Name: _____

Address: _____ Phone #: _____
 _____ Block _____ Lot _____

Combustion air or make up air is needed by all fuel burning appliances in order to ensure a clean burning flame and to replace the air that passes out through the chimney. Failure to provide adequate combustion air will result in inefficient combustion, raise fuel usage and possibly lead to excessive carbon monoxide production. Performing the following calculations will help to arrive at total volume of air, series of vents or full louvered doors that will be sized in accordance with the International Fuel Gas Code & International Mechanical Code 2003 and provide for safe operation of your appliance.

1. Total firing rate of all appliances located in the space: **BTU Input (found on appliance label)**
 Furnaces, Water Heaters, Gas Clothes Dryer, Range, Oven, Gas Fireplace etc.

_____ + _____ + _____ + _____ = _____
 Total BTU

2. _____ Total BTU :- 1000 x 50 = _____
 Total BTU (#1) Required cubic footage

3. Available air from adjacent rooms (Cannot be from a Garage or Bathroom). Open to enough rooms so the total cubic feet equals or exceeds # 2 above.

Indicate room volume starting with room appliances are located in. Indicate all room sizes as they are to be finished.

<u>Room</u>	<u>Length</u>	<u>Width</u>	<u>Height</u>	
_____	_____	X _____	X _____	= _____ cu ft.
_____	_____	X _____	X _____	= _____ cu ft.
_____	_____	X _____	X _____	= _____ cu ft.
_____	_____	X _____	X _____	= _____ cu ft.
Total Cubic Feet =				_____

4. Required unobstructed opening size:
 _____ :- 1000 = _____ square inches (**minimum of 100 sq. in. required**)
 BTU input (#1) Required opening size (#5)

5. Unobstructed openings = Vents/Louvered Doors

Length	x	Width	:	Coefficient	=	Unobstructed Openings
_____	x	_____	:	1.25	=	_____ Metal
_____	x	_____	:	1.75	=	_____ Wood
						Total (#4)

NOTE: Two openings (high & low) are required of size indicated in #5 above in each room in #3 above so as to connect enough rooms to provide available air to equal the total in #2 above. Care must be taken when locating vents so as not to obstruct them with furniture, storage, etc