Combustion Air Calculations- Fuel Burning Appliances

This form is to be used when an alteration to the space containing fuel burning appliances is being made or if new appliance is being installed. All BTU ratings are the input ratings. Appliances that receive combustion air directly from the exterior (Direct Vent) should not be included.

Address_____Block_____Lot_____

Furnace BTU's_____ ___Hot Water Heater BTU's_____Gas Dryer BTU's_____
Other BTU's_____

(A) Total BTU's of all appliances in affected area_____

(B) Cubic footage of affected area_____

Room:	**Length**	**Width**	**Height**	**cubic foot**
Mechanical room _____	**_____X**	**_____X**	**_____=**	**_____**
_____	**_____X**	**_____X**	**_____=**	**_____**
_____	**_____X**	**_____X**	**_____=**	**_____**
_____	**_____X**	**_____X**	**_____=**	**_____**

Total Cubic foot available_____

Combustion Air cannot be drawn from bathrooms, bedrooms, & garages.

The total cubic footage must exceed totals from (C) below:

(C) Cubic footage required:

Total BTU's from (A) _____ ÷ 1000 X 50 cubic feet = _____

So if the total required **(C)** is greater than the total cubic footage available **(A)** then additional combustion air is required**.** Available air from adjacent rooms can be used to meet the requirement through the use of air transfer grills. Otherwise combustion air must be obtained from outside.

(D) Transfer grills for inside air shall have a clear open area of 1 inch per 1000 BTU's.

_____ ÷ 1000 = _____Square inches of clear opening **required** (minimum of 100 Sq in.)
Total BTU input

(E) Louver sizing:	**Length**	**X**	**Width**	**X**	**Coefficient**	**=**	**Unobstructed Opening**	
	_____	**X**	**_____**	**X**	**.75**	**=**	**_____**	**Metal Louver**
	_____	**X**	**_____**	**X**	**.25**	**=**	**_____**	**Wood Louver**
Example:	**14 inch**	**X**	**14 inch grill**	**X**	**.75**	**=**	**147 square inches (metal)**	

If (E) is smaller than (D) than a larger grill is required.

The first grill shall commence one foot from the ceiling, and the second grill shall commence one foot from the floor.

Note: Refer to current edition of NJ International Residential code or the International fuel gas code for all other options.