This is only to provide rationale for code change proposals submitted. For final language specific to the 2004 code, more details regarding the sections in the code, and correct wording, please see the 2006 Supplement. Please see the proposed code change modifications for text submitted for consideration by the Florida Building Commission.

2/24/06

MECHANICAL TAC

FBC TRACKING CHART: PROPOSED MODIFICATIONS

2006 Annual Interim Code Amendments to the 2004 Florida Building Code

This chart is organized according to mod/proponent, section number, and a summary of the proposed change for modifications related to the Technical Advisory Committee's (TAC) area of responsibility. Common designations are:

Admin: Integration of the administration and enforcement portions of all codes and private swimming pool barriers.
Elec: Related to Electrical codes and standards
Energy: Related to the energy codes and standards
Fire: Related to the Fire and life/safety issues as contained within the building code and standards.
Mech: Related to the Mechanical codes and standards.
PlumbGas: Related to the Plumbing, Gas and swimming pool codes and standards (except commercial pools and pool barriers).
SpecOcc: Codes and related standards associated with facilities for special occupancies that are regulated by state agencies.
Struc: Related to the Building code for structural, technical, and material requirements and wind standards.

The proposals are listed sequentially by code section number for the base code designated. The proposed mod numbers are assigned by the BCIS web site as they are received. They are assigned to the TAC which administers that specific subject area. Notations concerning where a proposal has been assigned for action are made in the Comments column. For example, if the first proposed modification to the base code FBC-Mechanical code is for section 603.1.2 (related to duct construction), it would be assigned to the Energy TAC because the issue is with the energy chapter in the building base code. This chart can be used for quick reference and for tracking the status of proposals.

Status Codes:
AS = Approved as submitted
AM = Approved as modified
NA = Not approved
W = Withdrawn
I = Insufficient (Incomplete or does not meet criteria)

This is only to provide rationale for code change proposals submitted. For final language specific to the 2004 code, more details regarding the sections in the code, and correct wording, please see the 2006 Supplement. Please see the proposed code change modifications for text submitted for consideration by the Florida Building Commission.

2/24/06

Section	Rationale	Summary
13-202 Definitions **MANUFACTURED BUILDING**. A ~~Means a~~ closed structure, building assembly, or system of subassemblies, which may include structural, electrical, plumbing, heating, ventilating, or other service systems manufactured ~~in manufacturing facilities~~ for installation or erection, with or without other specified components, as a finished building or as part of a finished building, which shall include, but not be limited to, residential, commercial, institutional, storage, and industrial structures. ~~This part does not apply to mobile (manufactured) homes. Manufactured building may also mean, at the option of the manufacturer, any building of open construction made or assembled in manufactured facilities away from the building site, for installation, or assembly and installation, on the building site.~~	**[Mod 1752] Although proposed to Chapter 13 of the FBC-B (energy), this proposal also applies to Chap. 2 of the mechanical code.** This definition is a holdover from a much earlier version of Rule 9B-1 and should be consistent with the current definition in the rule for manufactured buildings.	Fix definition of Manufactured Building for consistency with the Manufactured Building Program.
307.2.3 Auxiliary and secondary drain systems. In addition to the requirements of Section 307.2.1, a secondary drain or auxiliary drain pan shall be required for each cooling or evaporator coil where damage to any building components will occur as a result of overflow from the equipment drain pan or stoppage in the condensate drain piping. One of the following methods shall be used. 1. [No change] 2. A separate overflow drain line shall be connected to the drain pan provided with the equipment. Such overflow drain shall discharge to a conspicuous point of disposal to alert occupants in the event of a stoppage of the primary drain. The overflow drain line shall connect to the drain pan at the higher level than the primary drain connection. As an alternative to a separate drain line, a water-level detection device that will shut off the equipment served prior to overflow of the pan shall be provided. The water level detection device shall connect to the drain pan at a higher level than the primary drain connection. 3. [No change]	**[Mod 1093]** This modification is proposed as a glitch fix to correct the language in the 2004 Florida Mechanical Code to allow for the use of a water level detection device connected to the drain pan provided with the equipment in lieu of a separate overflow drain. Both the 2001 Florida Mechanical Code and the 2004 Supplement to the International Mechanical Code contain language allowing this method.	Add a water level detection device that will shut off equipment prior to overflow of a condensate pan as an alternative to a separate drain line.
Change Chapter 7 to read as in the IMC as follows: **SECTION 701** **GENERAL** **701.1 Scope.** The provisions of this chapter shall govern the requirements for combustion and dilution air for fuel-burning appliances other than gas-fired appliances. The requirements for combustion and dilution air for gas-fired appliances shall be in accordance with the *Florida Building Code, Fuel Gas* **701.2 Combustion and dilution air required.** Every room or space containing fuel-burning appliances shall be provided with combustion and dilution air as required by	**[Mod 1551]** It appears that, with the intent to maintain consistency between the combustion air provisions of the Mechanical code and the Fuel Gas code, certain important scoping and protection provisions have been inadvertently left out of Chapter 7 of the Mechanical code. This proposal would return Chapter 7 to its original 2003 IMC content, rather than strive for consistency with the Fuel Gas code.	This proposal would return Chapter 7 to its original IMC content, rather than strive for consistency with the Fuel Gas Code

Section	Rationale	Summary
this code. Combustion and dilution air shall be provided in accordance with Section 702, 703, 704, 705, 706 or 707 or shall be provided by an approved engineered system. Direct vent appliances or equipment that do not draw combustion air from inside of the building are not required to be considered in the determination of the combustion and dilution air requirements. Combustion air requirements shall be determined based on the simultaneous operation of all fuel-burning appliances drawing combustion and dilution air from the room or space. **701.3 Circulation of air.** The equipment and appliances within every room containing fuel-burning appliances shall be installed so as to allow free circulation of air. Provisions shall be made to allow for the simultaneous operation of mechanical exhaust systems, fireplaces or other equipment and appliances operating in the same room or space from which combustion and dilution air is being drawn. Such provisions shall prevent the operation of such appliances, equipment and systems from affecting the supply of combustion and dilution air. **701.4 Crawl space and attic space.** For the purposes of this chapter, an opening to a naturally ventilated crawl space or attic space shall be considered equivalent to an opening to the outdoors. **701.4.1 Crawl space.** Where lower combustion air openings connect with crawl spaces, such spaces shall have unobstructed openings to the outdoors at least twice that required for the combustion air openings. The height of the crawl space shall comply with the requirements of the *International Building Code* and shall be without obstruction to the free flow of air. **701.4.2 Attic space.** Where combustion air is obtained from an attic area, the attic ventilating openings shall not be subject to ice or snow blockage, and the attic shall have not less than 30 inches (762 mm) vertical clear height at its maximum point. Attic ventilation openings shall be sufficient to provide the required volume of combustion air and the attic ventilation required by the *International Building Code*. The combustion air openings shall be provided with a sleeve of not less than 0.019-inch (0.5 mm) (No. 26 Gage) galvanized steel or other approved material extending from the appliance enclosure to at least 6 inches (152 mm) above the top of the ceiling joists and insulation. **701.5 Prohibited sources.** Openings and ducts shall not connect appliance enclosures with a space in which the operation of a fan will adversely affect the flow	Conditions of installation and use differ between fuel oil and fuel gas systems. The expertise found on the relative International Code Council committees for these fuel types should be respected and the codes not changed without good cause and appropriate experience.	

Section	Rationale	Summary
of the combustion air. Combustion air shall not be obtained from a hazardous location, except where the fuel-fired appliances are located within the hazardous location and are installed in accordance with this code. Combustion air shall not be taken from a refrigeration machinery room, except where a refrigerant vapor detector system is installed to automatically shut off the combustion process in the event of refrigerant leakage. Combustion air shall not be obtained from any location below the design flood elevation. **SECTION 702** **INSIDE AIR** **702.1 All air from indoors.** Combustion and dilution air shall be permitted to be obtained entirely from the indoors in buildings that are not of unusually tight construction. In buildings of unusually tight construction, combustion air shall be obtained from the outdoors in accordance with Section 703, 705, 706 or 707. **702.2 Air from the same room or space.** The room or space containing fuel-burning appliances shall be an unconfined space as defined in Section 202. **702.3 Air from adjacent spaces.** Where the volume of the room in which the fuel-burning appliances are located does not comply with Section 702.2, additional inside combustion and dilution air shall be obtained by opening the room to adjacent spaces so that the combined volume of all communicating spaces meets the volumetric requirement of Section 702.2. Openings connecting the spaces shall comply with Sections 702.3.1 and 702.3.2. **702.3.1 Number and location of openings.** Two openings shall be provided, one within 1 foot (305 mm) of the ceiling of the room and one within 1 foot (305 mm) of the floor. **702.3.2 Size of openings.** The net free area of each opening, calculated in accordance with Section 708, shall be a minimum of 1 square inch per 1,000 Btu/h (2201 mm^2/kW) of input rating of the fuel-burning appliances drawing combustion and dilution air from the communicating spaces and shall be not less than 100 square inches (64 516 mm^2). **SECTION 703** **OUTDOOR AIR**		

Section	Rationale	Summary
703.1 All air from the outdoors. Where all combustion and dilution air is to be provided by outdoor air, the required combustion and dilution air shall be obtained by opening the room to the outdoors. Openings connecting the room to the outdoor air shall comply with Sections 703.1.1 through 703.1.4. **703.1.1 Number and location of openings.** Two openings shall be provided, one within 1 foot (305 mm) of the ceiling of the room and one within 1 foot (305 mm) of the floor. **703.1.2 Size of direct openings.** The net free area of each direct opening to the outdoors, calculated in accordance with Section 709, shall be a minimum of 1 square inch per 4,000 Btu/h (550 mm2/kW) of combined input rating of the fuel-burning appliances drawing combustion and dilution air from the room. **703.1.3 Size of horizontal openings.** The net free area of each opening, calculated in accordance with Section 709 and connected to the outdoors through a horizontal duct, shall be a minimum of 1 square inch per 2,000 Btu/h (1100 mm^2/kW) of combined input rating of the fuel-burning appliances drawing combustion and dilution air from the room. The cross-sectional area of the duct shall be equal to or greater than the required size of the opening. **703.1.4 Size of vertical openings.** The net free area of each opening, calculated in accordance with Section 709 and connected to the outdoors through a vertical duct, shall be a minimum of 1 square inch per 4,000 Btu/h (550 mm^2/kW) of combined input rating of the fuel-burning appliances drawing combustion and dilution air from the room. The cross-sectional area of the duct shall be equal to or greater than the required size of the opening. **SECTION 704** **COMBINED USE OF INSIDE AND OUTDOORAIR (CONDITION 1)** **704.1 Combination of air from inside and outdoors.** This section shall apply only to appliances located in confined spaces in buildings not of unusually tight construction. Where the volumes of rooms and spaces are combined for the purpose of providing indoor combustion air, such rooms and spaces shall communicate through permanent openings in compliance with Sections 702.3.1 and 702.3.2. The required combustion and dilution air shall be obtained by opening the room to the outdoors using a combination of inside and outdoor air, prorated in accordance with		

Section	Rationale	Summary
Section 704.1.6. The ratio of interior spaces shall comply with Section 704.1.5. The number, location and ratios of openings connecting the space with the outdoor air shall comply with Sections 704.1.1 through 704.1.4. **704.1.1 Number and location of openings.** At least two openings shall be provided, one within 1 foot (305 mm) of the ceiling of the room and one within 1 foot (305 mm) of the floor. **704.1.2 Ratio of direct openings.** Where direct openings to the outdoors are provided in accordance with Section 703.1, the ratio of direct openings shall be the sum of the net free areas of both direct openings to the outdoors, divided by the sum of the required areas for both such openings as determined in accordance with Section 703.1.2. **704.1.3 Ratio of horizontal openings.** Where openings connected to the outdoors through horizontal ducts are provided in accordance with Section 703.1, the ratio of horizontal openings shall be the sum of the net free areas of both such openings, divided by the sum of the required areas for both such openings as determined in accordance with Section 703.1.3. **704.1.4 Ratio of vertical openings.** Where openings connected to the outdoors through vertical ducts are provided in accordance with Section 703.1, the ratio of vertical openings shall be the sum of the net free areas of both such openings, divided by the sum of the required areas for both such openings as determined in accordance with Section 703.1.4. **704.1.5 Ratio of interior spaces.** The ratio of interior spaces shall be the available volume of all communicating spaces, divided by the required volume as determined in accordance with Sections 702.2 and 702.3. **704.1.6 Prorating of inside and outdoor air.** In spaces that utilize a combination of inside and outdoor air, the sum of the ratios of all direct openings, horizontal openings, vertical openings and interior spaces shall equal or exceed 1. **SECTION 705** **COMBINED USE OF INSIDE AND OUTDOORAIR (CONDITION 2)** **705.1 General.** This section shall apply only to appliances located in unconfined		

Section	Rationale	Summary
spaces in buildings of unusually tight construction. Combustion air supplied by a combined use of indoor and outdoor air shall be supplied through openings and ducts extending to the appliance room or to the vicinity of the appliance. **705.1.1 Openings and supply ducts.** Openings shall be provided, located and sized in accordance with Sections 702.3.1 and 702.3.2; additionally, there shall be one opening to the outdoors having a free area of at least 1 square inch per 5,000 Btu/h (440 mm2/kW) of total input of all appliances in the space. **SECTION 706** **FORCED COMBUSTION AIR SUPPLY** **706.1 General.** Where all combustion air and dilution air is provided by a mechanical forced-air system, the combustion air and dilution air shall be supplied at the minimum rate of 1 cfm per 2,400 Btu/h [0.00067 $m^3/(s \cdot kW)$] of combined input rating of all the fuel-burning appliances served. Each of the appliances served shall be electrically interlocked to the mechanical forced-air system so as to prevent operation of the appliances when the mechanical system is not in operation. Where combustion air and dilution air is provided by the building's mechanical ventilation system, the system shall provide the specified combustion/dilution air rate in addition to the required ventilation air. **SECTION 707** **DIRECT CONNECTION** **707.1 General.** Fuel-burning appliances that are listed and labeled for direct combustion air connection to the outdoors shall be installed in accordance with the manufacturer's installation instructions. **SECTION 708** **COMBUSTION AIR DUCTS** **708.1 General.** Combustion air ducts shall: 1. Be of galvanized steel complying with Chapter 6 or of equivalent corrosion-resistant material approved for this application. **Exception:** Within dwelling units, unobstructed stud and joist spaces shall not be prohibited from conveying combustion air, provided that not more than one required fireblock is removed.		

Section	Rationale	Summary
2. Have a minimum cross-sectional dimension of 3 inches (76 mm). 3. Terminate in an unobstructed space allowing free movement of combustion air to the appliances. 4. Have the same cross-sectional areas as the free area of the openings to which they connect. 5. Serve a single appliance enclosure. 6. Not serve both upper and lower combustion air openings where both such openings are used. The separation between ducts serving upper and lower combustion air openings shall be maintained to the source of combustion air. 7. Not be screened where terminating in an attic space. 8. Not slope downward toward the source of combustion air, where serving the upper required combustion air opening. **SECTION 709** **OPENING OBSTRUCTIONS** **709.1 General.** The required size of openings for combustion and dilution air shall be based on the net free area of each opening. The net free area of an opening shall be that specified by the manufacturer of the opening covering. In the absence of such information, openings covered with metal louvers shall be deemed to have a net free area of 75 percent of the area of the opening, and openings covered with wood louvers shall be deemed to have a net free area of 25 percent of the area of the opening. Louvers and grills shall be fixed in the open position. **Exception:** Louvers interlocked with the appliance so that they are proven to be in the full open position prior to main burner ignition and during main burner operation. Means shall be provided to prevent the main burner from igniting if the louvers fail to open during burner startup and to shut down the main burner if the louvers close during operation. **709.2 Dampered openings.** Where the combustion air openings are provided with volume, smoke or fire dampers, the dampers shall be electrically interlocked with the firing cycle of the appliances served, so as to prevent operation of any appliance that draws combustion and dilution air from the room when any of the dampers are closed. Manually operated dampers shall not be installed in combustion air openings. **SECTION 710**		

Section	Rationale	Summary
OPENING LOCATION AND PROTECTION **710.1 General.** Combustion air openings to the outdoors shall comply with the location and protection provisions of Sections 401.5 and 401.6 applicable to outside air intake openings. **Add the following to the code:** **APPENDIX A** **COMBUSTION AIR OPENINGS AND CHIMNEY CONNECTOR PASS-THROUGHS** Figures A-1 through A-4 are illustrations of appliances located in confined spaces. FIGURE A-1. ALL AIR FROM INSIDE THE BUILDING (same as Figure ;702.1.3 in 2004 FBC-M) **NOTE:** Each opening shall have a free area of not less than 1 square inch per 1,000 Btu per hour of the total input rating of all appliances in the enclosure and not less than 100 square inches. For SI: 1 square inch = 645 mm^2, 1 British thermal unit per hour = 0.2931 W. FIGURE A-2. ALL AIR FROM OUTDOORS – INLET AIR FROM VENTILATED CRAWL SPACE AND OUTLET AIR TO VENTILATED ATTIC (same as Figure 703.1.1(1) in the 2004 FBC-M) **NOTE:** The inlet and outlet air openings shall each have a free area of not less than 1 square inch per 4,000 Btu per hour of the total input rating of all appliances in the enclosure. For SI: 1 square inch = 645 mm^2, 1 British thermal unit per hour = 0.2931 W. FIGURE A-3. ALL AIR FROM OUTDOORS THROUGH VENTILATED ATTIC (same as Figure 703.1.1(2) of the 2004 FBC-M)		

Section	Rationale	Summary
NOTE: The inlet and outlet air openings shall each have a free area of not less than 2 square inch per 4,000 Btu per hour of the total input rating of all appliances in the enclosure. For SI: 1 foot = 304.8 mm, 1 square inch = 645 mm^2, 1 British thermal unit per hour = 0.2931 W. FIGURE A-4. ALL AIR FROM OUTDOORS THROUGH HORIZONTAL DUCTS OR DIRECT OPENINGS (same as Figure 703.1.1(3) of the 2004 FBC-M) **NOTE:** Each air duct opening shall have a free area of not less than 1 square inch per 2,000 Btu per hour of the total rating of all appliances in the enclosure. If the appliance room is located against an outside wall and the air openings communicate directly with all the outdoors, each opening shall have a free area of not less than 1 square inch per 4,000 Btu per hour or the total input rating of all appliances in the enclosure. For SI: 1 foot = 304.8 mm, 1 square inch = 645 mm^2, 1 British thermal unit per hour = 0.2931 W. Add FIGURE A-5 from the International Mechanical Code to this appendix. FIGURE A-5 CHIMNEY CONNECTOR SYSTEMS **Delete Chapter 7 in its entirety and replace with the above.** ~~**SECTION 701**~~ ~~**COMBUSTION, VENTILATION AND DILUTION AIR**~~ ~~**701.1 General.** Air for combustion, ventilation and dilution of flue gases for gas utilization equipment installed in buildings shall be provided by application of one of the methods prescribed in Sections 702 through 705. Where the requirements of Section 702 are not met, outdoor air shall be introduced in accordance with one of the methods prescribed in Sections 703 through 705. Direct-vent appliances, gas appliances of other than natural draft design and vented gas appliances other than Category I shall be provided with combustion, ventilation and dilution air in accordance with the equipment manufacturer's instructions.~~		

Section	Rationale	Summary
Exception: Type 1 clothes dryers that are provided with makeup air with an opening having an area of not less than 100 square inches (645 mm2☺ in the closet enclosure, or by other approved means **701.2 Appliance/equipment location.** Equipment shall be located so as not to interfere with proper circulation of combustion, ventilation and dilution air. **701.3Draft hood/regulator location.** Where used, a draft hood or a barometric draft regulator shall be installed in the same room or enclosure as the equipment served so as to prevent any difference in pressure between the hood or regulator and the combustion air supply. **701.4Makeup air provisions.** Makeup air requirements for the operation of exhaust fans, kitchen ventilation systems, clothes dryers and fireplaces shall be considered in determining the adequacy of a space to provide combustion air requirements. **SECTION 702** **COMBUSTION, VENTILATION AND DILUTION AIR** **702.1 Indoor combustion air.** The required volume of indoor air shall be determined in accordance with Section 702.1.1 or 702.1.2, except that where the air infiltration rate is known to be less than 0.40 air changes per hour (ACH), Section 702.1.2 shall be used. The total required volume shall be the sum of the required volume calculated for all appliances located within the space. Rooms communicating directly with the space in which the appliances are installed through openings not furnished with doors, and through combustion air openings sized and located in accordance with Section 702.1.3, are considered to be part of the required volume. **702.5.1 Standard method.** The minimum required volume shall be 50 cubic feet per 1,000 Btu/h (4.8 m 3 /kW) of the appliance input rating. **702.1.2] Known air infiltration rate method.** Where the air infiltration rate of a structure is known, the minimum required volume shall be determined as follows: For appliances other than fan assisted, calculate volume using Equation 3 1. Required Volumeother □0003 *21ft ACH B hr other* 1,/ *tu* **(Equation 3 1)** For fan assisted appliances, calculate volume using Equation 3 2. Required Volumefan □150003*ft ACHI B hr fan*1,/ *tu* **(Equation 3 2)** where: *Iother* = All appliances other than fan assisted (input in Btu/h).		

Section	Rationale	Summary
~~*Ifan* = Fan-assisted appliance (input in Btu/h).~~ ~~*ACH* = Air change per hour (percent of volume of space exchanged per hour, expressed as a decimal).~~ ~~For purposes of this calculation, an infiltration rate greater than 0.60 ACH shall not be used in Equations 3-1and 3-2.~~ ~~**702.1.3 Indoor opening size and location.** Openings used to connect indoor spaces shall be sized and located in accordance with Sections 702.1.3.1 and 702.1.3.2 (see Figure 702.1.3).~~ ~~**702.1.3.1 Combining spaces on the same story.** Each opening shall have a minimum free area of 1 square inch per 1,000 Btu/h (2,200 mm 2 /kW) of the total input rating of all gas utilization equipment in the space, but not less than 100 square inches (0.06 m 2). One opening shall commence within 12 inches (305 mm) of the top and one opening shall commence within 12 inches (305 mm) of the bottom of the enclosure. The minimum dimension of air openings shall be not less than 3 inches (76 mm).~~ ~~**702.1.3.2 Combining spaces in different stories.** The volumes of spaces in different stories shall be considered as communicating spaces where such spaces are connected by one or more openings in doors or floors having a total minimum free area of 2 square inches per 1,000 Btu/h (4402 mm 2 /kW) of total input rating of all gas utilization equipment.~~ ~~**SECTION 703**~~ ~~**OUTDOOR AIR**~~ ~~**703.1 Outdoor combustion air.** Outdoor combustion air shall be provided through opening(s) to the outdoors in accordance with Section 703.1.1 or 703.1.2. The minimum dimension of air openings shall be not less than 3 inches (76 mm).~~ ~~**703.1.1 Two permanent openings method.** Two permanent openings, one commencing within 12 inches (305 mm) of the top and one commencing within 12 inches (305 mm) of the bottom of the enclosure, shall be provided. The openings shall communicate directly, or by ducts, with the out-doors or spaces that freely communicate with the outdoors. Where directly communicating with the outdoors, or where communicating with the outdoors through vertical ducts, each opening shall have a minimum free area of 1 square inch per 4,000 Btu/h (550 mm 2 /kW) of total input rating of all equipment in the enclosure [see Figures 703.1.1(1) and 703.1.1(2)].~~		

Section	Rationale	Summary
~~Where communicating with the outdoors through horizontal ducts, each opening shall have a minimum free area of not less than 1 square inch per 2,000 Btu/h (1,100 mm 2 /kW) of total input rating of all equipment in the enclosure [see Figure 703.1.1(3)].~~ ~~**703.1.2 One permanent opening method.** One permanent opening, commencing within 12 inches (305 mm) of the top of the enclosure, shall be provided. The equipment shall have clearances of at least 1 inch (25 mm) from the sides and back and 6 inches (152 mm) from the front of the appliance. The opening shall directly communicate with the outdoors or through a vertical or horizontal duct to the outdoors or spaces that freely communicate with the outdoors [see Figure 703.1.2] and shall have a minimum free area of 1 square inch per 3,000 Btu/h (734 mm 2 /kW) of the total input rating of all equipment located in the enclosure, and not less than the sum of the areas of all vent connectors in the space.~~ ~~**SECTION 704**~~ ~~**COMBINED USE OF INSIDE AND OUTDOOR AIR**~~ ~~**704.1Combination indoor and outdoor combustion air.** The use of a combination of indoor and outdoor combustion air shall be in accordance with Sections 704.1.1 through 704.1.3.~~ ~~**704.1.1 Indoor openings.** Where used, openings connecting the interior spaces shall comply with Section 702.1.3.~~ ~~**704.1.2 Outdoor opening location.** Outdoor opening(s) shall be located in accordance with Section 703.1.~~ ~~**704.1.3 Outdoor opening(s) size.** The outdoor opening(s) size shall be calculated in accordance with the following:~~ ~~1. The ratio of interior spaces shall be the available volume of all communicating spaces divided by the required volume.~~ ~~2. The outdoor size reduction factor shall be one minus the ratio of interior spaces.~~ ~~3. The minimum size of outdoor opening(s) shall be the full size of outdoor opening(s) calculated in accordance with Section 703.1, multiplied by the reduction factor. The minimum dimension of air openings shall be not less than 3 inches (76 mm).~~ ~~**SECTION 705**~~		

Section	Rationale	Summary
~~SPECIFICALLY ENGINEERED INSTALLATIONS~~ ~~Engineered combustion air installations shall provide an adequate supply of combustion, ventilation and dilution air and shall be approved.~~ **~~SECTION 706~~** **~~COMBUSTION AIR DUCTS~~** **~~706.1 Combustion air ducts.~~** ~~Combustion air ducts shall comply with all of the following:~~ ~~1. Ducts shall be of galvanized steel complying with Chapter 6 of this code or of equivalent corrosion-resistant material approved for this application.~~ ~~**Exception:** Within dwellings units, unobstructed stud and joist spaces shall not be prohibited from conveying combustion air, provided that not more than one required fireblock is removed.~~ ~~2. Ducts shall terminate in an unobstructed space allowing free movement of combustion air to the appliances.~~ ~~3. Ducts shall serve a single enclosure.~~ **~~4. Ducts shall not serve both upper and lower combustion air openings where both such openings are used. The separation between ducts serving upper and lower combustion air openings shall be maintained to the source of combustion air.~~** ~~5. Ducts shall not be screened where terminating in an attic space.~~ **~~6. Horizontal upper combustion air ducts shall not slope downward toward the source of combustion air.~~** ~~7. The remaining space surrounding a chimney liner, gas vent, special gas vent or plastic piping installed within a masonry, metal or factory-built chimney shall not be used to supply combustion air.~~ ~~**Exception:** Direct-vent gas-fired appliances de-signed for installation in a solid-fuel-burning fireplace where installed in accordance with the listing and the manufacturer's instructions.~~ ~~8. Combustion air intake openings located on the exterior of a building shall have the lowest side of such openings located not less than 12 inches (305 mm) vertically from the adjoining grade level.~~ **~~SECTION 707~~** **~~LOUVERS AND GRILLES~~** **~~707.1 Louvers and grilles.~~** ~~The required size of openings for combustion, ventilation and dilution air shall be based on the net free area of each opening. Where the free~~		

Section	Rationale	Summary
~~area through a design of louver or grille is known, it shall be used in calculating the size opening required to provide the free area specified. Where the design and free area are not known, it shall be assumed that wood louvers will have 25 percent free area and metal louvers and grilles will have 75-percent free area. Non-motorized louvers and grilles shall be fixed in the open position.~~ ~~**707.2 Motorized louver interlock.** Motorized louvers shall be interlocked with the equipment so that they are proven to be in the full open position prior to main burner ignition and during main burner operation. Means shall be provided to prevent the main burner from igniting if the louvers fail to open during burner start-up and to shut down the main burner if the louvers close during operation.~~ ~~**SECTION 708**~~ ~~**INSTALLATION**~~ ~~**708.1General.** Equipment and appliances shall be installed as required by the terms of their approval, in accordance with the conditions of listing, the manufacturer's instructions and this code. Manufacturers' installation instructions shall be available on the job site at the time of inspection. Where a code provision is less restrictive than the conditions of the listing of the equipment or appliance or the manufacturer's installation instructions, the conditions of the listing and the manufacturer's installation instructions shall apply. Unlisted appliances approved in accordance with Section 301.4 shall be limited to uses recommended by the manufacturer and shall be installed in accordance with the manufacturer's instructions, the provisions of this code and the requirements determined by the code official..~~ ~~**SECTION 709**~~ ~~**OPENING LOCATION AND PROTECTION**~~ ~~**709.1Protection from fumes and gases.** Where corrosive or flammable process fumes or gases, other than products of combustion, are present, means for the disposal of such fumes or gases shall be provided. Such fumes or gases include carbon monoxide, hydrogen sulfide, ammonia, chlorine and halogenated hydrocarbons. In barbershops, beauty shops and other facilities where chemicals that generate corrosive or flammable products, such as aerosol sprays, are routinely used, non-direct-vent-type appliances shall be located in an equipment room separated or partitioned off from other areas with provisions for combustion air and dilution air from the outdoors. Direct-vent appliances shall be installed in accordance with the appliance~~		

Section	Rationale	Summary
~~manufacturer's installation instructions.~~ **~~FIGURE 702.1.3: ALL AIR FROM INSIDE THE BUILDING (see Section 702.1.3)~~** **~~FIGURE 703.1.1(1) : ALL AIR FROM OUTDOORS INLET AIR FROM VENTILATED CRAWL SPACE AND OUTLET AIR TO VENTILATED ATTIC (see Section 703.1.1)~~** **~~FIGURE 703.1.1(2): ALL AIR FROM OUTDOORS THROUGH VENTILATED ATTIC (see Section 703.1.1(2))~~** ~~For SI: 1 foot = 304.8 mm.~~ ~~FIGURE 703.1.1(3) ALL AIR FROM OUTDOORS (see Section 703.1.1)~~ ~~FIGURE 703.1.2 SINGLE COMBUSTION AIR OPENING< ALL AIR FROM THE OUTDOORS (see Section 703.1.2)~~		
Update a standard referenced in Chapter 15 as follows: ASHRAE American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. 1791 Tullie Circle, NE Atlanta, GA 30329-2305 Standard Reference Number — Title — Referenced in code section number 62.1-2004 ~~01~~ — Ventilation for Acceptable Indoor Air Quality. — 430.~~45~~	**[Mod 1751]** The intent of the Mechanical TAC of the Florida Building Commission was that addenda approved by ASHRAE be utilized by designers using section 403.4 of the Florida Building Code, Mechanical. Florida rules require that only standards in effect at the time a rule is promulgated be referenced. In that light, it is proposed to update to ANSI/ASHRAE Standard 62.1-2004.	Update ASHRAE 62-2001 to 2004 editions to incorporate important addenda for ventilation criteria in section 403.4.
RESIDENTIAL CODE		
Revise proposal for M1304 and move to the Fuel Gas section (Chapter 24): **G2404.4 (301.7) Fuel types.** Fuel-fired appliances shall be designed for use with the type of fuel gas to which they will be connected and the altitude at which they are installed. Appliances that comprise parts of the installation shall not be converted for the usage of a different fuel, except where approved and converted in accordance with the manufacturer's instructions or the serving gas supplier. The fuel gas input rate	**[Mod 1614]** This change will make the Residential Code consistent with the Florida Building Code, Fuel Gas 301.7. TAC Action: Move it to the fuel gas part of the Residential code. Leave	This change will make the language in the Residential Code M1304 consistent with the Fuel Gas Code 301.7

Section	Rationale	Summary
shall not be increased or decreased beyond the limit rating for the altitude at which the appliance is installed.	M1304.1 as is.	

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