

exhaust fans and pipe penetrations is also sprayed-in as needed for air-tight construction. All work complies with the insulation manufacturer's printed instructions and recommendations.

07.04. VAPOR BARRIERS:
Provide continuous 6 mil poly vapor barrier on new and existing Crawl Space floors and turn up at foundation walls. Secure vapor barrier to walls w/ adhesive. All joints of vapor barrier shall overlap by 6" and be sealed or taped. Also, provide properly placed and installed moisture/ vapor barriers in new construction as required to prevent condensation in walls, ceilings and floors adjacent to the exterior, or where otherwise required.

07.05. INFILTRATION WRAP:
Provide and install infiltration barrier, Tyvek Housewrap or approved equal, on all exterior wall sheathing installed or exposed during construction at the new rear and dormer additions. Install per manufacturer's specifications, requirements and recommendations.

07.06. WINDOW AND DOOR FLASHING SYSTEM:
Provide and install Tyvek Flashing System at windows and doors at the new rear and dormer additions. The Flashing system shall be coordinated with installation of housewrap as well as the window and door installation conditions. Flashing components and their installation shall meet the specifications, requirements, and recommendations of the product manufacturer. Refer to The Home Energy Profile by Energy Service Group - Central Maryland dated 8/30/2012 for other flashing requirements and recommendations at existing windows.

07.07. FIBERGLASS SHINGLE ROOFING:
The scope of the roofing work shall include the complete removal and replacement of all existing roofing and existing roofing underlayment, as well as the investigation of the structural integrity of the existing roof sheathing and the replacement of damaged sheathing as required. Provide and install CertainTeed Traditional XT30, 30-year fiberglass shingle roofing, or approved equal at the new rear addition and at all existing areas (removing all existing roofing and underlayment). Provide and install CertainTeed Flintlastic Low-Slope, Self-Adhered 3-ply roofing system with Flintlastic SA Cap, or approved equal at new Dormers. Provide samples of roofing shingles and colors for the Developer's review and final approval. Provide and install self adhesive Ice-Guard beneath all flashing and on all eaves and ridges and valleys and extend the ice-guard back at least 2 feet past the interior edge. The scope of the work shall include the complete removal and replacement of all existing roofing and existing roofing underlayment, as well as the investigation of the structural integrity of the existing roof sheathing and the replacement of damaged sheathing as required. Install roofing per manufacturer's specifications, guidelines, and recommendations. Coordinate the installation and flashing of the new roofing with all surrounding and abutting conditions as required for a complete, neat appearing, weather-tight installation. Coordinate with all other trades, and sequence the work as required to provide a water tight final assembly.

07.08. ROOF VENTS: Provide and install 2" diameter soffit vents at each rafter bay at the addition and new dormers. Provide and install baffles as required to maintain 1 inch minimum vent space at all rafter bays. Provide and install shingle-over ridge vents on proposed addition and existing roofs.

07.09. GUTTERS & DOWNSPOUTS:
Provide and install aluminum gutters and downspouts at new addition and the existing house as indicated in the Drawings. Gutters shall be oversized (3"x4") white aluminum with gutter guards. Downspouts shall be 2"x3" white aluminum. Coordinate all drainage work with roofing, flashing, trim, and construction of eaves, walls, or other adjoining work to provide a leak proof, secure, and non-corrosive installation. Provide precast concrete splash blocks for each downspout.

07.10. MISC. FLASHING:
Provide flashing where indicated or required in exterior wall construction. Flashing material shall be pre finished aluminum in color to be coordinated with trim. Coordinate and sequence the flashing work with the work of other trades as required for a complete, neat appearing, weather-tight installation. Coordinate flashing material with surrounding materials or existing colors as applicable. Flash at all wall projections. Refer to The Home Energy Profile by Energy Service Group - Central Maryland dated 8/30/2012 to other flashing requirements and recommendations at existing house components.

07.11. SEALANTS:
Provide sealants as required at windows, doors, and in conjunction with all trim work as required for a complete weather-tight construction. Refer to The Home Energy Profile by Energy Service Group - Central Maryland dated 8/30/2012 for other sealant requirements and recommendations at existing house components.

DIVISION 8: DOORS AND WINDOWS

08.01. GENERAL:
The Contract for Construction shall include all doors and windows work required to complete the Work indicated and described in the Construction Documents. Provide all facilities, labor, materials, equipment, and services required. The General Contractor shall provide for the coordination of the work of this division with the work of any and all other divisions as required.

08.02. CODES & STANDARDS:
Doors and windows work shall conform to all applicable local, state, federal and national codes and standards, as well as those established by the Door and Hardware Institute, the American Woodwork Institute, and the National Woodwork Manufacturer's Association as described in their current publications. Additionally, the work shall conform to The Prince George's County Department of Housing and Community Development "CDBG Substantial Rehabilitation Standards for Single Family Homes," and The Prince George's County "Green Building Standards Addendum," January 2012. The products and materials used shall be approved by the American Society for Testing Materials as the most applicable to the Work described and the conditions encountered.

08.03. WINDOWS:
Provide and install ENERGY STAR vinyl Replacement windows for all existing First Floor and Attic windows. Provide and install new ENERGY STAR vinyl windows for the Rear and Dormer Additions as indicated in the Drawings. The windows shall be vinyl or approved equal. All units provided shall be low-e glazing with argon gas, with grilles to match existing and lite grills on top sashes only. All operable units shall be provided with screens. Vinyl, screen frame, and hardware color shall be selected by Developer. Window interiors shall be primed and painted in accordance with Division 9 of these Specifications. Install windows according to the manufacturer's specifications and requirements as required for a complete weather-tight installation. The Contractor shall field verify all rough opening and jamb dimensions prior to ordering units.

08.04. GLAZING:
Window and door fabricator shall supply glazing meeting or exceeding the test requirements of CSPC 16-CFR, part 1201 for glazing in "Hazardous Locations" as specified in the applicable IRC Code.

08.05. INTERIOR DOORS:
Provide and install all new interior doors and frames at existing house and in Rear and Dormer Addition. Door types to be six panel wood colonial. **New doors in existing house shall replace doors and frames removed due to lead paint.** The material, its fabrication, and its installation shall conform to the Custom Grade Specifications and Requirements of Section 300 of the Architectural Woodwork Institute's Architectural Woodwork Quality Standards, Guide Specifications and Quality Certification Program manual, most current edition, as applicable to the Work indicated and the conditions encountered. Unless otherwise noted, all wood used for interior standing and running trim shall be clear, pine, fir or poplar, and shall be painted in accordance with Division 9 of these Specifications.

08.06. EXTERIOR FRONT DOOR:
Provide and install new front door and frame where indicated in the Drawings. Door shall be insulated fiberglass paneled door as specified in the RA/NSP Guidelines for Amenities, Materials, and Color Palettes, December 2012, and ENERGY STAR Certified. The contractor shall field verify all jamb requirements.

08.07. STORM DOOR:
Provide and install new full view locking storm door at Main Entrance. Storm door to match color and type of Entry door and in accordance with the Color Palette. Doors to be approved by Developer. Provide and install frame as needed. Frames shall be painted in accordance with Division 9 of these Specifications. The contractor shall field verify all jamb requirements.

08.08. FINISH HARDWARE:
Provide and install finish hardware at all existing and new doors. Hardware shall be selected by Developer. The Contractor shall verify all cutout requirements, and shall supply all necessary accessories and trim for complete hardware sets, including items not listed but required for proper operation and installation of sets specified. The Contractor shall coordinate quantities and locations of all door hardware as well as handing of doors.

DIVISION 9: FINISHES & ACCESSORIES

09.01. GENERAL:
The Contract for Construction shall include all finishes work required to complete the Work indicated and described in the Construction Documents. Provide all facilities, labor, materials, equipment, and services required. The General Contractor shall provide for the coordination of the work of this division with the work of any and all other divisions as required.

09.02. CODES & STANDARDS:
Finishes work shall conform to all applicable local, state, federal and national codes and standards, as well as those established by the Gypsum Association, and the Tile Council of America as described in their current publications. Additionally, the work shall conform to The Prince George's County Department of Housing and Community Development "CDBG Substantial Rehabilitation Standards for Single Family Homes," and The Prince George's County "Green Building Standards Addendum," January 2012. The products and materials used shall be approved by the American Society for Testing Materials as the most applicable to the work described and the conditions encountered.

09.03. GYPSUM WALLBOARD:
Gypsum wall board (GWB) shall be glued and screwed into place on wood framing. Provide GWB at all new ceilings, partition walls, and furred areas as indicated in the Drawings, and at existing damaged walls. Finish GWB surfaces as required for a smooth and even appearance. Provide Durock board under all tile and moisture resistant "green board" at all other surfaces in Kitchen and Bathrooms.

09.04. INTERIOR PAINTING:
After conducting a Lead-Based Paint Inspection, the subject property exhibited signs of lead paint existence which requires the removal of lead paint in some cases, the removal and replacement of the components coated with LBP in others, and the encapsulation of all others. In any of these cases, any renovation work shall follow the Laws, Rules, Regulations and Guidelines as per Division 7 of these Specifications. Prepare, prime and paint the whole interior of the house. Interior paint shall be Benjamin Moore, or approved equal, premium grade low VOC satin latex on all wood trim surfaces, and matte latex on gypsum wallboard surfaces, applied in a minimum of two finish coats over one coat of primer/undercoat. Bathroom walls and trim shall be semi gloss paint. Interior painting scope includes the complete painting of all new, existing and renovated areas of all floors of the house. Colors shall vary from room to room as well as from walls to ceilings, and shall be selected by the Developer.

09.05. EXTERIOR PAINTING:
After conducting a Lead-Based Paint Inspection, the subject property exhibited signs of lead paint existence which requires the removal of lead paint in some cases or the removal and replacement of the components coated with LBP in others. In any of these cases, any renovation work shall follow the Laws, Rules, Regulations and Guidelines as per Division 7 of these Specifications. Exterior paint shall be Benjamin Moore, or approved equal, premium grade low VOC semi-gloss latex applied in a minimum of two finish coats over one coat of primer/undercoat. The scope of exterior painting and staining shall include all new wood or PVC trim work of the additions, as well as renovated portions of the existing exterior as appropriate.

09.06. PAINT PREPARATION:
Interior and exterior priming, painting and required preparation shall be per the specifications, requirements and recommendations of the paint manufacturer for the installation indicated and the conditions encountered and in accordance with the EPA Standards.

09.07. GRANITE COUNTERTOPS:
Color and type to be determined by the Developer and guided by the RA/NSP Guidelines for Amenities, Materials, and Color Palettes, December 2012. Provide granite countertop for Kitchen cabinets with 3 inch back and side splashes. Provide coordination as required in placing countertop order and verify all field conditions and requirements with final countertop dimensions. Installation shall be per the specifications, requirements and recommendations of the cabinet manufacturer.

09.08. SOLID SURFACE COUNTERTOPS:
Color and type to be determined by the Developer and guided by the RA/NSP Guidelines for Amenities, Materials, and Color Palettes, December 2012. Provide solid surface countertop to be selected by Developer for First and Second Floor Bathrooms with 3 inch back and side splashes. Provide coordination as required in placing countertop order and verify all field conditions and requirements with final countertop dimensions. Installation shall be per the specifications, requirements and recommendations of the cabinet manufacturer.

09.09. CERAMIC TILE:
Provide and install ceramic floor tile at Kitchen, Laundry Room, First Floor Bathroom, and New Master Bathroom floors as indicated in the Drawings. Provide and install tile bath surrounds at First Floor Bathroom and the New Master Bathroom. Styles, colors and sizes to be selected by Developer and to be guided by the RA/NSP Guidelines for Amenities, Materials, and Color Palettes, December 2012.

09.10. CARPET:
Provide and install new Green Label carpet and padding in the Dormer Addition as indicated in the Drawings. Material and color to be selected by Developer and guided by the RA/NSP Guidelines for Amenities, Materials, and Color Palettes, December 2012.

09.11. SHOWER ENCLOSURE:
Provide and install glass shower enclosure at Master Bathroom shower as indicated in the Drawings. Style and finish to be selected by Developer.

09.12. MIRROR:
Provide and install frameless mirrors at renovated First Floor Bathroom and new Master Bathroom vanities as indicated in the Drawings. Where sizes are not indicated, assume that mirror width shall match the vanity width and the height will be 4 feet 4 inches. Bottom of mirror reflective surface shall be a minimum of 40 inches above finished floor.

09.13. MEDICINE CABINET:
Provide and install a wall mounted medicine cabinet at renovated First Floor Bathroom and new Master Bathroom as indicated in the Drawings. Verify wall cavity dimensions for flush installations. Medicine cabinets shall have at least two usable shelves no higher than 44 inches above finished floor. Medicine cabinet mirrors shall have the bottom reflective edge no higher than 40 inches above the finished floor. Developer shall approve location and type of medicine cabinets.

DIVISION 10: NOT INCLUDED

DIVISION 11: EQUIPMENT

11.01. GENERAL:
The Contract for Construction shall include all equipment work required to complete the Work indicated in the Construction Documents. Provide all facilities, labor, materials, equipment, and services required. The General Contractor shall provide for the coordination of the work of this division with the work of any and all other divisions as required.

11.02. CODES & STANDARDS:
Equipment work shall conform to all applicable local, state, federal and national codes and standards. Additionally, the work shall conform to The Prince George's County Department of Housing and Community Development "CDBG Substantial Rehabilitation Standards for Single Family Homes," and The Prince George's County "Green Building Standards Addendum," January 2012. The products and materials used shall be approved by the American Society for Testing Materials as the most applicable to the work described and the conditions encountered.

11.03. RESIDENTIAL APPLIANCES:
Install ENERGY STAR kitchen and laundry appliances as listed below and at locations indicated in the Drawings per the specified RA/NSP Guidelines for Amenities, Materials, and Color Palettes, December 2012 or approved equal. All equipment shall be installed to meet the specifications, requirements and recommendations of the manufacturer. Provide all electrical and plumbing hookups and all vent ducting required for a complete installation. Developer to provide model selections prior to rough-in. Appliance List: Refrigerator with Ice Maker Hookup / 30" Gas Range / 30" Ducted Range Hood / Dishwasher / Disposal / Washer / Gas Dryer. Noise capacity of range hood shall not exceed 10 sones. Master Bathroom Vent shall have continuous and boost mode with time delay settings. First Floor Bathroom shall have time delay setting only. Bathroom vents shall not exceed 1.0 sones.

DIVISION 12-14 NOT INCLUDED

DIVISION 15: PLUMBING & MECHANICAL

15.01. GENERAL:
The Contract for Construction shall include all plumbing and mechanical work required to complete the Work indicated and described in the Construction Documents. Provide all facilities, labor, materials, equipment, and services required. The General Contractor shall provide for the coordination of the work of this division with the work of any and all other divisions as required.

15.02. CODES & STANDARDS:
Plumbing and mechanical work shall conform to all applicable local, state, federal and national codes and standards, as well as those established by the American Society of Heating, Refrigeration and Air Conditioning Engineers and the Sheet Metal and Air Conditioning Manufacturer's Association in their current publications. Additionally, the work shall conform to The Prince George's County Department of Housing and Community Development "CDBG Substantial Rehabilitation Standards for Single Family Homes," and The Prince George's County "Green Building Standards Addendum," January 2012. The products and materials used shall be approved by the American Society for Testing Materials as the most applicable to the work described and the conditions encountered.

15.03. PLUMBING SYSTEM:
Design, provide and install a complete plumbing system, including all necessary equipment, devices, material, labor, permits and inspections, for the supply of hot and cold water, and for the sanitary disposal of waste water as required to complete the Work indicated in the drawings. All water lines shall be run inside an insulated condition envelop, or space. All work shall conform to the IRC Plumbing Code, and all other applicable codes regulations, and requirements. Prior to rough-in, advise the Developer of modifications to, or deviations from, Construction Documents as required to comply with codes and regulations and to provide a complete and proper installation. Hot and cold supply piping shall be copper with wrought copper sweated fittings. Hot water supply piping shall be insulated.

15.04. WATER HEATER:
Replace existing water heater with new ENERGY STAR high-efficiency tank-less gas water heater with minimum 7 GPM flow rate. Provide proper installation and verify gas line requirements.

15.05. PLUMBING FIXTURES & FITTINGS:
Provide and install new plumbing fixtures for renovated First Floor Bathroom and New Second Floor Master Bathroom. Lavatory faucets shall be metal, washer-less types with pop-up lever, and maximum flow rate of 1.5 GPM. Shower/tub

faucets shall be single lever diverter types with an anti-scald device and a maximum 2.0 GPM flow rate and based on the Material Palette. Shower/tub drains shall have a lever operated pop-up drain overflow. Showers and bathtubs shall have non-slip bottoms. Bathtubs shall have a wide flat edge that can be sat on when entering and exiting the bathtub. Final fixtures, fittings, colors and finishes shall be selected by the Developer based on the RA/NSP Guidelines for Amenities, Materials, and Color Palettes, December 2012 or approved equal.

15.06. BATHROOM ACCESSORIES:
Provide and install bathroom accessories. Bathroom accessories shall include grab bars, soap dishes, and toilet paper holders. Final colors and finishes shall be selected by the Developer.

15.07. HOSE BIBS:
Provide and install two frost free hose bibs at locations indicated in the Drawings.

15.08. GAS SERVICE AND GAS FITTING:
Design, provide and install a complete gas fitting system for the house, sized appropriately for the anticipated loading that includes: Gas forced air heating system; Gas fired tankless water heater; Gas range; and Gas dryer. The Contractor shall obtain all permits, pay all fees and meet all requirements for the establishment of the gas service, and provide gas fitting as required for the gas appliances and equipment specified or as otherwise required to complete the Work. All gas fitting work shall be per the requirements of the International Mechanical Code as well as any and all other applicable codes, ordinances and standards.

15.09. AIR CONDITIONING & HEATING SYSTEM:
Design, provide and install a one-zone gas fired forced air heating and air conditioning system to service the existing house, the new rear and dormer additions and the crawl spaces. The furnace / air handler unit shall be located in the Mechanical Room on the Second Floor with the equipment and ductwork protected from unconditioned space by insulation per Division 7 of these Specifications. The door to the Mechanical Room shall be vented. Existing equipment and ducting shall be removed where practical. Refer to Mechanical Drawings for Conceptual Design Layout.

15.10. MECHANICAL EQUIPMENT AND DUCTING:
All new mechanical equipment shall be ENERGY STAR certified, installed to meet the specifications, requirements and recommendations of the manufacturer or the installation required. Provide the following, as applicable: High efficiency air handler; 20 SEER or better condensing unit and evaporator coil; Electronic air cleaner, and Microelectronic programmable thermostat. All trunk lines and main run-outs shall be hard ducted, flex ducting shall be limited to final runs not to exceed 6 feet in length. All miscellaneous material and anchoring devices shall be provided and all requirements for a complete installation. Coordinate with plumbing and electrical sub-contractors as required for equipment hookups. Isolate all equipment as required to properly reduce noise transmission. All HVAC equipment and duct sizing shall follow ACCA Manuals D, J and S. Refer to Mechanical Drawings for further requirements and details.

15.11. MECHANICAL DESIGN CRITERIA & BID SUBMITTAL:
Cooling: 20 degree cooling differential; 70 degrees indoor DBF, 50% relative humidity/outdoor 90 degrees DBF and 78 degrees WBF, with 24 hour automatic operation. Assume shades to direct light; a clean filter; normal occupancy; normal cooking; doors to remain closed during cooling season. Heating: 70 degrees indoor/17 degrees outdoor.

15.12. MISCELLANEOUS MECHANICAL HOOKUPS:
Provide and install new exhaust fans with wall/roof caps at First Floor Bathroom and the new Second Floor Master Bathroom. Provide and install new exhaust fan (venting through wall) for the new gas-fired tankless water heater.

15.13. PASSIVE WHOLE-HOUSE VENTILATION SYSTEM:
After conducting a Blower Door Test, the subject property exhibited excessive uncontrolled air exchange that requires both sealing of existing leaks and the installation of a passive whole-house ventilation system. House sealing shall follow the recommendations by The Home Energy Profile by Energy Service Group - Central Maryland dated 8/30/2012 and other Divisions of these Specifications. The passive whole-house ventilation system shall follow the Green Building Standards Addendum for Passive Fresh Air Intake and the conceptual design shown in the Mechanical Drawings. House air intake shall be at the first floor and exhaust at the Mechanical Room on the second floor as shown in the Drawings, with adequate under door space for air flow from the first floor spaces to the second floor Mechanical Room.

15.14. RADON GAS SYSTEM:
Provide and install a passive radon gas vent system with an electric outlet installed in the attic. Install the outlet less than 3 feet from the vent pipe, to make the system active for testing.

DIVISION 16: ELECTRICAL

16.01. GENERAL:
The Contract for Construction shall include all electrical work required to complete the Work indicated and described in the Construction Documents. Provide all facilities, labor, materials, equipment, and services required. The General Contractor shall provide for the coordination of the work of this division with the work of any and all other divisions as required.

16.02. CODES & STANDARDS:
Electrical work shall conform to all applicable local, state, federal and national codes and standards, as well as those established by the National Fire Protection Association as described in its current publications. Additionally, the work shall conform to The Prince George's County Department of Housing and Community Development "CDBG Substantial Rehabilitation Standards for Single Family Homes," and The Prince George's County "Green Building Standards Addendum," January 2012. The products and materials used shall be approved by the American Society for Testing Materials as the most applicable to the work described and the conditions encountered, and shall be UL approved.

16.03. ELECTRIC SERVICE, PANEL/LOAD CENTER:
Provide and install new 200 amp electrical service for existing and new portions of house. Circuit breakers shall be full module size. Provide Ground Fault Circuit Interrupt breakers as required for all outlets requiring GFCI safety cutoff where indicated and where otherwise required. The Electrical Contractor shall circuit all devices, fixtures, and equipment as required for a complete service. All loads shall be connected for the best possible phase balance.

16.04. CORRECTIONS TO EXISTING ELECTRICAL CIRCUITRY:
Evaluate existing circuitry and make corrections/ upgrade as required for proper balance of loads.

16.05. PRE WIRING WALK-THRU:
Include provisions for a pre wiring walk-thru by the Contractor and Developer. This walk-thru shall take place after all rough-in kits, j-boxes, switch and outlet boxes have been installed, and prior to the installation of all wiring. As this walk-thru, the Developer maintains the right to make minor adjustments in fixture and device locations as required for aesthetic effect. All labor and material costs for such minor adjustments shall be included.

16.06. WIRING:
Provide all wiring required to complete the Work indicated. All wiring shall be with copper conductors full rated for the loads served. Circuits shall be connected with loads not to exceed 60% of the breaker trip rating. All electrical wiring shall be run by experienced electricians accurately and in accordance with the requirements of the drawings. All miscellaneous materials and anchoring devices shall be provided and all wiring shall be installed in accordance with the manufacturers specifications, recommendations and requirements for a complete installation. All wiring shall be routed concealed.

16.07. LIGHTING & ELECTRICAL FIXTURES:
Provide and install ENERGY STAR lighting and electrical fixtures as shown in the Drawings. Lighting fixtures shall have fluorescent lamps except in ceiling fans with lighting fixtures which shall have CFL bulbs only. Ceiling fans shall be provided and installed in the Living/Dining Area and one in each bedroom. Ceiling fixtures and ceiling fans shall be selected by Developer. Recessed lighting shall not be used in ceilings that are part of the building envelope (insulated ceilings). Closet light fixtures shall be lens covered. Exterior lights shall be on photo cells that turn lights on at dusk and off at dawn and provide dusk to dawn low level lighting. Motion detectors shall be installed to turn lamps on to full brightness. Field verify required clearances prior to procuring fixtures - coordinate with mechanical ducting as applicable. All electrical fixtures shall be installed by experienced electricians accurately and in accordance with the requirements of the drawings. All miscellaneous materials and anchoring devices shall be provided and all fixtures shall be installed in accordance with the manufacturers specifications, recommendations and requirements for a complete installation.

16.08. SWITCHES AND OUTLETS:
Provide and install all switches and outlets as shown in the Drawings. Supplement existing outlets as needed for code compliance. Unless otherwise indicated, all switches and outlets shall be as manufactured by Lutron, or approved equal. Device colors shall be white. The exact location of all switches and outlets shall be determined by the Developer. Dimmer switches shall be Lutron Ariadni preset dimmers (verify with Developer). The electrical contractor shall properly size dimmers for the lighting loads indicated in the drawings.

16.09. TELEPHONE & CABLE:
Coordinate with the Developer for the establishment of phone and cable service. Provide phone jacks and cable jacks, and associated wiring, as indicated in the Drawings.

16.10. SMOKE DETECTORS:
Provide and install hard wired interconnected smoke detectors, as required. Smoke detectors shall be at each floor and one in each bedroom in compliance with fire and safety codes.

16.11. CARBON MONOXIDE DETECTOR:
Provide and install one carbon monoxide detector on each floor, as required, in compliance with related codes.