

ARTICLE II. - BUILDINGS AND BUILDING REGULATIONS¹³¹

Footnotes:

--- (3) ---

Editor's note— [Ord. No. 2018-1295](#), § 2, adopted Sept. 18, 2018, amended Art. II, in its entirety to read as herein set out. Former Art. II, §§ 42-21—42-43, 42-61—42-72, 42-91—42-95, 42-111—42-132, pertained to similar subject matter. See Code Comparative Table for complete derivation.

DIVISION 1. - GENERALLY

Sec. 42-21. - Structural integrity of certain buildings.

- (a) It is the purpose of this section to promote the public health, safety and general welfare of the citizens of and visitors to the city by requiring proper and approved construction methods and materials in structures erected therein.
- (b) The objective of this section is to produce structures completed with integrity and in compliance with applicable codes.
- (c) The seal of a registered architect or engineer, duly licensed in the state, shall be required on construction plans for all structures falling within the scope of the International Building Code. The design professional seal is also required on structures falling within the scope of the International Residential Code with the following exceptions:
 - (1) Additions of not more than 50 percent of the area under roof or 1,000 square feet whichever is less, may be constructed in accordance with the most recent edition of ICC 600 STANDARD FOR RESIDENTIAL CONSTRUCTION IN HIGH WIND REGIONS without engineered drawings.
 - (2) Accessory buildings not exceeding 1,000 sf may be constructed in accordance with ICC 600 STANDARD FOR RESIDENTIAL CONSTRUCTION IN HIGH WIND REGIONS without engineered drawings. For commercial and multi-family projects, continuing construction inspection shall be required to be done by a registered architect or engineer licensed in the state, or by a duly authorized representative thereof licensed in the state, to verify and ensure that the structure is being built according to all applicable city ordinances and the requirements of the city building code, plumbing code, mechanical code, gas code, housing code, electrical code, and other codes in effect in the city. These inspections shall be in addition to all inspections required to be performed by the city.
- (d) For all commercial and multi-family structures, a final certification by the architect or engineer, qualified as set forth in this section, certifying that the structure is built according to all applicable city ordinances and the requirements of the codes, shall be furnished to the city prior to any occupancy of the structure.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-23. - Reserved.

Sec. 42-24. - Setbacks, easements and buffers; responsibility.

The city is not responsible for verifying building location, including setbacks, easements, elevations or buffers. The building owner and/or permit holder shall be at all times responsible for verifying location and elevation. An as-built survey may be required by the building official.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-25. - Reserved.

Sec. 42-26. - Street numbering.

- (a) *Purpose of section.* the purpose of this section is to promote public safety and convenience through the provision of a street numbering system whereby addresses may be identified with ease and speed, which is essential to the quick response of emergency services, such as firefighting and emergency medical care.

- (b) *Duties of building official.* The building official may, at his discretion and without notice, assign, renumber or change each building, other than an accessory building, with a street identification number by which such building shall be known. It shall be the duty of the building official, whenever a new street is developed, to assign, to the land abutting on the street, numbers at such measured intervals or distances as, in the opinion of the building official, public interest shall require.
- (c) *Duty of owners.* It shall be the duty of the owner of any building existing as of June 21, 1994, without prior notice and within 60 days from such date, to affix numerals indicating the street identification number which has previously been assigned to such building by the city or by the county. If there is no record of such assignment, the street identification number shall be the one customarily used for such premises. When a new building is completed for occupancy, the owner shall ascertain the street identification number assigned to the building and shall affix the appropriate numerals thereto in the manner prescribed in this section.
- (d) *Numeral specifications and location(s).* Street identification numbers shall be installed in accordance with the International Fire Code Section 505.1 as amended by section 42-41(c) of the City of Orange Beach Municipal Code.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-27. - Utilities to be located underground; exceptions; appeals.

- (a) All utilities for new construction within the city located on private property must be installed underground. No overhead service exception will be approved for any business, commercial entity or residence regardless of floor area, location, income-producing potential, or proximity or number of other structures having overhead service in the area unless underground service would be electrically unsafe.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Secs. 42-28—42-40. - Reserved.

DIVISION 2. - TECHNICAL CODES

Sec. 42-41. - Technical codes.

Pursuant to Code of Ala. 1975, § 11-45-8(c), the following rules and regulations which have been printed as a code in book or pamphlet form, copies of which are on file in the offices of the building official, city clerk, and the City of Orange Beach Public Library, are hereby adopted as rules and regulations in, of and for the city with the additions, insertions, deletions and changes, if any, as prescribed.

- (a) The *2018 International Building Code* including Appendix Chapters I and K as published by the International Code Council, be and is hereby adopted as the Building Code of the City of Orange Beach, in the State of Alabama and the following sections are hereby revised:

The 2017 Coastal Construction Supplement published by Smart Home America, Inc., and attached hereto is hereby adopted as an appendage to the International Building Code for design and construction of structures within the City of Orange Beach, in the State of Alabama.

Section 101.1 Insert: City of Orange Beach, Alabama

Section 101.4.6 Delete "International Energy Conservation Code" and replace with "Alabama Energy and Residential Code"

Section 101.47 Insert "All commercial or residential structures relocated or moved to be utilized in a different location must be in compliance with all existing, adopted building, plumbing, electrical and mechanical codes and standards. The owner of the structure shall provide proof that the structure was permitted and constructed under the Building Code edition referenced in Section 1 of this ordinance. The owner must also submit a letter showing that the structure has been inspected and found by a duly licensed professional pest service to be free of termites. The structure must be set

on the permanent foundation within 30 days of being placed onto the lot or the moving permit becomes void. For plumbing, mechanical, electrical and gas installations not permitted in accordance with the code edition referenced in Section 1 of this Ordinance, the owner may agree to make all necessary improvements required in order for said installations to comply with this ordinance and any local codes or ordinances within 30 days from the date of issuance of the moving permit. An additional one-time extension of 30 days may be granted by the building official after payment of an additional moving fee. Failure to complete improvements under this section will be subject to penalties as provided by law. Proof of compliance with this section will be a Certificate of Completion issued by the building official upon successful final inspection.

EXCEPTION: These requirements shall not apply to structures relocated within a platted lot for the purpose of correcting a nonconformity in regards to setbacks or elevation.

Section 105.1.1 Delete in its entirety

Section 105.1.2 Delete in its entirety

Section 105.2 Delete item 1 under "Building" in its entirety

Section 105.2 Under item 2 under "Building", delete "not over 7 feet (2134mm) high"

Section 105.2 Delete item 9 under "Building" in its entirety

Section 105.2.1 Delete in its entirety and replace with: "Where equipment replacements and repairs must be performed in an emergency situation, the permit application shall be submitted and inspections scheduled within the next working business day to the Building Department.

Section 105.3.2 Insert: "There will be a \$50 charge for extensions granted for permit applications in accordance with Section 105.3.2"

Section 105.4 Delete "of this jurisdiction" and Insert: "or other relevant Local, State or Federal laws, rules or regulations, as determined by the Building Official."

Section 105.5 Insert: "A minimum of one inspection must be requested within this 180 day period."

Section 105.5 Insert: "There will be a \$100 charge for extensions to permits in accordance with Section 105.5."

Insert new Section 107.1.1 SUBCONTRACTORS. The applicant shall submit a list of all known subcontractors on a form provided by the jurisdiction at the time of application. Such list shall include the name, address and phone number of each subcontractor. The sub-contract amount shall also be specified on the list. The subcontractor list shall be updated periodically, but not less than prior to rough inspection; meter release inspection; and final inspection.

Section 107.2 Insert: "All construction documents shall be prepared by an architect or engineer registered in the state of Alabama and shall be signed and sealed as required by law."

Section 107.2 Insert: "All construction documents shall be prepared by an architect or engineer registered in the State of Alabama and shall be signed and sealed as required by law."

Section 107.2.6 Insert: "All setbacks, easements and buffers are the direct responsibility of the builder or homeowner and not the responsibility of the building department or the City of Orange Beach, Alabama. Therefore, on all structures moved to or constructed upon any properties within the corporate limits of the City of Orange Beach, a spot survey prepared by an Alabama-licensed surveyor must be submitted to the building department upon completion of pile supports on the first level. For slab supported structures this shall be a "Form Board" or "As Staked" survey done prior to concrete placement. This survey shall account for the proposed outside dimensions of building(s), accounting for wall thickness, band placement, or pile cap and slab placement. Dimensions are

required from all lot lines. The survey shall depict grade elevations and proposed elevations of the lowest finished floor. Assumed elevations may be used if construction does not require an elevation certificate. Further building construction shall cease until the requirements of this paragraph are met. If an elevation certificate is required in accordance with Article III, it will have to be verified and amended for finished construction."

Section 107.2.6.1 Delete section in its entirety and insert: "All commercial and residential structures moved to or constructed within the corporate limits of the City of Orange Beach shall have the finished floor elevation (FFE) of any enclosed space one foot above the average centerline of the nearest paved road or public street, or be in accordance with Article III FLOOD DAMAGE PREVENTION, and any revisions thereto, whichever is greater. The one-foot-above-centerline requirement may be adjusted or waived in writing by the Director of Community Development due to obvious or unusual site conditions that would make strict application of this section impractical."

Section 109.3 Insert: "For new construction, the valuation used to determine the applicable fees shall be calculated from the most current version of the Building Valuation Data published by the International Code Council."

**EXCEPTION:
Group U Buildings**

Section 109.6 Insert: "The policy for applications and permits issued in accordance with this Code is as follows: Plans Review fees, Issuance fees, Data Processing fees and Penalties are non-refundable. Permits that expire in accordance with Section 105.5 prior to commencement of any work may, upon written request, be granted a refund for the permit fee less a \$100 administration fee; no refund will be given where work on the permit has commenced.

Section 111.3 Delete in its entirety.

Delete 1106.4 Insert "Where more than 25 spaces are required in any lot, 50% but not less than one van accessible space must be labeled 'VAN ONLY'."

Section 1107.4-3 Exceptions : 3. Delete "that are part of Type B units and have impervious surfaces, and that are not more than 4 inches (102mm) below the finished floor level of the adjacent interior space of the unit."

Section 1111.1(2) Delete Exception.

Section 1609.1.2 Delete Exception 1.

Section 1609.3 Insert: The ultimate design wind speed, V_{ult} as determined by the City of Orange Beach Alabama is as follows:

RISK CATEGORY I	RISK CATEGORY II	RISK CATEGORY III
147 MPH	157 MPH	170 MPH

Risk Category IV must provide design wind speed determination by calculation.

Section 1612.3 Insert: Baldwin County, Alabama and incorporated area.

Section 1612.3 Insert: July 17, 2007.

Section 1613 Delete in its entirety.

- (b) The 2018 International Residential Code including Appendix Chapters A, B, C, E, G, H, J, M, P, and Q as revised, as published by the International Code Council, be and is hereby adopted as the Residential Code of the City of Orange Beach, in the State of Alabama and the following sections are hereby revised:

The *2017 Coastal Construction Supplement* published by Smart Home America, Inc., and attached hereto is hereby adopted as an appendage to the International Residential Code for design and construction of structures within the City of Orange Beach, in the State of Alabama.

Section R101.1 Insert: City of Orange Beach, Alabama.

Section R105.2 Delete item 1 in its entirety.

Section R105.2 Under item 2, delete "not over 7 feet (2134mm) high".

Section R105.2 Under item 3, insert "or located adjacent to tidally influenced waters."

Section R105.2 Delete item 5 in its entirety.

Section R105.2 Delete item 7 in its entirety.

Section R105.2 Delete item 10 in its entirety.

Section R105.3 Insert new item: "8. SUBCONTRACTORS. The applicant shall submit a list of all known subcontractors on a form provided by the jurisdiction at the time of application. Such list shall include the name, address and phone number of each subcontractor. The sub-contract amount shall also be specified on the list. The subcontractor list shall be updated periodically, but not less than prior to rough inspection; meter release inspection; and final inspection."

Section R105.3.2 Insert: "There will be a \$50 charge for extensions granted for permit applications in accordance with Section R 105.3.2."

Section 105.4 Delete "of this jurisdiction" and insert: "or other relevant Local, State or Federal laws, rules or regulations, as determined by the Building Official."

Section R105.5 Insert: "A minimum of one inspection must be requested within this 180 day period."

Section R105.5 Insert: "There will be a \$100 charge for extensions to permits in accordance with Section R105.5."

Section R106.1 Insert: "Structural portions of construction documents shall be prepared by an architect or engineer registered in the state of Alabama and shall be signed and sealed as required by law."

EXCEPTION:

- 1) Additions of not more than 50% of the area under roof or 1000sf whichever is less, may be constructed in accordance with the most recent edition of ICC 600 STANDARD FOR RESIDENTIAL CONSTRUCTION IN HIGH WIND REGIONS without engineered drawings.
- 2) Accessory buildings not exceeding 1,000 sf may be constructed in accordance with ICC 600 STANDARD FOR RESIDENTIAL CONSTRUCTION IN HIGH WIND REGIONS without engineered drawings.

Section R106.1.4 Under item 2, insert: "All residential structures moved to or constructed within the corporate limits of the City of Orange Beach shall have the finished floor elevation (FFE) of any enclosed space one foot above the average centerline of the nearest paved or public street, or be in accordance with Article III FLOOD DAMAGE PREVENTION, and any revisions thereto, whichever is greater. The one-foot-above-centerline requirement may be adjusted or waived in writing by the City

Engineer due to obvious or unusual site conditions that would make strict application of this section impractical."

Section R106.2 Insert: "All setbacks, easements and buffers are the direct responsibility of the builder or homeowner and not the responsibility of the building department or the City of Orange Beach, Alabama. Therefore, on all structures moved to or constructed upon any properties within the corporate limits of the City of Orange Beach, a spot survey prepared by an Alabama-licensed surveyor must be submitted to the building department upon completion of pile supports on the first level. For slab supported structures this shall be a "Form Board" or "As Staked" survey done prior to concrete placement. This survey shall account for the proposed outside dimensions of building(s), accounting for wall thickness, band placement, or pile cap and slab placement. Dimensions are required from all lot lines. The survey shall depict grade elevations and proposed elevations of the lowest finished floor. Assumed elevations may be used if construction does not require an elevation certificate. Further building construction shall cease until the requirements of this paragraph are met. If an elevation certificate is required in accordance with Article III it will have to be verified and amended for finished construction."

Section R108.3 Insert: "For new construction, the valuation used to determine the applicable fees shall be calculated from the most current version of the Building Valuation Data published by the International Code Council."

EXCEPTION:
Group U Buildings

Section R108.5 Insert: "The policy for applications and permits issued in accordance with this Code is as follows: Plans Review fees, Issuance fees, Data Processing fees and Penalties are non-refundable. Permits that expire in accordance with Section 105.5 prior to commencement of any work may, upon written request be granted a refund for the permit fee less a \$100 administration fee; no refund will be given where work for which the permit was issued has commenced."

Section R108.5.1 REBATES. A rebate in accordance with this section shall be given to the applicant upon application and evidence of certification of one of the listed programs. All fees must be paid in full and a Certificate of Occupancy issued for the subject property in order for the applicant to be eligible for the rebates under this Section.

LEED Certification 15%

Developed by the U.S. Green Building Council (USGBC) LEED certification provides independent, third-party verification that a home was designed and built using strategies aimed at achieving high performance in key areas of human and environmental health, sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality.

FORTIFIED HOME GOLD Certification 25%

FORTIFIED GOLD requires development of a continuous load path from roof to foundation; chimneys must be adequately anchored; and windows and entry doors, even those that are protected from wind-borne debris, must meet wind design pressure requirements for the location.

Section R110.4 Delete in its entirety.

Section R301.2.1.2 Delete the Exception in its entirety.

Table R301.2.1.2 Delete in its entirety.

Table R301.2(1) Delete and insert:

- Ground Snow Load - 0

- Wind Design
 - Speed (mph) - 157
 - Topographic Effect - No
 - Special Wind Region - No
 - Windborne Debris Zone - Yes
- Seismic Design Category - A
- Subject to Damage From
 - Weathering - Negligible
 - Frost Line Depth - 12"
 - Termite - Very Heavy
- Winter Design Temp. - 30°
- Ice Barrier Underlayment Required - No
- Flood Hazards - NFIP 1985, FIS July 31, 2017, Community Number 015011
- Air Freezing Index - 33
- Mean Annual Temp. - 67.5
- Manual J Design Criteria
 - Elevation - 23
 - Latitude - 30.2688757
 - Winter Heating - 29
 - Summer Cooling - 93

Section R202: Add Definition: AGGREGATE GROSS FLOOR AREA. The total floor area inside the building envelope, including the exterior walls, and excluding uninhabitable attic spaces and spaces enclosed by screening or louvered walls.

Section R313.2 Insert: "with an aggregate gross floor area exceeding 5000sf or a building height in stories exceeding two. For the purposes of this Section, a structure constructed on piers, pilings, shear walls or columns where the distance between the lowest horizontal supporting member and any portion of the grade or slab below the first elevated floor is 70" or greater shall be considered a story.

Section R322.1 Insert: "and in accordance with the Flood Damage Prevention Ordinance of the City of Orange Beach, Alabama."

- (c) The 2018 *International Fire Code* including Appendix Chapters A, B, C, D E, F, H, and I as published by the International Code Council, be and is hereby adopted as the Fire Code of the City of Orange Beach, in the State of Alabama and the following sections are hereby revised:

Section 101.1 City of Orange Beach, Alabama and its Police and Planning Jurisdiction.

Section 105.6 Delete in its entirety.

Section 110.4

(SPECIFY OFFENSE) Fire Code Violation

(AMOUNT) As determined by the Municipal Court System

(NUMBER OF DAYS) As determined by the Municipal Court System

Section 112.4 Delete in its entirety and replace with: "Failure to comply. It shall be unlawful and a violation of the city code for any person to continue work after having been served with a stop work order, except such work as the person is directed to perform to remove a violation or unsafe condition. Penalties shall be provided in §1-7 of the city code."

Section 307.1.1 Insert: "Prohibited Open Burning. Open burning is prohibited unless approved by the fire chief.

Exceptions:

1. Portable/permanent outdoor fire pits equipped with approved spark arrestors."

Section 307.1.2 Insert: "Burning of dangerous or hazardous materials. No permit shall be issued for the burning of organic or other debris from lot clearing activities, or the burning of any materials which may produce dangerous, noxious, or toxic fumes, smoke, odors, or which may be considered dangerous to the health and general welfare of the people of the city.

Section 307.4.4 Insert: "Permanent Outdoor Fireplace - Public Areas. Permanent, public outdoor fireplaces shall be used in accordance with the manufacturer's instructions and shall not be operated within 15 feet of structures or combustible materials."

Section 308.1.4 Delete Item 3 under Exceptions.

Section 505.1 Insert: "Address Identification. New and existing buildings shall be provided with approved address identification. The address identification shall be legible and placed in a position that is visible from the street or road fronting the property. Address identification characters shall contrast with their background. Address numbers shall be arabic numbers or alphabetical letters. Numbers shall not be spelled out. Each character shall be not less than 4 inches (102 mm) high with a minimum stroke width of ½ inch (12.7 mm). Where required by the fire code official, address identification shall be provided in additional approved locations to facilitate emergency response. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure. Address identification shall be maintained. Address and building numbers for commercial properties shall be as follows:

1. 50' or less setback from addressed street curb - 4"
2. 51' to 100' or less setback from addressed street curb - 6"
3. 101' - 150' setback from addressed street curb - 8"
4. 151' - 200' setback from addressed street curb - 10"
5. 201' or greater setback from addressed street curb - Permanent sign that is not more than 50' from the street curb"

Section 505.1.1 Insert: "Beach address Identification. New and existing buildings (excluding single family dwellings) located on the south side of State Highway 182 (Perdido Beach BLVD) with frontage on the Gulf of Mexico shall comply with the following requirements for identification signs:

1. All new and existing buildings (excluding single family residential) with dune walkovers or boardwalks in excess of one hundred (100) feet in length, an minimum of eighteen (18) inch by twenty-four (24) inch and a maximum of twenty-four (24) by thirty-six (36) inch sign shall be installed at the south end of the boardwalk or walkover and shall face southward. Such sign shall comply with the specifications in paragraph 2, below.
2. All new and existing buildings (excluding single family residential) without dune walkovers or boardwalks, or with dune walkovers or boardwalks less than one hundred (100) feet in length, one (1) eighteen (18) inch by twenty-four (24) inch to twenty-four (24) inch by thirty-six (36) inch sign with (3) inch high letters and the background shall be white. Signs shall be properly mounted and shall be placed north of the Construction Control Line (CCL) established by the Alabama Department of Environmental Management. The sign shall be no less or greater than four (4) feet above grade.
3. Signs shall be attached to posts with two (2) inch minimum stainless steel screws or bolts as applicable.
4. Content of sign: Name of establishment and its street address.
5. The sign shall be maintained in good condition at all times."

Section 507.5.1.1 Delete in its entirety and replace with: "Hydrant for standpipe systems and automatic sprinkler systems. Buildings equipped with an approved standpipe system or automatic sprinkler system installed in accordance with Section 905 shall have a fire hydrant within 100 feet of the fire department connection."

Section 507.5.7 Insert: "A private service fire hydrant shall be painted yellow in color. The valve stem, coupling threads, or portions of the hydrant where the application of paint would violate the listing of the hydrant or hinder its operation shall not be painted."

Section 607.2 Delete in its entirety and replace with: "Where required and including Mobile and Temporary Cooking Operations. A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes producing grease laden vapors."

Section 901.2.1.1 Insert: "All sprinkler and fire alarm design drawings submitted to the fire department for review shall abide by the Alabama State Board of Licensure for Professional Engineers and Land Surveyors' fire protection position statement. NICET certification does not replace the requirement for professional licensure. The designing of fire protection and detection systems is engineering and as such must be designed by or under the direct supervision of professional engineers qualified to design fire protection and detection systems. Only fire protection and detection designs that have been signed and sealed by a qualified Alabama licensed professional engineer shall be approved for construction."

Section 901.2.1.2 Insert: "Contractor Qualification Requirements. Copies of applicable permits and Certifications as required shall be submitted to the Fire Marshall for review."

Restaurant Fixed Extinguishing Systems:

- The qualifier must possess manufacturer certification (which restricts them to that manufacturer) and/or NAFED/ICC certification (which would allow them to be unrestricted and service, maintain, or install any system).

Sprinkler Systems:

- Must possess a current sprinkler permit through the Alabama State Fire Marshal's Office and applicable NICET certification.

Fire Alarm Systems:

- Must possess a fire alarm permit through the Alabama State Fire Marshal's Office and applicable NICET certification. Must possess a minimum of NICET II to perform technician work, or work under the direct supervision of a NICET II.

Portable Fire Extinguishers:

- Current certificate of training on portable fire extinguishers in compliance with NFPA 10."

Section 903.4.4 Insert: "Multi-Tenant Buildings. In multi-tenant buildings requiring automatic fire sprinkler systems, and where no fire alarm is required by Section 907, each tenant shall have at least one notification device (horn/strobe) to provide audible and visual notification upon activation of the listed sprinkler monitoring system."

Section 905.4.3 Insert: "Pressure Regulating Devices. Where hose valve pressure regulating devices are installed on 2 1/2 in. (65 mm) outlets, they shall be field adjustable, capable of being adjusted through the full adjustment range by a 3/8 in. (12 mm) rod with a maximum required torque of 30 foot-pounds (41 nm) while flowing water. Field adjustment shall not require any hose valve disassembly."

Section 905.6.3 Insert: "Pressure Regulating Devices. Where hose valve pressure regulating devices are installed on 2 1/2 in. (65 mm) outlets, they shall be field adjustable, capable of being adjusted through the full adjustment range by a 3/8 in. (12 mm) rod with a maximum required torque of 30 foot-pounds (41 nm) while flowing water. Field adjustment shall not require any hose valve disassembly."

Section 912.6.1 Insert: "All above-ground piping exposed to the weather shall be insulated to protect from freezing."

Section 913.5 Delete in its entirety and replace with: "Testing and maintenance. Fire pumps shall be inspected, tested and maintained in accordance with this section and NFPA 25. More specifically, a weekly test of electric fire pump assemblies shall be conducted without flowing water due to the susceptibility to lightning in our area. Records of inspection, testing and maintenance shall be maintained."

Section 1103.5.1 Insert: "Occupancies shall have 2 years from the date of the adoption of this code to comply with the fire sprinkler installation requirements."

Section 1103.5.3 Insert: "[DATE BY WHICH SPRINKLER SYSTEM MUST BE INSTALLED - January 1, 2021]"

- (d) The 2018 International Mechanical Code including Appendix Chapter A, as published by the International Code Council, be and is hereby adopted as the Mechanical Code of the City of Orange Beach, in the State of Alabama and the following sections are hereby revised:

Section 101.1 Insert: "City of Orange Beach, Alabama"

Section 106.5.1 Delete in its entirety and replace with: "Any person who commences work on an installation before obtaining the necessary permits shall be subject to penalty fees in accordance with Section 42-3 of the Code of Ordinances."

Section 106.5.2 Mechanical permit fees shall be in accordance with Section 42-3(C)4 of the Code of Ordinances.

Section 106.5.3 Insert item (2): "Twenty-five"

Section 106.5.3 Delete item (3) in its entirety.

Section 107.4

Delete in its entirety and replace with: "Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who installs, alters or repairs a mechanical system or component in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law."

Section 108.4 Delete in its entirety

Section 108.5 Insert: "Fifty; One hundred"

Section 109 Delete in its entirety.

- (e) The *2018 International Plumbing Code* including Appendix Chapters C, E, F and G, as published by the International Code Council, be and is hereby adopted as the Plumbing Code of the City of Orange Beach, in the State of Alabama and the following sections are hereby revised:

Section 101.1 Insert: "City of Orange Beach, Alabama"

Section 106.6.1 Delete in its entirety and replace with, "Any person who commences work on an installation before obtaining the necessary permits shall be subject to penalty fees in accordance with Section 42-3 of the Code of Ordinances."

Section 106.6.2 Insert: "Plumbing permit fees shall be in accordance with Section 42-3(C)6 of the Code of Ordinances."

Section 106.6.3 Under item (2), insert: "Fifty"

Section 106.6.3 Delete item (3) in its entirety.

Section 108.4 Delete in its entirety and replace with: "Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who installs, alters or repairs a plumbing system or component in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to the penalties as prescribed by law."

Section 108.5 Insert: "Fifty; One hundred"

Section 109.2.1 Delete in its entirety.

Section 305.4.1 Delete in its entirety.

Section 903.1 Insert: "Six (6)"

- (f) The *2018 International Property Maintenance Code*, as published by the International Code Council, be and is hereby adopted as the Property Maintenance Code of the City of Orange Beach, in the State of Alabama and the following sections are hereby revised:

Section 101.1 Insert: "The City of Orange Beach, Alabama"

Section 103.5 Delete in its entirety.

Section 111.1 Delete "board of appeals" and insert "City Council."

Section 111.2 Delete in its entirety.

Section 111.4.1 Delete in its entirety.

Section 112.4 Delete "of not less than AMOUNT dollars or more than AMOUNT dollars" insert "as determined by the Municipal Court System."

Section 302.4 Insert: "twelve"

Section 304.14 Delete in its entirety

Section 602.3 Insert: "November 1; February 28"

Section 602.4 Insert: "November 1, February 28"

- (g) The 2018 International Fuel Gas Code, as published by the International Code Council, be and is hereby adopted as the Fuel Gas Code of the City of Orange Beach, in the State of Alabama and the following sections are hereby revised:

Section 101.1 Insert: "City of Orange Beach, Alabama"

Section 106.2 Delete in its entirety and replace with, "Any person who commences work on an installation before obtaining the necessary permits shall be subject to penalty fees in accordance with Section 42-3 of the Code of Ordinances."

Section 106.6.2 Insert: "Gas permit fees shall be in accordance with Section 42-3(C)7 of the Code of Ordinances."

Section 106.6.3 Under item 2, insert: "fifty"

Section 106.6.3 Under item 3, insert "fifty"

Section 108.4 Delete in its entirety and replace with: "Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who installs, alters or repairs a gas system or component in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law."

Section 108.5 Insert: "Fifty; One hundred"

Section 109 Delete in its entirety.

The 2018 International Swimming Pool and Spa Code, as published by the International Code Council, be and is hereby adopted as Swimming Pool and Spa Code of the City of Orange Beach in the State of Alabama and the following sections are hereby revised:

Section 101.1 Insert: "The City of Orange Beach, Alabama"

Section 105.6.2 Insert: "Swimming Pool and Spa Permit fees shall be in accordance with Section 42-3(C)7 of the Code of Ordinances."

Section 105.6.3(2) Insert: "fifty"

Section 105.6.3(3) Delete in its entirety

Section 107.4 Delete in its entirety and replace with: "Violation penalties. Any person who violates a provision of this code or fails to comply with any of the requirements thereof or who installs, alters or repairs a pool or spa regulated by this code in violation of the approved construction documents or directive of the building official, or of a permit or certificate issued under the provisions of this code, shall be subject to penalties as prescribed by law."

Section 305.2.4 Delete in its entirety and replace with: "SCREEN ENCLOSURES. Standard screen enclosures which meet the requirements of Section 305 may be utilized as part, or all, of the "barrier" and shall be considered a "nondwelling" wall."

- (i) The *2017 National Electrical Code (NFPA 70)*, as published by the National Fire Protection Association, be and is hereby adopted as the Electrical Code of the City of Orange Beach, in the State of Alabama and the following sections are hereby revised:

Article 210.8(A)(3) Insert: "For structures located in a Special Flood Hazard Area, the required GFCI protection for these outlets shall be located in the panel."

Article 210.8(A)(8) Insert: "The required GFCI protection for these outlets shall be located in the panel."

Article 210.8(B)(4) Insert: "Protection required by this section for outdoor receptacles at grade level and located within the Special Flood Hazard Area shall be located within the panel."

Article 210.8(C) Insert: "for plug and cord connected hoists, the required GFCI protection shall be located in the panel."

Article 210.52(E) Insert: "for structures located in a Special Flood Hazard Area, the required GFCI protection for grade level outlets shall be located in the panel."

Article 230.70(A)(1) Delete: "or inside nearest the point of entrance of the service conductors."

Article 680.26(C)(1) Insert: "Where deck reinforcing steel is not an integral part of the pool, the deck reinforcing steel shall be bonded to other parts of the bonding grid using a minimum 8AWG solid copper conductor. Connection shall be per 680.26(D)."

- (j) For the purposes of regulating energy-efficient building envelopes and installation of energy-efficient mechanical, lighting and power systems in residential and commercial structures, the following codes are hereby adopted:

- (1) Residential Structures—the Alabama Energy and Residential Codes including all amendments, as set forth in sections 305-2-4-.07 and 305-2-4-.10 of the Alabama Administrative Code.
- (2) Commercial and Multi-Family Structures—the Alabama Energy and Residential Codes, including all amendments, as set forth in sections 305-2-4-.07 and 305-2-4-.08 of the Alabama Administrative Code.

- (k) The *2018 International Wildland-Urban Interface Code* including Appendix Chapters A and B as published by the International Code Council, be and is hereby adopted as the Wildland-Urban Interface Code of the City of Orange Beach, in the State of Alabama and the following sections are hereby revised:

Section 101.1 Insert: "The City of Orange Beach, Alabama"

Section 103.1 Delete in its entirety.

Section 106 Delete in its entirety.

Section 109.4.7 Delete in its entirety.

Section 302.1 Delete in its entirety.

Section 302.2 Insert Wildland-Urban Interface Boundry Map.

Chapter 5 Delete in its entirety.

Section 602 Delete in its entirety.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-42. - Building permits.

- (a) *Processing and fees.* Procedures for processing of building permit applications shall be supplemented as follows:
- (1) *Application.* Building permit applications shall be submitted to the building department of the city for review, processing and approval. Applicants may schedule a preapplication conference with the building department director (director) to discuss a proposed project before submitting the application.
 - (2) *Fees.* A nonrefundable plan review fee shall be paid in accordance with Section 42-3 when the application is submitted to cover the cost of plan review, administration and management of the permitting process, and inspection of project implementation and operation. A schedule of permit application fees shall be established by the director.
 - (3) *Sufficiency review.* An application sufficiency review shall be conducted by the director, or his designee, and, within 30 days from the submittal date, written comments shall be provided to the applicant regarding the completeness of the application and requesting additional information, if necessary.
 - (4) *Issuance.* If the director determines that the building permit application submittal is in compliance with all provisions of this section, a building permit may be issued. If the director determines that the permit application submittal does not conform with all provisions of this section, building permit issuance shall be denied and a written statement as to the reasons for the denial shall be provided to the applicant.
 - (5) *Appeals.* Any applicant who believes that a building permit application is denied without sufficient cause and that the submittal conforms with all provisions of this section may petition in writing to the director. If the applicant is again denied a building permit, that denial may be appealed to the city.
- (b) *Permit conditions.* Each building permit issued by the city shall be subject to the following conditions:
- (1) *Area.* The development, including associated construction, shall be conducted only within the area specified in the approved building permit.
 - (2) *Execution.* Activities requiring a building permit shall not be commenced until the building permit is approved and posted in a conspicuous place in front of the premises. The building permit shall be protected from weather and shall remain posted until a certificate of occupancy or completion has been issued.
 - (3) *Inspections.* A schedule of inspections to be carried out during the construction phases of permitted activities shall be established as conditions to the permit.
 - (4) *Subcontractors.* A list of all subcontractors shall be submitted to the Building Department as required in Section 42.41(a) or (b).
 - (5) *Revocation.* A building permit may be revoked if the approved plans and permit conditions are violated without the prior written approval of the director.
 - (6) *Transfer.* Building Permits are non-transferable.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-43. - Corrective action.

A person or entity found to be in violation of this article may be required to restore any alteration of the affected property to its undisturbed condition. If restoration is not undertaken within a reasonable time after notice, the city may take necessary corrective action, the cost of which shall become a lien upon the property until paid.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Secs. 42-44—42-60. - Reserved.

DIVISION 3. - CONSTRUCTION BOARD OF ADJUSTMENT AND APPEALS

Sec. 42-61. - Appointment and establishment.

As a part of the building code heretofore or hereafter adopted, there is hereby established a board to be called the construction board of adjustment and appeals, which shall consist of seven members and two alternates. The board shall be appointed by the mayor, by and with the advice and consent of the city council.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-62. - Membership.

The construction board of adjustment and appeals shall consist of seven members. Such board members shall be composed of individuals with knowledge and experience in the technical codes, such as design professionals, contractors or building industry representatives. In addition to the regular members, there shall be two alternate members, one member at large from the building industry and one member at large from the public. A board member shall not act in a case in which he has a personal or financial interest.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-63. - Terms.

The terms of office of the board members shall be staggered so no more than one-third of the board is appointed or replaced in any 12-month period. The two alternates, if appointed, shall serve one-year terms. Vacancies shall be filled for an unexpired term in the manner in which original appointments are required to be made. Continued absence of any member from required meetings of the board shall, at the discretion of the city council, render any such member subject to immediate removal from office.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-64. - Quorum; voting.

A simple majority of the board shall constitute a quorum. In varying any provision of this article, the affirmative votes of the majority present, but not less than three affirmative votes, shall be required. In modifying a decision of the building official, not less than four affirmative votes, but not less than a majority of the board, shall be required. If regular members are unable to attend a meeting, the alternate members, if appointed, shall vote.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-65. - Secretary of board.

The building official shall act as secretary of the board and shall make a detailed record of all of its proceedings, which shall set forth the reasons for its decision, the vote of each member, the absence of a member and any failure of a member to vote.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-66. - Powers.

The construction board of adjustments and appeals shall have the power, as further defined in this division, to hear appeals of decisions and interpretations of the building official and consider variances of the technical codes.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-67. - Appeals of decisions of the building official.

The owner of a building, structure or service system, or his duly authorized agent, may appeal a decision of the building official to the construction board of adjustment and appeals whenever any one of the following conditions are claimed to exist:

- (1) The building official rejected or refused to approve the mode or manner of construction proposed to be followed or materials to be used in the installation or alteration of a building, structure or service system.
- (2) The provisions of this article do not apply to this specific case.
- (3) An equally good or more desirable form of installation can be employed in any specific case.
- (4) The true intent and meaning of this article or any of its regulations have been misconstrued or incorrectly interpreted.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-68. - Variances.

The construction board of adjustments and appeals, when so appealed to and after a hearing, may vary the application of any provision of this article to any particular case when, in its opinion, such enforcement would do manifest injustice and would be contrary to the spirit and purpose of this article or the technical codes or public interest, and also finds all of the following:

- (1) Special conditions and circumstances exist which are peculiar to the building, structure or service system involved and which are not applicable to others.
- (2) The special conditions and circumstances do not result from the action or inaction of the applicant.
- (3) Granting the variance requested will not confer on the applicant any special privilege that is denied by this article to other buildings, structures or service system.
- (4) The variance granted is the minimum variance that will make possible the reasonable use of the building, structure or service system.
- (5) The grant of the variance will be in harmony with the general intent and purpose of this article and will not be detrimental to the public health, safety and general welfare.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-69. - Conditions of the variance.

In granting the variance, the board may prescribe a reasonable time limit within which the action for which the variance is required shall be commenced or completed, or both. In addition, the board may prescribe appropriate conditions and safeguards in conformity with this article. Violation of the conditions of a variance shall be deemed a violation of this article.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-70. - Notice of appeal.

Notice of appeal shall be in writing and filed within 30 calendar days after the decision is rendered by the building official. Appeals shall be in a form acceptable to the building official.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-71. - Unsafe or dangerous buildings or service systems.

In the case of a building, structure or service system which, in the opinion of the building officials, is unsafe, unsanitary or dangerous, the building official may, in his order, limit the time for such appeals to a shorter period.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-72. - Procedures of the board.

- (a) *Rules and regulations.* The board shall establish rules and regulations for its own procedure not inconsistent with the provisions of this article. The board shall meet on call of the chairman. The board shall meet within 30 calendar days after notice of appeal has been received.
- (b) *Decisions.* The construction board of adjustment and appeals shall, in every case, reach a decision without unreasonable or unnecessary delay. Each decision of the board shall also include the reasons for the decision. If a decision of the board reverses or modifies a refusal, order or disallowance of the building official or varies the application of any provision of this article, the building official shall immediately take action in accordance with such decision. Every decision shall be promptly filed in writing in the office of the building official and shall be open to public inspection. A certified copy of the decision shall be sent by mail or otherwise to the appellant, and a copy shall be kept publicly posted in the office of the building official for two weeks after filing. Every decision of the board shall be final, subject, however, to such remedy as any aggrieved party might have at law or in equity.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Secs. 42-73—42-90. - Reserved.

DIVISION 4. - EXCAVATION AND CUTS

Sec. 42-91. - Penalty for violation of division.

Any person violating any of the provisions of this division shall be guilty of a misdemeanor. If a person convicted of a violation of this division shall be a licensed plumber, contractor, gasfitter or other person doing business under a license or franchise issued to such person by the city, the council may revoke such license or franchise.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-92. - Scope of division.

This division is intended to cover excavation, building onto, adding to, taking out, cutting into, taking up or undermining real property where the real property is disturbed. It is not intended to restrict gardening, farming, working flower beds or other normal uses of the surface of real property.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-93. - Permit.

- (a) *Required.* No person shall excavate, cut into, take up, build or affix anything to or undermine real property, private or public, without first having obtained a permit from the building official to do so.
- (b) *Application.* An application for a permit shall be made in writing to the building official and shall describe the proposed affixing, building or excavation or cutting into and the purpose thereof along with plans, drawings or maps.
- (c) *Issuance or denial.* Upon compliance with this division, a permit shall be issued to the applicant, which shall authorize the building, adding to, excavation, cutting into, taking up or undermining of the real property designated in the permit, unless a permit for a similar service has been previously

permitted for the same property, whether private or public, and the building official determines that the duplicated service is not in the best interest of the city or the public.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-94. - Proceeding with work.

The work authorized under this division shall proceed without unreasonable delay, and, upon the completion of such work, the person to whom the permit is granted shall be responsible for restoring to substantially their former condition all roads or streets; or utilities broken, damaged in any way by such excavations, or cutting into. Upon a failure to do so within a reasonable time, to be ascertained by the city or the owner of the utility so damaged, the city or the owner, as the case may be, may proceed to do such restoration work, but the person to whom the permit was granted shall be responsible for the total cost of such work and shall hold the city harmless therefor.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Sec. 42-95. - Warning devices.

- (a) Any person who makes excavation or cutting into of any real property under this division and leaves such property uncovered shall place sufficient warning devices around such property to warn others of danger both in the daytime and in the nighttime.
- (b) No person shall destroy, remove, damage or interfere with any device or danger signal that may be in use at an excavation or other work under this division.

([Ord. No. 2018-1295](#), § 2, 9-18-2018)

Secs. 42-96—42-150. - Reserved.

COASTAL CONSTRUCTION CODE SUPPLEMENT

For Adoption by Communities Affected By Hurricanes



©Insurance Institute for Business and Home Safety



©Insurance Institute for Business and Home Safety



©Habitat for Humanity

A supplemental code to the International Residential Codes (IRC) 2009, 2012 or 2015 and later editions that will be created.



The Coastal Construction Code Supplement was created and adopted by community leaders and Building Code Officials in Coastal Alabama, in partnership with Smart Home America, after being impacted by both Hurricanes Ivan and Katrina in back to back years.

The purpose of the Code Supplement is to increase community resilience and reduce future damage from hurricanes, high winds and wind-driven rain. Adoption has many benefits including; reduction of losses during severe weather events, significantly reduced damage, and lowered insurance costs. A recent study also shows that a FORTIFIED Home™ designation increases the resale value of a property. Additional benefits from using and enforcing this supplemental code are increased numbers of FORTIFIED Home™ designations and reduced storm debris cleanup costs.

Adoption of the Code Supplement closes the gap between existing “I Codes®”¹ and the Insurance Institute for Business and Home Safety’s (IBHS) FORTIFIED Home™ Technical Standards. The Code Supplement is meant to be adopted and enforced in addition to local building codes. IBHS provides technical input to keep the Code Supplement current. The Supplement is based on the latest research and testing conducted at the IBHS Research Center and in the field. To connect with communities enforcing this supplemental code, please contact Smart Home America at 1.855.742.7233 or info@smarthomeamerica.org.

Additionally, Smart Home America strongly advises the adoption of the 2015 IRC/IBC flood-resistant construction standards. Flooding is one of the most devastating and shared hazards facing communities today. By incorporating added steps to mitigate against wind and flood hazards, the durability and strength of homes can be increased while bolstering the safety of residents.

NOTE: By adopting this Supplemental Code, municipalities and jurisdictions recognize that individual homes built, re-roofed or otherwise permitted under this code will be constructed to code-plus standards but will not be designated as a FORTIFIED Home™. To be identified as a FORTIFIED Home™ and issued a Designation Certificate, a homeowner, or the builder, must voluntarily contract the services of a Certified FORTIFIED Evaluator™. They are the only professional able to inspect and collect relevant documentation confirming that a home meets all the requirements of the IBHS FORTIFIED Home™ program. Adoption of the Supplemental Code also allows the local building code to be consistent with **FEMA’s P-804, Wind Retrofit Guide for Residential Buildings**².

This public resource is maintained by Smart Home America and is available at:
SmartHomeAmerica.org/resources/details/code-supplement

¹ The International Code Council (ICC) develops and maintains the International Codes®, or I-Codes®. They provide minimum safeguards for people at home, at school and in the workplace. The I-Codes are a complete set of comprehensive, coordinated building safety and fire prevention codes. www.ICCsafe.org

² <https://www.fema.gov/media-library/assets/documents/21082>

COASTAL CONSTRUCTION SUPPLEMENT

S1 Roof Coverings

Roof coverings and their attachment shall be rated for the ASCE 7 design wind speed for the site location of the building and shall be installed in accordance with the manufacturer's recommendations for high-wind regions.

S1.1 Asphalt Shingles:

Asphalt shingles shall be tested in accordance with ASTM D7158 and meet the classification requirements listed in Table S1 for the design wind speed at the building site. Their packaging shall be labeled to indicate compliance with ASTM D7158 and the classification required for the applicable International Residential Code (IRC)/American Society of Civil Engineers (ASCE) Standard 7 design wind speed at the building site.

TABLE S1. CLASSIFICATION OF ASPHALT SHINGLES BASED ON DESIGN WIND SPEED

2012 IRC/ASCE 7-05 Basic Design Wind Speed V_{ASD} (mph)	2015 IRC/ASCE 7-10 Basic Design Wind Speed V_{ult} (mph)	ASTM D7158 Shingle Testing Standard / Classification
110	140	G or H
120	152	G or H
>120 to 150	>152 to 190	H

S1.1.1 Shingle attachment:

Shingles shall be installed using the number of fasteners required by the manufacturer for high-wind fastening. In areas where the local building code requires more fasteners than required by the manufacturer, fasteners shall comply with the local building code.

S1.1.2 Edge Metal:

Provide code-compliant, minimum gauge metal drip edge at eaves and gables. Overlap drip edge metal a minimum of 3-inch at joints. Eave drip edges shall extend ½ in. below sheathing and extend back on the roof a minimum of 2-inches. The drip edge shall be mechanically fastened to the roof deck. Fasteners shall be fabricated from similar or compatible material and spacing shall be a maximum of 4-inch o.c. Mechanical fasteners shall be applied in an alternating (staggered) pattern along the length of the drip edge. Drip edge at eaves shall be installed over the underlayment.

S1.1.3 Installation of starter strips at eaves:

Starter strips at eaves shall be set in a minimum 8-inch-wide strip of flashing cement. Maximum thickness of flashing cement shall be 1/8 inch or a shingle manufacturer-approved ASTM D1970 fully adhered (peel-and-stick) starter strip with asphaltic adhesive strip at eave.

S1.1.4 Attachment of shingles at intersections, valleys, rakes and gable ends:

S1.1.4.1 Attachment of Shingles at Intersections and Valleys:

Shingles installed at all intersections and both sides of open valleys shall be set in a minimum 8-in.-wide strip of flashing cement. Maximum thickness of flashing cement shall be $\frac{1}{8}$ in. Cut side of closed valleys shall be set in a minimum 2-in.-wide, $\frac{1}{8}$ -in.-thick strip of flashing cement. Woven valleys to be according to the manufacturer's specifications.

S1.1.4.2 Attachment of Shingles at Rakes:

Manufacturer-approved starter strips at rakes shall be set in a minimum 8-in.-wide strip of compatible flashing cement. Maximum thickness of flashing cement shall be $\frac{1}{8}$ in or install a shingle manufacturer-approved ASTM D1970 fully adhered (peel-and-stick) starter strip with asphaltic adhesive strip at rake. Fasten starter strips parallel to the rakes according to the manufacturer's specifications. Position fasteners to ensure they will not be exposed. Starter strips and shingles must not extend more than $\frac{1}{4}$ in. beyond the drip edge.

S1.2 Metal Panels:

Metal panel roofing systems and their attachment shall be installed in accordance with the manufacturer's installation instructions and shall provide uplift resistance equal to or greater than the design uplift pressure for the roof based on the site design wind speed and exposure category. The metal panels shall be installed over continuous decking and one of the acceptable sealed roof deck underlayment options (See Section S2).

S1.3 Clay and Concrete Roof Tiles:

Clay and concrete roof tile systems shall be installed over continuous 19/32" thick plywood roof decking and one of the acceptable sealed roof deck underlayment options (See Section S2). Clay and concrete roof tile systems and their attachment shall meet the requirements of the site design wind speed and exposure category. For design wind speeds based on 2012 IRC (ASCE 7-05), clay and concrete roof tiles shall be installed in accordance with FRSA/ Tile Roofing Institute installation guidelines, "Concrete and Clay Roof Tile Installation Manual Fourth Edition, FRSA/TRI 07320/08-05" for the site design wind speed and exposure category. For design wind speeds based on 2015 IRC (ASCE 7-10), clay and concrete roof tiles shall be installed in accordance with FRSA/ Tile Roofing Institute installation guidelines, "Florida High Wind Concrete and Clay Roof Tile Installation Manual Fifth Edition, FRSA/TRI April 2012 (04-12)" for the site design wind speed and exposure category. Mortar set tile or mortar set hip and ridge tiles (Systems Three and Four B, as listed in FRSA/TRI Manual) are not permitted. Hip and ridge boards shall be attached to the roof framing to resist the uplift pressure for the site design wind speed and exposure or in accordance with Table 11 of the FRSA/Manual. Hip and ridge tiles shall be secured to the hip and ridge boards with mechanical fasteners and/or an approved roof tile adhesive.

S1.4 Other Roof Coverings:

For all other roof coverings, the designer must provide documentation showing the roof covering and the attachments were designed for the component and cladding wind pressures corresponding to the site design wind speed (up to 150 mph). All roof coverings, regardless of type, shall be installed in accordance with the manufacturer's installation guidelines for the appropriate design wind speed. When applicable (e.g., wood shakes, slate roofs), the roof deck shall be sealed using one of the options provided in Section S2 that is compatible with the manufacturers installation requirements for the roof covering selected.

S1.5 Residential Reroofing:

Reroofing of residential structures shall meet the requirements of this section for roof sheathing replacement, roof sheathing attachment, and roof covering; and, Section S2 for Sealed Roof Deck. Existing roof coverings shall be removed to expose the roof deck. An inspection shall be conducted at this point to determine the condition of roof decking in accordance with section S1.5.1. The inspection shall also determine the adequacy of the roof deck attachment and the existing decking as well as any replaced decking shall be fastened in accordance with Section S1.5.2 or Section S1.5.3 as appropriate for the type and thickness of the roof decking.

S1.5.1 Deteriorated or damaged roof deck:

Damaged or deteriorated decking will generally be marked by one or more of the following characteristics: soft or spongy wood, wood swelling or buckling, delamination (plywood), or crumbling and flaking wood. If deteriorated or damaged roof decking is identified, the decking shall be replaced.

S1.5.2 Sawn lumber or wood board roof decking:

S1.5.2.1 For sawn lumber or wood boards up to 1-inch-thick:

Add fasteners to ensure boards are secured with at least two nails, having a minimum diameter of 0.131 inches and a minimum length of 2-1/2 inches, (three nails if the board is wider than 8 inches) to each roof framing member it crosses. Framing members shall be spaced no more than 24 inches apart. Clipped-head, D-head or round-head nails shall be acceptable provided they have the required minimum diameter and length.

S1.5.2.2 For wood boards greater than 1-inch-thick and up to 2 inches thick:

Add fasteners as required to ensure that the decking is secured with at least two nails, having a minimum diameter of 0.131 inches and sufficient length to penetrate a minimum of 1-5/8 inches into the roof framing, (three nails if the board is wider than 8 inches) to each framing member it crosses. Framing members shall be spaced no more than 24 inches apart. Clipped-head, D-head or round-head nails shall be acceptable provided they have the required minimum diameter and length.

S1.5.3 Structural wood panel (plywood or oriented strand board-OSB) Roof Sheathing:

The number and spacing of additional fasteners needed to adequately strengthen the connection of structural wood panel roof sheathing depends on the size, type and spacing of the existing fasteners. The re-nailing solutions specified in Table S2 are based on using ring-shank nails with the following characteristics and dimensions.

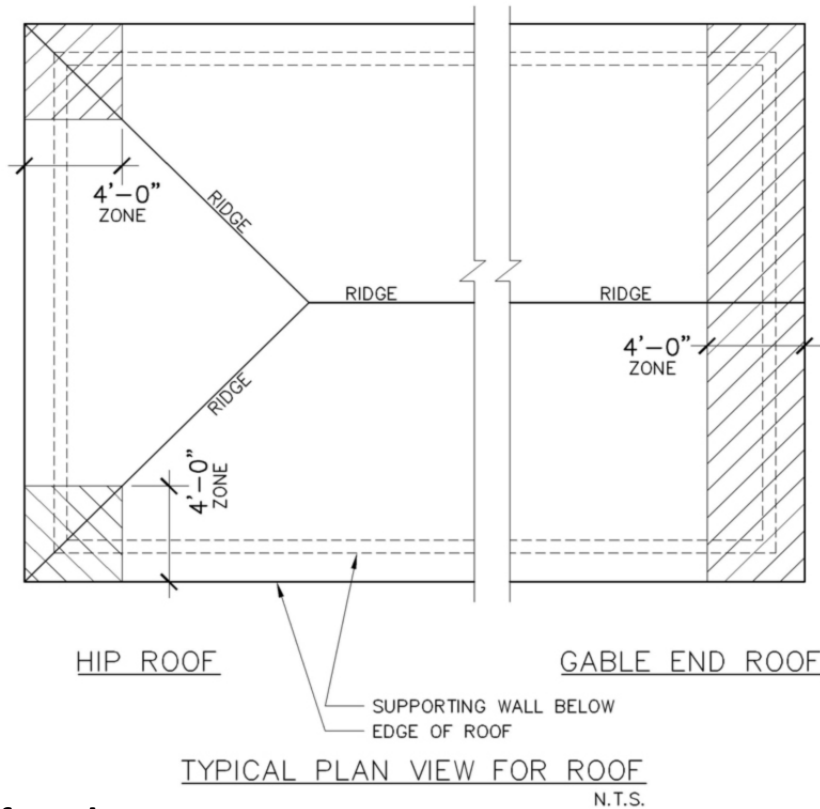
- full round head diameter (no clipped head nails allowed)
- 2-3/8-inch minimum nail length
- 0.113-inch minimum shank diameter

Additional fasteners meeting the minimum requirements listed above shall be installed in accordance with Table S2 for the zones shown in Figure S1.

TABLE S2. ADDITIONAL FASTENERS AT PANEL EDGES AND INTERMEDIATE FRAMING FOR ROOF DECKS

Wind Speed	Existing Fasteners	Existing Spacing	Required Additional Fastening	
			Within 4-foot zone (see Figure S1)	Outside of 4-foot zone
120 mph or less	Staples or 6d nails	Any	6 inches o.c. spacing between additional fasteners along panel edges and intermediate framing	
	8d smooth shank nails	6 inches o.c. or less along panel edges and intermediate framing	No additional fasteners required along panel edges, 6 inches o.c. spacing between additional fasteners along intermediate framing	No additional fasteners required
	8d smooth shank nails	Greater than 6 inches o.c.	6 inches o.c. spacing between existing and additional fasteners along panel edges, 6 inches o.c. spacing between additional fasteners along intermediate framing	6 inches o.c. spacing between existing and additional fasteners along panel edges and along intermediate framing
	8d ring shank nails	12 inches o.c. or less	6 inches o.c. spacing between existing and additional fasteners along panel edges and intermediate framing	6 inches o.c. spacing between existing and additional fasteners along panel edges and along intermediate framing
Greater than 120 mph	Staples or 6d nails	Any	4 inches o.c. spacing between additional fasteners along panel edges and intermediate framing	6 inches o.c. spacing between additional fasteners along panel edges and intermediate framing
	8d smooth shank nails	Less than 6 inches o.c.	4 inches o.c. spacing between existing and additional fasteners along panel edges and 6 inches o.c. between additional fasteners along intermediate framing	No additional fasteners required along panel edges, 6 inches o.c. spacing between additional fasteners along intermediate framing
	8d smooth shank nails	6 inches o.c. or greater	4 inches o.c. spacing between existing and additional fasteners along panel edges and along intermediate framing	6 inches o.c. spacing between existing and additional fasteners along panel edges, 6 inches o.c. spacing between additional fasteners along intermediate framing
	8d ring shank nails	12 inches o.c. or less	4 inches o.c. spacing between existing and additional fasteners along panel edges and along intermediate framing	6 inches o.c. spacing between existing and additional fasteners along panel edges and along intermediate framing

FIGURE S1. IDENTIFICATION OF 4-FOOT ZONES FOR SPECIAL NAILING REQUIREMENTS



S2 Sealed Roof Deck

For all new construction and re-roofing applications, a sealed roof deck shall be constructed using one of the methods specified in Sections S2.1, S2.2, or S2.3.

S2.1 Self-adhering Polymer Modified Bitumen Membrane:

The entire roof deck shall be covered with a full layer of self-adhering polymer modified bitumen membrane ("peel and stick") conforming to ASTM D1970 requirements. In applications where membrane adhesion to OSB is marginal, apply a primer to the OSB panels to ensure the proper attachment of the self-adhering membrane to the sheathing.

S2.2 Tape Seams Between Roof Deck Wood Structural Panels:

Apply a 4-inch wide ASTM D1970 compliant self-adhering polymer-modified bitumen flashing tape or a 3-3/4-inch wide AAMA 711-13, Level 3 (for exposure up to 80°C/176°F) compliant self-adhering flexible flashing tape to seal all horizontal and vertical joints in the roof deck. In applications where flashing tape adhesion to OSB is marginal, apply a manufacturer-specified compatible primer to the OSB panels where the tape will be applied to ensure the proper attachment of the self-adhering tape to the sheathing.

Cover the entire deck with a code-compliant #30 ASTM D226 Type II or ASTM D4869 Type IV underlayment over the self-adhering tape. As an alternative, cover the entire deck with a reinforced synthetic roof underlayment which has an ICC evaluation report as an alternate to ASTM D226 Type II felt paper and has passed ASTM D4869 Section 8.6 liquid water transmission test. The synthetic underlayment shall have a minimum tear strength of 20 lb per ASTM D5034 or ASTM D4533.

These underlayment's shall be attached using annular ring or deformed shank roofing fasteners with minimum 1-in.-diameter caps (button cap nails) at 6 in. o.c. spacing along all laps and at 12 in. o.c. vertically and horizontally in the field or a more stringent fastener schedule if required by the manufacturer for high-wind and prolonged exposure installations. Horizontal laps shall be a minimum of 2 in. and end laps shall be a minimum of 6 in. Weave underlayment across valleys. Double-lap underlayment across ridges (unless there is a continuous ridge vent). Lap underlayment with minimum 6-in. leg "turned up" at wall intersections; lap wall weather barrier over turned-up roof underlayment.

S2.3 Two Layers of Underlayment:

Install two (2) layers of ASTM D226 Type II (#30) or ASTM D4869 IV (#30) underlayment in a shingle-fashion, lapped 19 in. on horizontal seams (36-in. roll), and 6 in. on vertical seams. Create a starter course of felt by cutting 17 in. off one side of the roll and install the remaining 19-in.-wide strip of underlayment along the eave, safely tacked in place. Install a 36-in.-wide roll of underlayment over the 19-in.-wide course of underlayment along the eave. The same procedure shall be followed for each course, overlapping the sheets 19-in. (leaving a 17-in. exposure). The underlayment shall be fastened with annular ring or deformed shank nails with 1-in.-diameter caps at 6-in. o.c. along the laps and at approximately 12-in. o.c. in the field of the top sheet between the side laps. For sites with design wind speeds less than 140 mph (ASCE 7-05), annular ring or deformed shank nails with 1-in.-diameter caps (button cap nails) shall be allowed. For sites with design wind speeds greater than or equal to 140 mph (ASCE 7-05), annular ring or deformed shank nails with 1-in.-diameter thin metal disks ("tincaps") shall be used.

Note:

- Weave underlayment across valleys.
- Double-lap underlayment across ridges (unless there is a continuous ridge vent).
- Lap underlayment with minimum 6-in. leg "turned up" at wall intersections; lap wall weather barrier over turned-up roof underlayment.

S3 Aluminum/Vinyl Soffit

All Aluminum/Vinyl Soffit covering shall be attached to minimum 7/16-inch-thick OSB or plywood or minimum nominal 2-inch x 2-inch wood supports 8-inches o.c. maximum.

S4 Roof Deck Attachment

Roof decks shall be nailed in accordance with the engineered drawings but no less than 6 inches o.c. maximum spacing along intermediate and edge framing members except within the 4-foot zones shown in Figure S1. Within the 4-foot zones shown in Figure S1, roof deck nailing shall be not less than 4 inches o.c. along all intermediate and edge framing. Fasteners shall be minimum 8d (0.113" x 2-3/8") irregular shank (i.e., ring shank or spiral) nails with full round heads. Staples are not permitted for fastening of the roof decking.

S5 Roof Vents

Roof Vents shall be designed for the applicable wind load; ridge and off ridge vents shall be tested in accordance with the Florida Building Code Testing Application Standard TAS 100(A) for high wind and be labeled for verification of compliance. All roof vents shall be installed in accordance with the manufacturer's installation instructions for the appropriate wind load.

Gable vents shall be provided with a removable cover that can be attached from the outside made of plywood or a nonporous type of shutter that will prevent water from entering through the gable end vent. Wood structural panels with a minimum thickness of 7/16 inch and a maximum span of 4 feet are permitted as a gable end cover. Panels must be pre-cut so that they can be attached to the framing surrounding the gable vent. Panels shall be pre-drilled as required for the anchorage method and all required hardware shall be provided. Permanent corrosion-resistant attachment hardware with anchors permanently installed on the building shall be provided. Attachment schedule shall be, at a minimum, in accordance with Table S3.

TABLE S3. GABLE END COVERING FASTENER SCHEDULE

Fastener Type	Fastener Spacing (inches) ¹
No. 8 Wood Screw based anchor with 2-inch embedment length ²	16
No. 10 Wood Screw based anchor with 2-inch embedment length ²	16
¼-inch Lag Screw based anchor with 2-inch embedment length ²	16

Notes for Table S3:

1. Fasteners shall be installed at opposing ends of the wood structural panel and have a 2-inch minimum penetration into the building framing through veneers. Attachment to veneers is not acceptable.
2. Where screws are attached to masonry or masonry/stucco, they shall be attached using vibration-resistant anchors having a minimum withdrawal capacity of 1500 lb.

S6 Gable End Bracing

Unless balloon framed, gable ends over 4-foot high shall be braced using the method specified in S6.1 or S6.2.

S6.1 Gable End Bracing Option 1:

A minimum 2-inch x 6-inch horizontal strong-back shall be installed at midpoint of the vertical height of the gable end wall. Strong-back shall be attached to each framing member it crosses using metal straps with 3-8d x 1-1/2-inch long nails at each end of the strap. Minimum 2 x 4 diagonal bracing not to exceed 45 degrees or 4 feet o.c. shall be installed on top of strong back and face nailed with 4-10d nails into side of gable wall framing studs. The other ends of diagonal braces shall be toenailed to roof rafters or top chords or trusses and connected with a metal strap with 4-8d x 1-1/2-inch long nails at each end of strap or face nailed with 4-10d nails into sides of ceiling joists when they run perpendicular to the gable wall or into the sides of 2-inch x 4-inch x 8-foot lateral braces connected to tops of ceiling joists or truss bottom chords when ceiling joists run parallel to the gable wall.

In addition, when ceiling joists run parallel to the gable end wall, a minimum 2-inch x 4-inch x 8-foot lateral brace shall be installed at maximum 6 feet o.c. on top of ceiling joists or truss bottom chord and gable top

plate, aligned with a wall stud below, and nailed with 2-10d nails at each support. Metal 20 gauge straps shall be installed on top of 2-inch x 4-inch lateral brace and over gable top plate into stud below using 10-8d nails top and bottom (into the lateral brace and into the wall stud below). Install minimum 2 x 4 blocking under lateral braces in the bay between the gable wall framing and the first ceiling joist or truss with four (4) 10d nails.

S6.2 Gable End Bracing Option 2:

When ceiling joists or trusses run parallel to the gable end wall, continuous 2-by-4 lateral braces shall be installed on the top edges of ceiling joists or the top edges of truss bottom chords from the gable end truss/framing at maximum 6-feet o.c., and aligned with a wall stud below. The lateral braces shall be attached to each truss bottom chord/ceiling joist with 2-10d nails. The braces shall extend back from the gable truss/framing a distance equal to 90% of the building width. Each lateral brace shall have a minimum 20-gauge metal strap connected to the lateral brace that wraps over the bottom chord of the gable end wall plate/truss, over the top plate of the wall below and connected to a stud in the wall below. Straps shall be connected with ten (10) 8d nails at each end. Install minimum 2 x 4 blocking under lateral braces in the bay between the gable wall framing and the first ceiling joist or truss with four (4) 10d nails.

S7 Continuous Load Path

A continuous load path shall be provided to transfer all lateral and vertical loads from the roof, wall and floor systems to the foundation. All residential structures proposed for locations with a wind speed of 120 mph or greater shall have the structural design depicting the load path and all connections signed and sealed by a State-based, registered design professional. Structures located outside of the 120 mph or higher wind zones shall be permitted to use prescriptive design in accordance with the engineered design limitations of the most current editions of the ANSI/AF&PA Wood Frame Construction Manual (WFCM) or the American Iron and Steel Framing Prescriptive Method for One and Two-family Dwellings (COFS-PM).

S8 Glazed Openings

Glazed openings shall be designed and protected in relation to the applicable wind loads and impact resistance requirements specified in Sections S8.1 and S8.2.

S8.1 Design Pressure Requirements:

Windows, all exterior doors (including the glazing in exterior doors), and all impact protection systems shall be rated for the design pressures appropriate for the exposure category, design wind speed, opening size, and opening location on the building. The required pressure ratings shall be depicted on the building plans. Products shall be tested, at a minimum, in accordance with IRC accepted standards and installed in accordance with the manufacturer's instructions. Acceptable IRC design pressure test standards for windows and glass doors include AAMA/WDMA/CSA 101/I.S.2/A440, ASTM E330 (products shall be tested to 1.5 times design pressure). Installation of products with adequate ratings achieved using the Florida Building Code Testing Application Standard, TAS 202 shall also be permitted.

S8.2 Opening Protection Impact Requirements:

All glazing in exterior windows and doors (including sliding glass doors, garage doors and entry doors, etc.) shall be impact rated or protected by a system that is impact rated as defined in this section.

Where the design wind speed is 120 mph or greater, accepted test standards for impact resistance include the Large Missile Test of ASTM E 1886 and ASTM E 1996 or AAMA 506. Installation of products with Florida Building Code Testing Application Standards, TAS 201, 202, and 203 shall also be permitted. Plans shall indicate the applicable test standard for impact resistance and labeling for verification of compliance consistent with plan submittal is required at time of inspection.

Where design wind speeds are less than 120 mph, wood structural panels with a minimum thickness of 7/16 inch and a maximum span of 8 feet are permitted to be used for opening protection. Panels shall be pre-cut and pre-drilled as required for the anchorage method and all required hardware shall be provided. Wood structural panels shall extend a minimum of 1-inch beyond the center-line of fasteners. Permanent corrosion-resistant attachment hardware with anchors permanently installed on the building must be provided. The attachment schedule must be, at a minimum, in accordance with Table S4.

Exception: Glazed openings (windows) in garage doors with a total window area less than or equal to 1.0 square feet for a one car wide garage door or 1.8 square feet for a two-car wide garage door shall not be required to be impact rated or covered with an impact rated system.

TABLE S4 WINDBORNE DEBRIS PROTECTION FASTENING SCHEDULE FOR WOOD STRUCTURAL PANELS

Fastener Type	Fastener Spacing (inches) ¹		
	Panel span ≤ 4-foot	Panel span > 4-foot and ≤ 6-foot	Panel span > 6-foot and ≤ 8-foot
No. 8 wood screw based anchor with 2-in. embedment length ²	16	10	8
No. 10 wood screw based anchor with 2-in. embedment length ²	16	12	9
¼-inch lag screw based anchor with 2-in. embedment length ²	16	16	16

Notes for Table S4:

1. Fasteners shall be installed at opposing ends of the wood structural panel and have a 2-inch minimum penetration into the building framing through veneers. Attachment to veneers is not acceptable.
2. Where screws are attached to masonry or masonry/stucco, they shall be attached using vibration-resistant anchors having a minimum withdrawal capacity of 1500 lb.

S9 Garage Doors

Garage doors and their attachment system shall conform to the design wind pressure for the door size, exposure category and design wind speed at the site. Products shall be tested and approved per ANSI/DASMA 108 or ASTM E 330 for the required design wind pressure or the garage door shall be protected with an impact-rated shutter/screen product that meets the design wind pressure. Garage doors and their attachment systems with adequate ratings achieved using the Florida Building Code Testing Application Standard, TAS 202 shall also be permitted. Labeling for verification of compliance is required.

S10 Chimney Chases

Wood frame chimney chases shall be structurally connected to rafters and ceiling joists. The attachment shall be detailed in the engineered plans or shall meet the minimum requirements of Sections S10.1, S10.2 and S10.3 as illustrated in Figure S2.

S10.1 Connection of Chimney structure to Roof Structure:

Each corner of the chimney structure shall have a tension strap fastened to the corner stud that continues downward to the roof support members below. The tension strap shall have a minimum tension capacity of 700 pounds and shall be connected with a minimum of seven (7) 8d by 1.5-inch-long nails at each end.

S10.2 Sheathing of Chimney:

Chimney framing shall be sheathed with minimum 7/16-inch-thick wood structural panels on all four exterior sides.

S10.3 Support of Chimney Perimeter:

The base perimeters of chimney framing shall be continuously supported by minimum 2x4 blocking fastened to roof framing members with joist hangers.

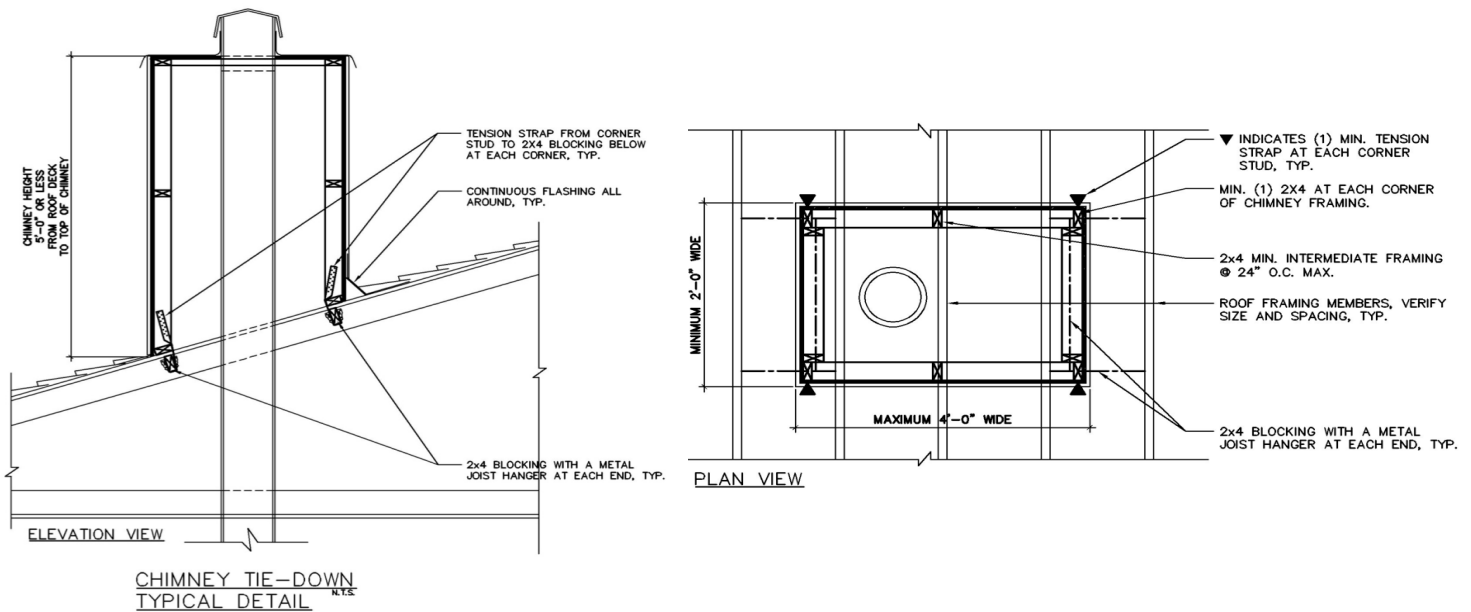


FIGURE S2. TYPICAL CHIMNEY TIE-DOWN DETAILS

S11 Braced Wall Lines / Shear Walls

Exterior and Interior shear wall and/or braced wall panel locations shall be indicated on the plans and shall be nailed in accordance with the engineered drawings but no less than 6 inches o.c. maximum spacing along all intermediate and edge framing using 8d (0.113-inch diameter x 2-3/8-inch-long) irregular shank (i.e., ring shank or spiral) nails with full round heads. Shear wall designs shall meet the engineered design requirements specified in Section S7.



LEVELS OF DESIGNATION



Component/system	BRONZE	SILVER	GOLD
ROOF <ul style="list-style-type: none"> • Roof deck is sealed • Roof deck attachment meets program standards • Roof covering condition meets standards 	✓	✓	✓
ATTIC VENTILATION <ul style="list-style-type: none"> • Roof-mounted vents are high-wind rated • Soffit vents will resist water intrusion • Gable overhangs and vents properly constructed • Gable end vents are protected against water intrusion 	✓	✓	✓
GABLES OVER 4' TALL - EXTERIOR <small>(IF APPLICABLE)</small> <ul style="list-style-type: none"> • Must have structural sheathing 	✓	✓	✓
OPENINGS <ul style="list-style-type: none"> • Impact-protected with an approved system 	-	✓	✓
ATTACHED STRUCTURES - PORCHES/CARPORTS <ul style="list-style-type: none"> • Roof connected to beam to resist uplift • Beam connected to column to resist uplift • Column anchored to structure to resist uplift 	-	✓	✓
GABLES OVER 4' TALL- BRACING <small>(IF APPLICABLE)</small> <ul style="list-style-type: none"> • Braced to withstand high wind pressures 	-	✓	✓
CHIMNEYS <small>(IF APPLICABLE)</small> <ul style="list-style-type: none"> • Properly attached to structure 	-	-	✓
OPENINGS <ul style="list-style-type: none"> • Have adequate design pressure ratings 	-	-	✓
CONTINUOUS LOAD PATH <ul style="list-style-type: none"> • Roof-to-wall connection • Wall-to-floor connection • Floor-to-foundation connection 	-	-	✓



SMART HOME AMERICA™

This public resource is maintained by Smart Home America and is available at:
SmartHomeAmerica.org/resources/details/code-supplement

For more information contact:

Smart Home America
P.O. Box 2731
Mobile, AL, 36652

info@smarthomeamerica.org

1.855.742.7233

SmartHomeAmerica.org