

**Issue: DS 2020-064:** The petitioner Paul Danforth, P.E., is seeking a declaratory statement on whether the installation of a manufactured home in accordance with FBC Section 458 requires additional termite treatment in accordance with Sections R318.1.1 through R318.1.7 if the requirements of Section R318.1.8 are met and whether a termite certificate of compliance is required.

Petitioner seeks clarification of the following questions:

**Question 1:** Does the installation of a manufactured home in accordance with FBC Section 458 require additional termite treatment in accordance with Sections R318.1.1 through R318.1.7 if the requirements of Section R318.1.8 are met by the use of naturally durable wood or wood that is preservative-treated in accordance with AWWPA U1 for the species, product, preservative and end use in areas required by Section R317.1.1 through R317.1.7 as illustrated in Figure 1?

**Question 2:** Does section R318.1 require that if termite protective treatment is provided by Section R318.1.8 in areas required by Section R317.1.1 through R317.1.7 as illustrated in Figure 1, that a Certificate of Compliance be issued to the building department by a licensed pest control company? Specifically, a Certificate of Compliance that contains the following statement: "The building has received a complete treatment for the prevention of subterranean termites. Treatment is in accordance with rules and laws established by the Florida Department of Agriculture and Consumer Services."

#### **Background:**

GFA International, Inc. is a full-service engineering firm providing engineering services including private provider plan review and inspection services pursuant to FS 553.791. GFA's private provider services include plan review and inspections of the installation of on-frame modular homes ("modular homes") pursuant to FBC Section 458 and Chapter 1 of the FBC as it relates to Section 458.

More specifically, GFA regularly reviews plans for modular homes throughout Florida. These modular homes are fabricated off-site at the manufacturer's facility under the requirements of FBC 458. The modular homes are transported to a site and supported by various foundation systems consisting of concrete, masonry, and wood. The frames are typically specified to be a minimum of 18" above the ground surface.

GFA believes the Code requirements are ambiguous and is seeking clarifications on certain sections of the FBC-R concerning treatment of building components and surroundings which are intended to prevent decay and termite infestation/damage.

#### **Project/situation:**

The following is a manufactured home project that GFA International, Inc. is anticipated to review for compliance with the 2017 Florida Building Code – Residential (See Figure 1):

A 26' by 48' modular home will be transported to a prepared site and supported on CMU Blocks which will be supported on ABS Pads. The frame of the modular home is specified to be a minimum of 18" above ground surface. A 10"x16" perimeter footing is specified around the perimeter of the modular homes to act as the ground anchor for the unit tie-downs. A perimeter wall skirt is specified to be attached to the perimeter footing and the underside of the modular

home frame. All wood shims, skirt wall framing, and sheathing are naturally durable or preservative treated (P.T.) wood in areas required by Section R37.1.1 through R317.1.7.

## **7<sup>th</sup> Edition (2020) Florida Building Code, Residential**

### **SECTION R317 PROTECTION OF WOOD AND WOOD-BASED PRODUCTS AGAINST DECAY**

#### **R317.1 Location required.**

Protection of wood and wood-based products from decay shall be provided in the following locations by the use of naturally durable wood or wood that is preservative-treated in accordance with AWPA U1 for the species, product, preservative and end use. Preservatives shall be listed in Section 4 of AWPA U1.

1. Wood joists or the bottom of a wood structural floor when closer than 18 inches (457 mm) or wood girders when closer than 12 inches (305 mm) to the exposed ground in crawl spaces or unexcavated area located within the periphery of the building foundation.
2. Wood framing members that rest on concrete or masonry exterior foundation walls and are less than 8 inches (203 mm) from the exposed ground.
3. Sills and sleepers on a concrete or masonry slab that is in direct contact with the ground unless separated from such slab by an impervious moisture barrier.
4. The ends of wood girders entering exterior masonry or concrete walls having clearances of less than 1/2 inch (12.7 mm) on tops, sides and ends.
5. Wood siding, sheathing and wall framing on the exterior of a building having a clearance of less than 6 inches (152 mm) from the ground or less than 2 inches (51 mm) measured vertically from concrete steps, porch slabs, patio slabs and similar horizontal surfaces exposed to the weather.
6. Wood structural members supporting moisture-permeable floors or roofs that are exposed to the weather, such as concrete or masonry slabs, unless separated from such floors or roofs by an impervious moisture barrier.
7. Wood furring strips or other wood framing members attached directly to the interior of exterior masonry walls or concrete walls below *grade* except where an *approved* vapor retarder is applied between the wall and the furring strips or framing members.

#### **R317.1.1 Field treatment.**

Field-cut ends, notches and drilled holes of preservative-treated wood shall be treated in the field in accordance with AWPA M4.

#### **R317.1.2 Ground contact.**

All wood in contact with the ground, embedded in concrete in direct contact with the ground or embedded in concrete exposed to the weather that supports permanent structures intended for human occupancy shall be approved pressure-preservative-treated wood suitable for ground contact use, except that untreated wood used entirely below groundwater level or

continuously submerged in fresh water shall not be required to be pressure-preservative treated.

## **SECTION R318 PROTECTION AGAINST TERMITES**

### **R318.1 Termite protection.**

Termite protection shall be provided by registered termiticides, including soil applied pesticides, baiting systems, and pesticides applied to wood, or other approved methods of termite protection labeled for use as a preventative treatment to new construction. See Section 202, "Registered termiticide." Upon completion of the application of the termite protective treatment, a Certificate of Compliance shall be issued to the building department by the licensed pest control company that contains the following statement: "The building has received a complete treatment for the prevention of subterranean termites. Treatment is in accordance with rules and laws established by the Florida Department of Agriculture and Consumer Services."

#### **R318.1.1**

If soil treatment is used for subterranean termite prevention, the initial chemical soil treatment inside the foundation perimeter shall be done after all excavation, backfilling and compaction is complete.

#### **R318.1.2**

If soil treatment is used for subterranean termite prevention, soil area disturbed after initial chemical soil treatment shall be retreated with a chemical soil treatment, including spaces boxed or formed.

#### **R318.1.3**

If soil treatment is used for subterranean termite prevention, space in concrete floors boxed out or formed for the subsequent installation of plumbing traps, drains or any other purpose shall be created by using plastic or metal permanently placed forms of sufficient depth to eliminate any planned soil disturbance after initial chemical soil treatment.

#### **R318.1.4**

If soil treatment is used for subterranean termite prevention, chemically treated soil shall be protected with a minimum 6 mil vapor retarder to protect against rainfall dilution. If rainfall occurs before vapor retarder placement, retreatment is required. Any work, including placement of reinforcing steel, done after chemical treatment until the concrete floor is poured, shall be done in such manner as to avoid penetrating or disturbing treated soil.

#### **R318.1.5**

If soil treatment is used for subterranean termite prevention, concrete overpour or mortar accumulated along the exterior foundation perimeter shall be removed prior to exterior chemical soil treatment, to enhance vertical penetration of the chemicals.

#### **R318.1.6**

If soil treatment is used for subterranean termite prevention, chemical soil treatments shall also be applied under all exterior concrete or grade within 1 foot (305 mm) of the primary structure sidewalls. Also, a vertical chemical barrier shall be applied promptly after

construction is completed, including initial landscaping and irrigation/sprinkler installation. Any soil disturbed after the chemical vertical barrier is applied shall be promptly retreated.

#### **R318.1.7**

If a registered termiticide formulated and registered as a bait system is used for subterranean termite prevention, Sections R318.1.1 through R318.1.6 do not apply; however, a signed contract assuring the installation, maintenance and monitoring of the baiting system that is in compliance with the requirements of Chapter 482, Florida Statutes shall be provided to the building official prior to the pouring of the slab, and the system must be installed prior to final building approval.

If the baiting system directions for use require a monitoring phase prior to installation of the pesticide active ingredient, the installation of the monitoring phase components shall be deemed to constitute installation of the system.

#### **R318.1.8**

If a registered termiticide formulated and registered as a wood treatment is used for subterranean termite prevention, Sections R318.1.1 through R318.1.6 do not apply. Application of the wood treatment termiticide shall be as required by label directions for use, and must be completed prior to final building approval.

## **Staff Analysis**

**Question 1:** Does the installation of a manufactured home in accordance with FBC Section 458 require additional termite treatment in accordance with Sections R318.1.1 through R318.1.7 if the requirements of Section R318.1.8 are met by the use of naturally durable wood or wood that is preservative-treated in accordance with AWWPA U1 for the species, product, preservative and end use in areas required by Section R317.1.1 through R317.1.7 as illustrated in Figure 1?

**Answer:**

**Option #1/Petitioner:**

It is GFA's position that FBC Section R318.1 and its various subsections are intended to provide for alternative methods of termite protection. As such, it is GFA's position that the chemical soil treatment requirements set forth in FBC-Residential section R318.1.1 through 318.1.7 are not required for the installation of the described manufactured home where building components are protected in accordance with Section R318.1.8 at locations required in Section R317.1 as illustrated in Figure 1. It is also GFA's position that Section R317.1 and its subsections allow the use of naturally durable or preservative treated wood as an approved method of termite protection as illustrated in Figure 1.

## Option #2/Staff:

The answer to the Petitioner's question is yes. The termite protection requirements of Sections R318.1.1 through R318.1.7 are in addition to requirements of Sections R317.1.1 through R317.1.7 of the 6<sup>th</sup> Edition (2017) Florida Building Code, Residential.

**Question 2:** Does section R318.1 require that if termite protective treatment is provided by Section R318.1.8 in areas required by Section R317.1.1 through R317.1.7 as illustrated in Figure 1, that a Certificate of Compliance be issued to the building department by a licensed pest control company? Specifically, a Certificate of Compliance that contains the following statement: "The building has received a complete treatment for the prevention of subterranean termites. Treatment is in accordance with rules and laws established by the Florida Department of Agriculture and Consumer Services."

## Answer:

### Option #1/Petitioner:

It is GFA's position that the Certificate of Treatment contemplated by FBC Section R318.1 is only required for projects which utilize termiticide applications in accordance with R318.1.1 through R318.1.7 and is Not Required for projects that protect the wood in areas required by R317.1.1 through R317.1.5 by use of naturally durable wood or wood that is preservative-treated in accordance with AWPA U1 for the species, product, preservative and end use.

### Option #2/Staff:

The answer to the Petitioner's question is yes. As per section R318.1 of the 6<sup>th</sup> Edition (2017) Florida Building Code, Residential, upon completion of the application of the termite protective treatment, a Certificate of Compliance shall be issued to the building department by the licensed pest control company.

