



Single Family Dwellings

FOUNDATIONS

1. Lots shall be graded to drain surface water away from foundation walls. The grade shall fall a minimum of 6 inches within the first 10 feet (R401.3)
2. Footings to be 40" below grade for frost protection (R403.1.4.1) and 24" wide with 8" wide foundation wall. Minimum living space shall be 400 sq. ft. Footings shall be on virgin dirt
3. Foundation anchor bolts shall be at least ½ "in diameter and shall extend a minimum of 7" into concrete, spaced
4. maximum of 6' on center and within 12" from each end of the plate section. Anchors or straps other than specified above shall be approved, spaced as required to provide anchorage equivalent to the ½" diameter bolts and installed per the model code evaluation report and the manufactures instructions (R403.1.6)
5. Foundation walls shall extend above the finished grade adjacent to the foundation a minimum of 6 in. (4 in. where masonry veneer is used) (R404.1.6)

FOUNDATION DRAINAGE

1. Concrete basement foundations shall have 2" gravel or crushed stone on the bottom and sides of the foundation, install a 4" drainage pipe or perforated pipe inside and outside of foundation walls. Provide 6" top fill of gravel or stone between pipe and footing. Foundation drains shall discharge to a sump pit located inside the building **not a sanitary sewer**. Sump pump shall discharge away from the foundation to daylight. Sump pits shall be sealed. (R405.1)
2. Basement walls shall be damp-proofed (R406.1)

TREATED WOOD Pressure treated wood is required for:

1. wood joists closer than 18" or wood girders closer than 12" to ground
2. wood joists closer than 18" or wood girders closer than 12" to ground
3. all sills or plates that rest on concrete exterior walls less than 8" above finished grade
4. wood siding, sheathing & exterior wall framing less than 6" from the ground or less than 2" from concrete steps,
5. porches, patio slabs
6. wood structural members exposed to the weather (R317)
6. **Anchors, connectors and hardware** shall be approved for use (double dip galvanized, stainless steel, or other approved material)

FLOORS

1. **Basement Concrete Floor:** 4" base of gravel, crushed stone placed on the prepared sub-grade, a 6-mil poly vapor retarder shall be installed between the base slab and base course. Minimum 3 ½" floor thicknesses (R506.1) (R506.2.3)
2. **Manufactured Lumber & Floor Trusses:** structural floor members shall not be cut, bored or notched in excess of the limitations as specified in (R502.8, R502.8.1 and R502.8.2)
3. Wood Trusses shall be designed in accordance with approved engineering practice (502.11)
4. Draft stops shall be installed when there is usable space both above and below the concealed space of a floor/ceiling assembly. Draft stops shall be installed so that the area of concealed space does not exceed 1000 sq. ft. in approximately equal areas. (R502.12) Fireblocking (302.11), (R502.13)

WALL COVERINGS Fireblocking is required in wood-frame construction in these areas:

1. in concealed spaces of stud walls, partitions, and furred spaces vertically at the ceiling and floor levels horizontally at intervals not exceeding 10 feet
2. At interconnections between concealed vertical and horizontal spaces such as occur in the soffits, drop ceilings and cove ceilings
3. in concealed spaces between stair stringers at the top and bottom of run (R302.11)
4. at openings around vents, pipes, ducts, cables and wires at ceiling and floor level with approved materials (R602.8, R302.11, R1003.19)

EXTERIOR WALL COVERING

1. The exterior wall envelope shall include flashing and be constructed with a water-resistant barrier (house
2. wrap, building felt or approved material) (R703.2)

ROOF/CEILING CONSTRUCTION

1. **Trusses:** Engineered roof truss design drawings and layout drawing showing girder and hanger locations (specify hanger type) are required prior to framing inspection. Approved anchors required at connections & bearing points. Bracing shall be installed per engineered truss design drawings. Trusses shall not be cut, notched, spliced or altered in any way without approval of registered design professional. Truss clips are required for all truss to wall connections. (R802.10)
2. **Ventilation:** Enclosed attics require soffit & roof vent free area equal to 1/300 of attic area. (R806 & R806.2 exception)
3. **Attic Access:** Readily accessible opening for access 22" X 30" with 30" headroom. (R807.1) When accessible from conditioned space, shall be weather –stripped and insulated (R402.2.4 IECC)

ROOFING

1. Roofing underlayment (felt) is required (R905.2.3, R905.3.3, R905.7.3)

2. Ice protection barrier (such as self-adhering polymer modified bitumen sheet) is required at eaves and shall extend from the eaves edge to a point at least 24" inside the exterior wall line. (R905.2.7, R905.4.3.1, R905.5.3.1, R905.6.3.1, R905.7.3.1, R905.8.3.1)
3. Metal flashings shall be corrosion resistant, minimum .019" or 26 Gage. (R903.2.1)
4. Asphalt shingles shall be installed according to Manufactures instructions and (R905.2)

CHIMNEYS AND FIREPLACES

1. Hearth extensions shall extend not less than 16" in front and not less than 8" beyond each side off the fireplace opening. For a fireplace opening equal to or greater than 6 square feet, the hearth extension shall extend 20" in front of & 12" beyond each side of the opening. (R1001.10)
2. Hearth thickness shall be 4" minimum. (R1001.9)
3. Mason Chimneys. Footings shall be constructed of concrete or solid masonry not less than 12" thick and shall extend not less than 6" beyond the face of the foundation support or support wall on all sides. (R1003.2)
4. Factory built chimneys and fireplaces shall be listed, labeled and installed per conditions of the listing (R.1004 & R1005)
5. Factory built chimneys and fireplaces shall be provided with an exterior air supply (R1006)

ENERGY EFFICIENCY

1. Jersey County is in a climate 5 (2018 IECC)
2. **Basement walls** associated with **conditioned** basements (finished) shall be insulated from the top of the **basement wall** down to 10' below grade or to the basement floor, whichever is less. (IECC R402.2.9)
3. **Basement walls** associated with **unconditioned** (not finished) basements shall meet this requirement **unless** the floor overhead is insulated in accordance with R402.1.2 & R402.2.8 (IECC)
4. **Crawl space walls – unvented.** Wall insulation shall be permanently fastened to the wall and extend downward from the floor to the finished grade level and vertically and/or horizontally for at least 24". Exposed earth in unvented crawl space foundations shall be covered with a continuous Class 1 Vapor retarder. All joints of the vapor retarder shall overlap by 6" and be sealed or taped and the edges of the retarder shall extend not less than 6" up the stem wall and shall be attached to the stem wall. Mechanical ventilation is required. (R402.2.11) (R408.3 IRC)

MEANS OF EGRESS (R311)

1. **Emergency escape & rescue window.** Basements, habitable attics and every sleeping room shall have not less than one openable emergency escape and rescue window or door opening directly to

the outside. Minimum net clear opening under normal operation shall be at least 5.7 sq. ft. Net clear height opening shall be not less 24 inches and net clear width shall be not less than 20 inches. (R310.1) Exceptions

2. **Window sill height.** Where a window is provided as the emergency escape and rescue opening, it shall have a sill height of not more than 44 inches above the floor; where the sill height is below grade, it shall be provided with a window well (R310.2.2)
3. **Window wells** shall not less than 9 sq. ft. with a horizontal projection and width of not less than 36 inches. The area of the window well shall allow the emergency escape & rescue opening to be fully operable. Drainage shall be required for all window wells. (R310.2.3)Exceptions
4. Minimum width of a **hallway** shall not be less than 36" (3 ft.) wide. (R311.6)
5. One **exit door** shall be required. It shall be a side-hinged exterior door and shall provide a clear width of not less than 32 inches and shall not pass through the garage.(R311.2)
6. **Landings** at doors. There shall be a floor or landing on each side of each exterior door with a clear width of not less than 36" wide. Refer to exceptions (R311.3)
7. Type of **lock or latch.** All egress doors shall be readily openable from the egress side without the use of a key or special knowledge or effort (R311.2)
8. **Stairways** – refer to Building Guideline Handouts for Stairs & Railings, Guard, Handrails and Tread Detail. a. Enclosed **accessible space under stairs** requires ½ inch gypsum board on enclosed side (R302.7); b. Interior and exterior stair illumination is required (R303.7 & R303.8) Exceptions

FIRE SAFETY

1. **Smoke Alarms** shall be located in each sleeping room, each hall area giving access to sleeping rooms and in each additional story including the basement. Smoke Alarms shall be powered by house wiring with battery backup and alarms interconnected. Smoke alarms shall be installed not less than 3 feet horizontally from the door or opening of a bathroom that contains a bathtub or shower (R314)
2. **Carbon Monoxide Alarms** shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms.(R315) Carbon Monoxide Alarms may be combined with smoke alarm. (R314.5)
3. **Garages** shall not open directly into a room used for sleeping purposes (R302.5.1) It shall be separated from the dwelling with ½" gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8" TYPE X gypsum board & the structure supporting the separation shall be protected by not less than ½" gypsum board (R302.6)
4. A 1-3/8 inch solid wood door, honeycomb or solid core metal door or a 20-minute fire-rated door required between the garage and dwelling. Doors may be self-closing. (R302.5.1)

5. **Insulation** including facings, when not enclosed in concealed spaces, shall have a flame spread index of less than or equal to 25 & smoke developed index of not less or greater than 450. Kraft faced insulation must be covered by ½" gypsum board. R302.10.1) Exceptions
6. **Foam plastic insulation** shall be separated from the interior of the building by minimum ½" gypsum board or an approved finish material equivalent to a 15 minute thermal barrier (R316.4)
7. Fireblocking shall be provided to cut off both vertical and horizontal concealed draft openings and to form an effective fire barrier between stories, and between a top story and the roof space (R302.11)

MISCELANIOUS REQUIREMENTS

1. The minimum ceiling height in habitable rooms is 7 ft. Bathrooms, toilet rooms, and laundry rooms shall have a ceiling height of not less than 6'8" (R305.1)
2. Minimum clearance for toilets is 21" in front & 15" from side to centerline of the toilet (R307.1)
3. Working clearance in front of electrical service panel shall be a minimum 30" wide X 36" deep, maintained free from any obstruction including pipes, ducts, & sump pits (2017 NEC Sec 110-26)
4. Glazing in windows shall bear the manufactures markings. Refer to R308.4.3