

Residential Code Requirements

This section contains general residential building code requirements. Please refer to the Building Codes for more detailed information. This information is intended as a guide and does not relieve the applicant from complying with all applicable code requirements.

New homes and existing homes undergoing additions constituting more than a 50% increase in square footage are required to install type 13D residential sprinklers.

****Changes are effective 3/19/2016**

Design Loads - 2015 International Residential Code

- Ground snowload - 25 psf
- 115 MPH wind speed
- Attics with storage - 20 psf
- Decks - 40 psf
- Balconies - 40 psf
- Rooms (other than sleeping) - 40 psf
- Sleeping areas - 30 psf
- Passenger vehicle garages - 50 psf (2000 lb point load over 20 sq. in area)
- Handrails - 200 lb concentrated lateral load
- Soil bearing capacity - 2,000 psf

Window and Door Openings

- Must be double studs
- Must have double headers
- All headers must be set on top of the studs, and must be set on edge
- For all single window and door openings, not exceeding 48 inches, the headers shall not be less than double 2x4 supporting one floor or roof
- For all twin openings not exceeding 72 inches, the headers shall not be less than double 2x6 supporting one floor or roof
- All triple openings not exceeding 8 feet, the headers shall not be less than double 2x8, and not exceeding 10 feet, not less than double 2x10 supporting one floor or roof. All headers must be braced at the top.

Framing

rooms above garage minimum 5/8" Type "X" gypsum board. Non-combustible floor sloped to overhead door with 4" minimum elevation to residence floor. Minimum 20 minute or 1-3/8" solid wood door with self-closer. No openings into sleeping areas.

Table of Building Envelope Requirements*

Windows and Insulation	
Window U Factor	0.35
Ceiling	R-49 (or R-38 uncompressed)
Wall	R-20
Foundation Type	
Floor	R-19
Basement Wall	R-10/13
Slab Perimeter	R-10
Crawl Space	R-10/13

*Notes

1. This table is based upon the International Energy Conservation Code, published by the International Code Council.
2. U-factors are MAXIMUM acceptable levels.
3. Insulation R-values are MINIMUM acceptable levels.
4. This table applies to single-family, wood frame residential construction. For steel framed wall construction or high-mass wall construction. Refer to Chapter 5 of the IECC.
5. "Window" refers to any translucent or transparent material (i.e. glazing) in exterior openings of buildings, including skylights, sliding glass doors, the glass areas of opaque doors, and glass block.
6. Window U-factor must be determined from a National Fenestration Rating Council (NFRC) label on the product.
7. Window area % is the ratio of the rough opening of windows to the gross wall area, expressed as a percentage. Up to one percent of the total window area may be exempt from the U-factor requirement.
8. Opaque doors are not considered glazing (or windows) and must have a maximum U-factor of 0.35. One exempt door allowed.

- Must be spaced 16 inches on centers
- Must be bolted to foundation with bolts of not less than one-half inch in diameter at 6 feet maximum centers
- Minimum embedded to a depth of not less than 8 inches in placed concrete
- Less than 15 inches in width of all wall supported thereon
- Pressure treated joists < 18" to ground
- Provide double joists under oversize bathroom tubs
- Provide 15 1/2 heel at roof truss bearings for R-49 insulation installation
- Provide collar ties or structural ridge at framed roofs less than 3 1/2 in 12 pitch
- Deck construction must comply with all specifications provided in the Deck Construction Guide

Mortar Mixture

- Not weaker than 1-2-3 1/2 and all mixture wet, but not more than 6-3/4 gallons of water to one bag of cement of 94 pounds

Foundation Walls

- Are required except that one-story buildings may use piers
- Foundation piers may be stone, brick, or concrete block
- Accessory buildings less than 400 sf require footings a minimum of 12" below grade
- Piers and all other footings must be placed below the surface of the ground and shall not be less than 30 inches (bottom of footing) and all joints must be securely cemented together
- Subsoil drains are required for all dwellings with basements, cellars, crawl spaces, or floors below grade and must be located inside and outside of the foundation. Weepholes are required with hollow block, maximum 48 inches apart.
- Foundation walls of habitable rooms located below grade shall be waterproofed with membranes extending from the edge of the footing to the finish grade line. The membrane shall consist of either 2-ply hot mopped felts, 6-mil. Polyvinyl chloride, 55-pound roll roofing or equivalent material. The laps in the waterproofing membrane shall be sealed and firmly affixed to the wall.
- An access crawl hole 18" by 24" shall be provided to the underfloor space. Vents to be located per 2015 IRC, Section 408.
- A readily accessible attic access opening not less than 22 inches by 30 inches shall be provided to any attic area having a clear height of over 30 inches. Attics containing appliances shall be provided with permanent or pull-down stairway in all new construction.

Wood

- Shall not rest upon masonry within 8 inches of the ground
- There shall interpose between the wood and the masonry a solid continuous layer of solid block or cement mortar at least 4 inches thick, or a hood along the edges of the masonry
- No wood within 4 feet of the ground shall be allowed to come in contact with piping, or other objects unless they have been fitted with metal shields to block the shelter tubes of termites

9. The code requires that windows be labeled in a manner to determine that they meet the IECC's air infiltration requirements; specifically, equal to or better than 0.30 cfm per square foot of window area (swinging doors below 0.50 cfm) as determined in accordance with AAMA/WDMA 101/LS2 (ASTM E 283).

10. R-2 shall be added to the requirements for heated slabs.
11. Floors over outside air must meet ceiling requirements.
12. R-values for walls represent the sum of cavity insulation plus insulated sheathing, if any.
13. Prescriptive packages are based upon normal HVAC equipment efficiencies.

All Electrical, Mechanical, and Plumbing Construction must be done in accordance with the adopted Anne Arundel County Codes and subject to field inspection.

One and Two Family Dwellings Code Requirements

Bedroom window	Minimum window required - Minimum net clear opening - Minimum net clear opening height - Minimum net clear opening width - Maximum sill height -	One 5.7 sq. ft 24-inches 20-inches 44-inches
Hallways	Minimum width -	3 feet
Stairways	Minimum clear width - Minimum headroom - Minimum tread - Maximum riser -	3 feet 6 ft 8 in 10-inches 7 3/4 inches
Working space around electric equipment	Minimum width - Minimum in front -	30-inches 36-inches
Ceiling height	Habitable rooms - Other areas - Under beams & ducts -	7 ft, 0 in 6 ft, 8 in 6 ft, 4 in
Bathrooms	Non-absorbent gypsum baseboard around shower & bath areas	
Exit ways	Two independent exit ways required for basement	
Fire stopping	All duct chases, bulkheads, laundry chutes, metal flues, tub traps, and all shafts at each floor	
Fuse box	Do not locate fuse box in clothes closets	
Smoke detectors	1 required on each level, plus 1 in each bedroom and one outside each sleeping area. Each shall have internal battery back-up plus being hardwired.	
Stud walls	2x4 at 16-inches on center, P.T. sole plates plates in contact w/masonry or concrete	
Wall coverings	Drywall - 1/2 inch Paneling - (Maximum smoke density - 450 Maximum flame spread - 200	
Habitable rooms	Minimum area - Minimum horizontal dimension -	70 sq. ft. 7 feet
Garage Separation	Attached garage separation from residence and attic minimum 1/2" gypsum board. Habitable	



ARCHITECTS

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Professional Certification:
I certify that these documents were prepared and approved by me, and that I am a duly licensed Architect under the laws of the State of Maryland, License Number #5297-A, Expiration Date: 06/27/2021



Professional Seal and Signature

Proposed Home Plans

1721 Lake Avenue
Shady Side, Maryland 20764

Revisions

Number	Description	Date

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**ANNE ARUNDEL COUNTY
RESIDENTIAL CODE
REQUIREMENTS**

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