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**CONSTRUCTION DOCUMENT REQUIREMENTS FOR SUBMITTAL**  
**All information provided on the construction plans shall be clear and legible.**

Plans review will be delayed if all the required information is not documented on the plans. Residential and Commercial plans shall include the following details:

**DRAWINGS SIZE/PLANS**

- Clear and legible plans – minimum ¼” scale or equivalent
- Provide 2 Sets of Plans
- Plans must be signed by the individual (not company) responsible for the design, including the Individual’s occupation and address (54.1-402 Code of Virginia)

**FOOTING**

- Width and thickness of the footing
- Details shall include foundation wall information
- Location of all columns, pier footings
- Piers footings and columns shall be sized to accommodate all point loads
- Slab thickness if applicable

**FOUNDATION**

- Type (i.e. Poured, CMU, etc.)
- Foundation wall width, height, and footprint dimension
- Details shall include reinforcement size/location and drainage system type and details
- Amount backfill against basement walls
- All point loads shall be identified

**FLOOR FRAMING**

- Type, Lumber Grade, Nominal Size, and on-center spacing required for all framing members
- Direction of run for framing members
- Plan details shall show entire floor framing system of each floor level. All beam, girders and the location of bearing points.
- Provide copies of all manufactured *beam* details, if applicable
- Provide copy of manufactured floor system showing each floor level, if applicable
- Habitable attics require a minimum of 30 lb. per square foot floor loading
- All point loads shall be identified

**WALL FRAMING**

- Stud nominal size, height, and on center spacing
- Bearing and nonbearing wall locations
- Opening sizes/door and window sizes
- All wall headers identified
- Window and Door Schedule
- Wind bracing plan identifying design approach, wall identification and length, panel location, nailing patterns and wall headers identified
- Walls more than 12’ in height required a Virginia Registered Design Professional to design the wall framing for wind bracing
- All point loads shall be identified

**ROOF FRAMING**

- Rafter nominal size, on center spacing, and length
- Direction of run for framing members
- Collar ties and/or ceiling joist nominal size, spacing, and length
- Ridge(s) identified
- All hips, valleys, gables, and bearing points identified

- Manufacturer’s design showing truss location and design for Engineered Roof Truss System
- Detailed individual truss details are required for all designs with more than one ridge line
- Overbuild(s) rafter size and spacing
- All point loads shall be identified

**FLOOR PLANS**

- Floor plan(s) show each level of the structure, including basements, unfinished areas, habitable attics, and bonus rooms
- All rooms/areas labeled to identify the use, i.e. bedroom, kitchen, recreation rooms
- All window and door locations clearly marked
- Habitable Attic areas 70 square foot or larger and 7’ ceiling heights require code compliant stairs

**ELEVATIONS**

- Details shall include exterior elevations indicating wall/floor heights. Elevations shall include windows and door locations.

**ENERGY CODE REQUIREMENTS**

- All projects (new & remodels) for all heated/conditioned areas require compliance with the R-values in the table to the right
- The buildings thermal envelope shall be represented on the drawings
- Unheated structures and areas such as garages, sunrooms, and seasonal structures that are not conditioned shall be clearly identified as such
- Basement remodeling projects shall clearly identify any existing insulation and any additional or new insulation being installed. Indicate the new and existing insulation R-values.
- Heating and cooling equipment to be sized in accordance with ACCA Manual S based on building loads calculated in accordance with ACCA Manual J or other approved heating and cooling calculation methodologies. Ducts and air handlers outside the building thermal envelope shall be pressure tested to determine air leakage.

Building Assemblies	Minimum R-Value
Walls (R-value)	R-15 or R-13 +R-1 <sup>H</sup>
Floors (R-value)	19
Ceiling (R-value) <sup>B</sup>	38
Ceiling (R-value) <sup>C</sup>	30
Basement Walls (R-value)	10 continuous or 13 cavity fill
Crawl Space Walls (Conditioned) <sup>C</sup>	10 continuous or 13 cavity fill
Concrete Slab (less than 24” below grade)	10, 2 ft
Slab (R-value) – Heated	15, 2 ft
Mass Wall (R-value) <sup>D</sup>	8/13 <sup>F</sup>
Windows (U-factor) <sup>E</sup>	0.35
Skylights (U-factor) <sup>E</sup>	0.55 max
Doors (U-factor) <sup>E</sup>	0.35
Hinged vertical attic access doors	R-5
Pull down attic access stairs	R-5 Rigid 75% of panel area

**MODULAR HOMES**

- Plans must be approved by a compliance assurance agency
- Plans must be labeled and dated with the approval date
- All work performed on-site or by others shall be detailed as required for new construction listed above (basement, porches, crawlspaces, unfinished area, garages, etc.)

**ACCESSORY STRUCTURE**

- Structures 256 square feet and larger require a permanent foundation detail
- Virginia Registered Design required on all metal building structures and carports
- Pole buildings exceeding 400 square foot in area required design professional to design the structure

**COMMERCIAL BUILDING PLANS (not required for Single Family Dwellings)**

- In addition to the above requirements, commercial projects shall include:
- Current Model Code edition
- Design Loads of the structure (Section 1603)
  - Wind loads 115 v<sup>ult</sup>
  - 35 lb ground snow (40 Pg in higher elevations)
  - Seismic Category B
  - Risk Category Section
  - Design Load Bearing Value of Soil
- Floor Live Loads
- Use Group as defined in Virginia Construction Code Section 302
- Type of Construction as defined in Virginia Construction Code Section 601
- Height and area (proposed and allowed) per Virginia Construction Section 503
- Required fire protection systems as listed in Virginia Construction Code Section 901
- Plans are sealed by a Virginia Registered Design Professional as required under Virginia Code 54.1-402
- Occupant load of tenant area(s) and total building occupant load (T1004.1.2)
- Floor design loads as required for the use of the space
- Fire exiting plan that clearly identifies the required exits, number of occupants traveling to the exit, and total travel distance for the occupants.
- Floor Plan indicating the use of each area/room; Dimensions of all rooms, hallways, and doors measured from finished materials
- Fire resistive construction and fire protection systems. Full details of firewalls, fire partitions, etc. (ex: UL Design details for nailing patterns, drywall installation, size of air space, etc.)
- Door Schedule indication size of door, hardware and rating
- ICC ANSI A117.1 Accessible Provisions:
  - Dimension the floor plan and provide measurements from finished materials for hallways, corridors, ramps, stairways, etc.
  - Restroom floorplan and elevations (min ¼" scale or larger; please provide dimensions if not to scale)
  - Depth and width, measured from finished material to finished material on restroom partitions, if provided
  - On-Center spacing of fixtures from finished walls to other fixtures or walls
  - Provide a 60" turning radius inside restroom
  - Provide clear floor space for required accessible fixtures including water closets, sinks, urinals
  - Interior wall elevation detailing mirror height, sink height, grab bar locations
  - Clear floor approach for all doors (404.2.3.2)
  - Customer Service Counters maximum height is 36" for a minimum of 36" length