

### CITY OF RICHMOND, VA Department of Planning and Development Review Land Use Administration Division 900 East Broad Street, City Hall - Room 511, Richmond, Virginia 23219

## AUTHORIZATION FROM PROPERTY OWNER

TO BE COMPLETED BY THE APPLICANT Applicant must complete <u>ALL</u> items								
HOME/SITE ADDRESS: APARTMENT NO/SUITE								
APPLICANT'S NAME:EMAIL ADDRESS:								
BUSINESS NAME (IF APPLICABLE):								
SUBJECT PROPERTY OR PROPERTIES:								
APPLICATION REQUESTED								
□ Plan of Development (New or Amendment)								
□ Wireless Plan of Development (New or Amendment)								
□ Special Use Permit (New or Amendment)								
Rezoning or Conditional Rezoning								
Certificate of Appropriateness (Conceptual, Administrative A	pproval, Final)							
Community Unit Plan (Final, Preliminary, and/or Amendment	;)							
□ Subdivision (Preliminary or Final Plat Correction or Extension	n)							

#### TO BE COMPLETED BY THE AUTHORIZED OWNER Owner must complete <u>ALL</u> items

Signing this affidavit acknowledges that you, as the owner or lessee of the property, authorize the above applicant to submit the above selected application/s on your behalf.

PROPERTY OWNER ADDRESS: \_\_\_\_\_

PROPERTY OWNER EMAIL ADDRESS:

Property Owner Signature: <u>Manuch Amir</u>

The names, addresses, telephone numbers and signatures of all owners of the property are required. Please attach additional sheets as needed. If a legal representative signs for a property owner, please attach an executed power of attorney.

3820 Hermitage Road Richmond, VA 23227 Tax Parcel No. N017-0364/011

# Special Use Permit (SUP) Application Report 09/19/2024

The owner of the property known as 3820 Hermitage Road, identified as Tax Parcel No. N017-0364/011 which is situated in a R-1 Single-Family Residential District, desires to use such property for the purpose of a dwelling unit within an accessory building to a single-family detached dwelling,

The special use granted by this ordinance will not be detrimental to the safety, health, morals and general welfare of the community involved, will not tend to create congestion in streets, roads, alleys and other public ways and places in the area involved, will not create hazards from fire, panic or other dangers, will not tend to overcrowding of land and cause an undue concentration of population, will not adversely affect or interfere with public or private schools, parks, playgrounds, water supplies, sewage disposal, transportation or other public requirements, conveniences and improvements, and will not interfere with adequate light and air. The applicant has conducted a detail review of the site and is confident that conditions will be met.

The Special Use of the Property shall be as a dwelling unit within an accessory building to a single-family detached dwelling, substantially as shown on the Plans. The Special Use shall be located no closer than five feet from the side-yard property line, and all mechanical equipment serving the Property will be located or screened so as not to be visible from any public right-of-way.

Comments received from various City of Richmond Departments and resolved, no outstanding issues.

All required final grading and drainage plans, together with all easements made necessary by such plans, will be submitted to the Director of Public Utilities for approval prior to the issuance of the building permit.

Property Owner Signature

Manuch Amir

Manuch Amir 3820 Hermitage Road Richmond, VA 23227



CITY OF RICHMOND 900 EAST BROAD STREET RICHMOND VIRGINIA 23219 (804) 646-6335

Administrative Approval

Commission of Architectural Review

October 11, 2023

Mr. Manuch Amir 3820 Hermitage Road Richmond, VA 23227

RE: Administrative Approval (COA-137360-2023) for 3820 Hermitage Road– New Garage material specifications

Dear Mr. Amir:

The staff for the Commission of Architectural Review (CAR) have reviewed the materials you submitted for the work at the above-referenced property. With the terms and conditions described below, you are granted administrative approval for this application in accordance with 30-930.6. (h) of the Richmond City Code.

The administrative approval covers the following work items: Construction of a new garage with a bronze metal or copper roof. The garage will have board and batten siding, and be painted to match the main dwelling. The garage will have ultimate clad, double hung, standard divided light windows.

The approval is conditioned on the following:

• The copper roof must be true copper, not a faux shiny copper that will not patina over time.

Therefore, all of the work listed in the application can proceed when any necessary permits are received from the Bureau of Permits and Inspections. Any additional work not included in the application will have to be submitted for additional review.

Please call me at 804.646.6569 or by e-mail at <u>alex.dandridge@rva.gov</u> if you have any questions.

Sincerely,

) mility

Alex Dandridge



# 3820 Hermitage Road Detached Garage Construction Plans

# Owner

Manuchehr and Rebecca A Amirsoleimani 3820 Hermitage Road Richmond, VA 23227

# Engineer

Obsidian, Inc. Charles R. Field, P.E. 417 North 22nd Street Richmond, VA 23223 804.647.1589 obsidianrva@gmail.com

# **Property Information**

Parcel ID Zoning Use **S**etbacks Lot Coverage < 20%

N0170364011 R-1 Residential Front Yard = 35 feet Side Yard = 10 feet Rear Yard = 10 feet



# Table of Contents

Table	of Contents
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6.1	Schedules
9.1	Isometric Views
51.1	Structure

# NCS Sheet Identification Standards

Dis	cipline Designators	Sh	eet Type Designator				
G	General –Sheet list, symbols, code summary	0	General: Symbol legend, abbreviations, general notes				
Н	Hazardous Materials Abatement, handling, etc.	1	Plans				
V	Survey / Mapping	2	Elevations				
В	Geotechnical	3	Sections				
С	Civil	4	Large Scale Drawings: plans, elevations, sections				
L	Landscape	5	Details				
S	Structural	6	Schedules and Diagrams				
Α	Architectural	7	User Defined (Calculations for Obsidian, Inc.)				
1	Interiors	8	User Defined				
Q	Equipment	9	3D drawings: isometric, perspective, photos				
F	Fire Protection						
Ρ	Plumbing						
D	Process						
М	Mechanical	1	N-#.##				
Ε	Electrical						
W	Distributed Energy		Sheet Sequence Number				
Т	Telecommunications						
R	Resource Existing conditions / buildings		Sheet Type Designator				
X	Other Disciplines		Discipling Desingator				
Ζ	Contractor / Shop Drawings		Discipline Desiligator				
0	Operations						

# **General Notes**

- 1. The structure will be constructed in accordance with the 2018 edition of the "Virginia Residential Code", the Virginia Statewide Uniform Building Code and the applicable City of Richmond ordinances.
- 2. The contractor is responsible for compliance with City, State and Federal job site safety requirements. 3. These plans are being provided without the benefit of external review by a third party. The client accepts responsibility for plans as drawn and will notify designer of any deficiencies that may be encountered during plan review or construction. If the contractor or contractors agent discovers missing or in complete details or conflicting items of work, they are obliged to call these items to the attention of the designer. Failure to do so may result in the designer disallowing any claims for cost incurred due to these deficiencies. 4. The contractor shall verify all dimensions and conditions prior to start of work, and any discrepancies will immediately be brought to the attention of the engineer.
- 5. Glazing in windows shall be tempered if the bottom edge is less than 18" above floor, in walls enclosing bathtub or showers, within 24" of arc of either vertical edge of a door, or less than 36" above the plane of stairways or landings. Glazing in all fixed and operable panels of swinging, sliding and bifold doors shall be tempered.
- 6. Carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages. The carbon monoxide detector shall comply with NFPA 720 and UL 2075. 7. Enclosed accessible space under stairs shall have walls, under-stair surface, and any soffits protected on
- the enclosed side with 1/2" gypsum board. 8. The structure shall be protected from subterranean termites by one of the following methods or a combination of these methods:
  - Chemical termiticide treatment, as provided in Section R318.2.
  - Termite baiting system installed and maintained according to the label.
  - Pressure-preservative-treated wood in accordance with the provisions of Section R317.1. • Naturally durable termite-resistant wood.
  - Physical barriers as provided in Section R318.3 and used in locations as specified in Section R317.1.
- 9. All lumber unless otherwise noted is to be Southern Pine No. 2.
- 10. There will not be a fire sprinkler system. 11. There is no proposed fire detection system or alarm.
- 12. The occupancy is Residential Group R-1.
- 13. The construction type is V-B.
- 14. There are 2 stories.
- 15. The house is located in Climate Zone 4.
- 16. VRC 2015 minimum insulation and fenestration requirements:
- Fenestration U-factor : 0.35
- Ceiling R-value : 49 • Wood frame wall R-value : 15 cavity or 13 + 1 continuous
- Mass wall R-value : 8/13
- Floor R-value : 19
- Basement wall R-value : 10/13
- Slab R-value & depth: 10, 2ft • Crawlspace wall R-value : 10/13
- 17. Load criteria:
  - Bearing soil capacity = 2000 psf •
  - Floor live load = 40 psf
  - Floor dead load = 10 psf
    Roof live load = 20 psf
  - Roof dead load = 10 psf
  - Snow loads = 20 psf
  - Basic Wind speed = 90 mph
  - Seismic Category: B.
  - Exposure: B.

# Scope of Work

Scope of work will generally consist of the construction of a new garage in accordance with these plans and the Virginia Residential Code, 2018.

# Room Area Table

	Name	Area
Garage	Slab	
	Hall	58 SF
	Bath	47 SF
	Garage	335 SF
	Work Shop	281 SF
	Utility	13 SF
		734 SF
Second	Floor	
	Studio	681 SF
	Bath	60 SF
	Closet	6 SF
		747 SF
Grand t	otal	1482 SF

Building Permit - Approved Construction Documents r general authority of the Building Code, this approved set of construction documents s be kept on the job site at all times and shall not be altered without approval from the Building fficial. This permit does not approve any Electrical, Mechanical or Plumbing work. This appro does not relieve the builder from complying with manufacturer instructions, Virginia Uniform Statewide Building Code and City of Richmond regulations whether noted, implied or omittee proved Plans\_20231117\_3820 Hermitage Rd\_BLDR-126660-2023 2/13/2023 11:20:35 AM

Reviewed per the 2018 Virginia Residential Code. The code can be read at the link below. https://codes.iccsafe.org/content/VRC2018P1



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#### General Notes

- 1. The general contractor and each trade contractor shall be required to check and be responsible for conformance of these plans with all requirements of the Virginia Uniform Statewide Building Code in force at the time of construction, local ordinances & construction requirements, and manufacturers recommendations prior to beginning work and during construction.
- 2. During construction the contractor may expose conditions that are unstable or unsafe. If the contractor finds such conditions, he shall take emergency action to stabilize the conditions and notify the owner and architect immediately.
- 3. The drawings are diagrammatic, intending to outline general design requirements only and are not intended to be complete in all details. specific implementation of the plans shall be the responsibility of the general contractor.
- 4. The general contractor and each trade contractor shall protect theirs and others work from damage due to their operation and shall repair or replace, as required, all damaged work to the satisfaction of the owner.
- 5. Protect existing construction to remain. If existing construction to remain is damaged during construction, the contractor shall repair or replace damaged areas to match the original condition.
- 6. Measurements and working conditions for all work shall be taken at the site and coordinated with connecting work with each other trade contractor. All walls are drawn @ 4" width with dimension taken edge to edge. Adjust as needed for prefabricated tubs, stairs, and other appliances.
- 7. Each trade contractor shall verify these drawings before laying out or proceeding with work and shall be held responsible for any errors resulting from their failure to exercise such verification.
- 8. The general contractor is responsible for coordination of the design of the site, HVAC, plumbing, and electrical trade contractors. Any plumbing, HVAC, or electric diagrams included in this plan are only provided as a guide to placement, not necessarily the the final placement.
- 9. Smoke detectors are required in each bedroom or sleeping space and in adjacent entry space and on each level of the dwelling.

### Exterior

- 1. Exterior details (eg: columns, shutters, decorative items, etc.) Are shown for illustrative purposes only. Window and door grill patterns are illustrative only and will be determined by the manufacturer of the window specified or by the general contractor. The general contractor and trade contractor will determine final placement and materials for all exterior details as well as requirements for exposure of siding reveal and other items that may be fastened to the exterior cladding or
- 2. Exterior detail may vary as predicted in elevation drawings. Field conditions and material variabilities or selections may affect final feature considerations and design.

#### Framing

- 1. Sawn lumber shall be identified by a grade mark of an accredited lumber grading or inspection agency and have design values certified by an accreditation body that complies with DOC PS 20.
- 2. Glued-laminated timbers shall be manufactured and identified as required in ANSI/AITC A190.1 and ASTM D 3737.
- 3. All framing lumber unless otherwise noted shall be SP #2 or better and have a minimum fb=1,200 psi, fv=90 ps, and e=1,400,000 PSI. All laminated veneer lumber shall have minimum fb=2,800 psi, fv=285 psi, and e=2,000,000 psi.
- 4. Wood structural panel sheathing shall conform to DOC PS 1, DOC PS 2 or, when manufactured in Canada, CSA O437 or CSA O325. Panels shall be identified for grade, bond classification, and performance category by a grade mark.
- 5. Truss drawings on architectural plans are intended to be diagrammatic only. Sealed manufacturer's truss drawings are required to be submitted with these drawings.
- 6. Braced wall panels to be placed in accordance with IRC §R602.10 or engineer design as indicated on plan. Where IRC proscriptive methods are used and indicated on plan minimum dimension of panel will govern placement of rough openings for openings in exterior and interior walls and may override center dimension of opening shown.
- 7. Where access is provided to attic areas over two story homes where a future room may be constructed first floor walls to be framed in accordance with IRC §R603.2.1 and tables R602.3(5) and R602.3.1.
- 8. Rafters framed to ridge members (ridge, hip, valley) labeled beam are required to be mechanically fastened with minimum Simpson A35 or
- 9. Where applicable temporary truss bracing will be the responsibility of the general contractor and his agents and will follow recommendations of the truss plate institute's guide "BCSI 1-03 Guide to Good Practice for Handling, Installing, & Bracing of Metal Plate Connected Wood Trusses."
- 10. Exterior walls of woodframe construction shall be designed and constructed in
- 11. accordance with the provisions of Chapter 6 and Figures R602.3(1) and R602.3(2), or in accordance with AWC NDS.
- 12. Components of exterior walls shall be fastened in accordance with Tables R602.3(1) through R602.3(4).
- 13. Wall sheathing shall be fastened directly to framing members and, where placed on the exterior side of an exterior wall, shall be capable of resisting the wind pressures listed in Table R301.2(2) adjusted for height and exposure using Table R301.2(3) and
- 14. shall conform to the requirements of Table R602.3(3). 15. Wall sheathing used only for exterior wall covering purposes shall comply with Section R703.
- 16. Studs shall be continuous from support at the sole plate to a support at the top plate to resist loads perpendicular to the wall. The support shall be a foundation or floor, ceiling or roof diaphragm or shall be designed in accordance with accepted engineering practice. • Jack studs, trimmer studs and cripple studs at openings in walls that comply with Tables R602.7(1) and R602.7(2).
- 17. The size, height and spacing of studs shall be in accordance with Table 18. R602.3.(5).
- 19. Studs shall be minimum Southern Pine No. 2 grade lumber. 20. Wood stud walls shall be capped with a double top plate installed to provide overlapping at corners and intersections with bearing partitions.
- 21. End joints in top plates shall be offset not less than 24 inches. 22. Joints in plates need not occur over studs. Plates shall be not less than 2-inches nominal thickness and have a width not less than the width of the studs
- 23. Studs shall have full bearing on a nominal 2-by or larger plate or sill having a width not less than to the width of the studs.

## Footing

- 1. Since the house is not located in a shrink swell area, in lieu of a complete geotechnical evaluation, the load-bearing values shall be assumed to be 1500psi as per Table R401.4.1.
- 2. Except where otherwise protected from frost, foundation walls, piers
- and other permanent supports of buildings and structures shall be protected from frost by one or more of the following methods:
- a. Extended below the frost line specified in Table R301.2.(1), 18". b. Constructed in accordance with Section R403.3.
- c. Constructed in accordance with ASCE 32. d. Erected on solid rock.
- 3. Exceptions:
- 4. Protection of freestanding accessory structures with an area of 600 square feet (56 m2) or less, of light-frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required.
- 5. Protection of freestanding accessory structures with an area of 400 square feet (37 m2) or less, of other than light-frame construction, with an eave height of 10 feet (3048 mm) or less shall not be required. 6. Decks not supported by a dwelling need not be provided with footings
- that extend below the frost line. 7. The footings shall be placed on clean undisturbed soil or compacted fill
- verified by an independent engineering firm. 8. The design does not allow for variation in bearing unless otherwise
- 9. Concrete to be minimum compressive strength of 3000psi and shall
- comply with Section R608.5.1 concrete material requirements as referenced by IRC §R402.2 10. Concrete shall be placed with a slump of 4"
- 11. Concrete exposed to weather shall have 6% air entrainment. 12. Concrete shall be thoroughly compacted and vibrated during placement
- and around embedded items and into corners of forms. 13. All reinforcing bar placed in concrete shall have a minimum 3" cover to all edges.
- 14. Reinforcing bars shall be deformed conforming to ASTM A-615, grade 60 (fy**-**60 ksi)
- 15. Do not backfill against walls retaining earth until masonry or concrete has cured for 28 days.
- 16. Backfill shall be placed in 8" loose layers and compacted to 95% of dry density in accordance with ASTM D698.

### Foundation

- 1. Grout collar joint solid in composite masonry foundation wall construction under all bearing points where indicated on plan.
- 2. In areas where columns or posts are shown on foundation plan the CMU cells shall be filled solid.
- 3. Brick columns supporting raised decks and porches shall be filled solid from footing to cap.
- 4. Foundation walls that retain earth and enclose interior spaces and floors below grade shall be dampproofed from the higher of (a) the top of the footing or (b) 6 inches below the top of the basement floor, to the finished grade. Masonry walls shall have not less than 3/8 inch portland cement parging applied to the exterior of the wall. The parging shall be dampproofed in accordance with one of the following: a. Bituminous coating.
- b. Three pounds per square yard of acrylic modified cement. c. One-eighth-inch coat of surface-bonding cement complying with ASTM C 887.
- d. Any material permitted for waterproofing in Section R406.2. 5. All sills in contact with masonry to be pressure treated (PT) material Fasteners in contact with PT material to be hot dipped galvanized conforming to ASTM A153 except foundation bolts greater than 1/2"dia.
- 6. Wood sill plates shall be anchored to the foundation with minimum 1/2inch diameter anchor bolts spaced a maximum of 6 feet on center or approved anchors or anchor straps spaced as required to provide equivalent anchorage to 1/2-inch-diameter (12.7 mm) anchor bolts. Bolts shall extend a minimum of 7 inches into concrete or grouted cells of concrete masonry units. The bolts shall be located in the middle third of the width of the plate. A nut and washer shall be tightened on each anchor bolt. There shall be a minimum of two bolts per plate section with one bolt located not more than 12 inches or less than seven bolt diameters from each end of the plate section.

### Drainage

- 1. Foundation walls that retain earth and enclose interior spaces and floors below grade shall be dampproofed from the higher of (a) the top of the footing or (b) 6 inches below the top of the basement floor, to the finished grade. Masonry walls shall have not less than 3/8-inch Portland cement parging applied to the exterior of the wall. The parging shall be dampproofed in accordance with one of the following:
- Bituminous coating: three pounds per square yard (1.63 kg/m2) of acrylic modified cement.
- One-eighth-inch coat of surface-bonding cement complying with ASTM C887.
- Other approved methods or materials.
- Exception: Parging of unit masonry walls is not required where a material is approved for direct application to the masonry 2. Drains shall be provided around concrete or masonry foundations that retain earth and enclose habitable or usable spaces located below grade. Drainage tiles, gravel or crushed stone drains, perforated pipe or other approved systems or materials shall be installed at or below the top of the footing or below the bottom of the slab and shall discharge by gravity or mechanical means into an approved drainage system. Gravel or crushed stone drains shall extend not less than 1 foot beyond the outside edge of the footing and 6 inches above the top of the footing and be covered with an approved filter membrane material. The top of open joints of drain tiles shall be protected with strips of building paper. Except where otherwise recommended by the drain manufacturer, perforated drains shall be surrounded with an approved filter membrane or the filter membrane shall cover the washed gravel or crushed rock covering the drain. Drainage tiles or perforated pipe shall be placed on not less than 2 inches of washed gravel or crushed rock not less than one sieve size larger than the tile joint opening or perforation and covered with not less than 6 inches of the same material.
- 3. Window wells and bulkhead enclosures shall be designed for proper drainage by connecting to the building's foundation drainage system. 4. Surface drainage shall be diverted to a storm sewer conveyance or other *approved* point of collection that does not create a hazard. 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. • Exception: Where *lot lines*, walls, slopes or other physical barriers prohibit 6 inches of fall within 10 feet, drains or swales shall be constructed to ensure drainage away from the structure.
- 5. Impervious surfaces within 10 feet of the building foundation shall be sloped a minimum of 2 percent away from the building.

# **C**rawlspace

Ventilation

- 1. The under-floor space between the bottom of the floor joists and the earth under the building shall have ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall be not less than 1 square foot for each 150 square feet of under-floor space area. One such ventilating opening shall be within 3 feet of each corner of the building.
- 2. Ventilation openings shall be covered for their height and width with any of the following materials provided that the least dimension of the covering shall not exceed 1/4 inch (6.4 mm):
- Perforated sheet metal plates not less than 0.070 inch thick. • Expanded sheet metal plates not less than 0.047 inch thick.
- Cast-iron grill or grating.
- Extruded load-bearing brick vents.
- Hardware cloth of 0.035 inch wire or heavier. • Corrosion-resistant wire mesh, with the least dimension being 1/8 inch thick.

Roof

- 1. Enclosed attics and enclosed rafter spaces formed where ceilings are applied directly to the underside of roof rafters shall have cross ventilation for each separate space by ventilating openings protected against the entrance of rain or snow.
- 2. Ventilation openings shall have a least dimension of 1/16 inch minimum and 1/4 inch maximum.
- 3. Ventilation openings having a least dimension larger than 1/4 inch (6.4 mm) shall be provided with corrosion-resistant wire cloth screening, hardware cloth or similar material with openings having a least dimension of 1/16 inch minimum and 1/4 inch maximum.
- 4. Required ventilation openings shall open directly to the outside air. 5. The minimum net free ventilating area shall be 1/150 of the area of the vented space.
- 6. Where eave or cornice vents are installed, insulation shall not block the free flow of air. Not less than a 1-inch space shall be provided between the insulation and the roof sheathing and at the location of the vent. 7. Ventilators shall be installed in accordance with manufacturer's
- instructions. 8. Installation of ventilators in roof systems shall be in accordance with
- the requirements of Section R903. 9. Installation of ventilators in wall systems shall be in accordance with the requirements of Section R703.1.

Roofing

- 1. The home shall have a controlled method of water disposal from roofs that will collect and discharge roof drainage to the ground surface not less than 5 feet (1524 mm) from foundation walls or to an *approved* drainage system.
- 2. Ice and water shield shall be applied at the eaves to 24" inside the exterior wall line. All valley's to be lined with ice and water shield or equivalent.
- 3. Drip edge shall be installed on all roof edges. Install drip edge on eaves first with underlayment installed over the drip edge. Install drip edge on rakes after underlayment is installed, with the drip edge fastened over
- 4. Underlayment. Joints in drip edge shall be lapped minimum 2 in with the upslope piece lapped over the down slope piece. Install fastener 8 in to 10 in on center, approximately 1-3/4 in (44 mm) from the outside edge of the drip edge
- Rafters shall be framed not more than 11/2-inches offset from each other to ridge
- board or directly opposite from each other with a gusset plate as a tie. Ridge board shall be not less than 1-inch nominal thickness and not less in depth than the cut end of the rafter.
- 8. At valleys and hips there shall be a valley or hip rafter not less than 2-inch nominal thickness and not less in depth than the cut end of the
- 9. Hip and valley rafters shall be supported at the ridge by a brace to a bearing partition or be designed to carry and distribute the specific load at that point.
- 10. Where the roof pitch is less than three units vertical in 12 units horizontal (25-percent slope), structural members that support rafters and ceiling joists, such as ridge beams, hips and valleys, shall be designed as beams.
- 11. Where ceiling joists are not connected to the rafters at the top wall plate, joists connected higher in the *attic* shall be installed as rafter ties, or rafter ties shall be installed to provide a continuous tie.
- 12. Where ceiling joists are not parallel to rafters, rafter ties shall be installed. Rafter ties shall be not less than 2 inches by 4 inches (nominal), installed in accordance with the connection requirements in Table R802.5.1(9), or connections of equivalent capacities shall be provided.
- 13. Where ceiling joists or rafter ties are not provided, the ridge formed by these rafters shall be supported by a wall or girder designed in accordance with accepted engineering practice.
- 14. Collar ties or ridge straps to resist wind uplift shall be connected in the upper third of the *attic* space with 4-10d box  $(3" \times 0.128")$ ; or 3-10d common ( $3" \times 0.148"$ ); or 4-3"  $\times 0.131"$  nails faced nailed to each
- 15. Collar ties shall be not less than 1 inch by 4 inches (nominal), spaced not more than 4 feet on center.
- 16. Ends of ceiling joists shall be lapped not less than 3 inches or butted over bearing partitions or beams and toenailed to the bearing member. Where ceiling joists are used to provide resistance to rafter thrust, lapped joists shall be nailed together in accordance with Table R802.5.1(9) and butted joists shall be tied together in a manner to resist such thrust.
- 17. Joists that do not resist thrust shall be permitted to be nailed in accordance with Table R602.3(1).
- 18. Wood structural panels shall conform to DOC PS 1, DOC PS 2, CSA O437 or CSA O325, and shall be identified for grade, bond classification and performance category by a grade mark or certificate of inspection issued by an *approved* agency. Wood structural panels shall comply with the grades specified in Table R503.2.1.1(1).
- 19. Roofing material dead loads based on: 40 yr composite shingle: 3.0 lbs/saft ouarried slate: 11 lhe/enft

dualiteu state.	
concrete tile:	12.5 lbs/saf

# Concrete Slab

- 1. Concrete to be minimum compressive strength of 3000psi unless
- otherwise noted. as per IRC §R402.2 2. All reinforcing bar placed in concrete shall have a minimum 3" cover to
- all edges. 3. Welded wire mesh shall conform to ASTME A-185, lap edges of wire at least 6" in each direction.

# Egress / Windows / Doors

- 1. All egress openings from bedrooms shall have a minimum net clear opening of 5.7 square feet, be not more than 44" from finished floor to sill height, and have a minimum net clear opening height of 24" and width of 20".
- 2. Contractor to verify height of window sill above grade and determine need for guard rail or other remedy if over 6' from finished grade at exterior.
- All exterior openings shall be protected from water intrusion by generally accepted building practices and as required by the virginia
- 4. Handrails shall be continuous, the full length of the stairs and ends shall be returned or terminated in newel posts. Handgrip portions shall not be more than 2-5/8" in cross sectional dimension or as approved by the building official.

# Flashing

- 1. Approved corrosion-resistant flashing shall be applied shingle-fashion in a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. Self-adhered membranes used as flashing shall comply with AAMA 711. Fluid-applied membranes used as flashing in exterior walls shall comply with AAMA 714. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at the following
- locations: A. Exterior window and door openings. Flashing at exterior window and door openings shall extend to the surface of the exterior wall finish or to the water-resistive barrier complying with Section 703.2 for subsequent drainage. Mechanically attached flexible flashings shall
- comply with AAMA 712. Flashing at exterior window and door openings shall be installed in accordance with one or more of the following:
- a. The fenestration manufacturer's installation and flashing instructions, or for applications not addressed in the fenestration manufacturer's instructions, in accordance with the flashing manufacturer's instructions. Where flashing instructions or details are not provided, pan flashing shall be installed at the sill of exterior window and door openings. Pan flashing shall be sealed or sloped in such a manner as to direct water to the surface of the exterior wall finish or to the waterresistive barrier for subsequent
- drainage. Openings using pan flashing shall incorporate flashing or protection at the head and sides. b. In accordance with the flashing design or method of a registered
- design professional. . In accordance with other approved methods.
- B. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.
- C. Under and at the ends of masonry, wood or metal copings and sills. Continuously above all projecting wood trim.
- Where exterior porches, decks or stairs attach to a wall or floor assembly of wood-frame construction.
- F. At wall and roof intersections.

# **G.** At built-in gutters. GLAZING

- 1. Each pane of glazing installed in hazardous locations shall be provided with a manufacturer's designation specifying who applied the designation, the type of glass and the safety glazing standard with which it complies, and that is visible in the final installation.
- 2. Regular, float, wired or patterned glass in jalousies and louvered windows shall be not less than nominal 3/16 inch thick and not more than 48 inches in length. Exposed glass edges shall be smooth.
- 3. Glazing in fixed and operable panels of swinging, sliding and bifold doors shall be considered to be a hazardous location.
- 4. Glazing in an individual fixed or operable panel adjacent to a door shall beconsidered to be a hazardous location where the bottom exposed edge of the glazing is less than 60 inches above the floor or walking surface and it meets either of the following conditions:
- A. Where the glazing is within 24 inches of either side of the door in the plane of the door in a closed position.
- B. Where the glazing is on a wall less than 180 degrees from the plane of the door in a closed position and within 24 inches of the hinge side of an in-swinging door.
- 5. Glazing in an individual fixed or operable panel that meets all of the following conditions shall be considered to be a hazardous location:
- A. The exposed area of an individual pane is larger than 9 square feet. B. The bottom edge of the glazing is less than 18 inches above the floor.
- C. The top edge of the glazing is more than 36 inches above the floor. D. One or more walking surfaces are within 36 inches, measured horizontally and in a straight line, of the glazing.
- 6. Glazing in guards and railings, including structural baluster panels and nonstructural in-fill panels, regardless of area or height above a walking surface shall be considered to be a hazardous location.
- 7. Glazing in walls, enclosures or fences containing or facing hot tubs, spas, whirlpools, saunas, steam rooms, bathtubs, showers and indoor or outdoor swimming pools where the bottom exposed edge of the glazing is less than 60 inches measured vertically above any standing or walking surface shall be considered to be a hazardous location. This shall apply to single glazing and each pane in multiple glazing. Exception: Glazing that is more than 60 inches, measured horizontally and in a straight line, from the water's edge of a bathtub, hot tub, spa, whirlpool or swimming pool or from the edge of a shower, sauna or steam room.
- 8. Glazing where the bottom exposed edge of the glazing is less than 36 inches above the plane of the adjacent walking surface of stairways, landings between flights of stairs and ramps shall be considered to be a hazardous location.
- A. Exceptions: Where glazing is adjacent to a walking surface and a horizontal rail is installed at 34 to 38 inches above the walking surface. The rail shall be capable of withstanding a horizontal load of 50 pounds per linear foot without contacting the glass and have a cross-sectional height of not less than 11/2 inches.
- B. Glazing 36 inches or more measured horizontally from the walking surface. 9. Glazing adjacent to the landing at the bottom of a stairway where the glazing is less than 36 inches (914 mm) above the landing and within a 60-inch horizontal arc less than 180 degrees (3.14 rad) from the bottom tread nosing shall be considered to be a hazardous location.
- A. Exception: Where the glazing is protected by a *guard* complying with Section R312 and the plane of the glass is more than 18 inches (457 mm) from the guard.

# Smoke Alarms

- 1. Smoke alarms shall comply with NFPA 72
- 2. Smoke alarms shall be listed in accordance with UL 217. Combination smoke and carbon monoxide alarms shall be listed in accordance with UL 217 and UL 2034.
- 3. Smoke alarms shall be installed in the following locations: In each sleeping room.
- Outside each separate sleeping area in the immediate vicinity of the bedrooms.
- On each additional story of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. 4. In dwellings or dwelling units with split levels and without an intervening door between the
- adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level. 5. 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 unless this would prevent placement of a smoke alarm required by this section. 6. Where more than one smoke alarm is required to be installed within an individual dwelling unit the alarm devices shall be interconnected in such a manner that the actuation of one alarm will
- activate all of the alarms in the individual dwelling unit. Physical interconnection of smoke alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one alarm.
- 7. Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of smoke alarms. 8. Smoke alarms shall receive their primary power from the building wiring where such wiring is served
- from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection.

## Carbon Monoxide Alarms

- 1. Carbon monoxide alarms shall be listed in accordance with UL 2034. Combination carbon monoxide and smoke alarms shall be listed in accordance with UL 2034 and UL 217.
- 2. Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2 3. Carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.
- The dwelling unit contains a fuel-fired appliance. • The dwelling unit has an attached garage with an opening that communicates with the
- dwelling unit. 4. Carbon monoxide alarms in dwelling units shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms.
- 5. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.
- 6. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.
- 7. Where more than one carbon monoxide alarm is required to be installed, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual dwelling unit. Physical interconnection of carbon monoxide alarms shall not be required where listed wireless alarms are installed and all alarms sound upon activation of one
- 8. Carbon monoxide alarms shall receive their primary power from the building wiring where such wiring is served from a commercial source and, where primary power is interrupted, shall receive power from a battery. Wiring shall be permanent and without a disconnecting switch other than those required for overcurrent protection. Exceptions:
- Carbon monoxide alarms shall be permitted to be battery operated where installed in buildings without commercial power.
- Carbon monoxide alarms installed in accordance with Section R315.2.2 shall be permitted to be battery powered.

### Stairways

- 1. Width. Stairways shall be not less than 36 inches in clear width at all points above the permitted handrail height and below the required headroom height. The clear width of stairways at and below the handrail height, including treads and landings, shall be not less than 311/2 inches where a handrail is installed on one side and 27 inches where handrails are installed on both sides.
- 2. Headroom. The headroom in stairways shall be not less than 6 feet 8 inches measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway.
- 3. Vertical rise. A flight of stairs shall not have a vertical rise larger than 151 inches between floor levels or landings. 4. Risers. The riser height shall be not more than 8 1/4" inches. The riser shall be measured
- vertically between leading edges of the adjacent treads. The greatest riser height within any flight of stairs shall not exceed the smallest by more than 3/8 inch. Risers shall be vertical or sloped from the underside of the nosing of the tread above at an angle not more than 30 degrees from the vertical. At open risers, openings located more than 30 inches, as measured vertically, to the floor or grade below shall not permit the passage of a 4-inch-diameter
- 5. Treads. The tread depth shall be not less than 9 inches. The tread depth shall be measured horizontally between the vertical planes of the foremost projection of adjacent treads and at a right angle to the tread's leading edge. The greatest tread depth within any flight of stairs shall not exceed the smallest by more than 3/8 inch.
- 6. Nosings. Nosings at treads, landings and floors of stairways shall have a radius of curvature at the nosing not greater than 9/16 inch (14 mm) or a bevel not greater than 1/2 inch (12.7 mm). A nosing projection not less than 3/4 inch (19 mm) and not more than 11/4 inches (32 mm) shall be provided on stairways. The greatest nosing projection shall not exceed the smallest nosing projection by more than 3/8 inch (9.5 mm) within a stairway.
- 7. Landings. There shall be a floor or landing at the top and bottom of each stairway. The width perpendicular to the direction of travel shall be not less than the width of the flight served. For landings of shapes other than square or rectangular, the depth at the walk line and the total area shall be not less than that of a quarter circle with a radius equal to the required landing width. Where the stairway has a straight run, the depth in the direction of travel shall be not less than 36 inches (914 mm).
- 8. Handrails. Handrails shall be provided on not less than one side of each flight of stairs with four or more risers. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or finish surface of ramp slope, shall be not less than 34 inches and not more than 38 inches. Handrails shall not project more than 41/2 inches on either side of the stairway. Handrails adjacent to a wall shall have a space of not less than 1 1/2" inches between the wall and the handrails. Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above the lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Required handrails shall be of one of the following types or provide equivalent graspability.
- a. Type I. Handrails with a circular cross section shall have an outside diameter of not less than 11/4 inches and not greater than 2 inches. If the handrail is not circular, it shall have a perimeter of not less than 4 inches and not greater than 61/4 inches and a cross section of not more than 21/4 inches.
- b. Type II. Handrails with a perimeter greater than 61/4 inches shall have a graspable finger recess area on both sides of the profile. The finger recess shall begin within 3/4 inch measured vertically from the tallest portion of the profile and have a depth of not less than 5/16 inch within 7/8 inch below the widest portion of the profile. This required depth shall continue for not less than 3/8 inch to a level that is not less than 13/4 inches below the tallest portion of the profile. The width of the handrail above the recess shall be not less than 11/4 inches and not more than 23/4 inches.

**Building Permit - Approved Construction Documents** der general authority of the Building Code, this approved set of construction documents sh be kept on the job site at all times and shall not be altered without approval from the Building cial. This permit does not approve any Electrical, Mechanical or Plumbing work. This appr does not relieve the builder from complying with manufacturer instructions, Virginia Uniform Statewide Building Code and City of Richmond regulations whether noted, implied or omitted Approved Plans\_20231117\_3820 Hermitage Rd\_BLDR-126660-2023 2/13/2023 11:20:35 AM

Reviewed per the 2018 Virginia Residential Code. The code can be read at the link below. https://codes.iccsafe.org/content/VRC2018P1



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Book:759,Page:1794

10'-0"





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64' - 0"

32' - 0" 0'

16' - 0" SCALE = 1/16" = 1'-0"

# NOTICE

This approval does not include any review of the mechanical, electrical, plumbing or other trade plans. This approval does not authorize any MEP work to begin.



Per Section R315.2.1 in the 2018 Virginia Residential Code carbon monoxide alarms shall be provided for new construction where the dwelling unit contains a fuel-fired appliance and/or the dwelling unit has an attached garage with an opening that communicates with the dwelling unit.

Install smoke alarms per attached Section R314.4 from the 2018 Virginia Residential Code.

Provide bathroom fixture clearances per attached Figure R307.1 from the 2018 Virginia Residential Code











The code can be read at the link below. https://codes.iccsafe.org/content/VRC2018P1 Official. This permit does not approve any Electrical, Mechanical or Plumbing work. This approve does not relieve the builder from complying with manufacturer instructions, Virginia Uniform Statewide Building Code and City of Richmond regulations whether noted, implied or omitted. Approved Plans\_20231117\_3820 Hermitage Rd\_BLDR-126660-2023 12/13/2023 11:20:35 AM 12/13/2023 11:20:35 AM

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9 Slab – CMU or Turned–Down Foundation Detail 3/4" = 1'-0"







1. Finish Flooring – 1 by 4 in. T&G, laid perpendicular to joists; or 19/32 in. thick wood structural panels, min grade "underlayment" or "single floor". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

6. Resilient Channel – formed of 25 MSG (0.021 in. thick) galv steel as shown, spaced 24 in. OC perpendicular to joists.

8. Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

 $3 \frac{1 \text{ Hr Floor} - \text{Wood Joist, L502}}{1" = 1'-0"}$ 

Reviewed per the 2018 Virginia Residential Code. The code can be read at the link below. https://codes.iccsafe.org/content/VRC2018P1

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# UL Assembly Design No. L502 Fire Rating – 1 Hr.

2. Vapor Barrier - Commercial rosin-sized, 0.010 in. thick.

3. Subflooring – 1 by 6 in. T&G, fastened diagonally to joists; or 15/32 in. thick plywood or 7/16 in. thick oriented strand board (OSB) wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

4. Bridging – 1 by 3 in.

5. Wood Joists - 2 by 10 in. spaced 16 in. OC, firestopped.

7. Gypsum Board – Type X, 1/2 in. thick.



# Door Schedule

Mark	Family	Width	Height	Casing Quantity
Garage Slab				
194	Single- Exterior windowed door- single bottom panel	3'-0"	6'-8"	32'-8"
197	Single-Panel 6	2'-8"	6'-8"	32'-0"
198	Garage Door – Carriage	9'-0"	8'-0"	50'-0"
199	Garage Door – Carriage	9'-0"	8'-0"	50'-0"
200	Garage Door – Carriage – No Glass	9'-0"	8'-0"	50'-0"
201	Single-Panel 6	2'-6"	6'-8"	31'-8"
204	Single-Panel 6	3'-0"	6'-8"	32'-8"
205	Single-Panel 6	3'-0"	6'-8"	32'-8"
Second Floor				
195	Single-Panel 6	2'-0"	6'-8"	30'-8"
203	Single-Panel 6	2'-0"	6'-8"	30'-8"
				373'-0"

# Window Schedule

Mark	Family	Count	Width	Heiaht	Sill Height	Casing Quantity	Sill Quantity
Garage Slab	,			- 5 -	<b>- - -</b>		,
71	Window-Fixed	1	5'-4"	1'-6"	6'-6''	8'-4"	6'-0"
72	Window-Fixed	1	5'-4"	1'-6"	6'-6''	8'-4"	6'-0''
75	Window-Fixed	1	2'-8"	1'-6"	6'-6''	5'-8"	3'-4"
79	Window-Fixed	1	2'-8"	1'-6"	6'-6''	5'-8"	3'-4"
74	Window-Fixed	1	2'-9 1/4"	1'-0"	7'-2 1/4"	4'-9 1/4"	3'-5 1/4"
Second Floor							
66	Window-Double-Hung	1	3'-0"	5'-0"	2'-0"	13'-0"	3'-8"
67	Window-Double-Hung	1	3'-0"	5'-0"	2'-0"	13'-0"	3'-8"
68	Window-Double-Hung	1	3'-0"	5'-0"	2'-0"	13'-0"	3'-8"
69	Window-Double-Hung	1	3'-0"	5'-0"	2'-0"	13'-0"	3'-8"
61	Window-Double-Hung	1	2'-6"	4'-6"	2'-6"	11'-6"	3'-2"
80	Window-Double-Hung	1	2'-6"	4'-6"	2'-6"	11'-6"	3'-2"
81	Window-Double-Hung	1	2'-6"	4'-6"	2'-6"	11'-6"	3'-2"
82	Window-Double-Hung	1	2'-6"	4'-6"	2'-6"	11'-6"	3'-2"
83	Window-Double-Hung	1	2'-6"	4'-6"	2'-6"	11'-6"	3'-2"
77	Window-Double-Hung	1	2'-6"	4'-0"	3'-0"	10'-6"	3'-2"
58	Window-Double-Hung	1	2'-6"	3'-6"	3'-6"	9'-6"	3'-2"
60	Window-Double-Hung	1	2'-6"	3'-6"	3'-6"	9'-6"	3'-2"
70	Window-Casement-Single	1	2'-4"	2'-8"	4'-4''	7'-8"	3'-0''
85	Window-Casement-Single	1	2'-4"	2'-8"	4'-4"	7'-8"	3'-0''
86	Window-Casement-Single	1	2'-4"	2'-8"	4'-4''	7'-8"	3'-0''
87	Window-Casement-Single	1	2'-4"	2'-8"	4'-4''	7'-8"	3'-0"
88	Window-Casement-Single	1	2'-4"	2'-8"	4'-4''	7'-8"	3'-0"
						210'-1 1/4"	77'-1 3/8"



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# 2018 Virginia Residential Code

Smoke Alarma

#### R314.3 Location.

Smoke alarms shall be installed in the following locations:

- 1. In each sleeping room.
- Outside each separate sleeping area in the immediate vicinity of the bedrooms.
- 3. On each additional story of the dwelling, including basements and habitable attics and not including crawl spaces and uninhabitable attics. In dwellings or dwelling units with split levels and without an intervening door between the adjacent levels, a smoke alarm installed on the upper level shall suffice for the adjacent lower level provided that the lower level is less than one full story below the upper level.
- 4. Smoke alarms shall be installed not less than 3 feet (914 mm) horizontally from the door or opening of a bathroom that contains a bathtub or shower unless this would prevent placement of a smoke alarm required by this section.

#### R314.3.1 Installation near cooking appliances.

Smoke alarms shall not be installed in the following locations unless this would prevent placement of a smoke alarm in a location required by Section R314.3.

- Ionization smoke alarms shall not be installed less than 20 feet (6096 mm) horizontally from a permanently installed cooking appliance.
- Ionization smoke alarms with an alarm-silencing switch shall not be installed less than 10 feet (3048 mm) horizontally from a permanently installed cooking appliance.
- Photoelectric smoke alarms shall not be installed less than 6 feet (1828 mm) horizontally from a permanently installed cooking appliance.

# SECTION R315 CARBON MONOXIDE ALARMS

## R315.1 General.

Carbon monoxide alarms shall comply with Section R315.

#### R315.1.1 Listings.

Carbon monoxide alarms shall be hard wired, plug-in or battery type; listed as complying with UL 2034; and installed in accordance with this code and the manufacturer's installation instructions. Combination carbon monoxide and smoke alarms shall be *listed* in accordance with UL 2034 and UL 217.

#### R315.2 Where required.

Carbon monoxide alarms shall be provided in accordance with this section.

#### R315.2.1 New construction.

For new construction, carbon monoxide alarms shall be provided in dwelling units where either or both of the following conditions exist.

- 1. The dwelling unit contains a fuel-fired appliance.
- 2. The *dwelling unit* has an attached garage with an opening that communicates with the dwelling unit.

#### R315.2.2 Alterations, repairs and additions.

(Section deleted.)

#### R315.3 Location.

Carbon monoxide alarms in *dwelling units* shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning *appliance* is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom.

#### R315.4 Combination alarms.

Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon monoxide alarms.

#### R315.5 Interconnectivity.

Where more than one carbon monoxide alarm is required to be installed within an individual *dwelling unit* in accordance with Section R315.3, the alarm devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the *dwelling*. Alarm devices within a *two-family dwelling* constructed without fire separations in accordance with Exception 3 of Section R302.3 shall be interconnected in such a manner that the actuation of one alarm within either unit will activate all alarms within both *dwelling units*. Physical interconnection of carbon monoxide alarms shall not be required where *listed* wireless alarms are installed and all alarms sound upon activation of one alarm.