INTRODUCED: April 14, 2025

### AN ORDINANCE No. 2025-082

To authorize the special use of the property known as 3202 Monument Avenue for the purpose of a dwelling unit within an accessory building to a single-family detached dwelling, upon certain terms and conditions.

Patron – Mayor Avula (By Request)

Approved as to form and legality

by the City Attorney

PUBLIC HEARING: MAY 12 2025 AT 6 P.M.

WHEREAS, the owner of the property known as 3202 Monument Avenue, which is situated in a R-6 Single-Family Attached Residential District, desires to use such property for the purpose of a dwelling unit within an accessory building to a single-family detached dwelling, which use, among other things, is not currently allowed by section 30-412.5, concerning yards, of the Code of the City of Richmond (2020), as amended; and

WHEREAS, in accordance with section 17.11 of the Charter of the City of Richmond (2020), as amended, it has been made to appear that, if granted subject to the terms and conditions set forth in this ordinance, 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

AYES:	NOES:	ABSTAIN:		
ADOPTED:	REJECTED:	STRICKEN:		

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; and

WHEREAS, (i) the City Planning Commission has conducted a public hearing to investigate the circumstances and conditions upon which the Council is empowered to authorize such use, (ii) the City Planning Commission has reported to the Council the results of such public hearing and investigation and its recommendations with respect thereto, and (iii) the Council has conducted a public hearing on this ordinance at which the person in interest and all other persons have had an opportunity to be heard;

NOW, THEREFORE,

### THE CITY OF RICHMOND HEREBY ORDAINS:

§ 1. **Finding.** Pursuant to section 30-1050.1 of the Code of the City of Richmond (2020), as amended, the Council hereby finds that the special use set forth in and subject to the terms and conditions of this ordinance will not (i) be detrimental to the safety, health, morals and general welfare of the community involved, (ii) tend to create congestion in streets, roads, alleys and other public ways and places in the area involved, (iii) create hazards from fire, panic or other dangers, (iv) tend to overcrowding of land and cause an undue concentration of population, (v) adversely affect or interfere with public or private schools, parks, playgrounds, water supplies, sewage disposal, transportation or other public requirements, conveniences and improvements, or (vi) interfere with adequate light and air.

### § 2. Grant of Special Use Permit.

- (a) Subject to the terms and conditions set forth in this ordinance, the property known as 3202 Monument Avenue and identified as Tax Parcel No. W000-1476/019 in the 2025 records of the City Assessor, being more particularly shown on a survey entitled "Survey of Portions of Lot 21, 23 & Lot 22 Block E, Shepards Plan, Richmond, Virginia," prepared by A. G. Harocopos & Associates, P.C., and dated February 2, 2024, a copy of which is attached to and made a part of this ordinance, hereinafter referred to as "the Property," is hereby permitted to be used for the purpose of a dwelling unit within an accessory building to a single-family detached dwelling, hereinafter referred to as "the Special Use," substantially as shown on the plans entitled "3202 Monument Avenue," prepared by Obsidian, and dated May 23, 2024, hereinafter referred to as "the Plans," copies of which are attached to and made a part of this ordinance.
- (b) The adoption of this ordinance shall constitute the issuance of a special use permit for the Property. The special use permit shall inure to the benefit of the owner or owners of the fee simple title to the Property as of the date on which this ordinance is adopted and their successors in fee simple title, all of which are hereinafter referred to as "the Owner." The conditions contained in this ordinance shall be binding on the Owner.
- § 3. **Special Terms and Conditions.** This special use permit is conditioned on the following special terms and conditions:
- (a) 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.
- (b) The height of the accessory structure shall not exceed two stories, substantially as shown on the Plans.
- (c) All building elevations and site improvements shall be substantially as shown on the Plans, and subject to the issuance of a Certificate of Appropriateness by the Commission of

### Architectural Review.

- (d) All mechanical equipment serving the Property shall be located or screened so as not to be visible from any public right-of-way.
- § 4. **Supplemental Terms and Conditions.** This special use permit is conditioned on the following supplemental terms and conditions:
- (a) All required final grading and drainage plans, together with all easements made necessary by such plans, must be approved by the Director of Public Utilities prior to the issuance of the building permit.
- (b) Storm or surface water shall not be allowed to accumulate on the land. The Owner, at its sole cost and expense, shall provide and maintain at all times adequate facilities for the drainage of storm or surface water from the Property so as not to adversely affect or damage any other property or public streets and the use thereof.
- (c) Facilities for the collection of refuse shall be provided in accordance with the requirements of the Director of Public Works. Such facilities shall be located or screened so as not to be visible from adjacent properties and public streets.
- (d) Any encroachments existing, proposed on the Plans or contemplated in the future shall require separate authorization and shall be subject to the applicable provisions of the Code of the City of Richmond (2020), as amended, and all future amendments to such laws.
- (e) In all other respects, the use of the Property shall be in accordance with the applicable underlying zoning regulations.
- § 5. **General Terms and Conditions.** This special use permit is conditioned on the following general terms and conditions:
- (a) No permit implementing this special use permit shall be approved until satisfactory evidence has been presented to the Zoning Administrator that any delinquent real estate taxes

applicable to the Property have been paid.

- (b) The Owner shall be bound by, shall observe and shall comply with all other laws, ordinances, rules and regulations applicable to the Property, except as otherwise expressly provided in this ordinance.
- (c) Words and phrases used in this ordinance shall be interpreted to have the meanings ascribed to them by section 30-1220 of the Code of the City of Richmond (2020), as amended, unless the context clearly indicates that a different meaning is intended.
- (d) Notwithstanding any other provision of law, this special use permit is being approved due, in part, to the mitigating effects of each and every condition attached hereto; consequently, if any portion of this ordinance is determined to be invalid for any reason by a final, non-appealable order of any Virginia or federal court of competent jurisdiction, the invalidity shall cause the entire ordinance to be void and of no further effect from the effective date of such order.
- (e) The privileges granted by this ordinance may be revoked pursuant to the provisions of sections 30-1050.7 through 30-1050.11 of the Code of the City of Richmond (2020), as amended, and all future amendments to such laws. Failure to comply with the terms and conditions of this ordinance shall constitute a violation of section 30-1080 of the Code of the City of Richmond (2020), as amended, and all future amendments to such law, or any other applicable laws or regulations.
- (f) When the privileges granted by this ordinance terminate and the special use permit granted hereby becomes null and void, whether as a result of the Owner relinquishing this special use permit in a writing addressed to the Director of Planning and Development Review or otherwise, use of the Property shall be governed thereafter by the zoning regulations prescribed for the district in which the Property is then situated.
  - § 6. Implementation. The Commissioner of Buildings is authorized to issue a building

permit substantially in accordance with the Plans for the Special Use subject to the terms and conditions set forth in this ordinance. An application for the building permit shall be made within 1,096 calendar days following the date on which this ordinance becomes effective. If either the application for the building permit is not made within the time period stated in the previous sentence or the building permit terminates under any provision of the Virginia Statewide Building Code, this ordinance and the special use permit granted hereby shall terminate and become null and void.

§ 7. **Effective Date.** This ordinance shall be in force and effect upon adoption.



# City of Richmond

# Intracity Correspondence

### **O&R** Transmittal

**DATE:** February 11, 2025

**TO:** The Honorable Members of City Council

**THROUGH:** The Honorable Dr. Danny Avula, Mayor (by request)

(This is no way reflects a recommendation on behalf of the Mayor)

THROUGH: Sabrina Joy-Hogg, Interim Chief Administrative Officer

**THROUGH:** Sharon L. Ebert, DCAO for Economic Development and Planning

**FROM:** Kevin J. Vonck, Director of Planning & Development Review

**RE:** To authorize the special use of the property known as 3202 Monument Avenue for

the purpose of one dwelling unit within an accessory building to a single-family

detached dwelling, upon certain terms and conditions.

**PURPOSE:** The applicant is requesting a Special Use Permit to authorize a single-family detached dwelling with an accessory structure containing a dwelling unit within the R-6 Single-Family Attached Residential District. This special use permit will allow a dwelling unit within an accessory structure. The applicant wishes to construct a second story above an existing accessory structure. While the use is permitted, the existing structure does not meet the requirements regarding side and rear setbacks as detailed in Sections 30-412.5 of the Code of the City of Richmond, as amended.

**BACKGROUND:** The property is in The Museum District neighborhood, on the northern side of Monument Avenue, between Tilden Street and Cleveland Street. The property is a ,750 square foot (.155 acre) parcel of land, improved with a single-family detached dwelling. The City's Richmond 300 Master Plan designates a future land use for the subject property as Neighborhood Mixed-Use, which is defined as "Existing or new highly walkable urban neighborhoods that are predominantly

residential with a small, but critical, percentage of parcels providing retail, office, personal service, and institutional uses." (Richmond 300, p. 82).

<u>Intensity:</u> Building heights are generally two to four stories. Buildings taller than four stories may be found along major streets (see Street Typologies Map). Parcels are generally between 1,500 and 5,000 sq. ft.

<u>Primary Uses</u>: Single-family houses, accessory dwelling units, duplexes, small multi-family buildings (typically 3-10 units), and open space.

<u>Secondary Uses</u>: Large multifamily buildings (10+units), retail/office/personal service, institutional, cultural, and government.

The current zoning for this property is R-6 Single-Family Attached Residential. It is also located within the Monument Avenue City Old and Historic District. The surrounding area is generally residential.

**COMMUNITY ENGAGEMENT:** The Museum District Association, the Fan Area Business Alliance, and the Historic Monument Avenue civic associations were notified of this request.

STRATEGIC INITATIVES AND OTHER GOVERNMENTAL: Richmond 300 Master Plan;

Ordinance to be considered by the Planning Commission on February 18, 2024 (tentative)

**FISCAL IMPACT:** \$2,400 Application Fee

**DESIRED EFFECTIVE DATE:** Upon adoption

**REQUESTED INTRODUCTION DATE:** March 24, 2025

CITY COUNCIL PUBLIC HEARING DATE: April 21, 2025

**REQUESTED AGENDA:** Consent

**RECOMMENDED COUNCIL COMMITTEE:** Planning Commission, April 15, 2025

**AFFECTED AGENCIES:** Office of Chief Administrative Officer

Law Department (for review of draft ordinance)

**RELATIONSHIP TO EXISTING ORD. OR RES.:** None

**ATTACHMENTS:** Draft Ordinance, Application Form, Applicant's Report, Plans, Survey

**STAFF:** Alyson Oliver, Planner, Land Use Administration (Room 511) 646-3709



### Application for SPECIAL USE PERMIT

Department of Planning and Development Review Land Use Administration Division 900 E. Broad Street, Room 511 Richmond, Virginia 23219 (804) 646-6304

http://www.richmondgov.com/

Application is hereby submitted for: (check one)  special use permit, new special use permit, plan amendment special use permit, text only amendment	
Project Name/Location Property Address: 3202 Manual Ave. Parcel I.D. #: Fee: Total area of affected site in acres:	Date: 9, 2, 24
(See <b>page 6</b> for fee schedule, please make check payable to the "City of	of Richmond")
Zoning Current Zoning: residential	
Richmond 300 Land Use Designation:	
Proposed Use (Please include a detailed description of the proposed use in the required Second Floor atop Carriage house in a Existing Use:  garage  Is this property subject to any previous land use cases?	
Yes No If Yes, please list the Ordinance Number:	
Applicant/Contact Person: (gleb Valentine Company: Clean Square IIc	
Mailing Address: 2116 Clarke St	
City: Henrico Telephone: (814) 441 7645 Email: Valentine kcje amail	State: <u>V4</u> Zip Code: <u><b>2322</b></u> % Fax: _()
Property Owner: Steven Mingar S  If Business Entity, name and title of authorized signee:	
(The person or persons executing or attesting the execution of this Appli she has or have been duly authorized and empowered to so execute or a	
Mailing Address. 3202 Manment Ave City: Richman Telephone: (214) 883-7394 Email: Janiel, s. crister @gmail. com	State: <u>VA</u> Zip Code: <u><b>23221</b></u> Fax: _()
Property Owner Signature:	
The names, addresses, telephone numbers and signatures of all owners of sheets as needed. If a legal representative signs for a property owner, pl	

NOTE: Please attach the required plans, checklist, and a check for the application fee (see Filing Procedures for special use permits)

photocopied signatures will not be accepted.

From:Caleb ValentineTo:Oliver, Alyson E. - PDRSubject:Re: Special Use Permit

**Date:** Friday, February 14, 2025 2:51:52 PM

Attachments: <u>image002.png</u>

**CAUTION:** This message is from an external sender - Do not open attachments or click links unless you recognize the sender's address and know the content is safe.

### As requested:

The client contacted us to design and build additional living space above their carriage house "garage". The space will have a small terrace facing the main home and will contain a common area, and bathroom. Access will be via stairs inside the back yard, and all cosmetics will match original home in accordance with local architectural guidelines.

Thanks. Caleb

02/02/2024 This is to certify that on NOTE: NOTE: THIS LOT APPEARS I made an accurate field survey of the known premises TO BE IN FEMA FLOOD ZONE

X AS SHOWN ON FEMA This survey has been prepared without shown hereon; that all improvements known or visible AS SHOWN ON FEMA the benefit of a title report and does are shown hereon; that there are no encroachments by FLOOD INSURANCE RATE MAP not therefore necessarily indicate all improvements either from adjoining premises, or from PANEL <u>5101290028D</u> encumberances on the property. subject premises upon adjoining premises, other than shown hereon. EORGE A. HAROCOPOS Alley Conc. 50.00' 15 BrickGarage Conc. Walk 20 24 23 21 22 LEGEND Rod/F Nail/F Corner In Conc. Brick Of Fence Post Conc. Wall 2 1/2 Story 6.61Patio Brick W/ Basement #3202 Stone 2.94' Border Brick Wall 45.00' To The W/L Of  $50.00^{\circ}$ **MONUMENT AVENUE** SURVEY OF JN 53265 PORTIONS OF LOT 21, 23 & LOT 22 BLOCK E A. G. HAROCOPOS & ASSOCIATES, P.C. SHEPARDS PLAN CERTIFIED LAND SURVEYOR AND CONSULTANT RICHMOND, VIRGINIA 4920 E.MILLRIDGE PKWY. SUITE 200 MIDLOTHIAN VA. 23112 NOTE: PLAT PREPARED FOR THE EXCLUSIVE Office 804 744 2630 FAX 804 744 2632 USE OF THE CONVEYANCE TO E-MAIL AGHAROCOPOS72@GMAIL.COM

Scale \_\_1"=20'

Date <u>02/02/24</u> Drawn by <u>GAH</u>

DAN CRISLER

# 3202 Monument Avenue Building Permit Plans

Owner

Steven Craig & Jeannie Denise Minyard 3202 Monument Ave. Richmond, VA, 23221

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 W0001476019 Zoning Residential Front Yard = 15 feet Setbacks Side Yard = 5 feet Rear Yard = 5 feet Lot Coverage < 55%

Table of Contents

Cover Sheet Details

Exterior Renderings

Structure

Calculations

S1.2

**S**7.2

Room Area Tabulation

Area Second Floor Kitchen/Living Area 88 SF Bath 69 SF 9 SF Linen 8 SF 126 SF **G**rand total

# NCS Sheet Identification Standards

Discipline Designators

General -Sheet list, symbols, code summary H Hazardous Materials Abatement, handling, etc.

V Survey / Mapping B Geotechnical

C Civil L Landscape

S Structural A Architectural I Interiors

Q Equipment F Fire Protection P Plumbing D Process

M Mechanical E Electrical W Distributed Energy T Telecommunications

R Resource Existing conditions / buildings X Other Disciplines

Z Contractor / Shop Drawings O Operations

Sheet Type Designator

Schedules and Diagrams

4 Large Scale Drawings: plans, elevations, sections

User Defined (Calculations for Obsidian, Inc.)

Sheet Type Designator

Discipline Designator

9 3D drawings: isometric, perspective, photos

Elevations

User Defined

**G**0.1

O General: Symbol legend, abbreviations, general notes

heet (1) Mon Danie 0

No. 21973 5/23/2024

# Scope of Work

Scope of work will generally consist of building a single story ADU on top of existing brick garage, adding a single parking space adjacent to the existing garage, and changing the location of the man-door into the garage, in accordance with the Virginia Residential Code, 2018.

# 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
- 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

plan review or construction. If the contractor or contractors agent discovers missing or in complete details

- immediately be brought to the attention of the engineer. 5. Plans and specifications in some instances, do not contain specific instructions for installation or preparation methods. Contractor and their subs are responsible for following ASTM standards and applicable
- 6. All decorative elements and finishes are to be selected by owner and/or interior designer and contractor to verify with owner and/or interior designer pertaining to any special requirements for ordering and installation prior to ordering and installation.
- 7. 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
- 8. 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. 9. Enclosed accessible space under stairs shall have walls, under-stair surface, and any soffits protected on
- the enclosed side with 1/2" gypsum board. 10. Bathrooms and water closet compartments shall be provided with not less than 3 sf of glazing area (onehalf must be operable) or an exhaust fan in compliance with Section M1507 of the code.
- 11. Provide a fire extinguisher (2-A:10-B:C) in the kitchen area if the home does not contain an approved
- sprinkler system. 12. 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. 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
- 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.
- 13. 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.

Wood frame wall R-value: 15 cavity or 13 + 1 continuous

- 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 14. Basements, habitable attics, and every sleeping room shall have at least one operable emergency escape and
- rescue opening. The sill height shall be not more than 44" to the bottom of the clear opening. Openings not on grade level shall have a min net clear opening of 5.7 sf. Openings on grade level or below shall have a min net clear opening of 5 sf. The min clear opening height shall be 24". The min clear opening width shall
- 15. Attic access shall be provide with a minimum size of 22" x 30" 16. All lumber unless otherwise noted is to be Southern Pine No. 2.
- 17. There will not be a fire sprinkler system.
- 18. There is no proposed fire detection system or alarm. 19. The occupancy is Residential Group R-3.
- 20. The construction type is V-B.
- 21. There are 2 stories. 22. The house is located in Climate Zone 4.
- 23. VRC 2018 minimum insulation and fenestration requirements: Fenestration U-factor: 0.32
  - Skylight U-factor: 0.55 • Ceiling R-value : 49
  - 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
- 24. Load criteria:
- Bearing soil capacity = 1500 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 = 115 mph
- Seismic Category: B.

- Exposure: B.
- In lieu of a complete geotechnical evaluation, the load-bearing values in Table R401.4.1 has been assumed.

- 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
- 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
- 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 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 veneer.
- 2. Exterior detail may vary as predicted in elevation drawings. Field conditions and material variabilities or selections may affect final feature considerations and design.

- 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

- 5. Truss drawings on architectural plans are intended to be diagrammatic only. Sealed manufacturer's truss drawings are required to be submitted with
- 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.
- 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.
- Rafters framed to ridge members (ridge, hip, valley) labeled beam are required to be mechanically fastened with minimum Simpson A35 or equal. 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
- 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 2inches nominal thickness and have a width not less than the width of the
- 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.

# 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.
- 3. All exterior openings shall be protected from water intrusion by generally accepted building practices and as required by the Virginia USBC.
- 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.

- 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: a. 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. b. 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. c. Decks not supported by a dwelling need not be provided with footings
- that extend below the frost line. 4. The footings shall be placed on clean undisturbed soil or compacted fill verified by an independent engineering firm.
- 5. The design does not allow for variation in bearing unless otherwise noted. 6. 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
- 7. Concrete shall be placed with a slump of 4"
- 8. Concrete exposed to weather shall have 6% air entrainment. 9. Concrete shall be thoroughly compacted and vibrated during placement and
- around embedded items and into corners of forms. 10. All reinforcing bar placed in concrete shall have a minimum 3" cover to all
- 11. Reinforcing bars shall be deformed conforming to ASTM A-615, grade 60 (fy**–**60 ksi)
- 12. Do not backfill against walls retaining earth until masonry or concrete has cured for 28 days.
- 13. Backfill shall be placed in 8" loose layers and compacted to 95% of dry density in accordance with ASTM D698.
- 14. Footings shall be a minimum of 18" deep.

# 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
- 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 1/2-inch 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.

- 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
- 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.

# Ventilation

# Crawlspace

- 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
- 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

- 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 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

- 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.

- 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. 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 the 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
- 5. Rafters shall be framed not more than 11/2-inches offset from each other to

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 rafter. 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 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" x 0.128"); or 3-10d common (3"  $\times$  0.148"); or 4-3"  $\times$  0.131" nails faced nailed to each rafter.
- 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 0437 or CSA 0325, 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/sf 11 lbs/sf quarried slate: concrete tile: 12.5 lbs/sf

1. Decks to be constructed in accordance with the IRC Section R507 in force at the issuance of the building permit as illustrated by the American Forest and Paper Associations Guide for Prescriptive Residential Wood Deck Construction (https://awc.org/codes-standards/publications/dca6)

# 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 sphere. 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
- 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.

- 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 be
- considered 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
- 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
- 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

shower, sauna or steam room.

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

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.

horizontal arc less than 180 degrees (3.14 rad) from the bottom tread nosing

## 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.
- 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

Outside each separate sleeping area in the immediate vicinity of the bedrooms.

- level provided that the lower level is less than one full story below the upper level. 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. 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. Combination smoke and carbon monoxide alarms shall be permitted to be used in lieu of smoke
- 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

monoxide alarms.

- 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.
- Carbon monoxide alarms shall be provided in accordance with Sections R315.2.1 and R315.2.2 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. 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. Combination carbon monoxide and smoke alarms shall be permitted to be used in lieu of carbon
- 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

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.

- 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
- 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.

a. The fenestration manufacturer's installation and flashing instructions, or for applications

- b. In accordance with the flashing design or method of a registered design professional. c. 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. D. Continuously above all projecting wood trim.
- E. 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.

with one or more of the following:

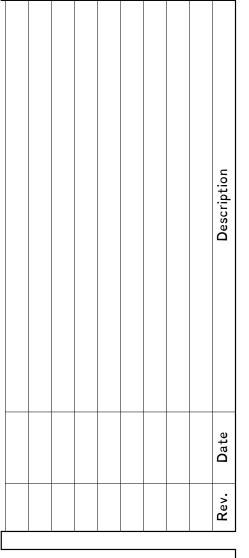
Attic Access

1. Buildings with combustible ceiling or roof construction shall have an attic access opening to attic areas that have a vertical height of 30 inches or greater over an area of not less than 30 square feet. The vertical height shall be measured from the top of

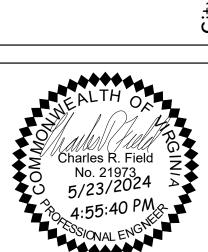
the ceiling framing members to the underside of the roof framing members.

2. The rough-framed opening shall be not less than 22 inches by 30 inches (559 mm by 762 mm) and shall be located in a hallway or other location with ready access. Where located in a wall, the opening shall be not less than 22 inches wide by 30 inches high (559 mm wide by 762 mm high). Where the access is located in a ceiling, minimum unobstructed headroom in the attic space shall be 30 inches (762 mm) at some point above the access measured vertically from the bottom of ceiling framing members. See Section M1305.1.3 for access requirements where mechanical equipment is located in

**G**0.2



enu ent Cris a ani 0 

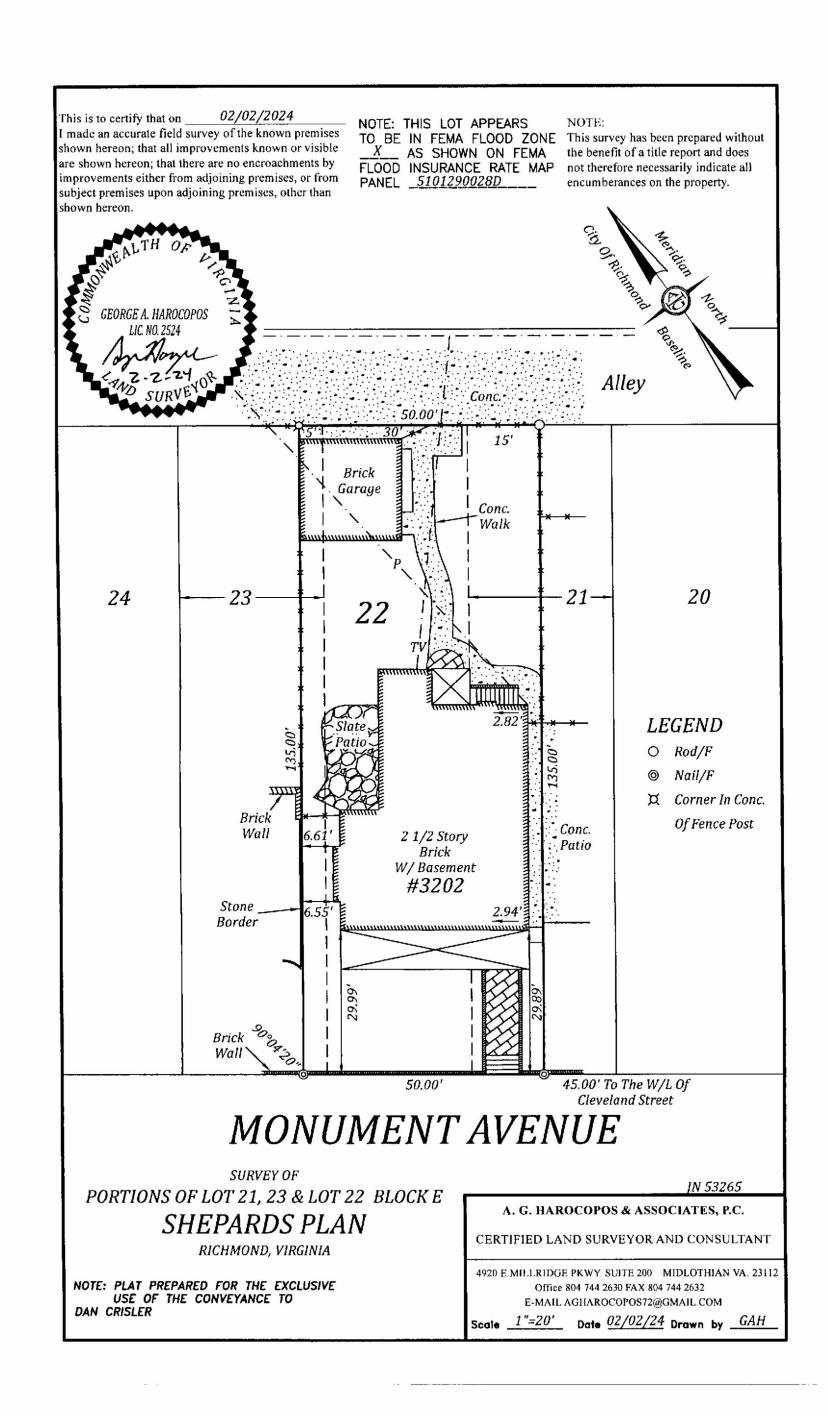


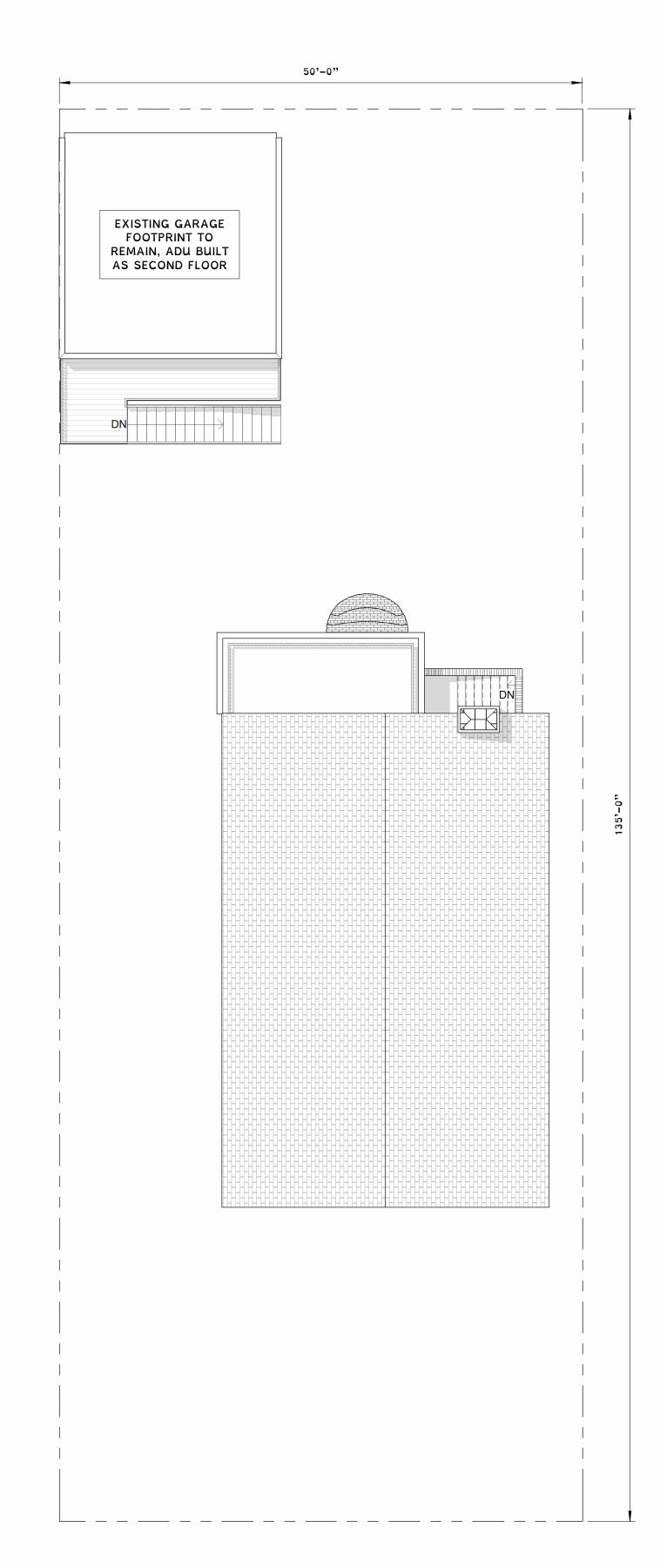
22nd VA :

7

Print plans at 24" x 36", Arch D

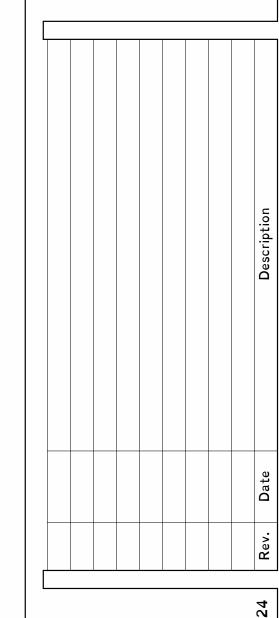
O 0 202





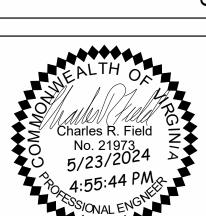
Site Plan
1/8" = 1'-0"



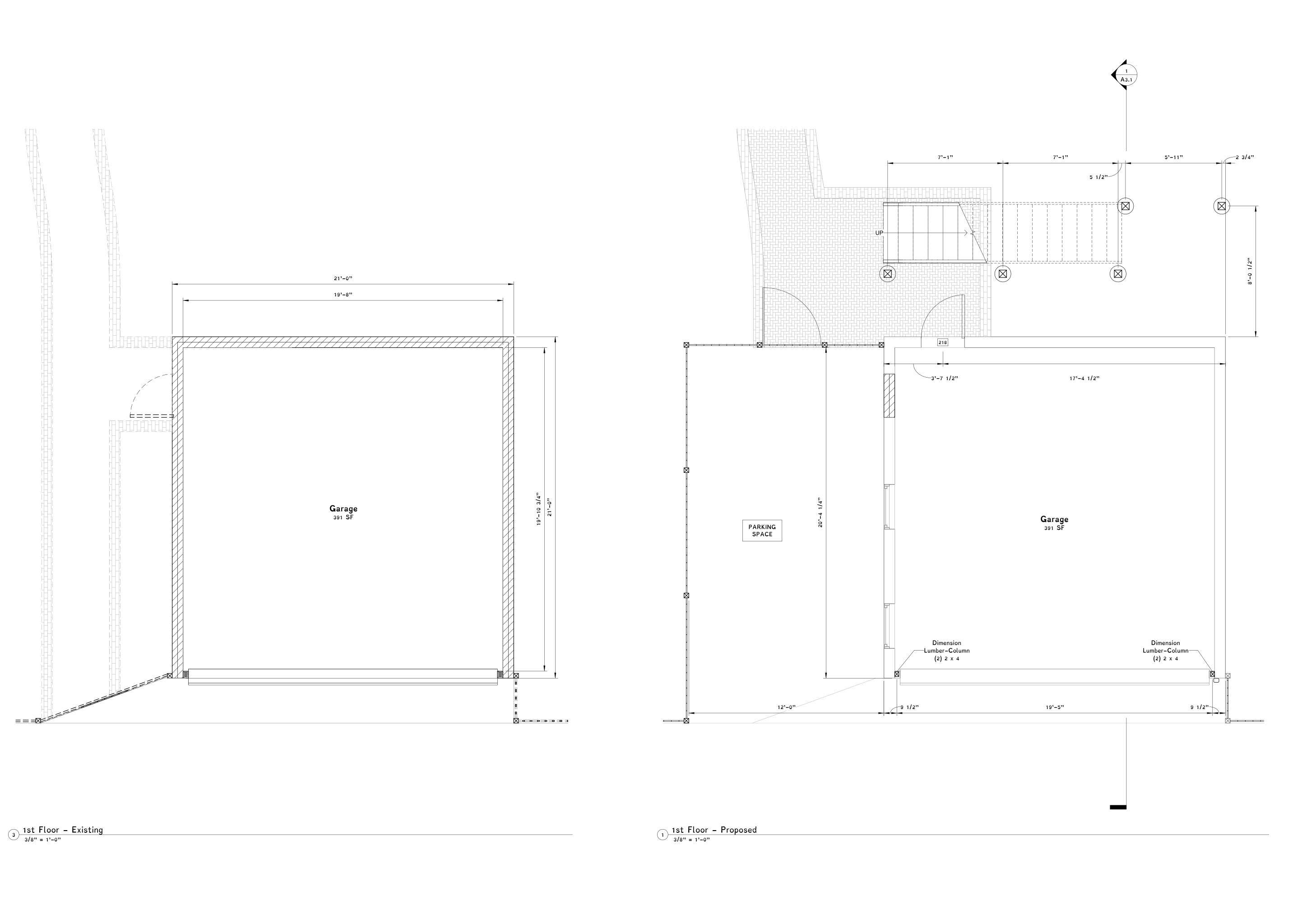


Sit

Moni Danie 3202

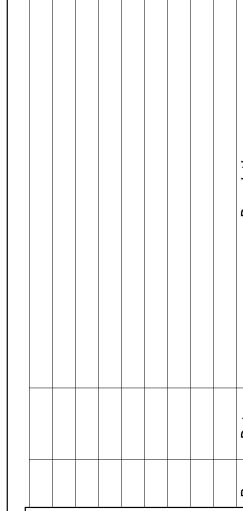


1. The finish grade around the structure shall slope away from the foundation a minimum of 6" for a minimum distance of 10 feet (5%). 0' 4' - 0" SCALE = 1/4" = 1'-0"



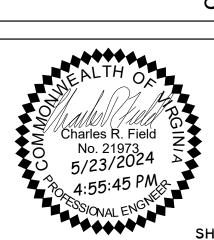
Print plans at 24" x 36", Arch D

A1.1



Floor Plan

3202 Monumo

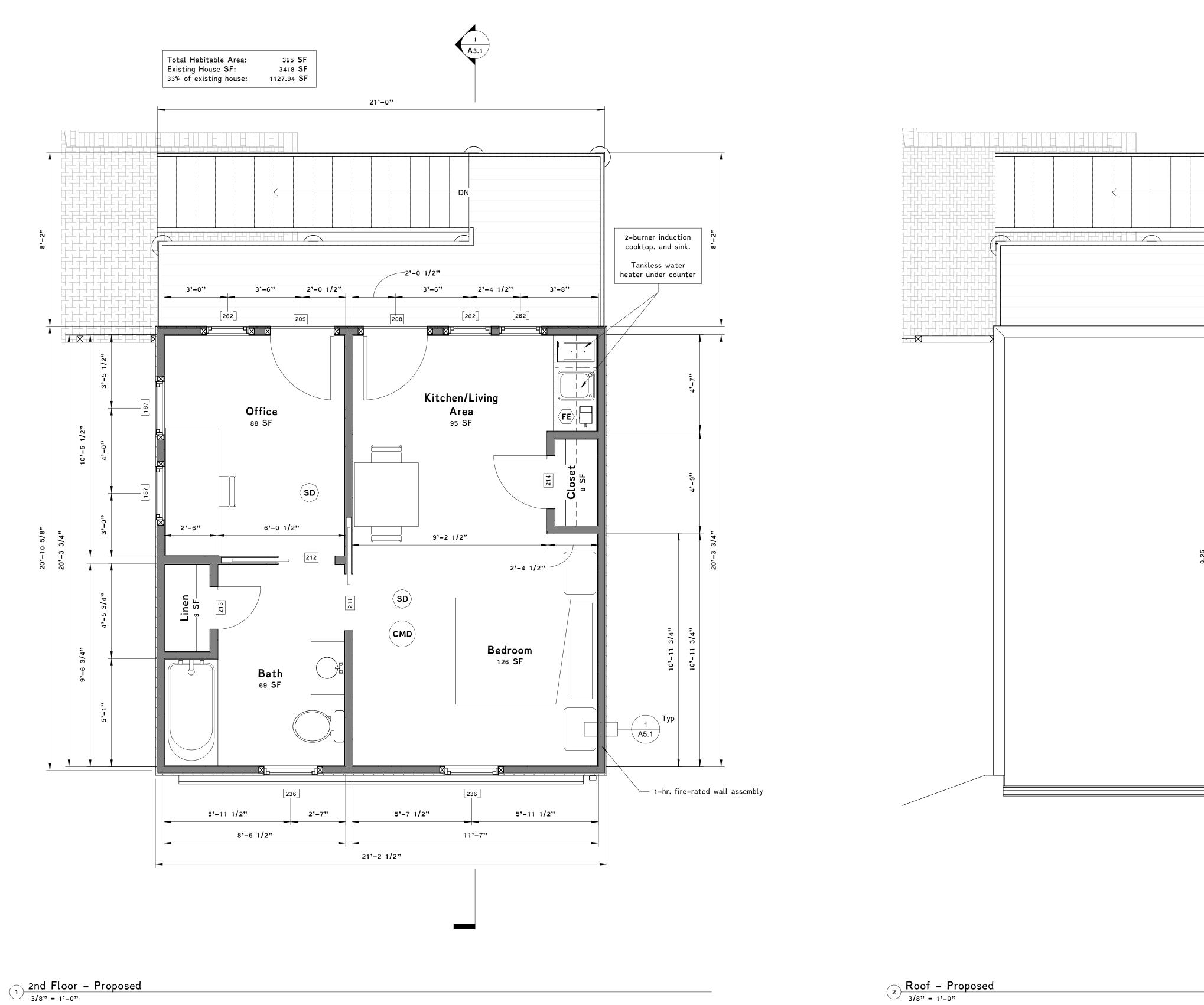


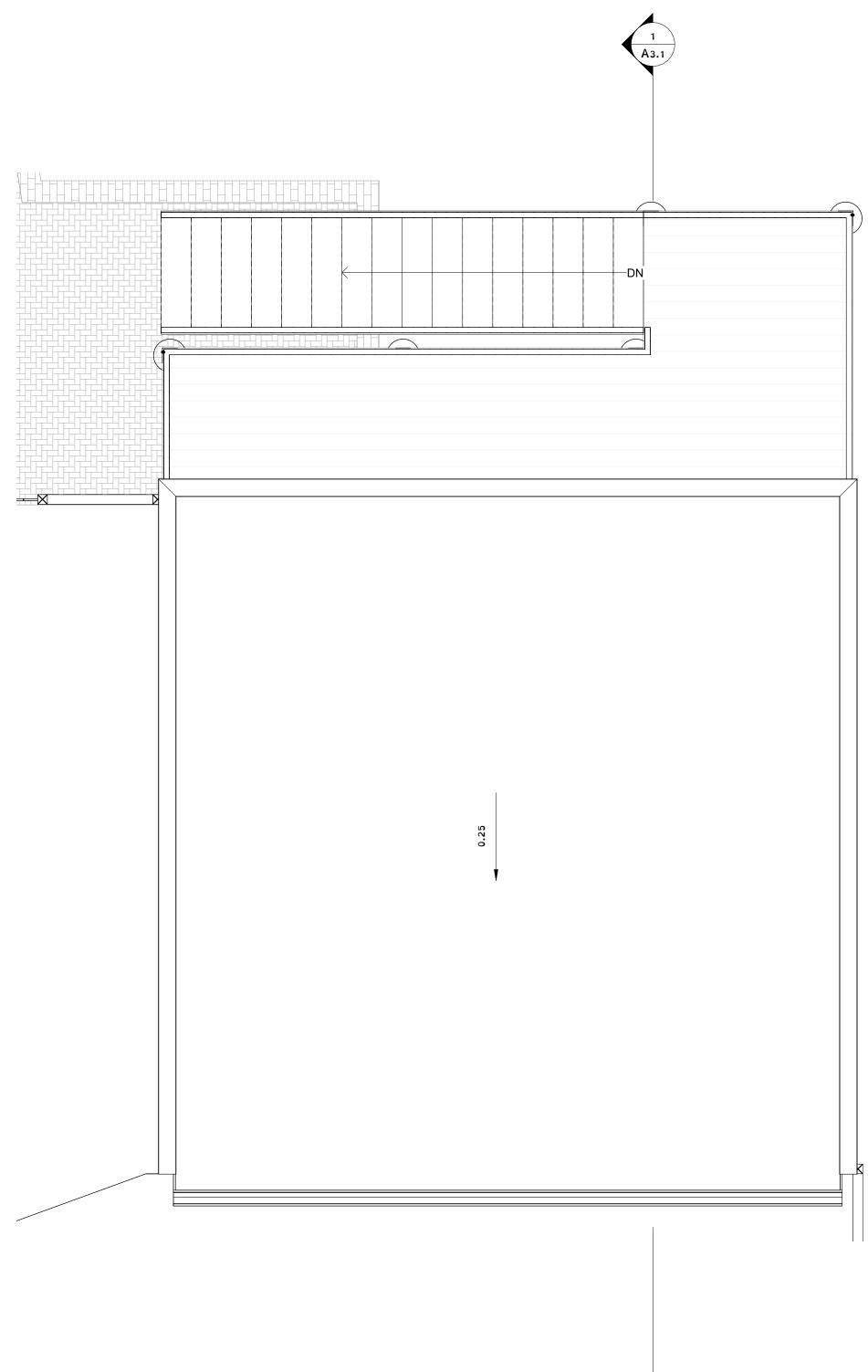
Specifical Street

A Professional Engineering Practice

417 North 22nd Street
Richmond, VA 23223

0' 4' - 0" SCALE = 1/4" = 1'-0"



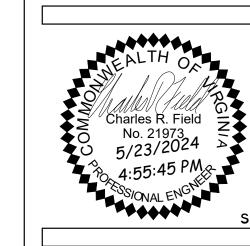


or Flo

Monument A Daniel Crisle

3202

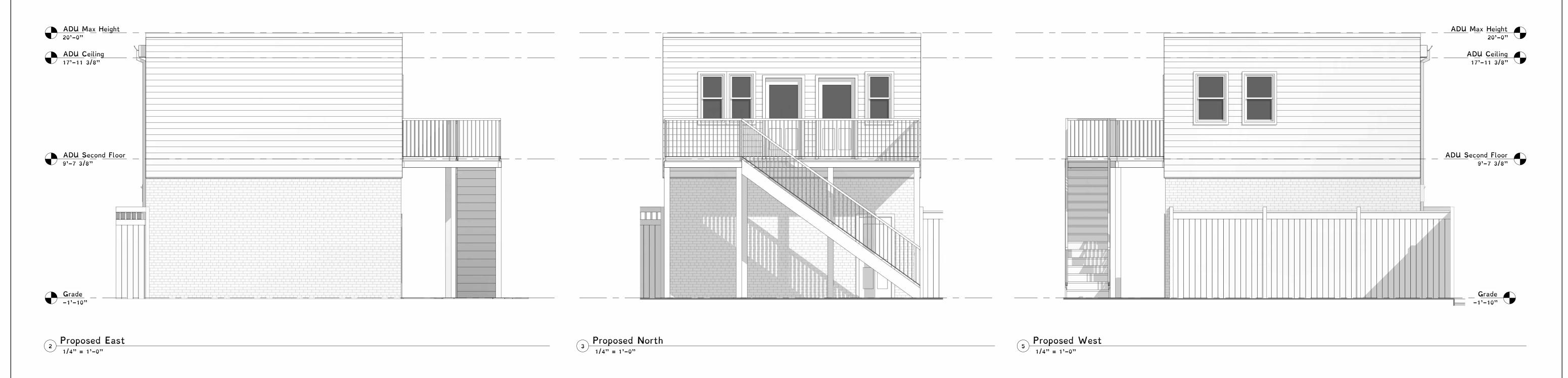
A1.2

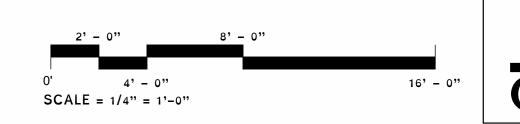


Sidian

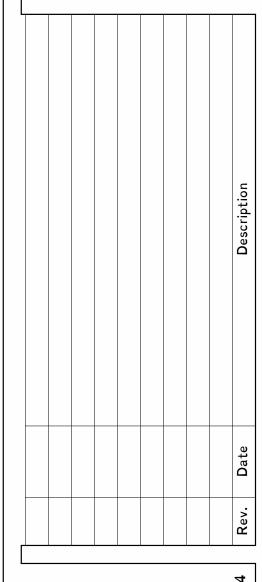
0' 4' - 0" SCALE = 1/4" = 1'-0"





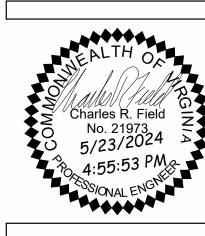


A2.1

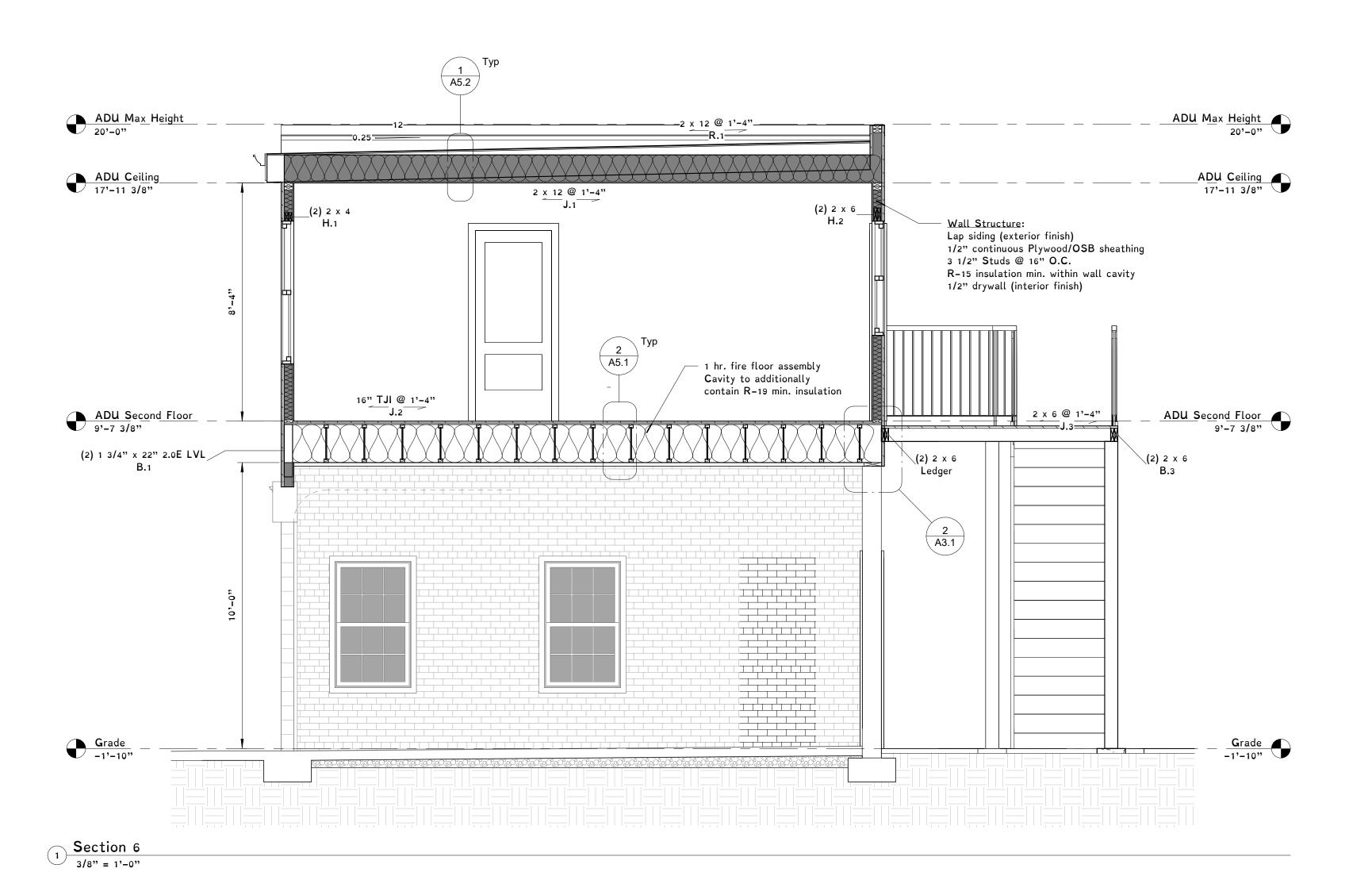


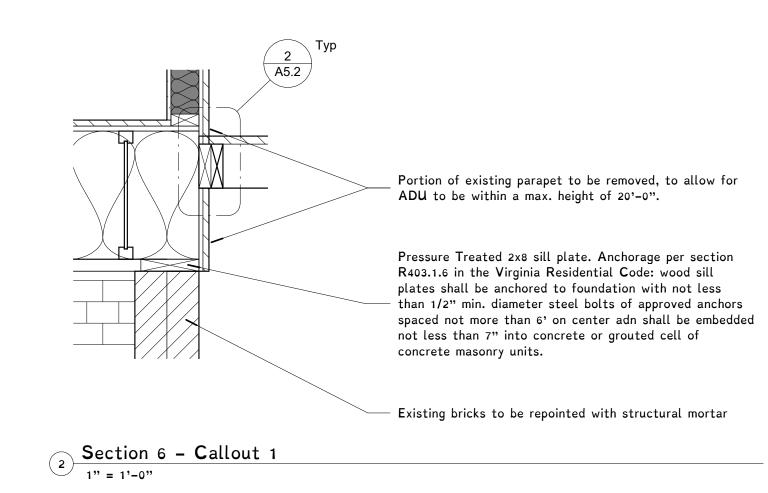
vations

Monument Avenue Daniel Crisler Ele 3202



Sidian





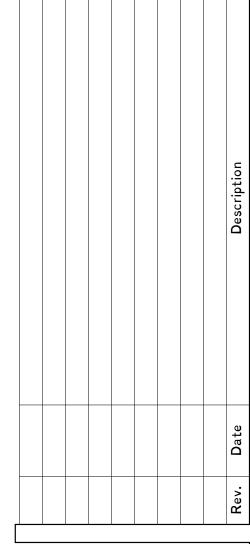
Window Schedule

Type Mark ADU Second Floor	Family	Count	Width	Height	Sill Height	Header	Casing Quantity	Sill Quantity
236	Window-Double-Hung	1	2'-6"	5'-0"	2'-0"	H.1 (2) 2 x 4	12'-6"	3'-2"
236	Window-Double-Hung	1	2'-6"	5'-0"	2'-0"	H.1 (2) 2 x 4	12'-6"	3'-2"
262	Window-Double-Hung	1	2'-0"	4'-0"	3'-0"	H.2 (2) 2 x 6	10'-0"	2'-8"
187	Window-Double-Hung	1	2'-6"	4'-0"	3'-0"	H.1 (2) 2 x 4	10'-6"	3'-2"
262	Window-Double-Hung	1	2'-0"	4'-0"	3'-0"	H.1 (2) 2 x 4	10'-0"	2'-8"
262	Window-Double-Hung	1	2'-0"	4'-0"	3'-0"	H.1 (2) 2 x 4	10'-0"	2'-8"
187	Window-Double-Hung	1	2'-6"	4'-0"	3'-0"	H.1 (2) 2 x 4	10'-6"	3'-2"
							76'-0"	20'-8"

_		
Door	Schedule	

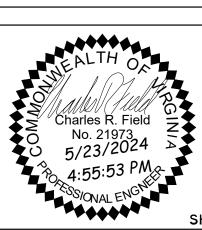
Mark	Family	Width	Height	Header	Casing Quantity
<b>G</b> rade	•		•		
218	Single- Exterior windowed door	2'-8"	6'-8"	(2)L 3 1/2" x 3 1/2" x 3/8"	32'-0"
ADU Second Flo	oor				
208	Single- Exterior windowed door	3'-0"	6'-8"	H.1 (2) 2 x 4	32'-8"
209	Single- Exterior windowed door	3'-0"	6'-8"	H.1 (2) 2 x 4	32'-8"
211	Single Pocket Door	2'-8"	6'-8"	(2) 2 x 4	32'-0"
212	Single Pocket Door	2'-8"	6'-8"	(2) 2 x 4	32'-0"
213	Single-Panel 6	2'-0"	6'-8"	(2) 2 x 4	30'-8"
214	Single-Panel 6	2'-6"	6'-8"	(2) 2 x 4	31'-8"
					223'-8"

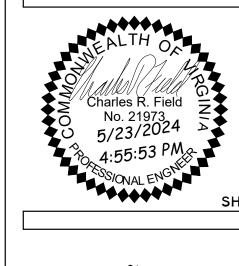
A3.1



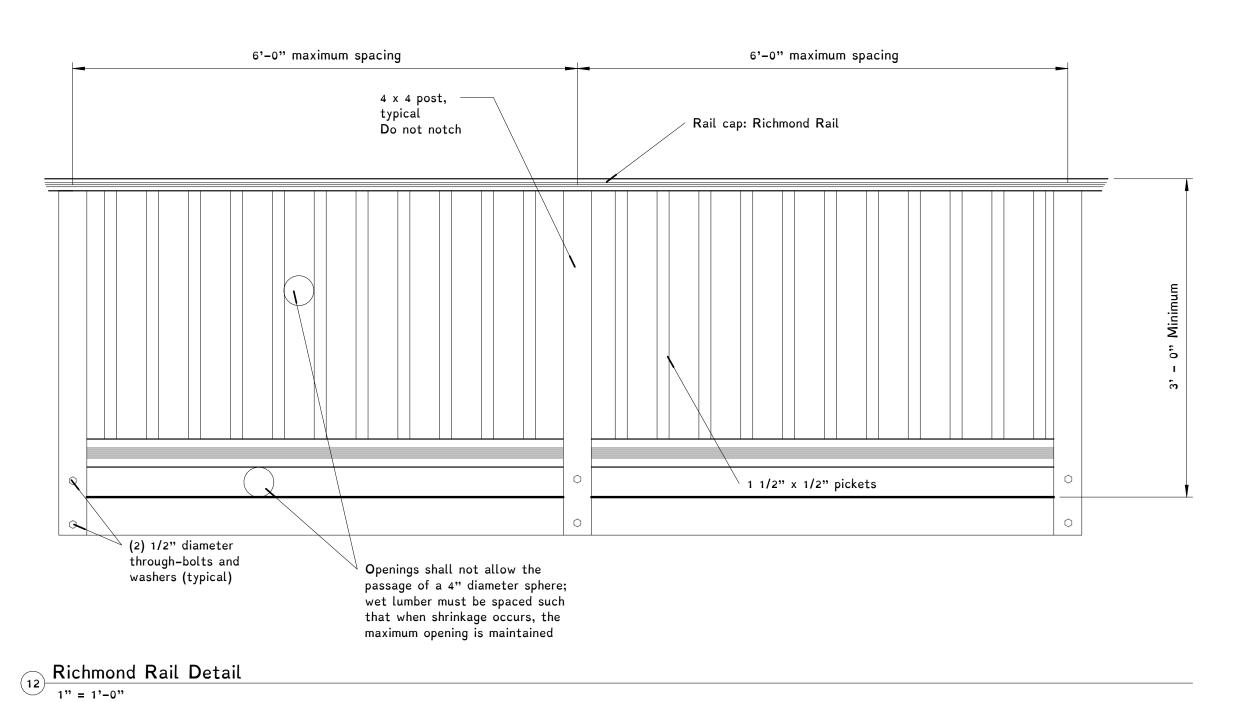
ctions

Monument Av Daniel Crisler 3202





0' 4' - 0" SCALE = 1/4" = 1'-0"



1. Wood Studs - Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped. 2. Joints and Nail-Heads - Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound. 3. Gypsum Board\* - 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. 4. Exterior grade drywall to be used on exterior walls

Design No.

**U**305

Bearing Wall Rating – 1 Hr. STC Rating – 56

1 Hr Exterior Wall - Stud, U305

5. Tyvek vapor barrier

at first interior bay,

provide 2x blocking a

guard posts; toe nail

bottom, each side

with 10d nails top and

Beam must

post

fully bear on

6 x 6 post;

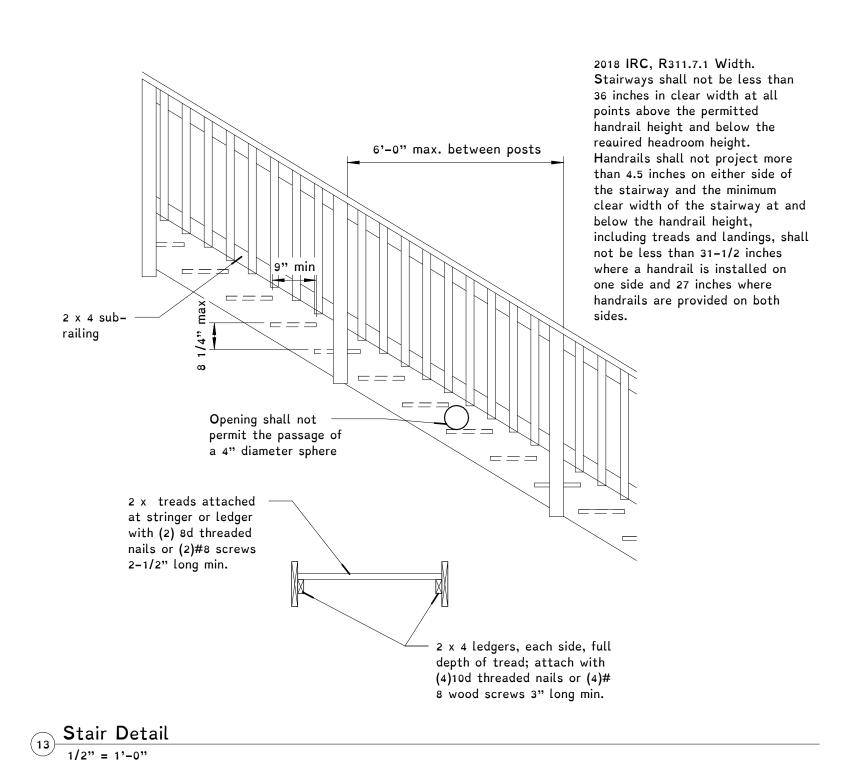
underside of beam

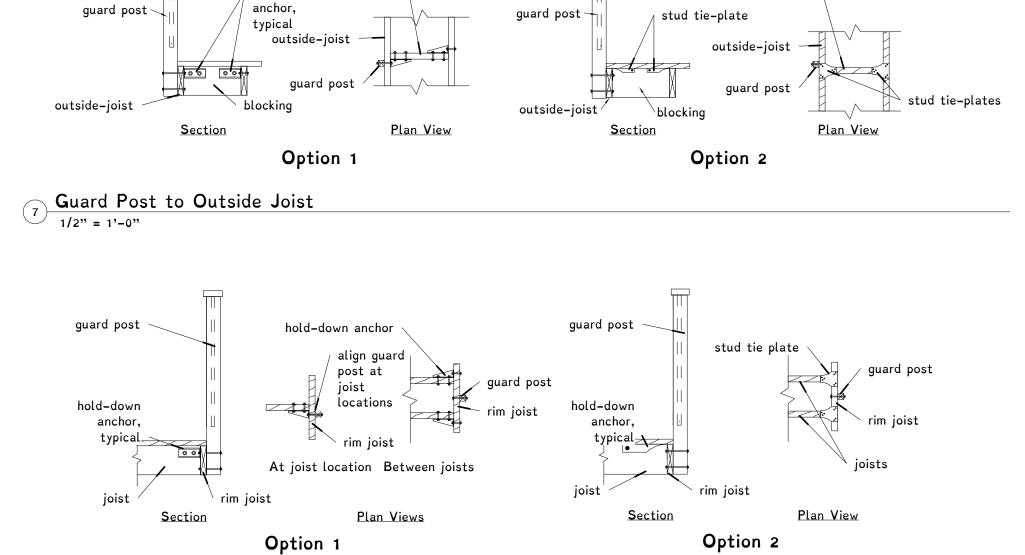
Post to Beam Connection Detail
1 1/2" = 1'-0"

to top of footing

notched 6 x 6

6. Finish siding





at first interior bay,

provide 2x blocking a guard posts; toe nail with 10d nails top and

bottom, each side

hold-down

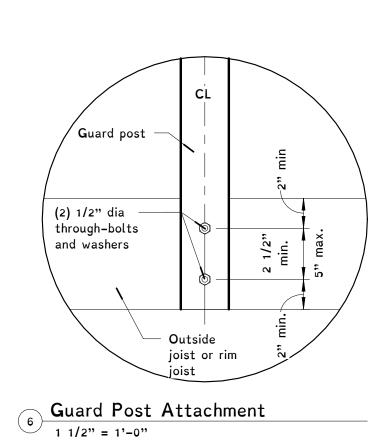
Guard Post to Rim Joist Detail
1/2" = 1'-0"

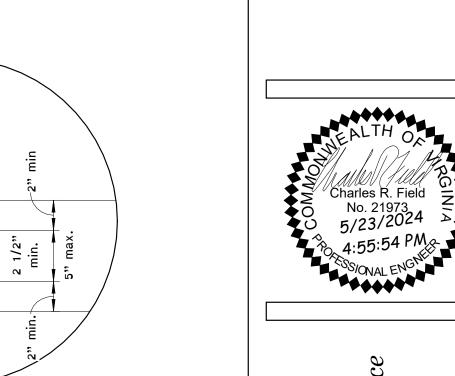
Assembly No. - GA-FC-5120 Fire Rating - 1 Hr. STC Rating - 50-54 1. Finish Flooring / 2. Floor Substrate / 3. Sub Floor 6. Ceiling Support 5. Batts and Blankets 7. Finished Ceiling 1. Finish Flooring - 1 by 4 in. T&G, laid perpendicular to joists; or 19/32 in. thick wood structural panels, min grade "underlayment" or "single floor". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. 2. Floor Substrate - 3/8 in. (9 mm) particle board 3. Sub Floor - 5/8 in. (16 mm) plywood underlayment 4. Structural Members - Nom. 2 in. (51 mm) by 10 in. (254 mm) 16 in. (406 mm) OC min. 5. Batts and Blankets - 3-1/2 in. (89 mm) fiberglass insulation 6. Ceiling Support - Furring channels spaced 24 in. (609 mm) OC 7. Finished Ceiling - 5/8 in. thick gypsum board 2 1 Hr Floor - Wood Joist, GA-FC-5120 1" = 1'-0" (3) 8d toe Mechanical Joist hanger Top of beam and nailed (2 on joist must be at fastener or same elevation one side 1 on hurricane clip the other) 9 Joist to Beam Connection

1" = 1'-0" Guard post diameter through-bolts with washers or (2) 1/2" dia 5" ledger locks through-bolts and washers Notch post to maximum height = provide beam 14'-0": measure to

with flush and

tight bearing





T

enn

ment |

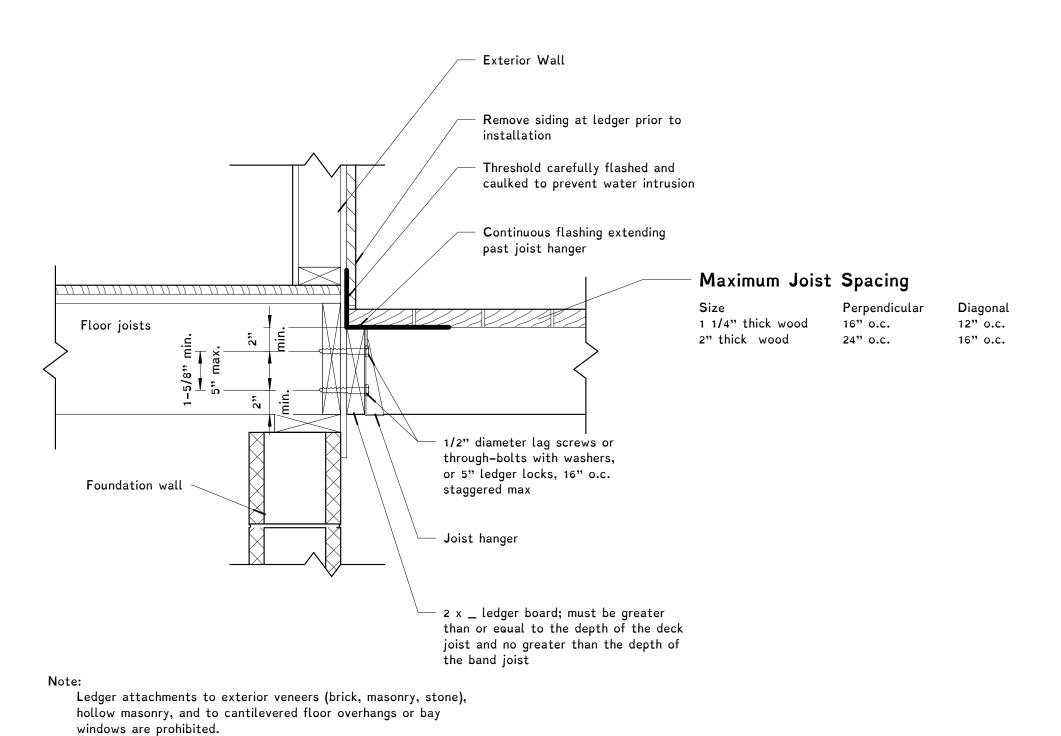
Monum Daniel

3202

tail

O

A5.1



Threaded rod, may be sloped up to 1:12 away form the house Floor sheathing nailing @ 6" max. o.c. to joist with hold down Hold-down or similar tension device 1/2" diameter lag screws or through-bolts with washers, or 5" ledger locks Foundation wall — Hold-down tension devices shall be provided in not less than two locations within two feet of the edge of the deck, and shall have an allowable stress design capacity of not less than 1,500 lb.

Lateral Load Device with Floor Joists Parallel to Deck Joists

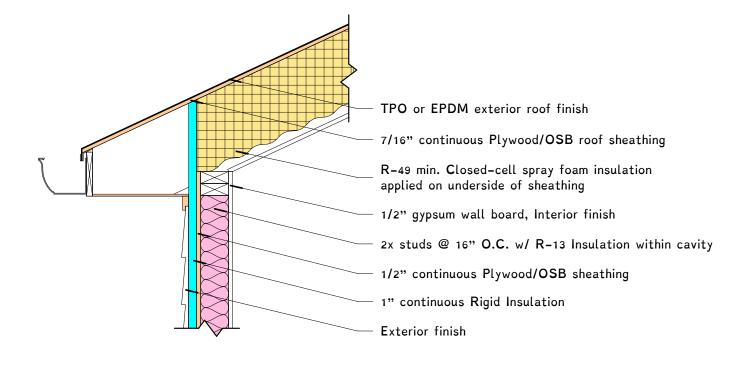
1 1/2" = 1'-0"

6x6 Pressure Treated nominal lumber column Simpson Strong-Tie CBS66 column cap or equivalent Finished footing above grade. Top of footing pitched slightly, away from 14" Circular concrete footing Circular Deck Footing

1" = 1'-0"

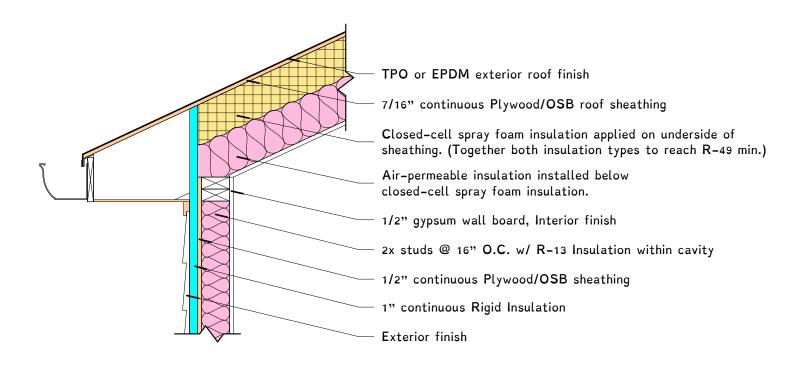
Ledger Attachment - deck to rim board 1 1/2" = 1'-0"

Option 1: Air-Impereable Insulation Only



Option 2: Air-Permeable Cavity Insulation TPO or EPDM exterior roof finish 1/2" continuous Plywood/OSB underlayment Provide 3" of Rigid Insulation in Climate Zone 4A. Use multiple 7/16" continuous Plywood/OSB roof sheathing Closed-cell spray foam insulation applied on underside of sheathing. (Together both insulation types to reach R-49 min.) - 1/2" gypsum wall board, Interior finish 2x studs @ 16" O.C. w/ R-13 Insulation within cavity - 1/2" continuous Plywood/OSB sheathing — 1" continuous Rigid Insulation Exterior finish

Option 3: Hybrid Insulation



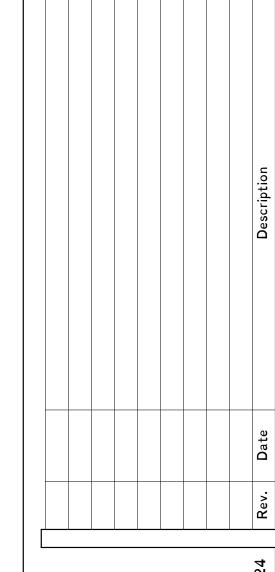
Option 4: Perfect Roof TPO or EPDM exterior roof finish 1/2" continuous Plywood/OSB underlayment – 2" air venting channel - 1/2" continuous Plywood/OSB underlayment Provide 10" of Rigid Insulation. Use multiple layers with joints staggered and taped to eliminate air leaks 7/16" continuous Plywood/OSB roof sheathing - Rafter bays open to interior Closed-cell spray foam insulation applied within wall cavity from top plate to roof decking. - 1/2" gypsum wall board, Interior finish - 2x studs @ 16" O.C. w/ R-13 Insulation within cavity — 1" continuous Rigid Insulation 1/2" continuous Plywood/OSB sheathing Exterior finish

1" = 1'-0"

Unvented Roof Assembly Options

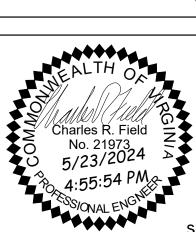
*Print plans at 24" x 36", Arch D* 

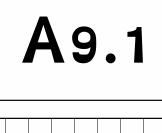
A5.2

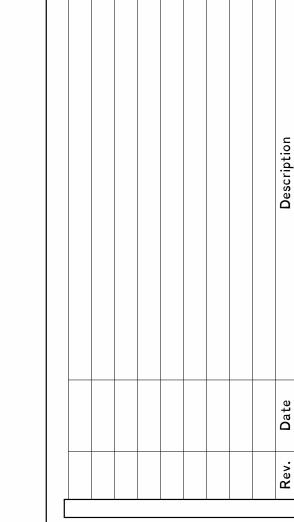


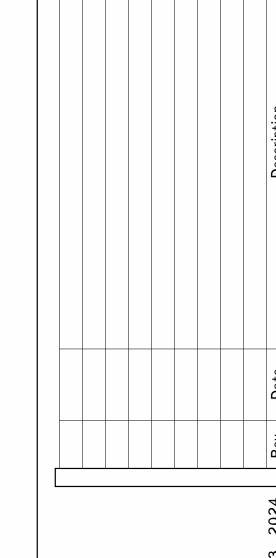
tail O

ment |





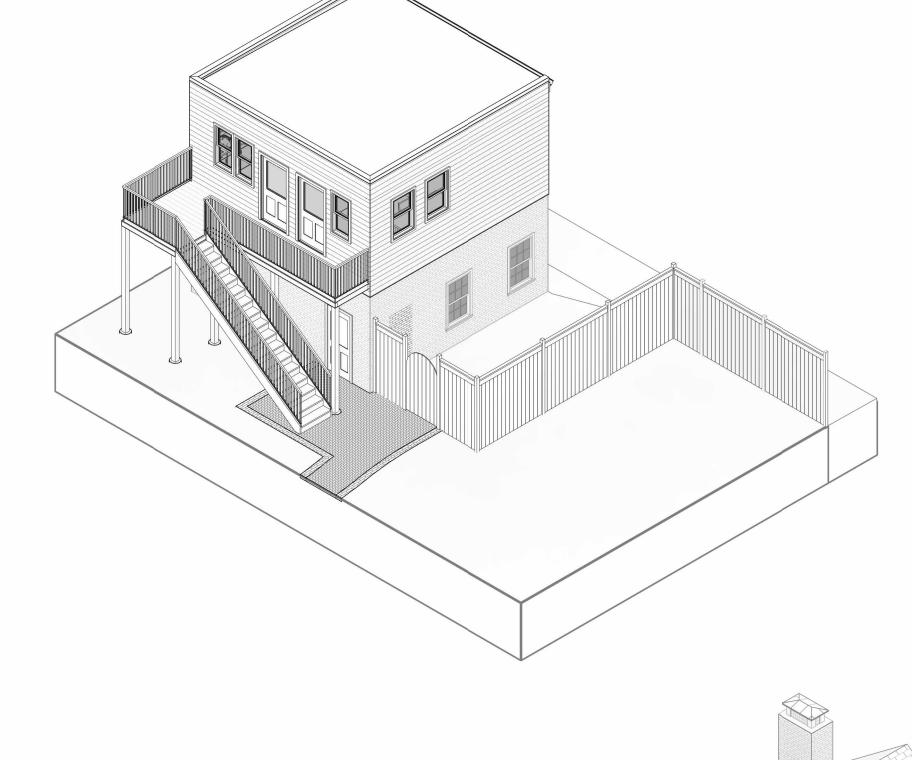


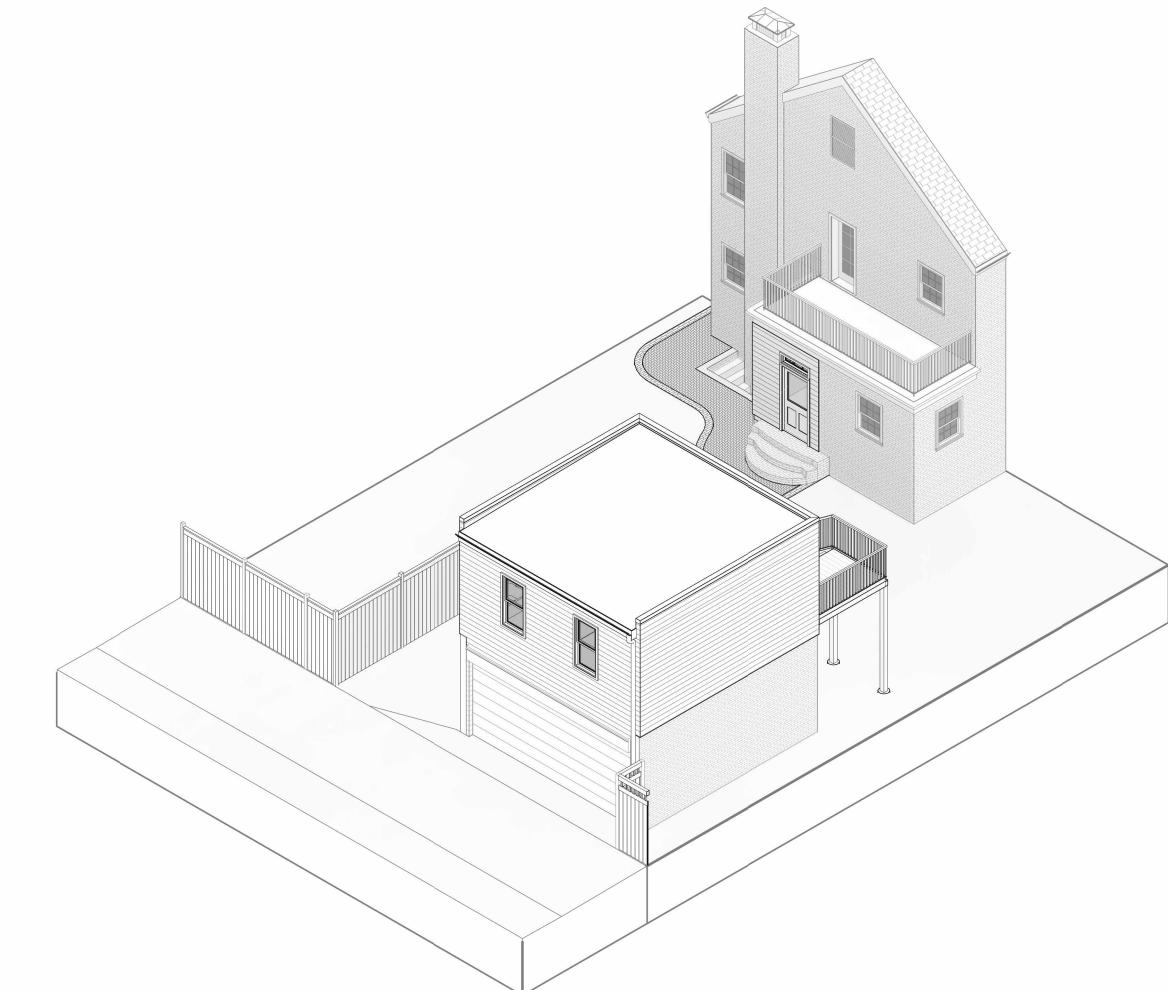


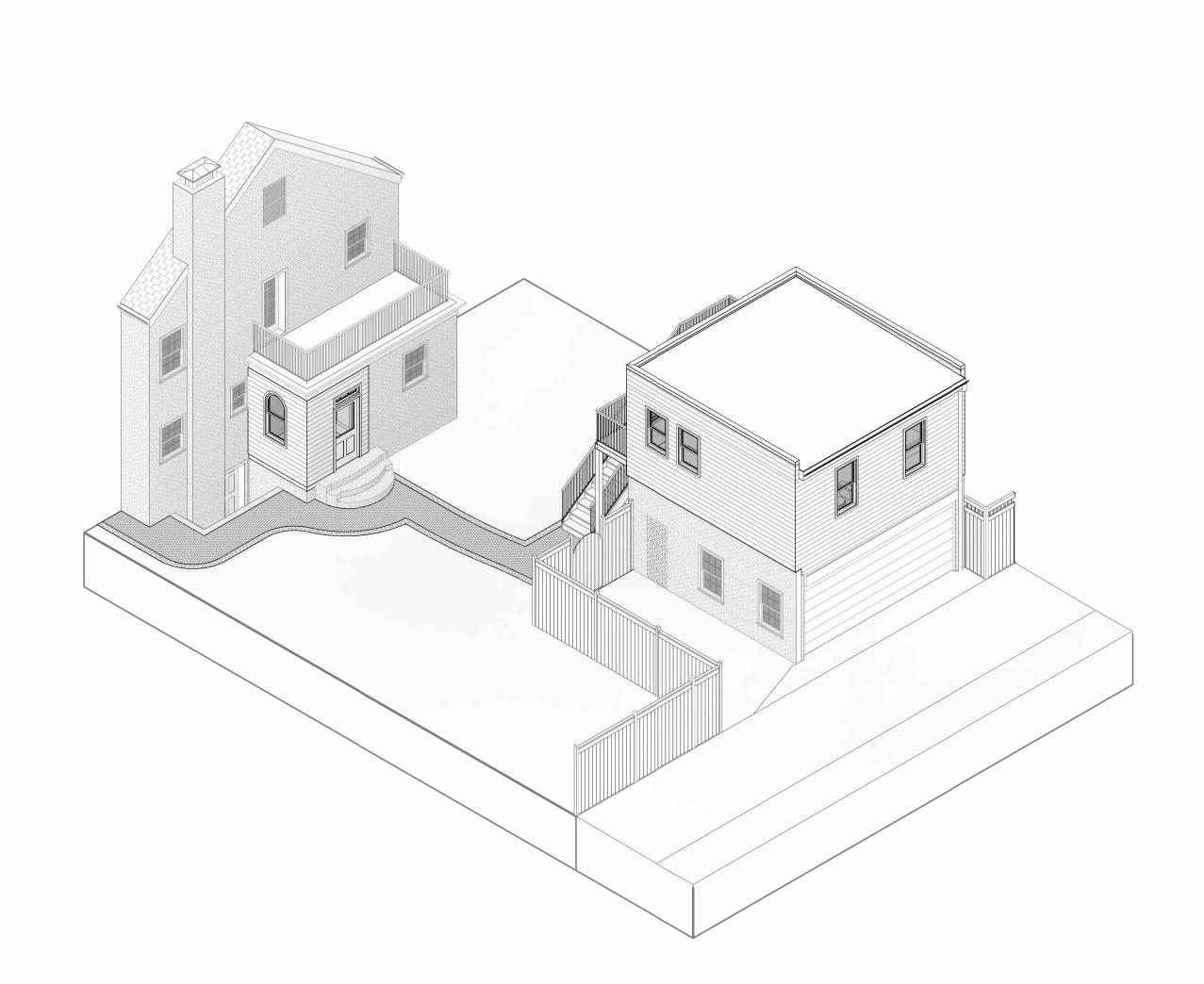
Renderings

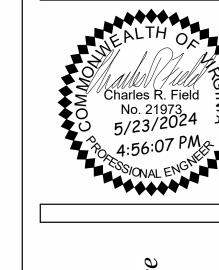
Exterior

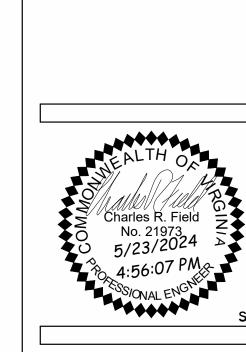
3202 Monument Avenue Daniel Crisler



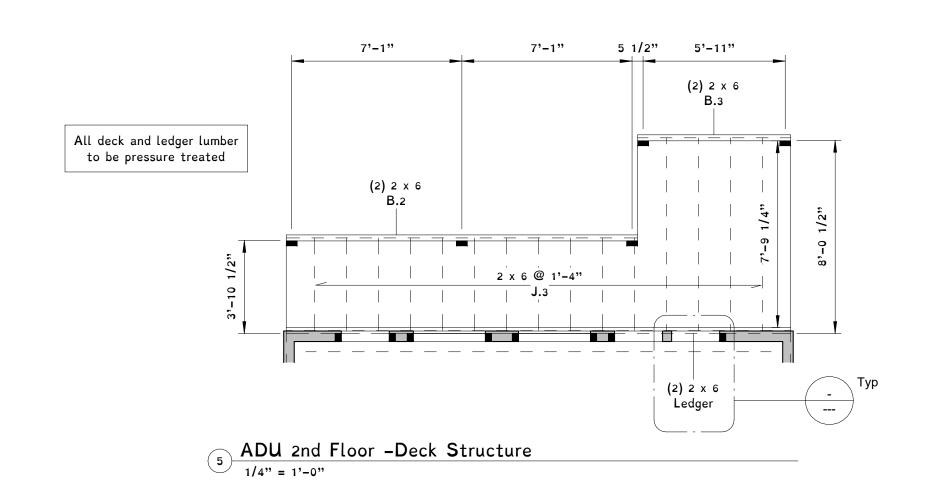


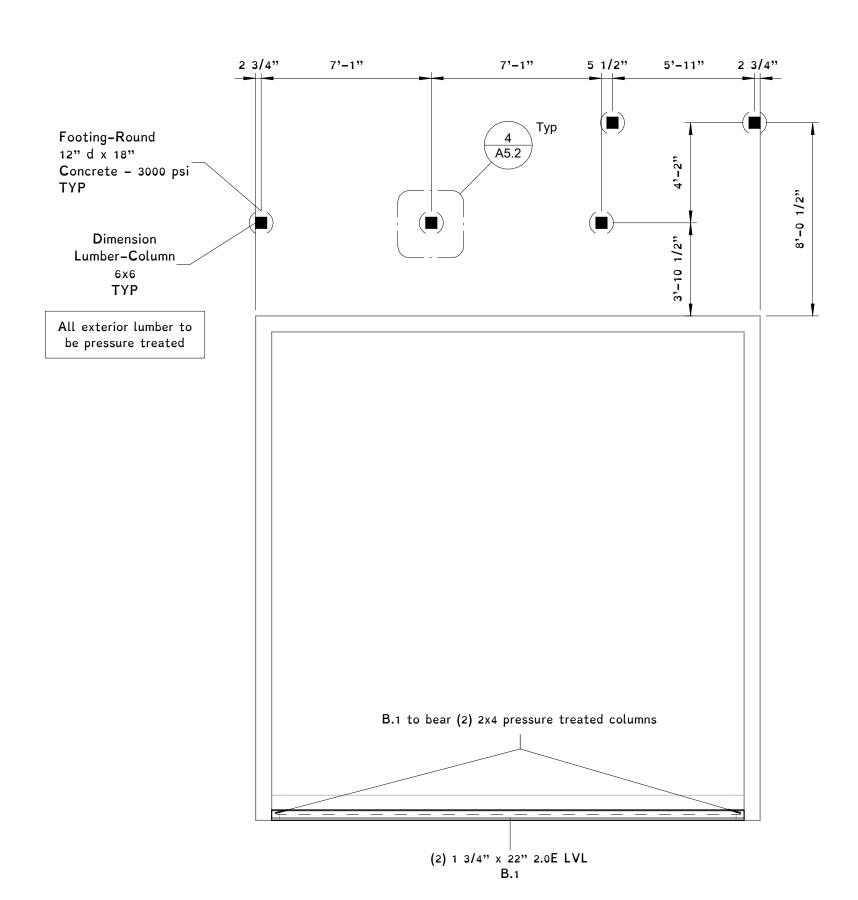




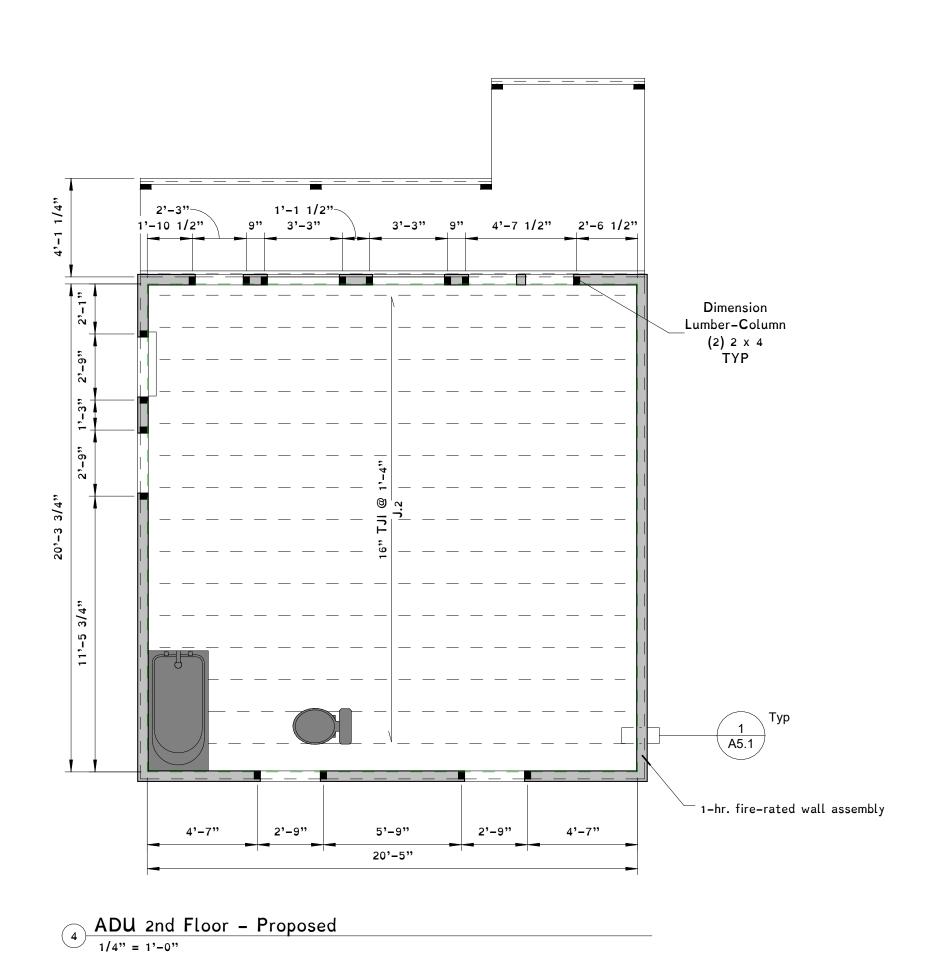


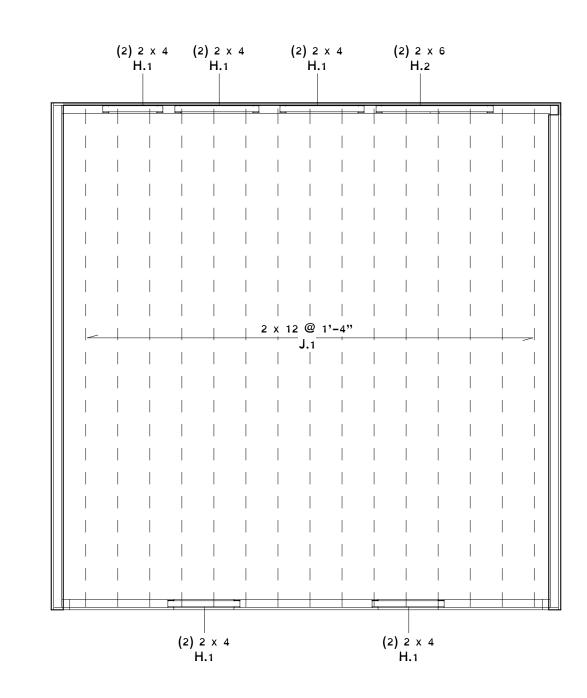
Spridian 0' 4' - 0" SCALE = 1/4" = 1'-0"



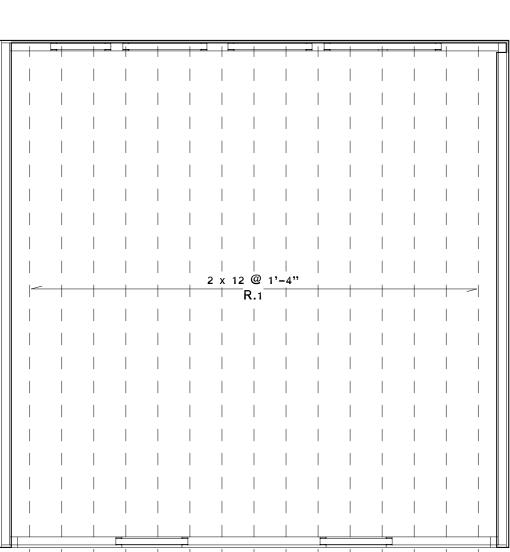


3 ADU 1st Floor - Footings and Garage Beam
1/4" = 1'-0"

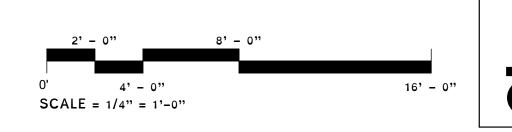




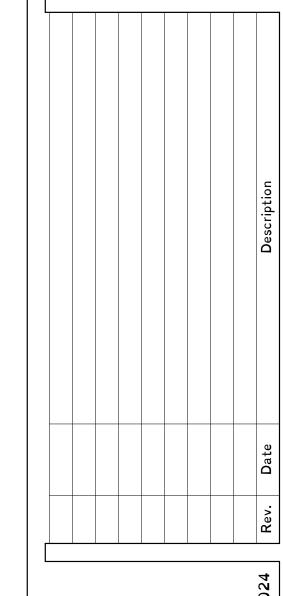
1 ADU 2nd Floor - Ceiling and Headers
1/4" = 1'-0"



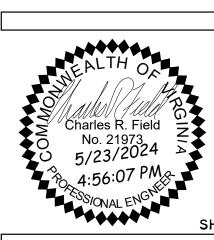
2 ADU Roof - Proposed
1/4" = 1'-0"

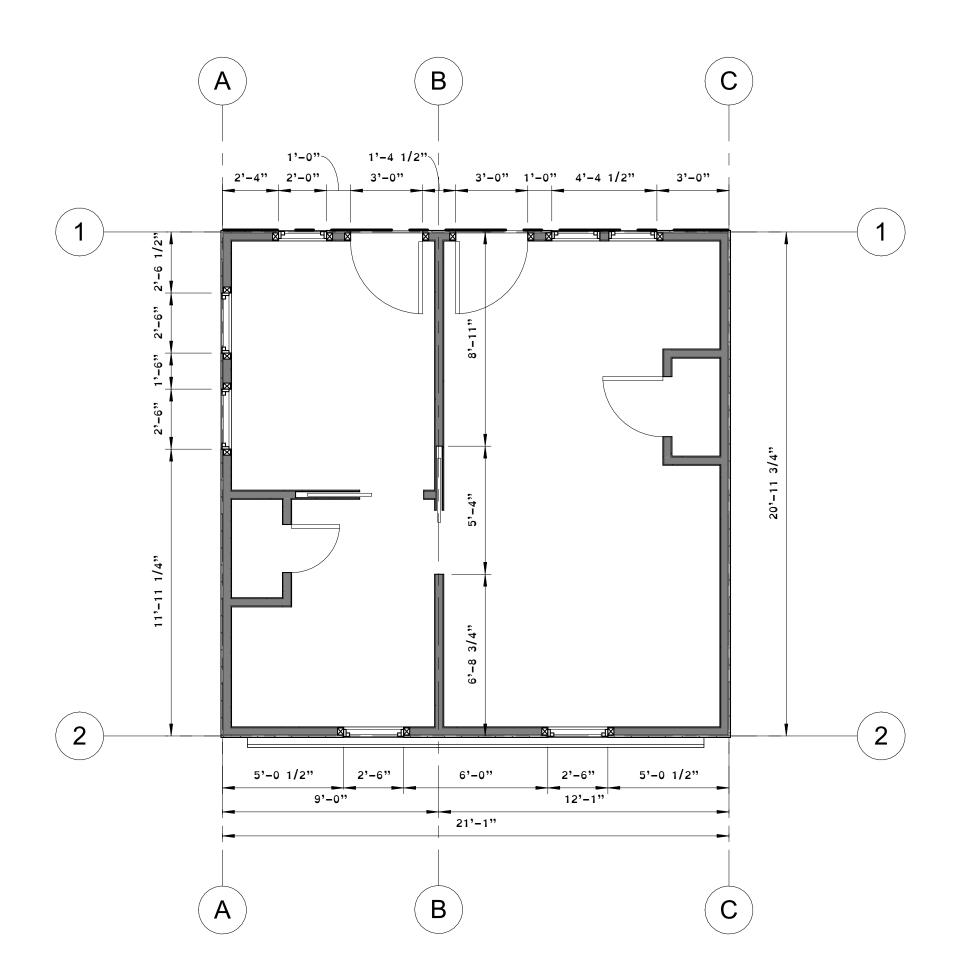


**S**1.1



Monument Ave Daniel Crisler ucture Str 3202

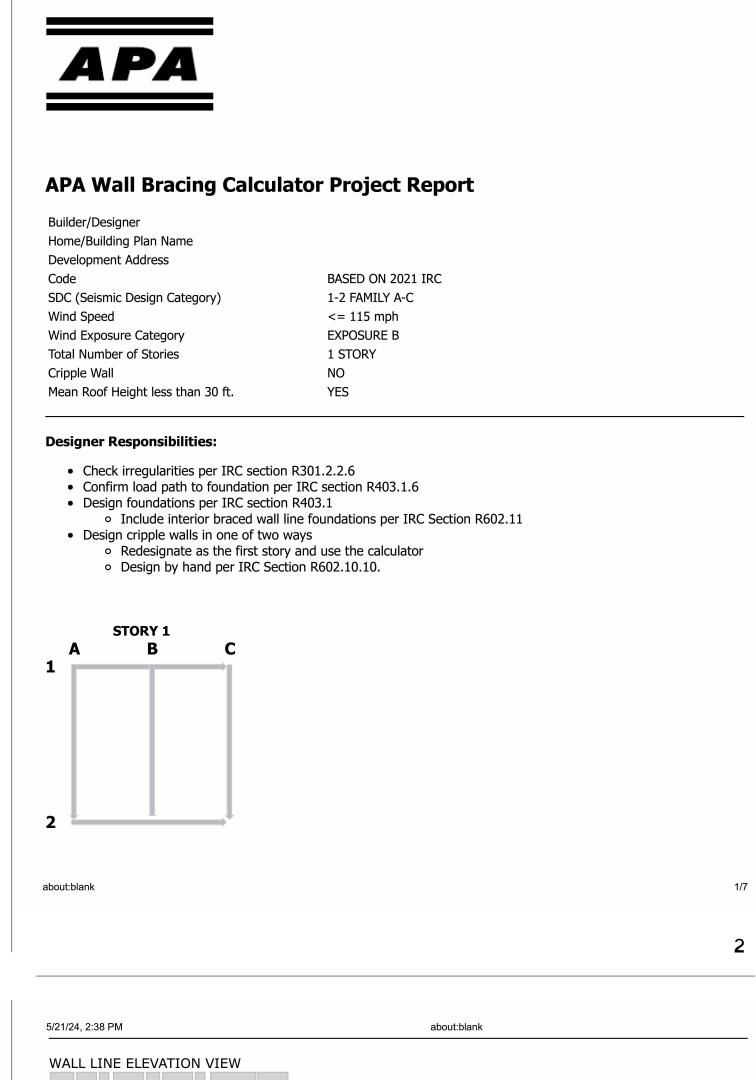




2nd Floor - Proposed
1/4" = 1'-0"

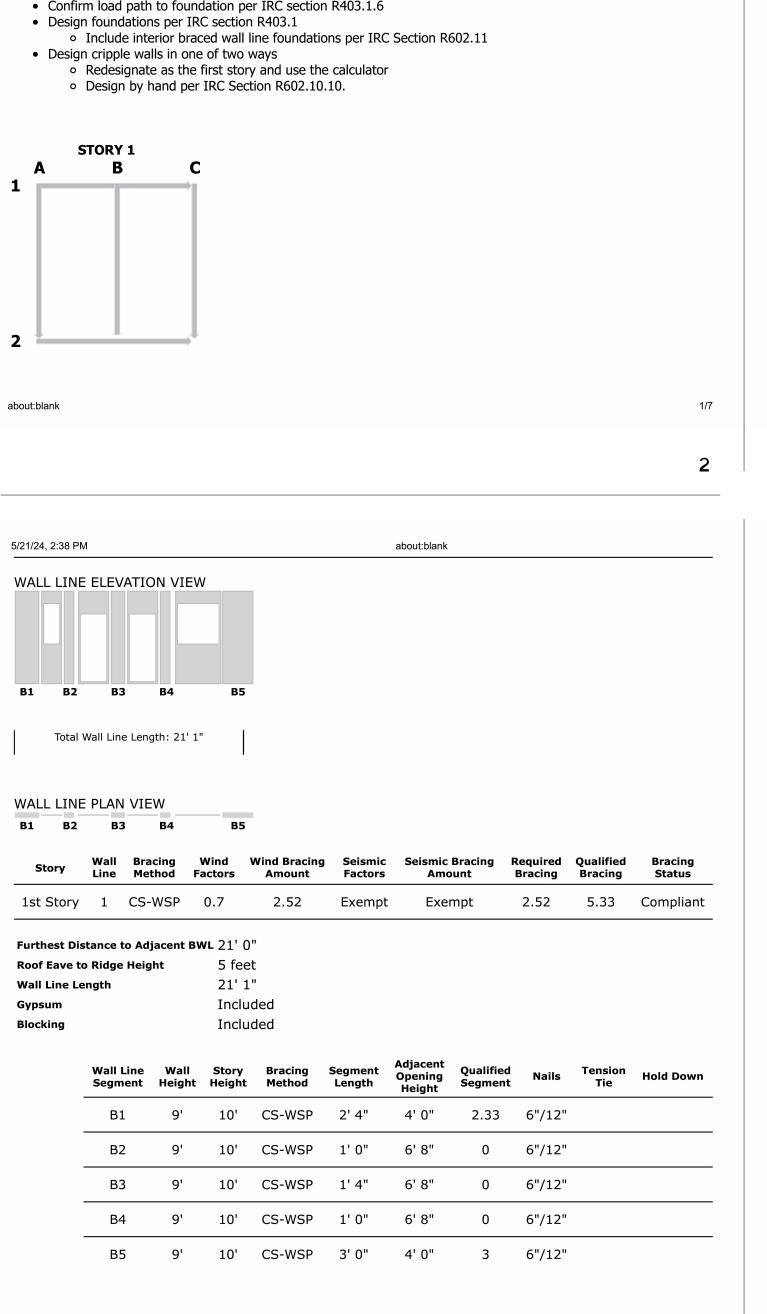
B2 9' 10' CS-WSP 6'9" 6'8" 6.75 6"/12"

WALL LINE ELEVATION VIEW WALL LINE ELEVATION VIEW Total Wall Line Length: 21' 0" Total Wall Line Length: 21' 0" WALL LINE PLAN VIEW 1st Story B CS-WSP 0.91 2.1 Exempt Exempt 2.1 15.67 Compliant 1st Story C CS-WSP 0.91 2.1 Exempt Exempt 2.1 21 Compliant Furthest Distance to Adjacent BWL  $12'\ 1"$ Furthest Distance to Adjacent BWL 12' 1" Roof Eave to Ridge Height Included Included Included Included B1 9' 10' CS-WSP 21'0" B1 9' 10' CS-WSP 8'11" 6'8" 8.92 6"/12"



about:blank

5/21/24, 2:38 PM



about:blank

	5/21/24, 2:38 PM						about:blank				
WALL LIN	E ELEV	ATION	I VIEW	/							
B1 B	2		В3								
l Total	Wall Line	l enath	· 21' በ"	1							
l	wan Line	Length	. 21 0								
WALL LIN		VIEW									
B1 B	2		В3								
Story	Wall Line	Braci Meth		Wind actors	Wind Bracing Amount	Seismic Factors	Seismic Amo		Required Bracing	Qualified Bracing	Bracing Status
1st Story	Α	CS-W	SP (	0.91	1.68	Exempt	Exer	mpt	1.68	14.5	Complia
Furthest Di	stance i	to Adia	cent RV	vi 9' 0"							
i di di coco				5 fee	t						
Roof Eave t				21' 0	11						
Roof Eave t	ength										
	ength			Inclu							
Wall Line L	ength			Inclu Inclu							
Wall Line L Gypsum	ength Wall I Segm		Wall Height		ded Bracing	Segment Length	Adjacent Opening Height	Qualified Segment		Tension Tie	Hold Dov
Wall Line L Gypsum	Wall I	ent F		Inclu-	ded Bracing		Opening				Hold Dov
Wall Line L Gypsum	Wall I Segm	l	Height	Inclu- Story Height	Bracing Method	Length	Opening Height	Segment	Naiis		Hold Dov
Wall Line L Gypsum	Wall I Segm	l	<b>Height</b> 9'	Story Height	Bracing Method CS-WSP	2' 7" 1' 6"	Opening Height 4' 0"	Segment 2.58	6"/12"		Hold Dov

WALL LINE ELEVATION VIEW Total Wall Line Length: 21' 1" 1st Story 2 CS-WSP 0.7 2.52 Exempt Exempt 2.52 16.08 Compliant

Furthest Distance to Adjacent BWL 21' 0" Included Included

Wall Line Segment	Wall Height	Story Height	Bracing Method	Segment Length	Opening Height	Qualified Segment	Nails	Tension Tie	Hold Down	_
B1	9'	10'	CS-WSP	5' 1"	5' 0"	5.08	6"/12"			
B2	9'	10'	CS-WSP	6' 0"	5' 0"	6	6"/12"			
В3	9'	10'	CS-WSP	5' 0"	5' 0"	5	6"/12"			

C

**S**1.2

*Print plans at 24" x 36", Arch D* 

about:blank

# FORTEWEB JOB SUMMARY REPORT Monument Avenue, 3202

ADU								
Member Name	Results (Max UTIL %)	Current Solution	Comments					
R.1	Passed (86% M)	1 piece(s) 2 x 12 SP No.2 @ 16" OC						
J.1 Ceiling Joists	Passed (46% M)	1 piece(s) 2 x 12 SP No.2 @ 16" OC						
J.2 ADU 2nd Floor Joists	Passed (80% R)	1 piece(s) 16" TJI® 560 @ 24" OC						
J.3 Deck Joists	Passed (84% ΔL)	1 piece(s) 2 x 6 SP No.2 @ 16" OC						
H.1 ADU 2nd Floor Headers	Passed (86% M)	2 piece(s) 2 x 4 SP No.2						
H.2 ADU 2nd Floor Header (Double Window)	Passed (89% M)	2 piece(s) 2 x 6 SP No.2						
H.3 Mudroom Headers	Passed (51% M)	2 piece(s) 2 x 4 SP No.2						
B.1 Garage Header	Passed (64% R)	2 piece(s) 1 3/4" x 22" 2.0E Microllam® LVL						
B.2 Deck Beam	Passed (54% M)	2 piece(s) 2 x 6 SP No.2						
B.3 Deck Beam	Passed (71% M)	2 piece(s) 2 x 6 SP No.2						

# Overall Length: 21' 4 3/4" 20' 3 3/4" Actual @ Location Allowed Result LDF Load: Combination (Pattern) Member Length : 21' 1 1/4"

**FORTEWEB** 

ring is Conceptual. All location	ns are measured from the	e outside face of I	eft support (or left ca	antilever	end). All dimensions are horizontal.

esign Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)	Member Length . 21 1 1/4
ember Reaction (lbs)	477 @ 21' 1 1/4"	1271 (1.50")	Passed (38%)		1.0 D + 1.0 Lr (Alt Spans)	System : Roof
near (lbs)	433 @ 20' 2"	2461	Passed (18%)	1.25	1.0 D + 1.0 Lr (Alt Spans)	Member Type : Joist Building Use : Residential
oment (Ft-lbs)	2438 @ 10' 10 9/16"	2843	Passed (86%)	1.25	1.0 D + 1.0 Lr (Alt Spans)	Building Code : IBC 2018
ve Load Defl. (in)	0.422 @ 10' 10 1/2"	0.682	Passed (L/583)		1.0 D + 1.0 Lr (Alt Spans)	Design Methodology : ASD
otal Load Defl. (in)	0.737 @ 10' 10 1/2"	1.023	Passed (L/333)		1.0 D + 1.0 Lr (Alt Spans)	Member Pitch: 0.25/12
Deflection criteria: LL (L/360) and	TL (L/240).					

**MEMBER REPORT** 

ADU, R.1

1 piece(s) 2 x 12 SP No.2 @ 16" OC

Overhang deflection criteria: LL (2L/360) and TL (2L/240).

•Maximum allowable bracing intervals based on applied load.

 Allowed moment does not reflect the adjustment for the beam stability factor. • A 15% increase in the moment capacity has been added to account for repetitive member usage. Applicable calculations are based on NDS.

	Bearing Length			Loads	to Supports		
Supports	Total	Available	Required	Dead	Roof Live	Factored	Accessories
1 - Stud wall - SYP	3.50"	3.50"	1.50"	218	290	508	Blocking
2 - Hanger on 11 1/4" SYP Ledger	3.50"	Hanger <sup>1</sup>	1.50"	210	280	491	See note <sup>1</sup>

• Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed. • At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger • 1 See Connector grid below for additional information and/or requirements.

Lateral Bracing	Bracing Intervals	Comments
Top Edge (Lu)	4' 1" o/c	
Bottom Edge (Lu)	21' 1" o/c	

Connector: Simpson Strong-Tie									
Support	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories			
2 - Face Mount Hanger	LRU28Z	1.94"	N/A	6-10dx1.5	5-10d				
Face Mount Hanger LRU28Z 1.94" N/A 6-10dx1.5 5-10d      Refer to manufacturer notes and instructions for proper installation and use of all connectors.									

			Dead	Roof Live	
Vertical Load	Location (Side)	Spacing	(0.90)	(1.25)	Comments
1 - Uniform (PSF)	0 to 21' 4 3/4"	16"	15.0	20.0	Roof Load

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties weyernaeuser warrants that the sizing on its products will be in accordance with weyernaeuser product design criteria and published design values. Weyernaeuser expressly discialins any other warrantees related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Engineered Lumber Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to

www.weyernacusen.com/woodproducts/document indiary.
The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes	
Stuart Dumais Obsidian (804) 647-1589 stuart.dumais@gmail.com		Weyerhaeuser

Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal. Member Length: 20' 8 1/4" Actual @ Location Allowed Result LDF Load: Combination (Pattern) System : Floor 

 207 @ 2 1/2"
 1907 (2.25")
 Passed (11%)
 - 1.0 D + 1.0 L (All Spans)

 184 @ 1' 2 3/4"
 1969
 Passed (9%)
 1.00
 1.0 D + 1.0 L (All Spans)

 Member Reaction (lbs) Member Type : Joist Building Use : Residential Moment (Ft-lbs) 1048 @ 10' 5 3/8" 2274 Passed (46%) 1.00 1.0 D + 1.0 L (All Spans) Building Code: IBC 2018 Live Load Defl. (in) Design Methodology : ASD Total Load Defl. (in) TJ-Pro™ Rating N/A Deflection criteria: LL (L/480) and TL (L/240). Allowed moment does not reflect the adjustment for the beam stability factor. • A 15% increase in the moment capacity has been added to account for repetitive member usage. Applicable calculations are based on NDS. • No composite action between deck and joist was considered in analysis. Bearing Length Loads to Supports (lbs) Total Available Required Dead Floor Live Factored Accessories 3.50" 2.25" 1.50" 70 139 209 1 1/4" Rim Board 1 - Stud wall - SYP 3.50" 2.25" 1.50" 70 139 209 1 1/4" Rim Board 2 - Stud wall - SYP Rim Board is assumed to carry all loads applied directly above it, bypassing the member being designed. Bracing Intervals Comments **Lateral Bracing** Top Edge (Lu) 13' 4" o/c 20' 8" o/c Bottom Edge (Lu) Maximum allowable bracing intervals based on applied load.

MEMBER REPORT

ADU, J.1 Ceiling Joists

1 piece(s) 2 x 12 SP No.2 @ 16" OC

Overall Length: 20' 10 3/4"

20' 3 3/4"

VCI Cicai Loud	Location (Side)		·	` ′	Commence
1 - Uniform (PSF)	0 to 20' 10 3/4"	16"	5.0	10.0	Attic w/o Stora

| Member Reaction (lbs)

Moment (Ft-lbs)

Live Load Defl. (in)

Trimmer - SYP

Trimmer - SYP

Lateral Bracing

Vertical Loads

0 - Self Weight (PLF) Uniform (PSF)

- Uniform (PSF)

- Uniform (PSF)

Obsidian (804) 647-1589

stuart.dumais@gmail.com

Bottom Edge (Lu)

Total Load Defl. (in)

Deflection criteria: LL (L/480) and TL (L/240).

Maximum allowable bracing intervals based on applied load.

ww.weyerhaeuser.com/woodproducts/document-library.

Applicable calculations are based on NDS.

• Allowed moment does not reflect the adjustment for the beam stability factor.

0 to 2' 11"

0 to 2' 11"

**FORTEWEB** 

**PASSED** 

5/23/2024 1:57:56 PM UTC

Page 2 / 13

File Name: Monument Avenue, 3202

ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at the contract of the contra Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Engineered Lumber Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to www.weyerhaeuser.com/woodproducts/document-library.

## The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator Stuart Dumais Obsidian	Job Notes	5/23/2024 1:57:56 PM UTC ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0
(804) 647-1589 stuart.dumais@gmail.com		Weyerhaeuser File Name: Monument Avenue, 3202 Page 3 / 13

ADU, H.1 ADU 2nd Floor Headers

2 piece(s) 2 x 4 SP No.2

Actual @ Location Allowed Result LDF Load: Combination (Pattern)

Total Available Required Dead Floor Live Roof Live Factored Accessories

(0.90) (1.00)

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at

Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Engineered Lumber Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to

828 @ 0 2543 (1.50") Passed (33%) -- 1.0 D + 0.75 L + 0.75 Lr (All Spans) System : Wall Member Type : Header

604 @ 1' 5 1/2" 702 Passed (86%) 1.25 1.0 D + 0.75 L + 0.75 Lr (All Spans) Building Use : Residential Building Code : IBC 2018 D.032 @ 1' 5 1/2" 0.073 Passed (L/999+) -- 1.0 D + 0.75 L + 0.75 Lr (All Spans) Design Methodology : ASD D.062 @ 1' 5 1/2" 0.146 Passed (L/568) -- 1.0 D + 0.75 L + 0.75 Lr (All Spans)

(1.25)

Loads to Supports (lbs)

1531 Passed (39%) 1.25 1.0 D + 0.75 L + 0.75 Lr (All Spans) Building Use : Residential

Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Bearing Length

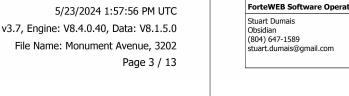
Bracing Intervals Comments

The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

N/A 2.7

10' 5" 15.0 10' 5" 5.0 10.0

Overall Length: 2' 11"



Member Length: 2' 11"

**FORTEWEB** 

Moment (Ft-lbs)

TJ-Pro™ Rating

Live Load Defl. (in)

Total Load Defl. (in)

1 - Hanger on 16" SYP Ledger

Lateral Bracing

. - Face Mount Hanger

Vertical Load

1 - Uniform (PSF)

- Face Mount Hanger

Top Edge (Lu)

Bottom Edge (Lu)

Deflection criteria: LL (L/480) and TL (L/240).

A structural analysis of the deck has not been performed.

 $\bullet$  Additional considerations for the TJ-Pro  $^{\text{\tiny{TM}}}$  Rating include: None.

• 1 See Connector grid below for additional information and/or requirements

• 2 Required Bearing Length / Required Bearing Length with Web Stiffeners

•TJI joists are only analyzed using Maximum Allowable bracing solution •Maximum allowable bracing intervals based on applied load.

**Connector: Simpson Strong-Tie** 

**PASSED** 

# MEMBER REPORT ADU, H.2 ADU 2nd Floor Header (Double Window)

MEMBER REPORT

ADU, J.2 ADU 2nd Floor Joists

1 piece(s) 16" TJI® 560 @ 24" OC

Overall Length: 19' 8"

19' 4 1/2"

2710 Passed (37%) 1.00 1.0 D + 1.0 L (All Spans)

1008 @ 1 3/4" 1265 (1.75") Passed (80%) 1.00 1.0 D + 1.0 L (All Spans)

 4880 @ 9' 10"
 12925
 Passed (38%)
 1.00
 1.0 D + 1.0 L (All Spans)

 0.217 @ 9' 10"
 0.484
 Passed (L/999+)
 - 1.0 D + 1.0 L (All Spans)

 0.282 @ 9' 10"
 0.969
 Passed (L/825)
 - 1.0 D + 1.0 L (All Spans)

Bearing Length Loads to Supports (lbs)

Total Available Required Dead Floor Live Factored Accessories 
 1.75"
 Hanger¹
 1.75" / -²
 236
 787
 1023
 See note ¹

 1.75"
 Hanger¹
 1.75" / -²
 236
 787
 1023
 See note ¹

> Dead Floor Live Spacing (0.90) (1.00) Comments

24" 12.0 40.0 ADU 2nd Floor Load

LDF Load: Combination (Pattern)

 Model
 Seat Length
 Top Fasteners
 Face Fasteners
 Member Fasteners
 Accessories

N/A N/A

Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Deflection analysis is based on composite action with a single layer of 23/32" Weyerhaeuser Edge™ Panel (24" Span Rating) that is glued and nailed down.

Connector not found N/A

Actual @ Location Allowed Result

1008 @ 1 3/4"

• At hanger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger

Bracing Intervals

9' 6" o/c

0 to 19' 8"

19' 5" o/c

Connector not found

• Allowed moment does not reflect the adjustment for the beam stability factor.

2 piece(s) 2 x 6 SP No.2 Overall Length: 4' 5 1/4"

Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizon	ontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)	Member Length: 4' 5 1/4"	
Member Reaction (lbs)	1263 @ 0	2543 (1.50")	Passed (50%)		1.0 D + 0.75 L + 0.75 Lr (All Spans)	System : Wall	
Shear (lbs)	931 @ 7"	2406	Passed (39%)	1.25	1.0 D + 0.75 L + 0.75 Lr (All Spans)	Member Type : Header Building Use : Residential	
Moment (Ft-lbs)	1401 @ 2' 2 5/8"	1575	Passed (89%)	1.25	1.0 D + 0.75 L + 0.75 Lr (All Spans)	Building Code : IBC 2018	
Live Load Defl. (in)	0.044 @ 2' 2 5/8"	0.111	Passed (L/999+)		1.0 D + 0.75 L + 0.75 Lr (All Spans)	Design Methodology : ASD	
Total Load Defl. (in)	0.085 @ 2' 2 5/8"	0.222	Passed (L/624)		1.0 D + 0.75 L + 0.75 Lr (All Spans)		
Deflection criteria: LL (L/480) and TL (L/240).							

· Allowed moment does not reflect the adjustment for the beam stability factor Applicable calculations are based on NDS.

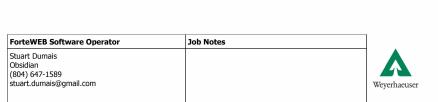
	В	earing Leng	th	Loads to Supports (lbs)				
Supports	Total	Available	Required	Dead	Floor Live	Roof Live	Factored	Accessories
1 - Trimmer - SYP	1.50"	1.50"	1.50"	615	231	633	1263	None
2 - Trimmer - SYP	1.50"	1.50"	1.50"	615	231	633	1263	None

Lateral Bracing 4' 5" o/c Maximum allowable bracing intervals based on applied load.

Bracing Intervals

			Dead	Floor Live	Roof Live	
Vertical Loads	Location	Tributary Width	(0.90)	(1.00)	(1.25)	Comments
0 - Self Weight (PLF)	0 to 4' 5 1/4"	N/A	4.2			
1 - Uniform (PSF)	0 to 4' 5 1/4"	10' 5"	15.0	-	20.0	Roof Load
2 - Uniform (PSF)	0 to 4' 5 1/4"	10' 5"	5.0	10.0	-	Attic w/o Storage
3 - Uniform (PSF)	0 to 4' 5 1/4"	3' 10 1/4"	16.8	=	20.0	Awning Load

Weyerhaeuser Notes Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Engineered Lumber Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to www.weyerhaeuser.com/woodproducts/document-library.



The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

5/23/2024 1:57:56 PM UTC ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0 File Name: Monument Avenue, 3202

Page 8 / 13

**PASSED** 

Member Length: 19' 4 1/2"

Member Type : Joist

Building Use: Residential

Building Code: IBC 2018

Design Methodology: ASD

5/23/2024 1:57:56 PM UTC

Page 4 / 13

File Name: Monument Avenue, 3202

ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0

ForteWEB Software Operator

stuart.dumais@gmail.com

Stuart Dumais

5/23/2024 1:57:56 PM UTC ForteWEB v3.7 File Name: Monument Avenue, 3202

Page 1 / 13

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to

The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

**FORTEWEB** MEMBER REPORT ADU, J.3 Deck Joists 1 piece(s) 2 x 6 SP No.2 @ 16" OC Overall Length: 8' 6"

Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)	Member Length: 8'
Member Reaction (lbs)	277 @ 3"	1271 (1.50")	Passed (22%)		1.0 D + 1.0 L (All Spans)	System : Floor
Shear (lbs)	246 @ 8 1/2"	963	Passed (26%)	1.00	1.0 D + 1.0 L (All Spans)	Member Type : Joist Building Use : Resident
Moment (Ft-lbs)	555 @ 4' 3"	725	Passed (77%)	1.00	1.0 D + 1.0 L (All Spans)	Building Code : IBC 20:
Live Load Defl. (in)	0.169 @ 4' 3"	0.200	Passed (L/569)		1.0 D + 1.0 L (All Spans)	Design Methodology :
Total Load Defl. (in)	0.219 @ 4' 3"	0.400	Passed (L/437)		1.0 D + 1.0 L (All Spans)	

- TJ-Pro<sup>™</sup> Rating Deflection criteria: LL (L/480) and TL (L/240). Allowed moment does not reflect the adjustment for the beam stability factor.
- A 15% increase in the moment capacity has been added to account for repetitive member usage.
- Applicable calculations are based on NDS. No composite action between deck and joist was considered in analysis.

	Bearing Length			Load	ls to Supports	(lbs)	
pports	Total	Available	Required	Dead	Floor Live	Factored	Accessories
langer on 5 1/2" SYP Ledger	3.00"	Hanger <sup>1</sup>	1.50"	68	227	295	See note <sup>1</sup>
langer on 5 1/2" SYP beam	3.00"	Hanger <sup>1</sup>	1.50"	68	227	295	See note 1
anger supports, the Total Bearing dimension is equal to the width of the material that is supporting the hanger							

 $\bullet$   $^{\rm 1}$  See Connector grid below for additional information and/or requirements.

teral Bracing	Bracing Intervals	Comments
Edge (Lu)	8' o/c	
om Edge (Lu)	8' o/c	
ximum allowable bracing interv	als based on applied load.	

onnector: Simpson Strong-1	īie					
upport	Model	Seat Length	Top Fasteners	Face Fasteners	Member Fasteners	Accessories
- Face Mount Hanger	LU26	1.50"	N/A	6-10dx1.5	4-10dx1.5	
- Face Mount Hanger	LU26	1.50"	N/A	6-10dx1.5	4-10dx1.5	
Dafay to many factories and instructi	ana fau augusu ingkallakian and	of all commontous				

Spacing (0.90) (1.00) Comments 0 to 8' 6"

5/23/2024 1:57:56 PM UTC

Page 5 / 13

File Name: Monument Avenue, 3202

ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Engineered Lumber Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to www.weyerhaeuser.com/woodproducts/document-library.

The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

teWEB Software Operator	Job Notes	
art Dumais iidian 4) 647-1589 art.dumais@gmail.com		Weyerhaeuse

5/23/2024 1:57:56 PM UTC ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0 File Name: Monument Avenue, 3202

Page 6 / 13

Attic w/o Storage

5/23/2024 1:57:56 PM UTC ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0 File Name: Monument Avenue, 3202

Page 7 / 13

Obsidian (804) 647-1589

stuart.dumais@gmail.com

*Print plans at 24" x 36", Arch D* 

Charles R. Field

No. 21973 5/23/2024

4:56:28 PM,~

a

>

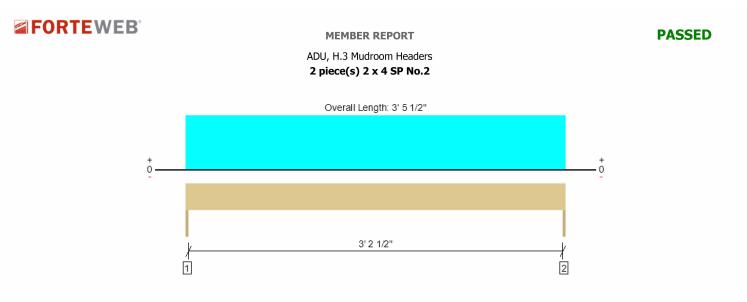
0

A a

ent Cris

un el

0



Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)	Member Length: 3' 5 1/2"
Member Reaction (lbs)	334 @ 0	2543 (1.50")	Passed (13%)		1.0 D + 1.0 L (All Spans)	System : Wall
Shear (lbs)	254 @ 5"	1225	Passed (21%)	1.00	1.0 D + 1.0 L (All Spans)	Member Type : Header Building Use : Residential
Moment (Ft-lbs)	289 @ 1' 8 3/4"	562	Passed (51%)	1.00	1.0 D + 1.0 L (All Spans)	Building Code : IBC 2018
Live Load Defl. (in)	0.031 @ 1' 8 3/4"	0.086	Passed (L/999+)		1.0 D + 1.0 L (All Spans)	Design Methodology: ASD
Total Load Defl. (in)	0.041 @ 1' 8 3/4"	0.173	Passed (L/999+)		1.0 D + 1.0 L (All Spans)	
Deflection criteria: LL (1/480) and	d TL (L/240)	•				•

• Allowed moment does not reflect the adjustment for the beam stability factor. Applicable calculations are based on NDS.

	В	earing Leng	th	Load	ds to Supports	(lbs)			
Supports	Total	Available	Required	Dead	Floor Live	Factored	Accessories		
1 - Trimmer - SYP	1.50"	1.50"	1.50"	81	254	334	None		
2 - Trimmer - SYP	1.50"	1.50"	1.50"	81	254	334	None		
Lateral Bracing	Bracing Into	ervals	Commen	nments					

Dead Floor Live Tributary Width (0.90) (1.00) Comments Location 0 to 3' 5 1/2" N/A 2.7 -- 0 to 3' 5 1/2" 3' 8" 12.0 40.0 Balcony Load 0 - Self Weight (PLF)

3' 6" o/c

# Weyerhaeuser Notes

1 - Uniform (PSF)

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Engineered Lumber Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to www.weyerhaeuser.com/woodproducts/document-library.

The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

ForteWEB Software Operator	Job Notes	
Stuart Dumais Obsidian (804) 647-1589 stuart.dumais@gmail.com		Weyerhaeuser

5/23/2024 1:57:56 PM UTC ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0 File Name: Monument Avenue, 3202 Page 9 / 13 FORTEWEB® **PASSED** MEMBER REPORT ADU, B.1 Garage Header 2 piece(s) 1 3/4" x 22" 2.0E Microllam® LVL Overall Length: 19'8"

Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)	Member Length: 19
Member Reaction (lbs)	5068 @ 2 1/2"	7910 (4.00")	Passed (64%)		1.0 D + 0.75 L + 0.75 Lr (All Spans)	System : Floor
Shear (lbs)	3384 @ 2' 2"	14630	Passed (23%)	1.00	1.0 D + 1.0 L (All Spans)	Member Type : Drop Building Use : Reside
Moment (Ft-lbs)	19901 @ 9' 10"	56332	Passed (35%)	1.00	1.0 D + 1.0 L (All Spans)	Building Code : IBC 2
Live Load Defl. (in)	0.149 @ 9' 10"	0.481	Passed (L/999+)		1.0 D + 0.75 L + 0.75 Lr (All Spans)	Design Methodology
Total Load Defl. (in)	0.297 @ 9' 10"	0.962	Passed (L/779)		1.0 D + 0.75 L + 0.75 Lr (All Spans)	

Allowed moment does not reflect the adjustment for the beam stability factor.

	В	earing Leng	th	Loads to Supports (lbs)					
Supports	Total	Available	Required	Dead	Floor Live	Roof Live	Factored	Accessories	
1 - Plate on concrete - SYP	4.00"	4.00"	2.56"	2527	1583	1806	5068	Blocking	
2 - Plate on concrete - SYP	4.00"	4.00"	2.56"	2527	1583	1806	5068	Blocking	
Blocking Panels are assumed to carry no loads applied directly above them and the full load is applied to the member being designed.									

Bracing Intervals Lateral Bracing 9' 6" o/c Top Edge (Lu) 19' 8" o/c •Maximum allowable bracing intervals based on applied load.

10 - Uniform (PSF)

			Dead	Floor Live	Roof Live	
Vertical Loads	Location (Side)	Tributary Width	(0.90)	(1.00)	(1.25)	Comments
0 - Self Weight (PLF)	0 to 19' 8"	N/A	22.5			
1 - Uniform (PSF)	0 to 4' 3 1/4" (Top)	10' 5"	15.0	-	20.0	Roof Load
2 - Uniform (PSF)	0 to 4' 3 1/4" (Top)	10' 5"	5.0	10.0	-	Attic w/o Storage Load
3 - Point (lb)	4' 3 1/4" (Top)	N/A	402	416	152	Point Load From H.1
4 - Point (lb)	6' 10 3/4" (Top)	N/A	402	416	152	Point Load From H.1
5 - Point (lb)	12' 9 1/4" (Top)	N/A	402	416	152	Point Load From H.1
6 - Point (lb)	15' 4 3/4" (Top)	N/A	402	416	152	Point Load From H.1
7 - Uniform (PSF)	6' 10 3/4" to 12' 9 1/4" (Top)	10' 5"	15.0	-	20.0	Roof Load
8 - Uniform (PSF)	6' 10 3/4" to 12' 9 1/4" (Top)	10' 5"	5.0	10.0	-	Attic w/o Storage Load

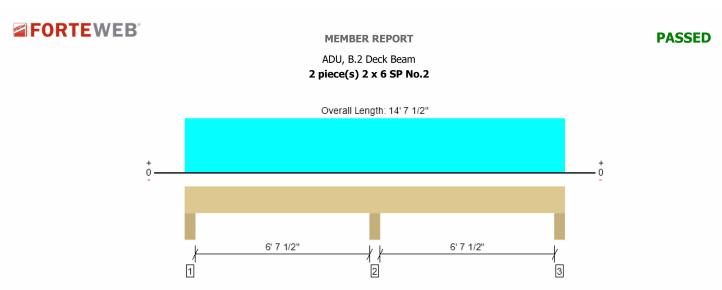
15' 4 3/4" to 19' 8" (Top) 10' 5" 5.0

ForteWEB Software Operator Stuart Dumais Obsidian (804) 647-1589 stuart.dumais@gmail.com	Job Notes	ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0  Weyerhaeuser  File Name: Monument Avenue, 3202	
		Page 10 / 13	

10.0

Attic w/o Storage Load

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Engineered Lumber Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to www.weyerhaeuser.com/woodproducts/document-library. The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator



Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal.

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)	Member Length : 14' 7 1/2"
Member Reaction (lbs)	982 @ 7' 3 3/4"	9323 (5.50")	Passed (11%)		1.0 D + 1.0 L (All Spans)	System : Floor
Shear (lbs)	413 @ 8'	1925	Passed (21%)	1.00	1.0 D + 1.0 L (All Spans)	Member Type : Flush Beam Building Use : Residential
Moment (Ft-lbs)	-685 @ 7' 3 3/4"	1260	Passed (54%)	1.00	1.0 D + 1.0 L (All Spans)	Building Code : IBC 2018
Live Load Defl. (in)	0.054 @ 3' 7 1/2"	0.174	Passed (L/999+)		1.0 D + 1.0 L (Alt Spans)	Design Methodology : ASD
Total Load Defl. (in)	0.065 @ 11' 7/8"	0.349	Passed (L/999+)		1.0 D + 1.0 L (Alt Spans)	
Deflection criteria: LL (L/480) and	TL (L/240).					_

• Allowed moment does not reflect the adjustment for the beam stability factor. Applicable calculations are based on NDS.

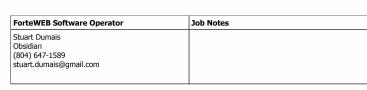
	Bearing Length		Loads to Supports (lbs)				
Supports	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Column - SYP	5.50"	5.50"	1.50"	86	282/-36	368	None
2 - Column - SPF	5.50"	5.50"	1.50"	255	727	982	None
3 - Column - SYP	5.50"	5.50"	1.50"	86	282/-36	368	None

Bracing Intervals Bottom Edge (Lu) 14' 8" o/c

			Dead	Floor Live	
Vertical Loads	Location (Side)	Tributary Width	(0.90)	(1.00)	Comments
0 - Self Weight (PLF)	0 to 14' 7 1/2"	N/A	4.2		
1 - Uniform (PSF)	0 to 14' 7 1/2" (Back)	2' 1"	12.0	40.0	Deck Load

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Engineered Lumber Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to

The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator



5/23/2024 1:57:56 PM UTC ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0 File Name: Monument Avenue, 3202

Page 12 / 13

**■ FORTEWEB**° MEMBER REPORT ADU, B.3 Deck Beam 2 piece(s) 2 x 6 SP No.2 Overall Length: 6' 4 1/2"

Drawing is Conceptual. All locations are measured from the outside face of left support (or left cantilever end). All dimensions are horizontal. Design Posuits Actual @ Location Allowed Result LDF Load: Combination (Pattern) Member Length : 6' 4 1/2"

Design Results	Actual @ Location	Allowed	Result	LDF	Load: Combination (Pattern)	Member Length: 6 4 1/2
Member Reaction (lbs)	704 @ 4"	9323 (5.50")	Passed (8%)		1.0 D + 1.0 L (All Spans)	System : Floor
Shear (lbs)	502 @ 11"	1925	Passed (26%)	1.00	1.0 D + 1.0 L (All Spans)	Member Type : Flush Beam Building Use : Residential
Moment (Ft-lbs)	900 @ 3' 2 1/4"	1260	Passed (71%)	1.00	1.0 D + 1.0 L (All Spans)	Building Code : IBC 2018
Live Load Defl. (in)	0.068 @ 3' 2 1/4"	0.143	Passed (L/999+)		1.0 D + 1.0 L (All Spans)	Design Methodology : ASD
Total Load Defl. (in)	0.091 @ 3' 2 1/4"	0.285	Passed (L/756)		1.0 D + 1.0 L (All Spans)	
Deflection criteria: LL (L/480) and	TL (L/240).					

• Allowed moment does not reflect the adjustment for the beam stability factor. Applicable calculations are based on NDS.

		Bearing Leng	ith	h Loads to Supports (lbs)			
Supports	Total	Available	Required	Dead	Floor Live	Factored	Accessories
1 - Column - SYP	5.50"	5.50"	1.50"	173	531	704	None
2 - Column - SYP	5.50"	5.50"	1.50"	173	531	704	None
Lateral Bracing	Bracing I	ntervals	Commer	nts			

 Maximum allowable bracing intervals based on applied load Dead Floor Live

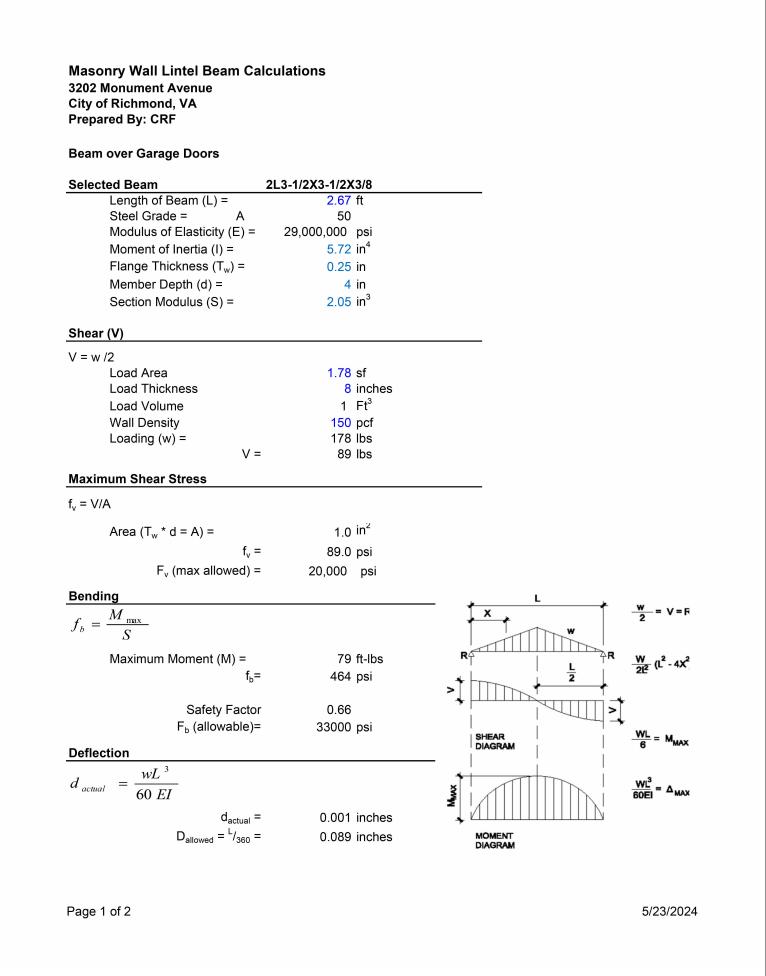
Vertical Loads	Location (Side)	Tributary Width	(0.90)	(1.00)	Comments
0 - Self Weight (PLF)	0 to 6' 4 1/2"	N/A	4.2		
1 - Uniform (PSF)	0 to 6' 4 1/2" (Back)	4' 2"	12.0	40.0	Deck Load
	•				
Warranka arraan Naka					

Weyerhaeuser warrants that the sizing of its products will be in accordance with Weyerhaeuser product design criteria and published design values. Weyerhaeuser expressly disclaims any other warranties related to the software. Use of this software is not intended to circumvent the need for a design professional as determined by the authority having jurisdiction. The designer of record, builder or framer is responsible to assure that this calculation is compatible with the overall project. Accessories (Rim Board, Blocking Panels and Squash Blocks) are not designed by this software. Products manufactured at Weyerhaeuser facilities are third-party certified to sustainable forestry standards. Weyerhaeuser Engineered Lumber Products have been evaluated by ICC-ES under evaluation reports ESR-1153 and ESR-1387 and/or tested in accordance with applicable ASTM standards. For current code evaluation reports, Weyerhaeuser product literature and installation details refer to www.weyerhaeuser.com/woodproducts/document-library.

The product application, input design loads, dimensions and support information have been provided by ForteWEB Software Operator

teWEB Software Operator	Job Notes	
rt Dumais dian I) 647-1589 rt.dumais@gmail.com		Weyerhae

5/23/2024 1:57:56 PM UTC ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0 File Name: Monument Avenue, 3202 Page 13 / 13



5/23/2024 1:57:56 PM UTC

Page 11 / 13

File Name: Monument Avenue, 3202

ForteWEB v3.7, Engine: V8.4.0.40, Data: V8.1.5.0

0

Charles R. Field No. 21973 5/23/2024

a

>

A a

ent Cris

un

Mon Danie

202

*Print plans at 24" x 36", Arch D* 

Stuart Dumais

stuart.dumais@gmail.com