

# BIRCH

DIV-COMM-LOT-UNIT -----		
COMM-LOT -----		
STREET ADDRESS -----		APT. NO. ---
CITY -----	STATE -----	ZIP -----



NVR, Inc.  
5285 Westview Drive, Suite 100  
Frederick, MD 21703

	SLAB FOUNDATION												STANDARD DETAILS	
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														WD-1
														WD-3
														WS-1b

FIRST FLOOR SQUARE FOOTAGE	
DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	640 SF
	640 SF
SECOND FLOOR SQUARE FOOTAGE	
DESCRIPTION	TOTAL SQ. FT.
2ND FLOOR (BASE SF)	1040 SF
	1040 SF
GARAGE SQUARE FOOTAGE	
DESCRIPTION	TOTAL SQ. FT.
TWO CAR GARAGE	400 SF
	400 SF
TOTAL FINISHED SQUARE FOOTAGE	
DESCRIPTION	TOTAL SQ. FT.
1ST FLOOR (BASE SF)	640 SF
2ND FLOOR (BASE SF)	1040 SF
	1680 SF

SET - VERSION  
**BRH00 - 01** **CS-1**

V:\As-Sold\2-Jobs\ASD\2021 1stHalf-Complete\RH\DETACHED\BIRCH\_BRH00\_01\ELK\_R\_OG\_0102\CS-1 COVERSHEET.dwg 03/17/21 - 10:01 am

GENERAL

- 1. These plans and specifications are the sole property of NVR. Any unauthorized use of these plans without the written consent of NVR is prohibited.
2. These plans are subject to modification as necessary to meet code requirements or to facilitate mechanical/plumbing installations or to incorporate design improvements.
3. These plans are not to be scaled for construction purposes. Dimension lines and notes supersede all scale references.
4. Single Family Attached/Detached - Automatic residential fire sprinkler systems shall be installed in accordance with NCRBC P2404 or NFPA 13D where required.
5. This note sheet only covers major code requirements. The plans are intended to conform to all current applicable codes or engineering design in accordance with Section 301.13.

CODE ANALYSIS

- 1. This note sheet only covers major code requirements. The plans are intended to conform to all current applicable codes including, but not limited to:
NCRBC 2018, NCMC 2018, NCFE 2018, NCFCE 2018, NEC 2017 w/ NC Amendments, NCEC 2018, NCFPC 2018
2. Use Group: R-3
3. Constr. Type: V-B
4. Max. Stories: 3

ENERGY AND MECHANICAL

- 1. Insulation requirements per 2018 NCRBC Chapter 11, Energy Efficiency, or Chapter 4 of the 2018 North Carolina Energy Conservation Code (NCECC), or Chapter 4 of the 2015 International Energy Conservation Code (IECC), Residential Energy Efficiency by the prescriptive method. See NVR "Standard Energy Package" for field procedures and details.
R-values shown below are the minimum used.

Table with 8 columns: CLIMATE ZONE, PENETRATION U-FACTOR, GLAZED PENETRATION SHGC, CEILING R-VALUE, FRAME WALL R-VALUE, FLOOR R-VALUE, BASEMENT WALL R-VALUE, SLAB R-VALUE, CRAWL SPACE WALL R-VALUE. Rows 3 and 4.

- 2. All HVAC equipment is sized based on ACCA Manual J calculations. Ductwork is sized using ACCA Manual D. Minimum efficiencies of equipment are as listed below. Upgrades for improved energy performance may be installed.
- Air conditioner - 14 SEER
- Gas furnace - 92% / 96%
- Heat Pump - 8.2 HSPF
3. Winter interior design temperatures shall be 70°F and summer interior design temperatures shall be 75°F. Exterior design temperatures vary based on geographic location and are listed on the Manual J calculations.
4. Roof ventilation calculations are based on the following specifications:
Ridge vent: Minimum 18 sq. in. of vent per linear foot
Soffit vent: Minimum 4.8 sq. in. of vent per linear foot
Roof Jack (box vent): Minimum 45 sq. in. of vent per unit
5. See NVR "Standard Energy Package" for field procedures and details.

DESIGN LOADS

Table of Loads for House Structure, Per Table 301.5

Table with 2 columns: Location (Floor Living Areas, Floor Sleeping Areas, Garage Floors, Roof Areas, Habitable Attics, Walls, Stairs) and Load (e.g., 40# P.S.F. (Live), 10# P.S.F. (Dead)).

Design Criteria

- Design Codes:
1. National Design specification for Wood Construction by National Forest Products Association.
2. Specification for the Design Fabrication and Erection of Structural Steel for Buildings by American Institute of Steel Construction.
Materials:
Headers\* Southern Pine (KD-14), No. 1 Grade
Studs Spruce-Pine-Fir, Stud Grade
Jacks Spruce-Pine-Fir, Stud Grade
Beams\*\* Southern Pine (KD-14), No. 1 Grade
Joists 2x10 Hem-Fir (KD-14), No. 2 Grade or better (NCLIB & NWFA)
2x8 Southern Pine (KD-14), No. 1 Grade or better
2x10 Spruce-Pine-Fir (KD-14), No. 2 Grade or better (NLGA)
LVL: 1.6E Minimum
\* Where required, Laminated Veneer Lumber may be used per Engineering Structural Steel - A.S.T.M. A36

FOUNDATIONS

- 1. All plain and reinforced concrete shall comply with requirements in ACI 318.
2. Concrete footings shall be poured a maximum 5' slump, 5 bag mix, and 2500 psi minimum strength per Table R402.2. Concrete walls shall be poured a maximum 5' slump, 5 1/2-bag mix, and 3000 psi minimum strength per Foundation Wall Design table below. Special soil and or wall height conditions may require a higher psi mix.
3. Walls and footings designed as unreinforced unless otherwise specified on foundation plans or details. Special soil and/or site conditions may require the addition of reinforcing.
4. Footing frost depth to be no less than 12" per R403.1.4 and Table R301.2(1).
5. Minimum Soil Bearing Capacity shall be 2,000 PSF per Table R401.4.1.
6. Interior slabs on grade (excluding garage slabs) to be minimum 3-1/2" concrete (may be represented on plans as nominal 4") over 4" sub-base, with vapor barrier (6-mil polyethylene) as required per Section 506 and minimum 2,500 PSI per Table R402.2.
7. Unconditioned crawl spaces shall have a minimum net area of ventilation not less than 1 square foot for each 150 square feet of area, unless the ground surface is covered by a class vapor retarder, in which case the minimum net area of ventilation shall not be less than 1 square foot for each 1500 square feet of area. One such ventilating opening shall be within 3 feet (914 mm) of each corner of the building, per R408.1.2.
8. Foundation drains shall be located per local codes and according to local site conditions. Drain discharge by gravity or mechanical means to conform with approved site plan and installed per Section R408.1.
9. The top course of block of foundation walls shall be semi-solid block or open cores of hollow block shall be filled with mortar.
10. Block piers to be solid block or mortar-filled hollow block.
11. A poured concrete foundation wall designed to withstand an equivalent fluid height of 30# per cubic ft. may be substituted where masonry units (block) are shown on plans.
12. Concrete and masonry foundation walls shall be damp-proofed with min. 3/8" portland cement grout from footing to top of finished grade. The grouting shall be covered with a coat of approved bituminous material applied at the recommended rate per R406.1.
13. Where required, concrete and masonry foundation walls shall be waterproofed with an approved membrane extending from footing to top of finished grade. The joints in the membrane shall be lapped and sealed with an adhesive compatible with the waterproofing membrane. Waterproofing to be in accordance with R406.2.
14. Non-structural garage slabs shall be nominal 3 1/2" thick. Structural garage slabs shall be nominal 4" thick. All garage slabs shall be 3500 PSI air-entrained concrete on compacted / undisturbed soil per Table R402.2.
15. Foundation framing anchors shall be 1/2"x18" anchor bolts with 7" minimum embedment or Simpson Strong-Tie MASA / USP F43 (16 gauge steel, galvanized) or equivalent set in concrete or grouted cell, 1'-0" maximum from corners and spaced at a maximum of 6' o.c. and in the middle third of the width of the plate. For walls connecting offset braced wall panels, those 24" in length or shorter shall have min. (1) anchor strap and those 12" or shorter can be installed without anchor strap. Torches in seismic design category "C" shall require a 22x1" x 3" x 3" plate washer per R403.1.6.1 and maximum anchor bolt spacing for buildings over two stories shall be 4'.
16. Steel columns and bases shall be given a shop coating of rust-inhibitive paint or equivalent to provide corrosion resistance per R407.2.
17. For masonry veneers:
Per R103.B.4.1 - Corrugated sheet metal veneer ties shall be a minimum of No. 22 U.S. gauge by 7/8 inch. Each tie shall be spaced not more than 32" o.c. horizontally and 24" o.c. vertically and shall support not more than 2.67 square feet of wall area. For townhouses in Seismic Design Category C and in wind areas of more than 30 pounds per square foot pressure, each tie shall support not more than 2 square feet of wall area.
Additional metal ties shall be provided around all wall openings greater than 16 inches (406 mm) in either dimension. Metal ties around the perimeter of openings shall be spaced not more than 3 feet (914mm) on center and placed within 12 inches (305 mm) of the wall opening.
Per R103.2 - One layer of No. 15 asphalt felt or other approved water-resistant barrier shall be provided behind brick.
Per Table R103.B.4 - Provide minimum 1-inch air space between brick veneer and sheathing.
Per R103.B.6 - Provide minimum 3/16" diameter weep holes at 33" on center maximum, located immediately above the flashing.
Per R103.B.5 - When veneer of brick, clay tile, concrete, or natural or artificial stone are used, 6 mil plastic flashing shall be attached to the sheathing wherever necessary to prevent moisture penetration behind the veneer. See NVR Flashing Details.

Per R103.B.4.1 - Corrugated sheet metal veneer ties shall be a minimum of No. 22 U.S. gauge by 7/8 inch. Each tie shall be spaced not more than 32" o.c. horizontally and 24" o.c. vertically and shall support not more than 2.67 square feet of wall area. For townhouses in Seismic Design Category C and in wind areas of more than 30 pounds per square foot pressure, each tie shall support not more than 2 square feet of wall area.

Additional metal ties shall be provided around all wall openings greater than 16 inches (406 mm) in either dimension. Metal ties around the perimeter of openings shall be spaced not more than 3 feet (914mm) on center and placed within 12 inches (305 mm) of the wall opening.

Per R103.2 - One layer of No. 15 asphalt felt or other approved water-resistant barrier shall be provided behind brick.

Per Table R103.B.4 - Provide minimum 1-inch air space between brick veneer and sheathing.

Per R103.B.6 - Provide minimum 3/16" diameter weep holes at 33" on center maximum, located immediately above the flashing.

Per R103.B.5 - When veneer of brick, clay tile, concrete, or natural or artificial stone are used, 6 mil plastic flashing shall be attached to the sheathing wherever necessary to prevent moisture penetration behind the veneer. See NVR Flashing Details.

18. Porch slab and exterior concrete work shall be nominal 4" minimum #3500 air entrained concrete w/ 6x6 #10 WLM unless otherwise noted as specified by engineering.

19. Foundation wall strip footing thickness to be 8" (or 6" with a single story) unless otherwise noted as specified by engineering. Strip footing projections beyond the face of the foundation wall shall not exceed the footing thickness. Bump out footings, pier pads, and any other footing identified as being greater than 8" in thickness shall not be reduced.

20. Block foundation walls may be substituted for poured foundation walls shown on foundation plans provided all requirements of Section R404 are met.

21. Termite treatment provided below slabs or to framing members per R318.

FOUNDATION WALL DESIGN (c) NCRBC PRESCRIPTIVE CODE OR ENGINEERED DESIGN PER ACI 302.2. Table with columns: WALL HEIGHT, WALL THICKNESS, LATERAL SOIL LOAD (q), UNBALANCED FILL, VERTICAL REINFORCING (b), HORIZONTAL REINFORCING (b).

NOTE: BACKFILLING OF THE FOUNDATION SHALL NOT TAKE PLACE BEFORE THE BASEMENT SLAB IS IN PLACE AND THE FLOOR FRAMING IS ERECTED OR UNLESS WALLS ARE ADEQUATELY BRACED.

- a. SOIL CLASSES SM, SC, SH, SM-SC AND ML - 45 PSF
SOIL CLASSES SC, MH, ML-CL AND CL - 60 PSF
b. SPACINGS SHOWN IS BASED UPON Fy = 60,000 PSI
STEEL FOR Fy = 40,000 PSI STEEL, REDUCE SPACINGS BY 0.67
c. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF NOT LESS THAN 3000 PSI
d. ENGINEERED DESIGN PER ACI 302-14, REQUIREMENTS FOR RESIDENTIAL CONCRETE CONSTRUCTION
e. FOR ALL WALL HEIGHTS, ONE HORIZONTAL BAR SHALL BE LOCATED WITHIN THE TOP 24", ONE IN THE BOTTOM 24" WITH THE REMAINING BARS EQUALLY SPACED. MAINTAIN 2" OF CONCRETE COVER BETWEEN INSIDE FACE OF WALL AND FACE OF HORIZONTAL BARS.
f. ONE BAR WITHIN 12" OF TOP AND AT MID-HEIGHT OF WALL PER TABLE R404.1.2(1).
g. ONE BAR WITHIN 12" OF TOP AND ONE EACH AT THIRD POINT OF WALL HEIGHT PER TABLE 404.1.2(1).

PLANS

- 1. Habitable attics and sleeping rooms shall have a window or door as a second means of egress that shall be minimum 5.7 sq. ft. of clearable area (5.0 sq. ft. if at grade level) with maximum sill height 44" above finish floor (min. hgt. 24", min. width 20") per R310.1.1.
2. All emergency escape and rescue openings shall have a minimum net clear opening area of 4 sq. ft. The minimum net clear opening height shall be 22" and a minimum net clear opening width of 20". Emergency escape and rescue openings must have a minimum total glazing area of not less than 5 sq. ft. in the case of a ground window and not less than 5.7 sq. ft. in the case of an upper story window per R310.2.1. Window wells where required, shall be installed per R310.2.3 with a minimum of 4 sq. ft. and a minimum horizontal projection and width of 36". Wells with a greater depth of 44" shall have permanently affixed ladder or steps per R310.2.3.1.
3. Clear opening heights for exterior doors to be 6'-6" minimum per R311.2. All interior doors providing egress from habitable rooms shall have nominal minimum dimensions of 2'-6" by 6'-8" per R311.6.1. Habitable rooms with double doors less than 5'-0" in total width (less than 2'-6" per door slab) shall have a total opening width of at least 2'-6" with no slide bolts or locking devices installed on either door.
4. Sliding glass drs/patio drs/wds must be safety glazed per R306.4.
5. Interior stairway shall have minimum head room of 6'-8" per R311.7.2 and minimum tread depth of 9" and maximum riser height of 6 1/4". Handrails are required for stairs with four or more risers and shall have minimum height of 34" and maximum height of 38" above treads and landings. Handrail to have maximum 4 1/2" projection into width of stair per Section R311.7. Enclosed accessible space under stairs shall have walls, under stair surface and any soffits protected on the enclosed side with 1/2" gypsum board per R302.1.
6. Guard rails to have minimum height of 36" and shall not have openings from the walking surface to the required guard height which allow passage of a sphere 4 inches in diameter per R312.
7. The triangular openings at the open side of stair, formed by the riser, tread and bottom rail of a guard, shall not allow passage of a sphere 6 inches (153 mm) in diameter per R312.1.3.
8. Where exterior landings or floors serving the required egress door are not at grade, they shall be provided with access to grade by means of a a stairway in accordance with Section R311.7 (see item #5 above) or a ramp in accordance with Section R311.8.
9. Handrails shall be installed on exterior stairs having (4) or more risers per R311.7.6. Guards shall be installed at exterior porches / decks that are located more than 30 inches (762 mm) measured vertically to the floor or grade below at any point within 36 inches (914 mm) horizontally to the edge of the open side. Insect screening shall not be considered as a guard.
10. All flashing used (including at windows, doors, and with stone or masonry veneer) shall be corrosion-resistant per R103.4. See NVR Flashing Details.
11. Wood framed walls assumed to be 2 x 4 stud construction unless otherwise noted on plans. Bearing walls shall have studs spaced at 16" o.c. maximum per Table R602.3(3) and Table R602.3(5).
12. All exterior sheathing to be structural sheathing designed in accordance with R602.10.
13. An approved water-resistant barrier shall be applied over sheathing of exterior walls per Section R103.2.
14. Interior sheathing shall be 1/2" gypsum wall board unless otherwise noted. Exceptions may include, but are not limited to, special requirements for wall bracing and fire separation.
15. Screw fastening is typical for gypsum installation and nailing will only be permitted at the perimeter of the board.
• All screws shall be corrosion-resistant Type #1-1/4" drywall screws.

SCREW FASTENING SCHEDULE. Table with columns: Framing Spacing, NAIL ADHESIVE WITH ADHESIVE, Ceilings, Load-brg. walls, Non-load-brg. walls.

- For 1/2" wallboard, nails shall be 1-1/4" long, 1/4" head and .098 diameter shanks with annular ring or acceptable equivalent and comply with ASTM C514.
• For 5/8" wallboard, nails shall be 1-3/8" long, 1/4" head and .098 diameter shanks.
17. Garages shall be completely separated from the residence and attic area by not less than 1/2" gypsum board applied to the garage side. Garages beneath habitable rooms shall be separated from all habitable rooms above by not less than 5/8" type X gyp. board. Where a structure is supporting a floor-ceiling assembly due to living space above the garage, the structure shall also be protected by not less than 1/2" gypsum board per Section R302.6. Openings and penetrations through the separation shall be protected by sealing the area around the penetration per Section R302.5. The garage door shall be a 20-minute fire-rated door and be equipped with a self-closing device installed per Section R302.5.1.
18. Asphalt shingles shall be installed per section R405.2. For roof slopes of 2:12 through 4:12, in lieu of two layers of underlayment, a self-adhering polymer-modified bitumen underlayment shall be used per section R405.1.1 Exception #1.
19. Attic spaces shall be ventilated w/ ridge and soffit vents unless otherwise noted. Venting provided per R306.2.
20. Fireblocking shall be installed between ceiling and floor openings per R302.11. Draftstopping to be installed in accordance with R302.12.

- 21. Water closet, lavatory or bidet shall not be set closer than 15 inches from its center to any side wall, partition or vanity or closer than 30 inches center-to-center between adjacent fixtures. There shall be a clearance of not less than 21 inches in front of the water closet, lavatory or bidet to any wall, fixture or door per P2105.1
22. Heating and cooling equipment installation shall be in accordance with IRC Chapter 14 and the International Mechanical Code.
23. Mechanical fireplaces shall be installed per Section R1004 and 1005.
24. Single family attached structures to have 2-hour dwelling unit separation wall continuous to roof deck. Roofing material to be minimum class "C" over approved fire retardant wood decking extending 4' each side of dwelling unit separation wall per R302.2 and R302.3.
25. Untreated wood shall be minimum 8" above finish grade per R311.1 Item #2.
26. Bottom plates on slabs and any wood in contact w/ concrete or masonry to be pressure treated material per Section R311.
27. Exterior egress swing doors shall open onto a landing not more than 8 1/4" below the top of the threshold when door swings in and 1 1/2" below the top of the threshold when the door swings out. The landing shall extend a minimum of 36" in the direction of travel and be at least the width of the doorway served per R311.3.
28. Air exhaust and intake openings that terminate outdoors shall be protected with corrosion-resistant screens, louvers, or grills having a min. opening size of 1/4" and maximum of 1/2" in any dimension per R303.6.
29. Fasteners and connectors for pressure preservative-treated wood shall be hot-dipped galvanized steel.
30. Windows that have an operable opening more than 72" above finished grade or surface below, the lowest part of the clear opening of the window shall be a minimum of 24" above the finished floor of the room in which the window is located. Glazing between the floor and 24" shall be fixed or have openings through which a 4" dia. sphere cannot pass per Section R312.2.
31. The final grade shall fall a minimum of 6 inches within the first 10 feet of the foundation per R401.3.

- 32. One- and two-family dwelling construction (R302.1.1):
Vinyl or aluminum soffit material shall be securely attached to framing members and use an underlayment material of either fire retardant treated wood, 3/4-inch wood sheathing or 5/8-inch gypsum board. Venting requirements shall apply to both soffit and underlayment. Vents shall be nominal 2-inch continuous or equivalent intermittent and shall not exceed the minimum net free air requirements of Section R306.2 by more than 50%. Vents in soffit are not allowed within 4 feet of fire walls or property lines per R302.2.5 and R302.2.6.
33. 1-hour fire-rated construction required on projections within 2' to 3' of lot line per R302.1. No projections allowed within 2' of property line.
1-hour fire-rated construction required on townhouse eaves within 3' of the property line.
Note: Single Family Detached product will NOT be built within 3' of the property line.
34. Wall bracing is designed in compliance with Section R602.10. When wall bracing is beyond the criteria for a prescriptive approach, the structure is analyzed utilizing engineering in compliance with the North Carolina Building Code (NCBC). Refer to house-specific wall bracing detail sheets and wall bracing standard details. Adhesive attachment of wall sheathing, including Method GB, shall not be permitted in Seismic Design Category C.
35. Minimum floor sheathing shall be 5/8" tongue & groove decking underlayment grade plugged and sanded, exterior glue, glued and nailed on joists to meet. "American Plywood Association" approved glued floor system, unless otherwise specified.

ELECTRICAL

- 1. Ground-fault and arc-fault circuit interrupter protection is provided per NFPA 70 (National Electric Code).
2. Electric panel box installation to be in accordance with NFPA 70, Article 408 Section III. Location may vary by design.
3. Approved smoke detectors shall be installed in each sleeping room; outside each separate sleeping area in the immediate vicinity of the bedrooms and on each additional story of the dwelling, including basements and habitable attics not including crawl spaces and uninhabitable attics. Where more than one smoke detector is installed, the devices shall be interconnected in such a manner that the actuation of one alarm will activate all of the alarms in the individual unit. All smoke detectors shall receive their primary power from the building wiring and be equipped with a battery backup.
4. Unless listed for installation in such locations, smoke detectors shall be installed at least 10 feet from a cooking appliance, at least 3 feet from the door to a bathroom containing a tub or shower, at least 3 feet from forced air supply registers, and at least 3 feet from the tip of a ceiling fan blade. In sleeping rooms, smoke detectors should be located in the vicinity of the room entrance. They shall be installed at the highest portion of the ceiling (including tray or coffered ceilings) or within 12 inches vertically from the highest point in rooms with sloped ceilings.
5. Interior stairs shall be provided with an artificial light source in the vicinity of each landing or directly over each stair section and capable of illuminating treads and landings to a level not less than 1fc measured at the center of the tread or landing per R303.1.
6. Outlets within 6' of a sink must be GFI protected.
7. An approved carbon monoxide alarm shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms. Where a fuel-burning appliance is located within a bedroom or its attached bathroom, a carbon monoxide alarm shall be installed within the bedroom, R315.3.
8. Outlets installed in laundry areas must be GFI protected.



REMARKS table with columns: REV. NO., DATE, and REMARKS. Includes code updates for 2018 NCRBC and MBT - UPDATED ENERGY NOTES.

NVR, Inc. expressly reserves the right to modify or update these plans without notice. These plans are not to be reproduced, changed or altered in any way without the written consent of NVR, Inc.

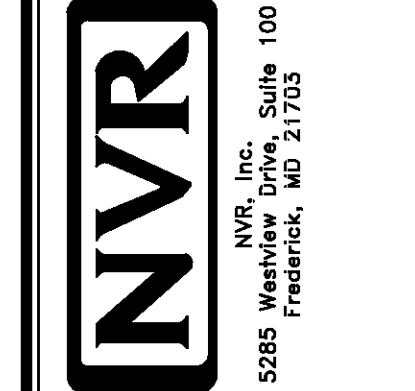
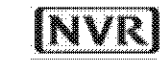


Table with columns: SHEET NO., MODEL, DRAWING TITLE, SET NO., VERSION, DRAWN BY, DATE, OPTION. Includes title 'NCRBC 2018 SPEC SHEET' and 'SINGLE FAMILY ATTACHED SINGLE FAMILY DETACHED'.



**ROOF VENTILATION CALCULATIONS**

HOUSE NAME  
HOUSE VERSION  
PRODUCT LINE  
VENTILATION VALUES

BIRCH
BRH00-01
RYANROMES
5.0 sq ft of vents per ft <sup>2</sup>
15 sq ft of vent per ft <sup>2</sup>
0.5 sq ft of vent per sq ft

**USER GUIDE**

YES	(opt)	(opt)	VENT ON	No action req'd
NO	YES	NO	LOC VENT OK	No action req'd
NO	YES	NO	LOW FAIL	Increase ridge
NO	YES	NO	HIGH FAIL	Increase ridge
NO	NO	NO	FAIL	Increase total vent

Version 1.0  
Rev: 06/04/2012

ELEVATION "A"															
Location / Option	Area (sq ft)	Required: A/150 (sq ft)	Required: A/300 (sq ft)	Soffit (sq ft)	Soffit Vent (sq ft)	Ridge (sq ft)	Ridge Vent (sq ft)	Upper Box / Stable Vent (sq ft)	Lower Box Vent (sq ft)	TOTAL (sq ft)	OK A/150	OK A/300	A/300 % vent at ridge	A/300 40% 50% OK	Notes
HOUSE WITH GARAGE	500.00	333.33	166.67	42	168.00	14	28.00	112.00	0	146.00	NO	YES	47.95%	OK	

ELEVATION "B"															
Location / Option	Area (sq ft)	Required: A/150 (sq ft)	Required: A/300 (sq ft)	Soffit (sq ft)	Soffit Vent (sq ft)	Ridge (sq ft)	Ridge Vent (sq ft)	Upper Box / Stable Vent (sq ft)	Lower Box Vent (sq ft)	TOTAL (sq ft)	OK A/150	OK A/300	A/300 % vent at ridge	A/300 40% 50% OK	Notes
HOUSE WITH GARAGE	500.00	333.33	166.67	42	168.00	14	28.00	112.00	0	146.00	NO	YES	47.95%	OK	

ELEVATION "K"															
Location / Option	Area (sq ft)	Required: A/150 (sq ft)	Required: A/300 (sq ft)	Soffit (sq ft)	Soffit Vent (sq ft)	Ridge (sq ft)	Ridge Vent (sq ft)	Upper Box / Stable Vent (sq ft)	Lower Box Vent (sq ft)	TOTAL (sq ft)	OK A/150	OK A/300	A/300 % vent at ridge	A/300 40% 50% OK	Notes
HOUSE WITH GARAGE	500.00	333.33	166.67	42	168.00	14	28.00	112.00	0	146.00	NO	YES	47.95%	OK	

ELEVATION "L"															
Location / Option	Area (sq ft)	Required: A/150 (sq ft)	Required: A/300 (sq ft)	Soffit (sq ft)	Soffit Vent (sq ft)	Ridge (sq ft)	Ridge Vent (sq ft)	Upper Box / Stable Vent (sq ft)	Lower Box Vent (sq ft)	TOTAL (sq ft)	OK A/150	OK A/300	A/300 % vent at ridge	A/300 40% 50% OK	Notes
HOUSE WITH GARAGE	500.00	333.33	166.67	42	168.00	14	28.00	112.00	0	146.00	NO	YES	47.95%	OK	



**HOUSE VOLUME CALCULATIONS**

HOUSE NAME	BIRCH
HOUSE VERSION	BRH00-01

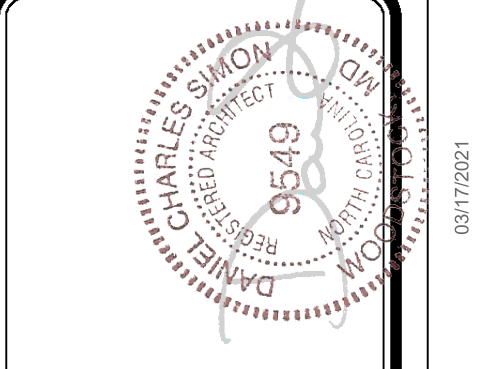
**Note:** The volume of the structure has been computed in accordance with "Title 5, of the Community Affairs, Chapter 23, Uniform Construction Code, Subchapter 2, Administration and enforcement: Process." (5,23-2.28. Volume computation)

ELEVATION "A"			
Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Left side of the house	640.00	21.45	13730
Right side of the house	400.00	19.95	7981
			<b>Total House Volume 21711</b>

ELEVATION "B", "L"			
Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Left side of the house	640.00	21.45	13730
Right side of the house	400.00	19.95	7981
Porch on front of house	24.00	8.90	214
			<b>Total House Volume 21925</b>

ELEVATION "K"			
Location / Area of house	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Left side of the house	640.00	21.45	13730
Right side of the house	400.00	19.95	7981
Porch on front of house	24.00	8.49	204
			<b>Total House Volume 21915</b>

Additional areas of volume to be added to total house volume as needed			
Location / Area of house / option	Floor Area (sq. ft.)	Mean height (ft.)	Total volume (cu. Ft.)
Partial Front Porch "EPB" W/ Elevation A "ELA"	24.00	8.49	204
Full Basement "FBA"	640.00	8.61	5513
Crawl space "FCA"	640.00	0.80	512



DIV-COMM-LOT-UNIT

COMM-LOT

STREET ADDRESS

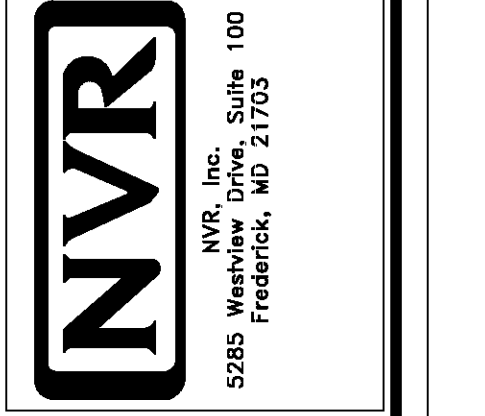
CITY

STATE

ZIP

APT. NO.

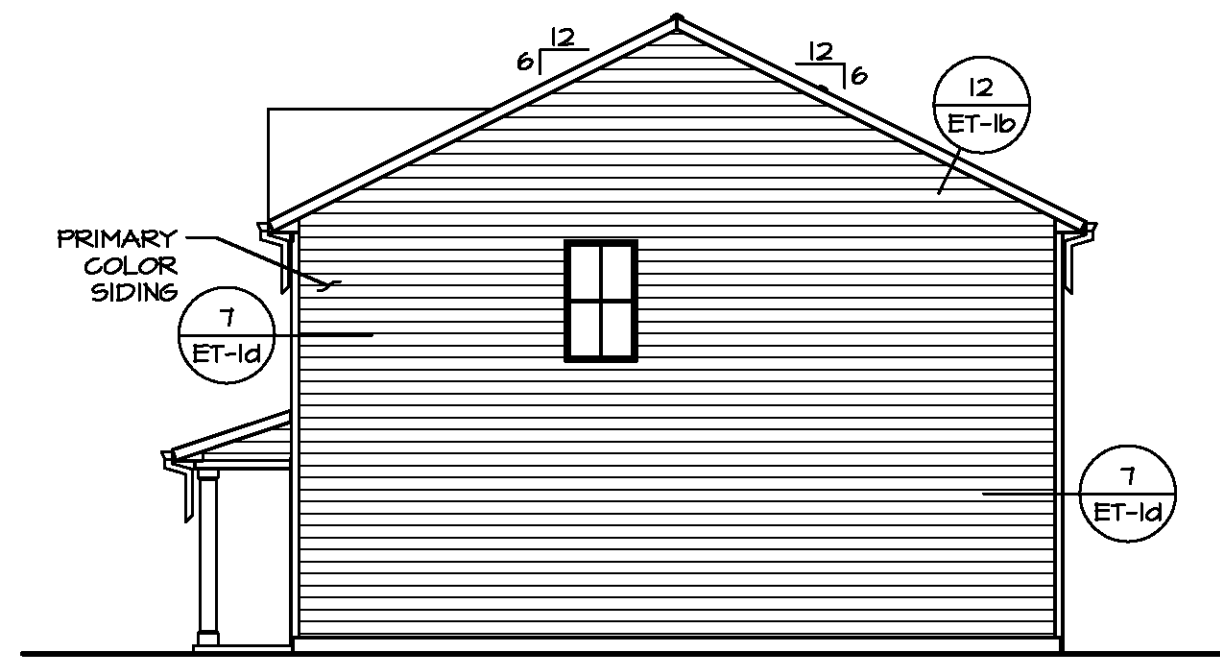
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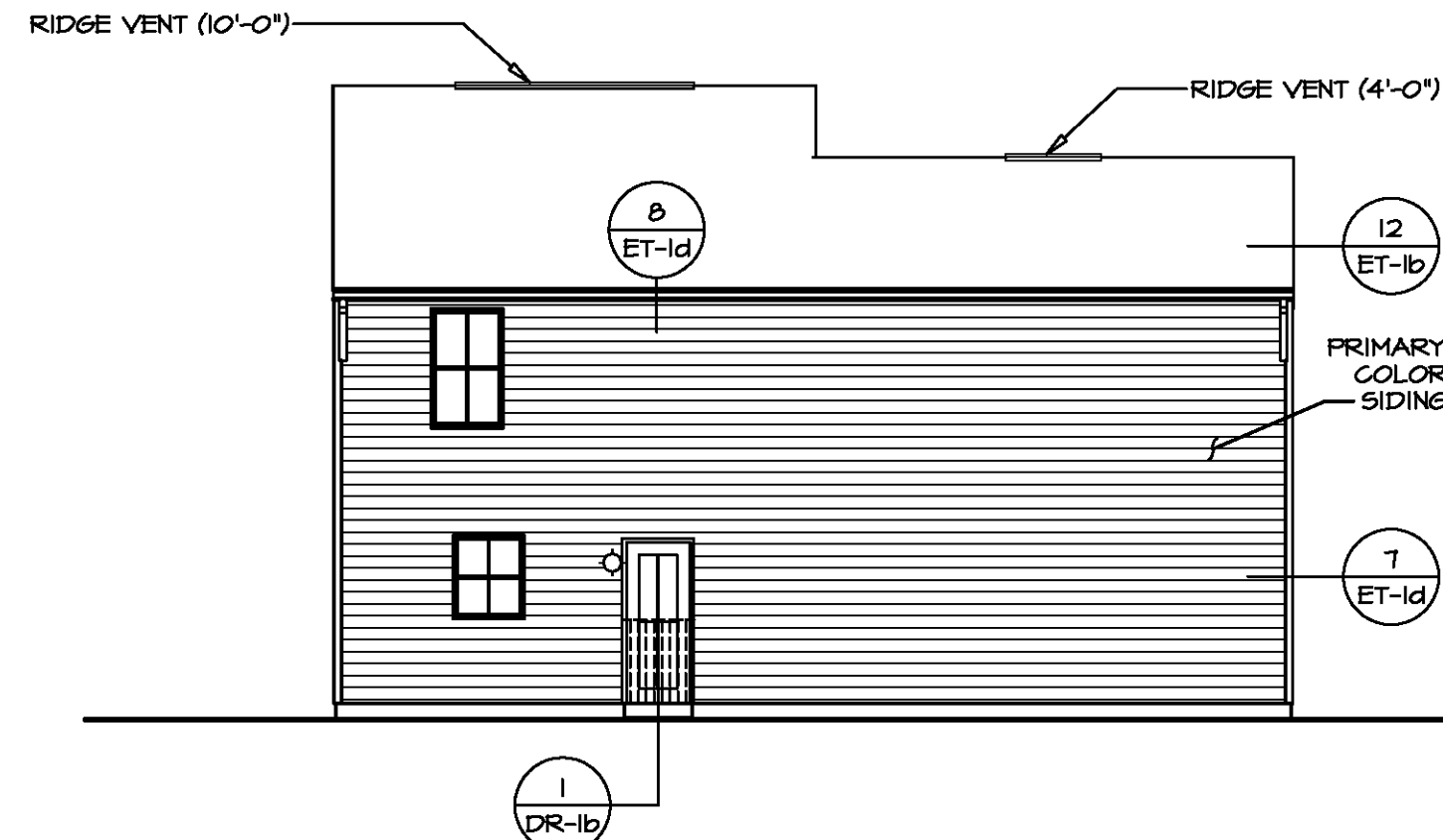
SHEET NO. MODEL BIRCH DRAWING TITLE

SET NO. BRH00 VERSION 01 DRAWN BY DATE: OPTION DESCRIPTION

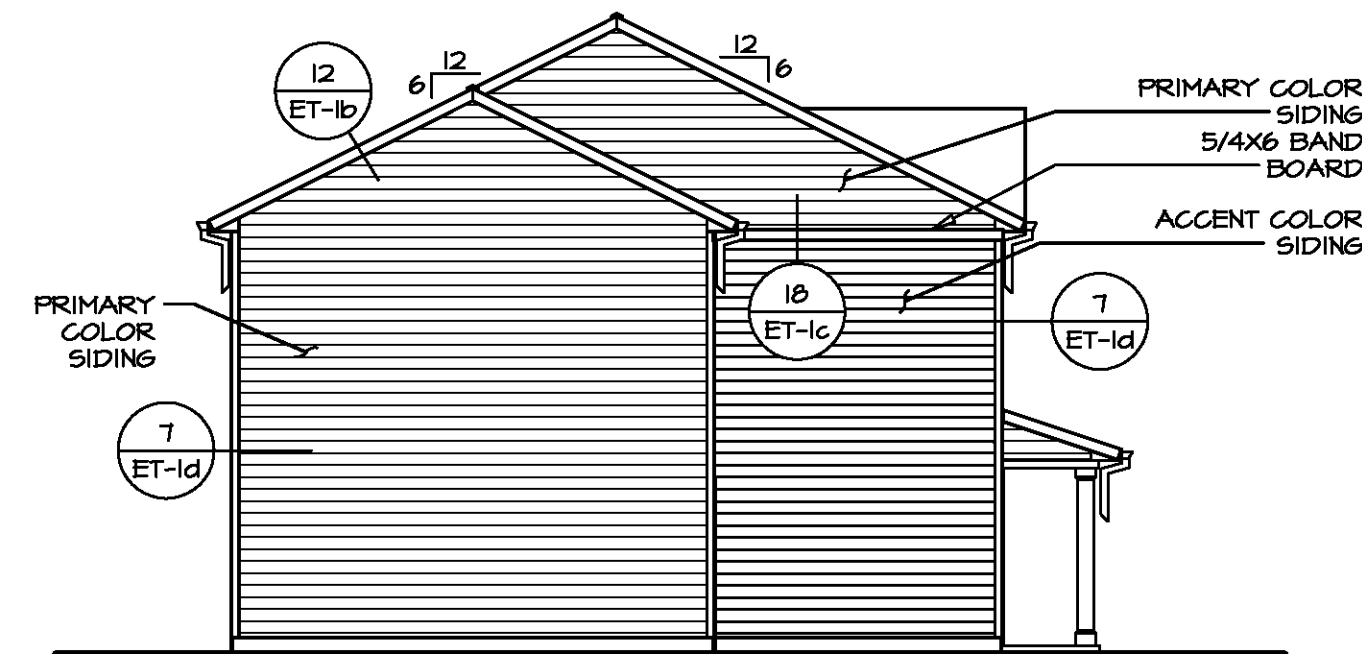
CA-1



**2 RIGHT ELEVATION**  
A-1 SCALE: 1/8" = 1'-0"



**3 REAR ELEVATION**  
A-1 SCALE: 1/8" = 1'-0"



**4 LEFT ELEVATION**  
A-1 SCALE: 1/8" = 1'-0"

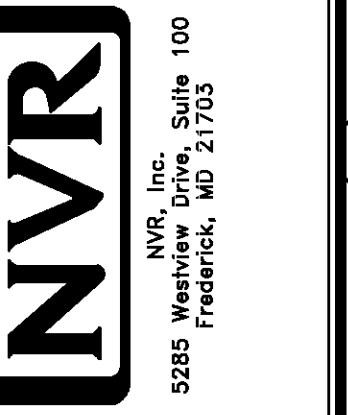


**1 FRONT ELEVATION "K"**  
A-1 SCALE: 1/4" = 1'-0"



DIV.-COMM.-LOT-UNIT	---
COM.-LOT	---
STREET ADDRESS	---
CITY	---
STATE	---
APT. NO.	---
ZIP	---

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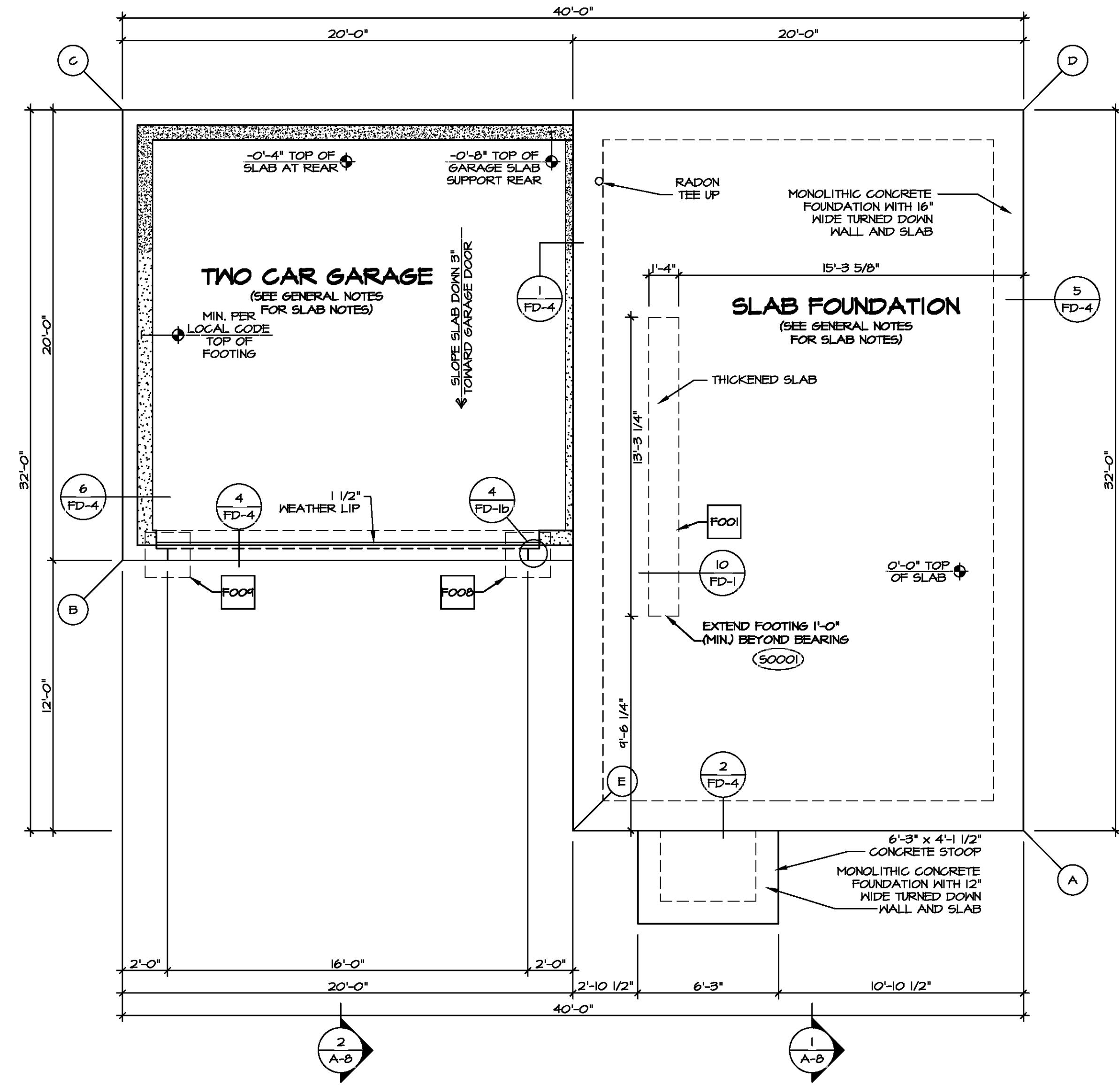
SHEET NO.	A-1	4
MODEL	BIRCH	SLAB FOUNDATION MONOLITHIC
SET NO.	BRH00	
VERSION	01	
DRAWN BY		
DATE:		
OPTION	FSM	

PAD FOOTING SCHEDULE					
IDENTIFIER	LENGTH	WIDTH	HEIGHT	ENS. N.M.	REMARKS
FOO1	1'-4"	15'-3 1/4"	0'-8"	S0001	
FOO2	2'-0"	2'-0"	1'-0"	1017	
FOO4	2'-0"	2'-0"	1'-0"	1017	

LEGEND	
	BEARING WALL
	NON BEARING WALL
	INDICATES BEARING FROM POINT-LOAD ABOVE
	JACKS
	BEAM/HEADER
	PAD FOOTING
	STEEL COLUMN
	TRUSS TIE DOWN
	PORTAL FRAME
	JOIST/TRUSS
	LVL
	ENGINEERING PAGE NUMBER

SEE FC DETAILS FOR FRAMING CONNECTORS

- FOUNDATION NOTES - SLAB**
- FOUNDATION UNDER HABITABLE SPACE:
    - CONCRETE SLAB ON 6 MIL VAPOR BARRIER OVER SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES)
  - FOUNDATION UNDER GARAGE:
    - UNEXCAVATED WITH CONCRETE SLAB ON VAPOR BARRIER OVER SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES) OR
    - STRUCTURAL CONCRETE SLAB ON VAPOR BARRIER OVER SUB-BASE (SEE SPEC SHEET FOR SLAB NOTES)
  - SEE FOUNDATION HOLD DOWN SHEET FOR CONNECTION INFORMATION.
  - SLAB LEDGE LOCATIONS VARY W/ GRADE BEAM(S) ORIENTATION. SEE GB-1 FOR DETAILS.
  - THE DIRECTION OF THE ARROW IS THE DIRECTION OF REBAR, AS REQUIRED.
  - ALL FOOTINGS ARE PLAIN, UNREINFORCED CONCRETE UNLESS NOTES OTHERWISE.



**FOUNDATION PLAN**  
SCALE: 1/4" = 1'-0"

**FOUNDATION DIAGONALS**

A		B	
A	0"	A	41'-4 1/8"
B	41'-4 1/8"	B	0"
C	51'-2 11/16"	C	20'-0"
D	32'-0"	D	44'-8 11/16"
E	20'-0"	E	23'-3 7/8"



DIV-COMM-LOT-UNIT

COMM-LOT

STREET ADDRESS

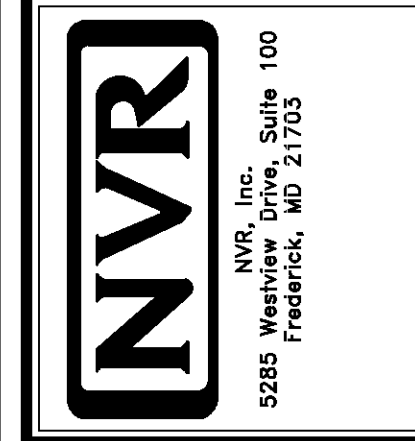
CITY

STATE

APT. NO.

ZIP

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SET NO. BRH00

VERSION 01

DRAWN BY

DATE:

OPTION FSA

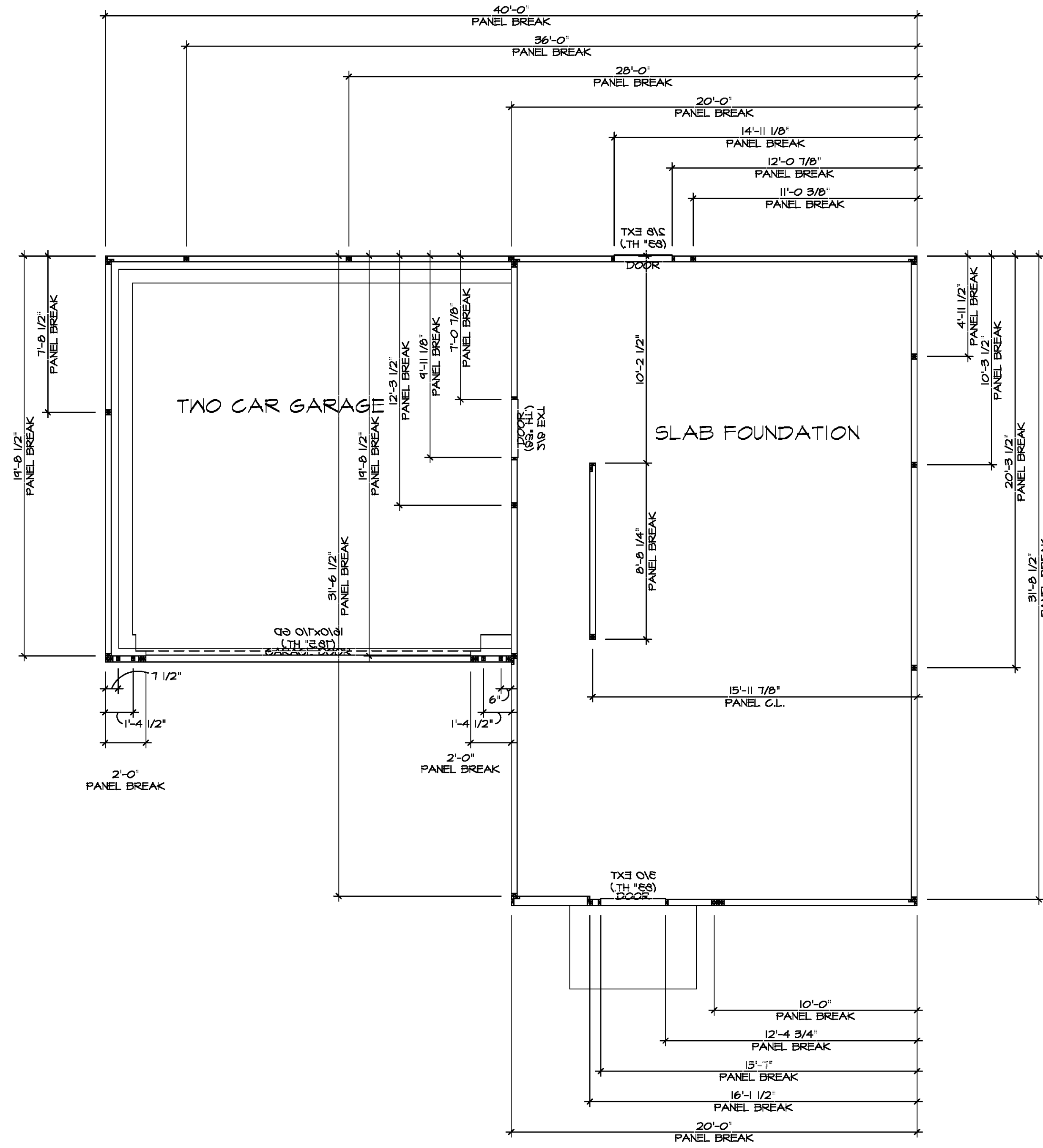
MODEL BIRCH

DRAWING TITLE FOUNDATION PLAN

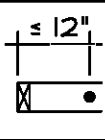


OPTION DESCRIPTION SLAB FOUNDATION


SHEET NO. A-2

8



**FOUNDATION HOLD DOWN PLAN**  
 SCALE: 1/4" = 1'-0"

HOLD DOWN NOTES	
REFER TO DETAIL (4/FD-1) FOR HOLD DOWN OFFSET DIMENSIONS. REFER TO DETAIL (12/FD-1) FOR HOLD DOWNS ON CMU BLOCK.	
	1. ALL PANELS GREATER THAN 24" SHALL HAVE AN ANCHOR WITHIN 12" OF THE PANEL BREAKS / ENDS. (SEE DETAIL SHEET FF-1 FOR MORE INFORMATION ON ANCHOR DETAILS)
	1. STRAP: a. ON FOUNDATION USE (STHD4) b. ON FLOOR SYSTEM USE (STHD4R/L) 2. ALL OTHER HOLD DOWN SEE DETAIL (MB-1, 2, 4) FOR MORE INFORMATION. 3. STRAP LOCATION ON PLANS SHOWN BY DASHED DIMENSION TO CENTER OF STUDS
OR	
	1. 5/8"Ø THREADED ROD 2. ALL OTHER HOLD DOWN SEE DETAIL (MB-1, 2, 4) FOR MORE INFORMATION. 3. BOLT LOCATION ON PLANS SHOWN BY SOLID DIMENSION TO CENTER OF BOLT



DIV-COMM-LOT-UNIT	COMM-LOT	STREET ADDRESS	CITY	STATE
---	---	---	---	---
			APT. NO.	ZIP
			---	---

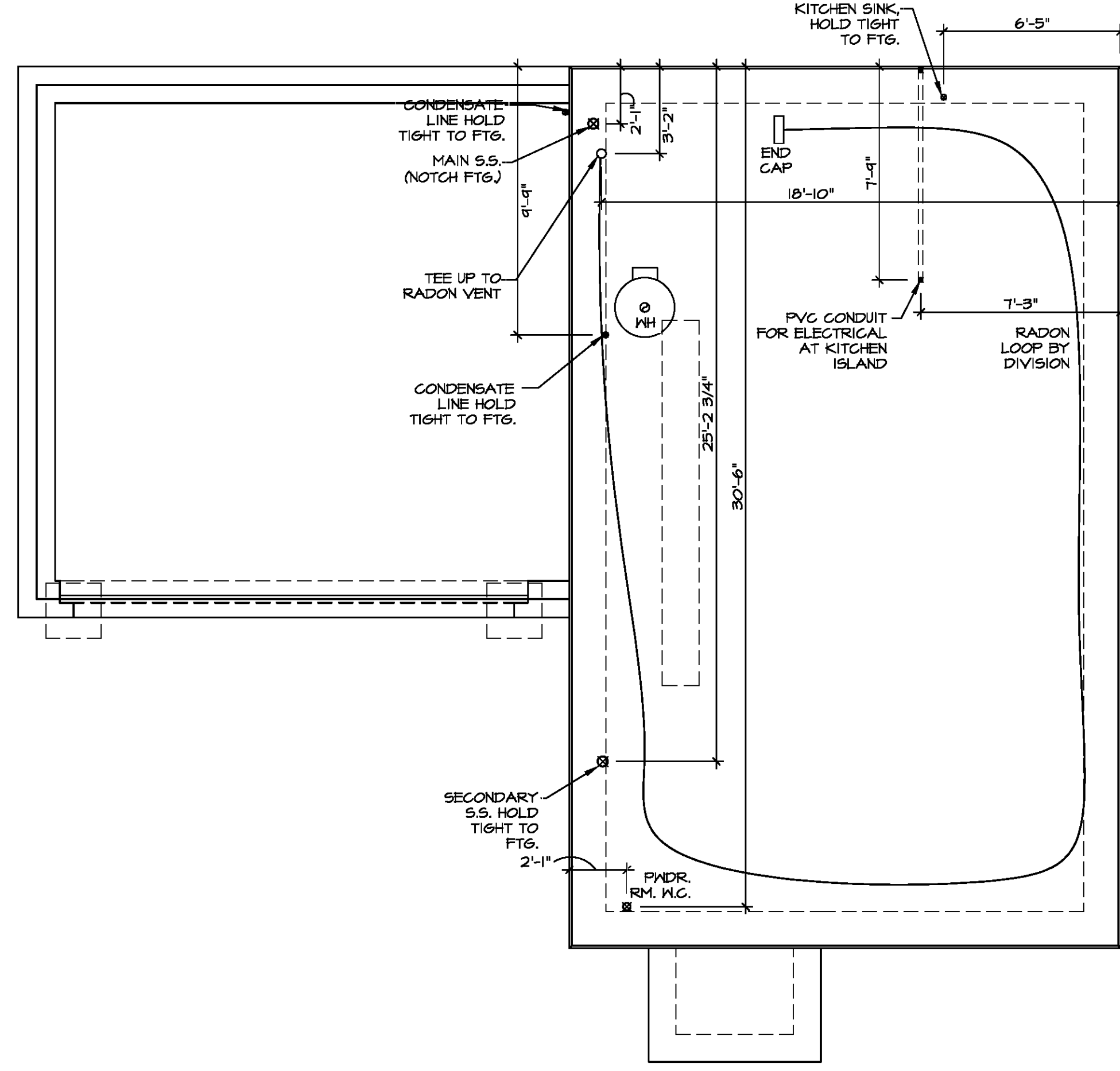
**NVR**, Inc.  
 5285 Westview Drive, Suite 100  
 Frederick, MD 21703

SET NO. BR400	VERSION 01	DRAWN BY	DATE	OPTION


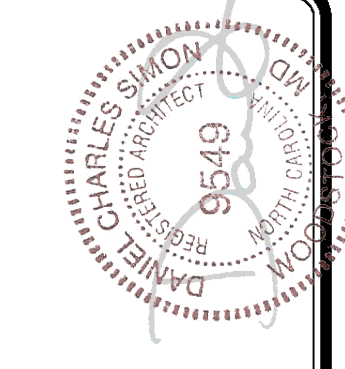
**BIRCH**  
 DRAWING TITLE  
 FOUNDATION HOLD DOWN DETAILS

SHEET NO.	OPTION DESCRIPTION
<b>A-3</b>	13

C:\NVR\Software\BIRCH\_06\_0102\Sheets\Lot\_Specific\13\_A-3\_FDN\_HD\_LS.dwg 03/16/21 - 12:53 pm



1 PLUMBING PLAN  
 A-4 SCALE: 1/4" = 1'-0"

SHEET NO. <b>A-4</b>	MODEL <b>BIRCH</b>	SET NO. BR400 VERSION 01	DRAWN BY  DATE: OPTION	DIV-COMM-LOT-UNIT  COMM-LOT STREET ADDRESS CITY STATE ZIP
		DRAWING TITLE <b>PLUMBING PLAN</b>		
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C:\NVR\Solvers\BIRCH_06_0102\Sheets\Lot_Specific\Y4_A-4_PLUMB_LS.dwg_03/16/21 - 12:53 pm				

FIRST FLOOR JACK SCHEDULE		
IDENTIFIER	DESCRIPTION	ENG. N.M.
J100	JACK - (4) 2x4 SFF STUD GRADE	1004
J101	JACK - (2) 2x4 SFF STUD GRADE	1002
J102	JACK - (3) 2x4 SFF STUD GRADE	1015
J103	JACK - (3) 2x4 SFF STUD GRADE	1015
J104	JACK - (4) 2x4 SFF STUD GRADE	1004
J105	JACK - (2) 2x4 SFF STUD GRADE	1008
J106	JACK - (2) 2x4 SFF STUD GRADE	1008

LEGEND	
	BEARING WALL
	NON BEARING WALL
	INDICATES BEARING FROM POINT-LOAD ABOVE
	JACKS
	BEAM/HEADER
	PAD FOOTING
	STEEL COLUMN
	TRUSS TIE DOWN
	PORTAL FRAME
	JOIST/TRUSS
	LVL
	ENGINEERING PAGE NUMBER

SEE FC DETAILS FOR FRAMING CONNECTORS

ALL WINDOWS HAVE  $\frac{1}{2}$ " HEADER HEIGHT UNLESS OTHERWISE NOTED

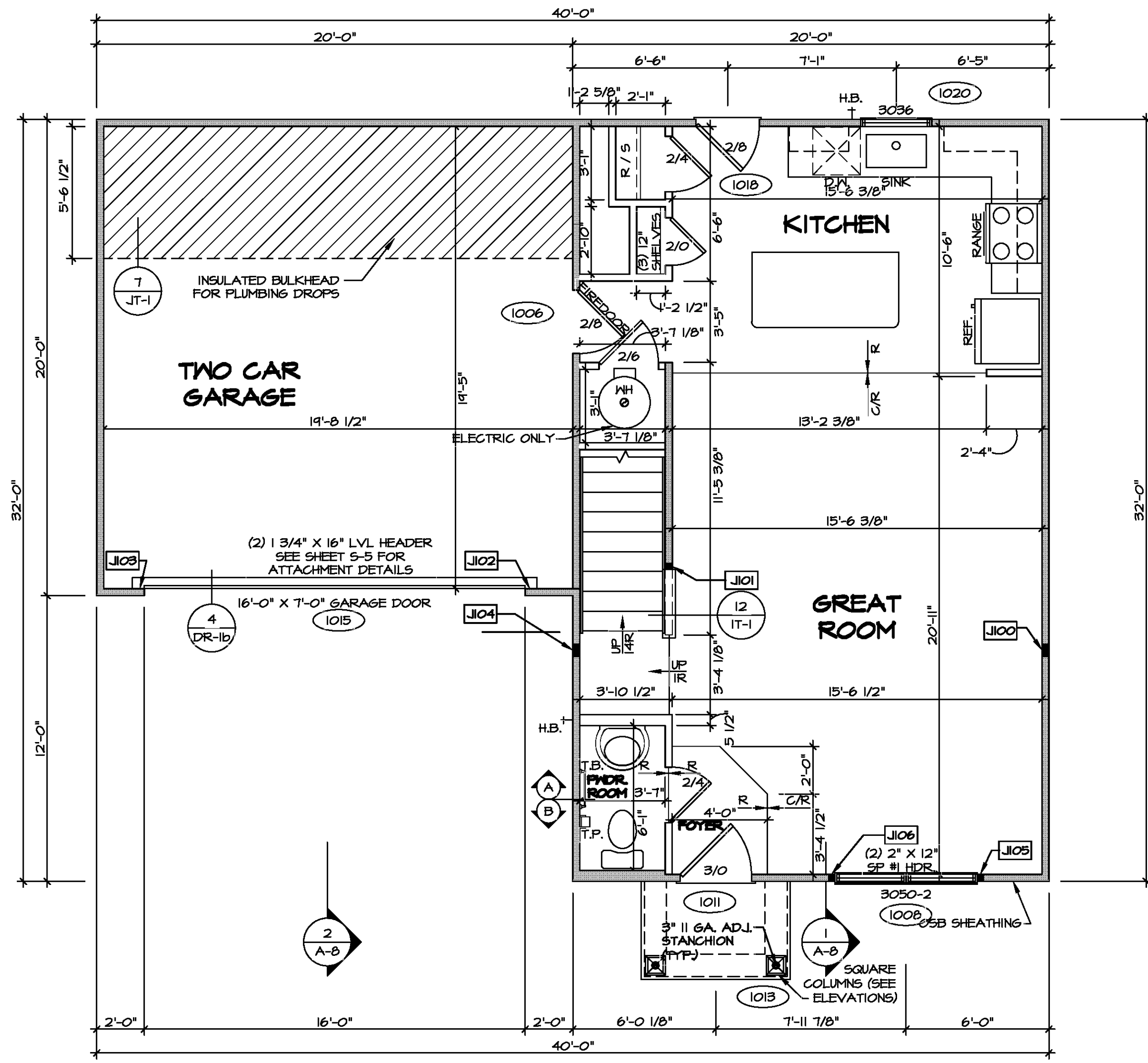
**FLOOR PLAN NOTES** RYAN

- ALL HEADERS ARE (2) 2x6 w/ 2x4 WALLS OR (3) 2x6 w/ 2x6 WALLS, UNLESS OTHERWISE NOTED.
- ALL HEADERS TO HAVE (1) 2x4 OR 2x6 JACK AND KING STUD EACH END, UNLESS OTHERWISE NOTED. MULTI-OPENING HEADERS TO HAVE (2) JACKS AT INTERMEDIATE BEARINGS, UNLESS OTHERWISE NOTED. NO ADDITIONAL FLOOR SYSTEM BLOCKING OR CONTINUOUS LOAD PATH JACKS ARE REQUIRED UNLESS OTHERWISE NOTED.
- ALL EXTERIOR WALLS TO BE 4" w/ OSB OR 3 1/2" w/ LAMINATED FIBROUS STRUCTURAL SHEATHING. ALL INTERIOR WALLS TO BE 3 1/2", UNLESS OTHERWISE NOTED.
- HATCHED AREAS INDICATE DROPPED CEILING. ALL DROPPED CEILING ARE 12" UNLESS OTHERWISE NOTED.
- SEE "BRACED WALL PANEL DETAIL SHEET" FOR SPECIAL WALL FRAMING LOCATIONS AND HEADER SIZES, IF APPLICABLE.
- SEE STANDARD DETAIL CATEGORY "IT" SHEET(S) FOR INTERIOR TRIM DETAILS.
- SEE ARCHITECTURAL DETAIL SHEET "AD" FOR HOUSE SPECIFIC INTERIOR TRIM OPTION TABLE.
- ALL HEADERS IN NON-BEARING WALLS SHALL BE A SINGLE FLAT 2x4 OR 2x6 ATTACHED TO CRIPPLES ABOVE, UNLESS OTHERWISE NOTED.
- TANKED WATER HEATER SHOWN AS BASE CONDITION, OPTIONAL TANKLESS WATER HEATER IS AVAILABLE IN LIEU OF TANKED WATER HEATER.

**GYPSUM NOTES**

AT GARAGE:  
GYPSUM BOARD AT COMMON WALLS, CEILING, BEAM WRAPS AND SUPPORTS PER STANDARD DETAIL FA-1(b) FIRE ASSEMBLIES OR AS REQUIRED BY LOCAL CODE.

AT STAIRS:  
1/2" GYPSUM BOARD AT UNDERSIDE OF STAIRS AND WALLS IN CLOSET



**FIRST FLOOR PLAN**  
SCALE: 1/4" = 1'-0"



DIV.-COMM.-LOT-UNIT

COMM.-LOT

STREET ADDRESS

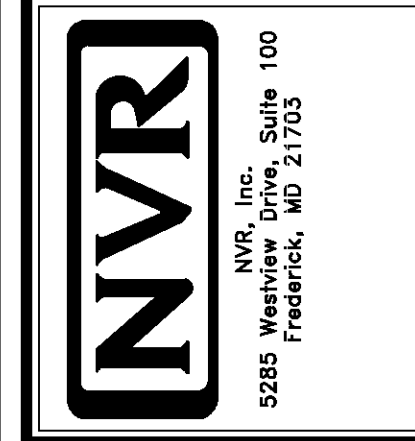
CITY

STATE

ZIP

APT. NO.

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MODEL	BIRCH
DRAWING TITLE	FIRST FLOOR PLAN
OPTION DESCRIPTION	
SHEET NO.	A-6
VERSION	01
DATE	
OPTION	
SET NO.	BRH00
VERSION	01
DRAWN BY	
DATE	
OPTION	
SHEET NO.	17





LEGEND	
	BEARING WALL
	NON BEARING WALL
	INDICATES BEARING FROM POINT-LOAD ABOVE
	JACKS
	BEAM/HEADER
	PAD FOOTING
	STEEL COLUMN
	TRUSS TIE DOWN
	PORTAL FRAME
	JOIST/TRUSS
	LVL
	ENGINEERING PAGE NUMBER

SEE FC DETAILS FOR FRAMING CONNECTORS

ALL WINDOWS HAVE  $\frac{1}{2}$ " 5/8" HEADER HEIGHT UNLESS OTHERWISE NOTED

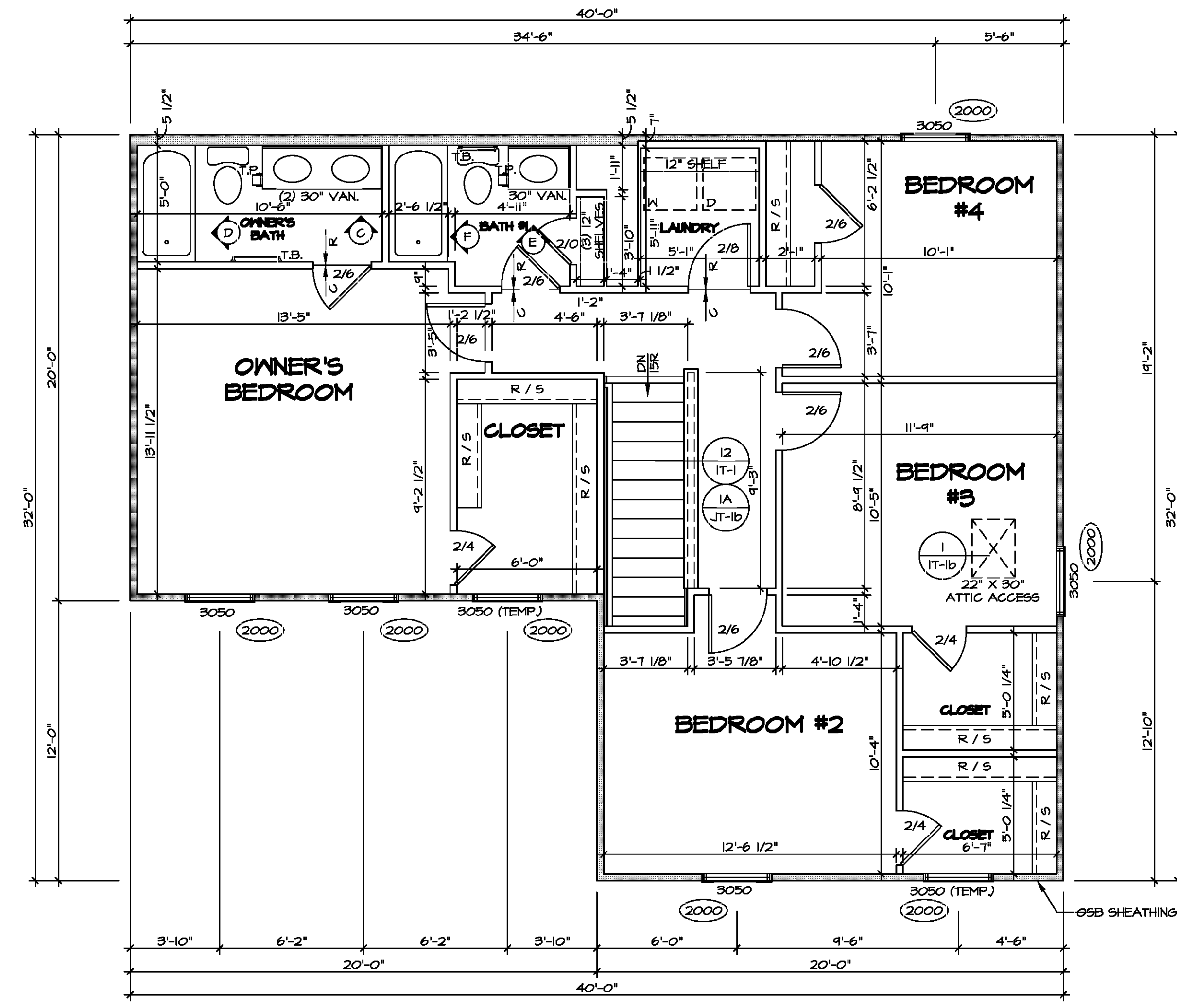
**FLOOR PLAN NOTES** RYAN

- ALL HEADERS ARE (2) 2x6 w/ 2x4 WALLS OR (3) 2x6 w/ 2x6 WALLS, UNLESS OTHERWISE NOTED.
- ALL HEADERS TO HAVE (1) 2x4 OR 2x6 JACK AND KING STUD EACH END, UNLESS OTHERWISE NOTED. MULTI-OPENING HEADERS TO HAVE (2) JACKS AT INTER-MEDIATE BEARINGS, UNLESS OTHERWISE NOTED. NO ADDITIONAL FLOOR SYSTEM BLOCKING OR CONTINUOUS LOAD PATH JACKS ARE REQUIRED UNLESS OTHERWISE NOTED.
- ALL EXTERIOR WALLS TO BE 4" w/ OSB OR 3 1/2" w/ LAMINATED FIBROUS STRUCTURAL SHEATHING. ALL INTERIOR WALLS TO BE 3 1/2", UNLESS OTHERWISE NOTED.
- HATCHED AREAS INDICATE DROPPED CEILING. ALL DROPPED CEILING ARE 12" UNLESS OTHERWISE NOTED.
- SEE "BRACED WALL PANEL DETAIL SHEET" FOR SPECIAL WALL FRAMING LOCATIONS AND HEADER SIZES, IF APPLICABLE.
- SEE STANDARD DETAIL CATEGORY "IT" SHEET(S) FOR INTERIOR TRIM DETAILS.
- SEE ARCHITECTURAL DETAIL SHEET "AD" FOR HOUSE SPECIFIC INTERIOR TRIM OPTION TABLE.
- ALL HEADERS IN NON-BEARING WALLS SHALL BE A SINGLE FLAT 2x4 OR 2x6 ATTACHED TO CRIPPLES ABOVE, UNLESS OTHERWISE NOTED.
- TANKED WATER HEATER SHOWN AS BASE CONDITION, OPTIONAL TANKLESS WATER HEATER IS AVAILABLE IN LIEU OF TANKED WATER HEATER.

**GYPSUM NOTES**

AT GARAGE:  
GYPSUM BOARD AT COMMON WALLS, CEILING, BEAM WRAPS AND SUPPORTS PER STANDARD DETAIL FA-1(b) FIRE ASSEMBLIES OR AS REQUIRED BY LOCAL CODE.

AT STAIRS:  
1/2" GYPSUM BOARD AT UNDERSIDE OF STAIRS AND WALLS IN CLOSET

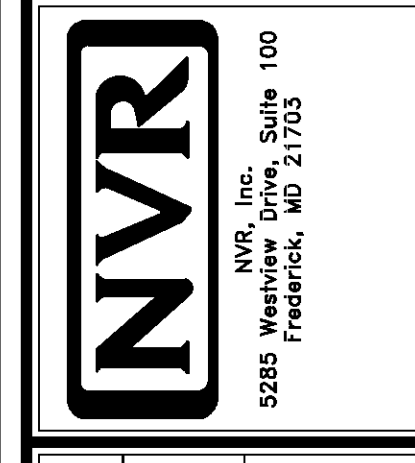


**1 SECOND FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

DIV-COMM-LOT-UNIT  
COM-LOT  
STREET ADDRESS  
CITY

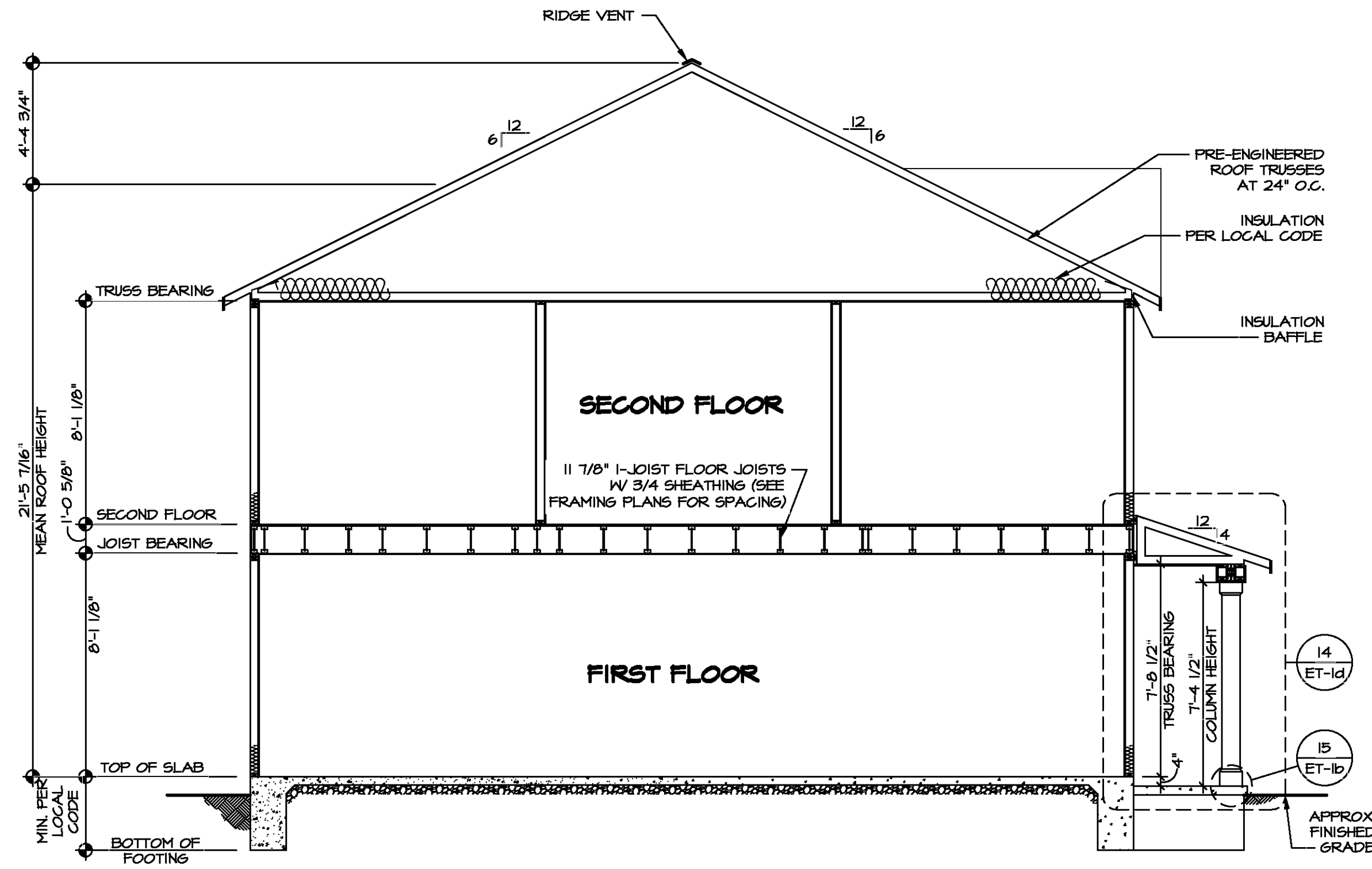
APT. NO.  
STATE  
ZIP

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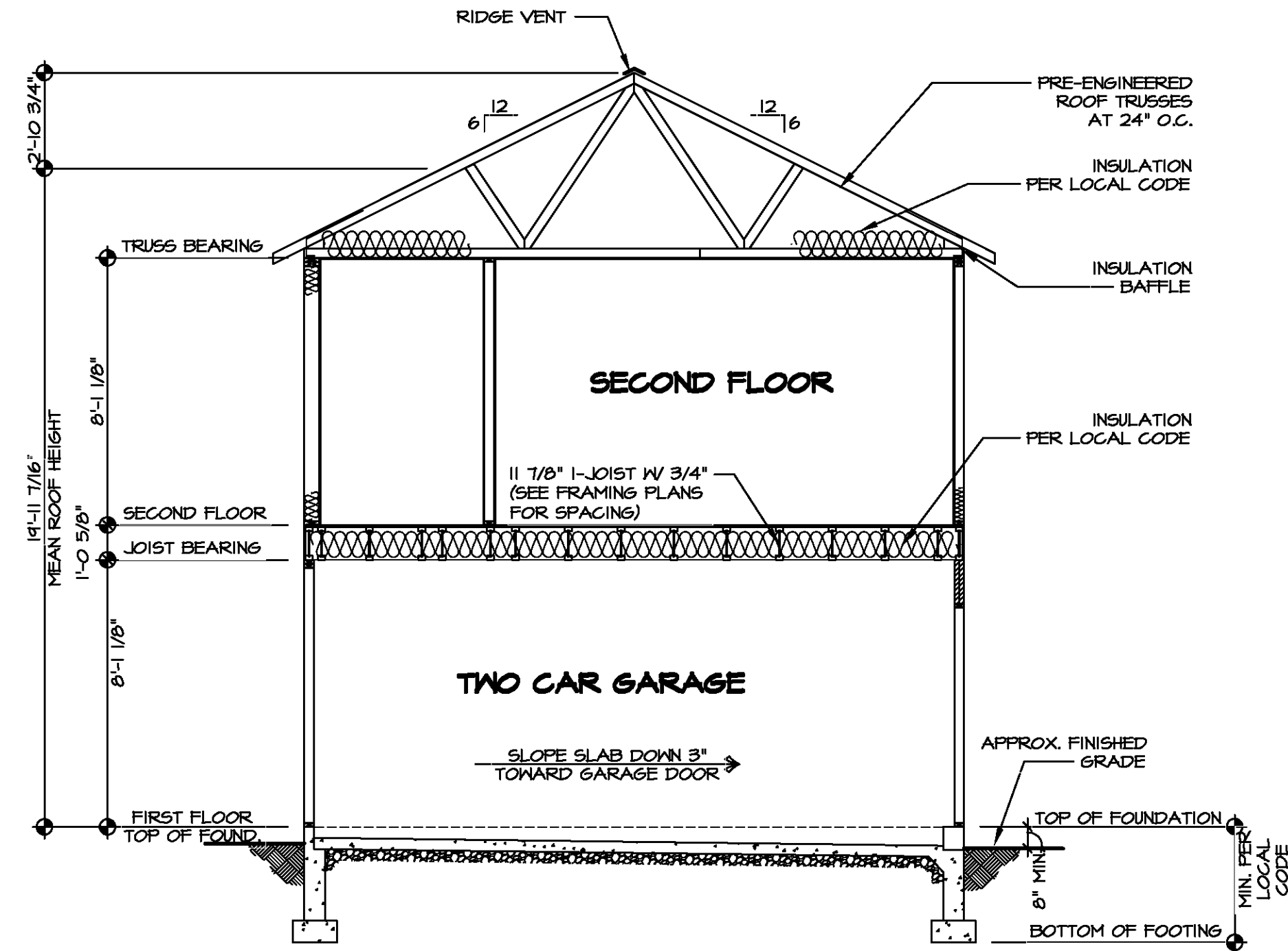


SET NO. BRHOO  
VERSION 01  
DRAWN BY  
DATE:  
OPTION

MODEL: BIRCH  
DRAWING TITLE: SECOND FLOOR PLAN  
OPTION DESCRIPTION: 1B



1 BUILDING SECTION - FOYER  
 A-B SCALE: 1/4" = 1'-0"

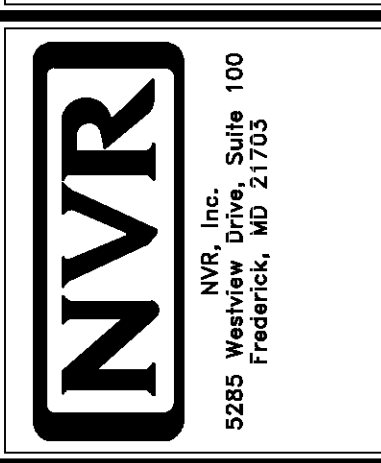


2 BUILDING SECTION - GARAGE  
 A-B SCALE: 1/4" = 1'-0"

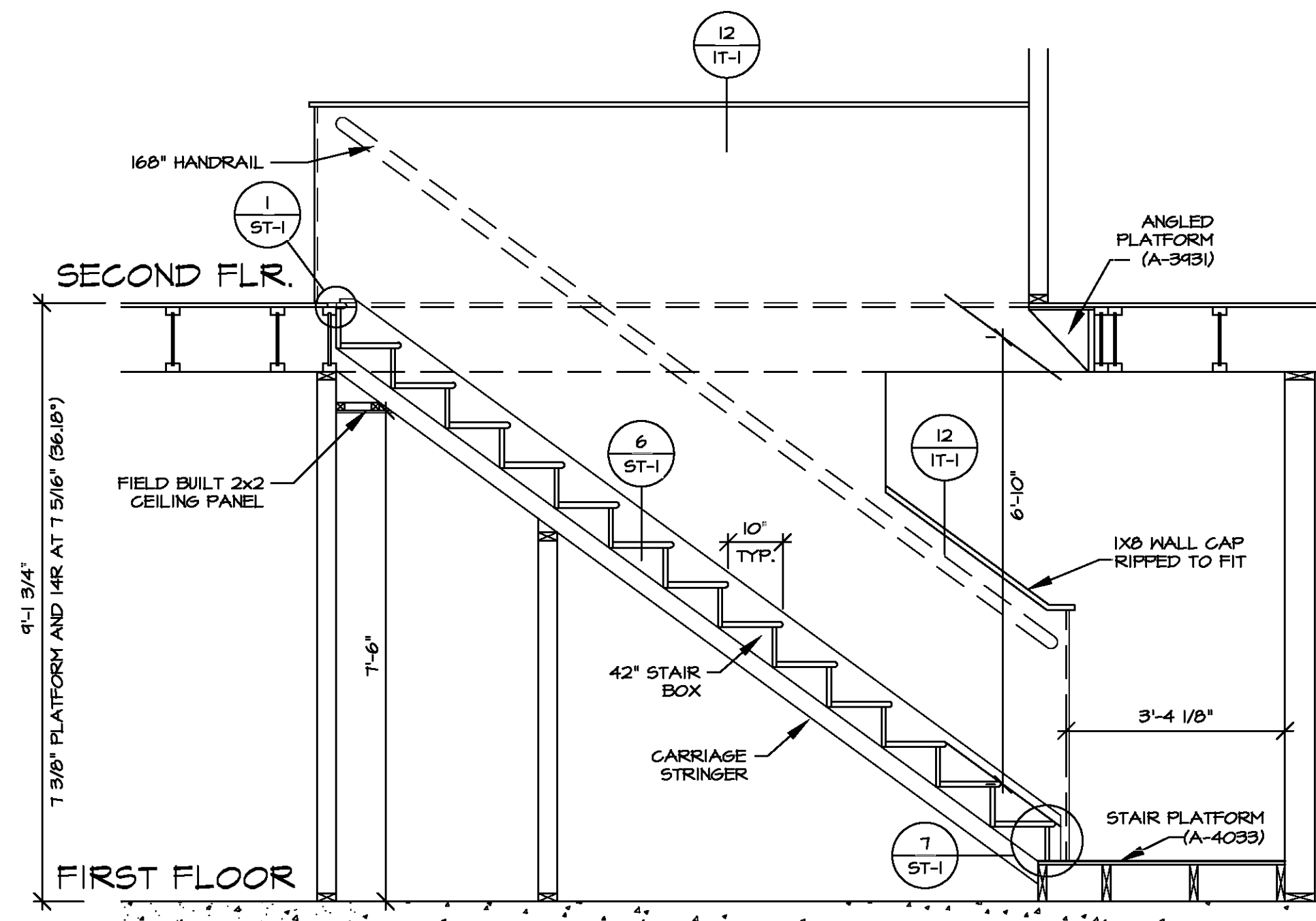


DIV-COMM-LOT-UNIT	
COMM-LOT	---
STREET ADDRESS	---
CITY	---
STATE	---
APT. NO.	---
ZIP	---

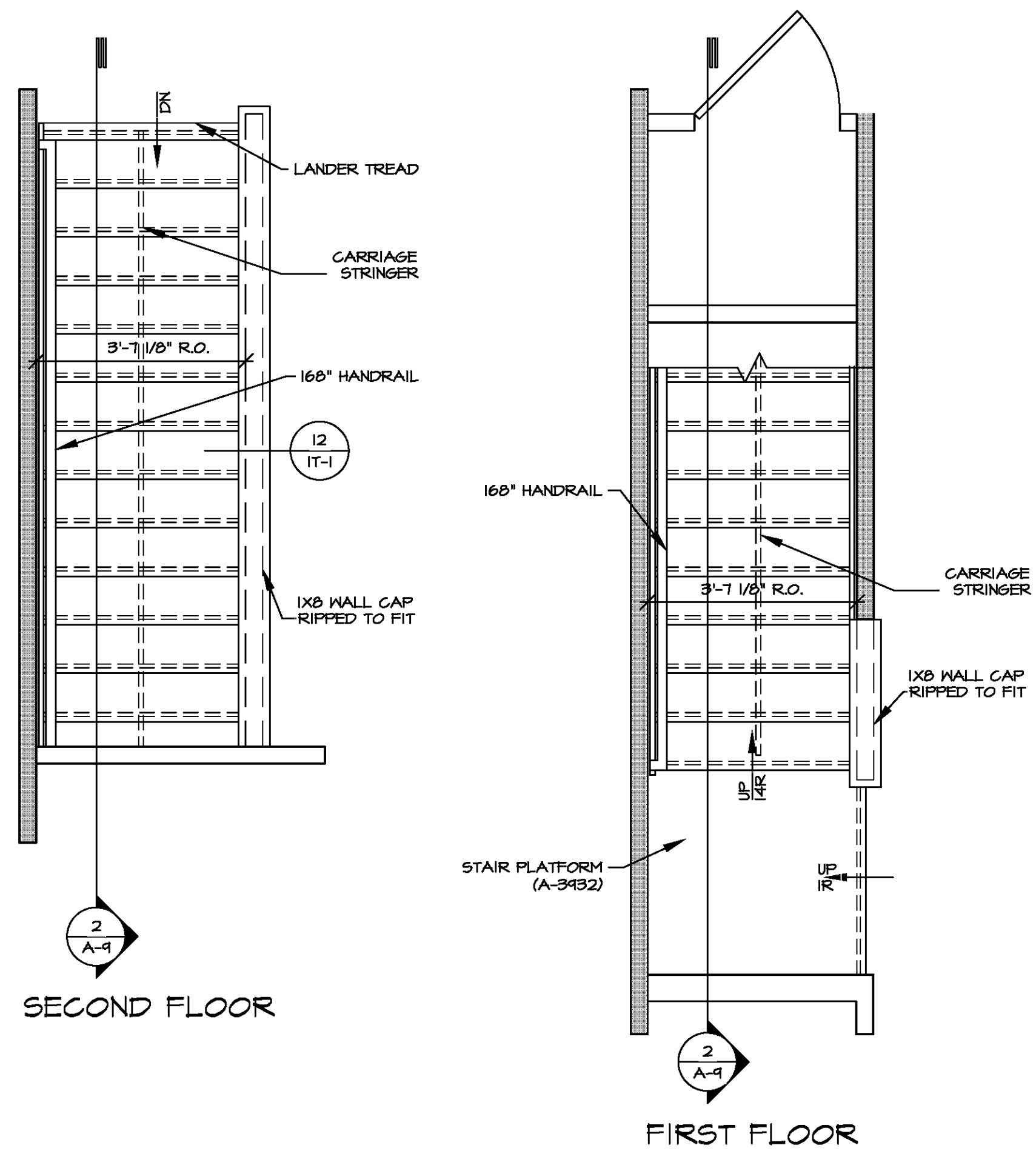
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SHEET NO.	A-8
MODEL	BIRCH
DRAWING TITLE	BUILDING SECTION
OPTION DESCRIPTION	
SET NO.	BRH00
VERSION	01
DRAWN BY	
DATE	
OPTION	



**2 STAIR SECTIONS**  
SCALE: 1/2" = 1'-0"



**1 STAIR PLANS**  
SCALE: 1/2" = 1'-0"

DIV-COMM-LOT-UNIT	---	COMM-LOT	---	STREET ADDRESS	---	CITY	---	STATE	---	APT. NO.	---	ZIP	---
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Frederick, MD 21703

SET NO. BRH00	VERSION 01	DRAWN BY	DATE:	OPTION
<b>BIRCH</b> DRAWING TITLE <b>STAIR SECTION</b>				
SHEET NO. <b>A-9</b>	OPTION DESCRIPTION			20

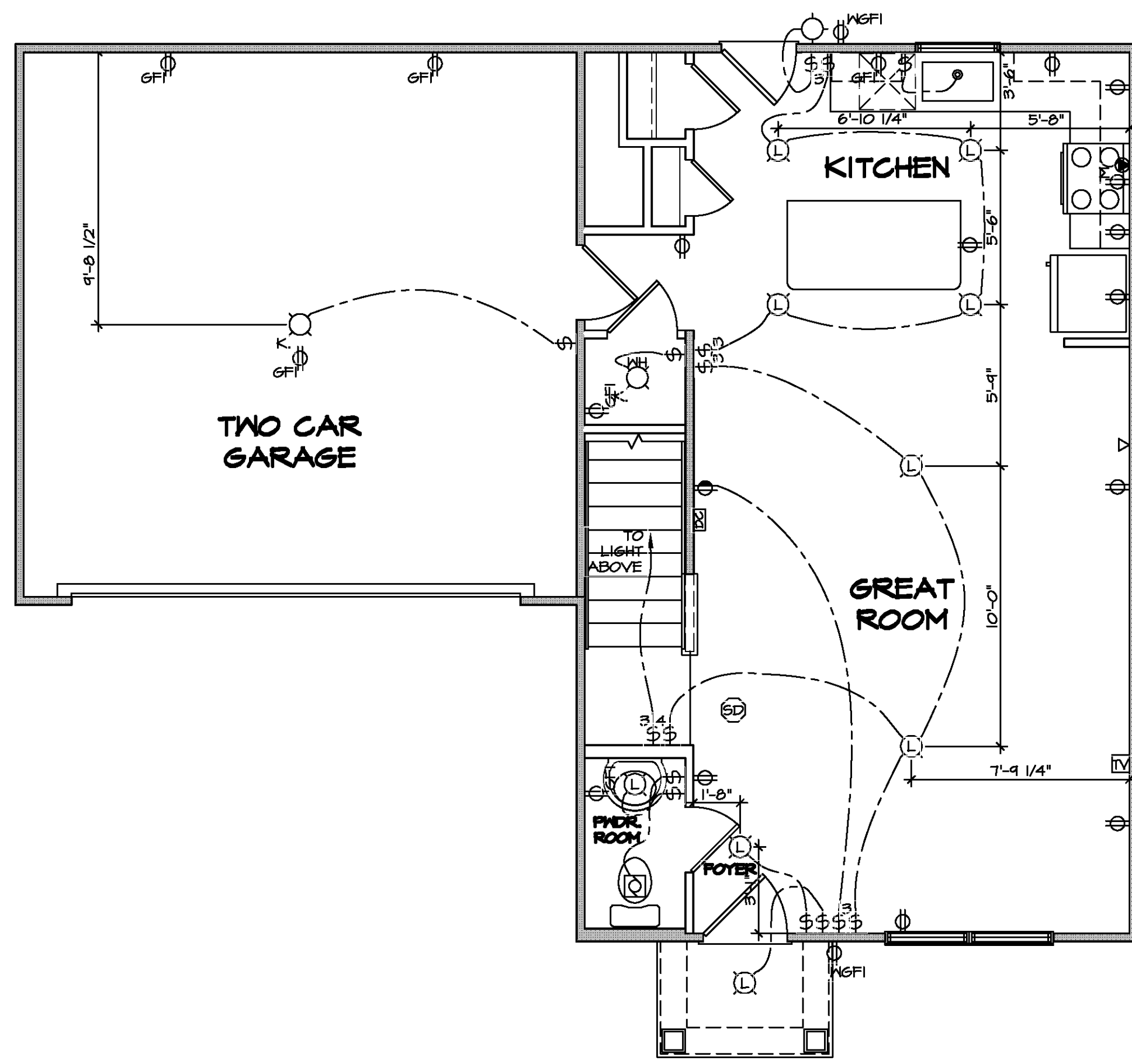
VA-As-SoldV2-565A ASDA 2021 1stHdlf-Complete\BIRCH DETACHED\BIRCH-BR00-01\ELC. E. 06-0102 20 A-9 STAIR LS.dwg 03/17/21 - 10:02 am



- NOTES:**
1. ALL ELECTRICAL PLANS ARE SCHEMATIC ONLY AND NOT INTENDED AS ENGINEERED DRAWINGS. THESE PLANS REPRESENT THE DESIGN INTENT FOR SWITCH AND RECEPTACLE LOCATIONS. ADDITIONAL INFORMATION, IF REQUIRED, SHALL BE PROVIDED BY A LICENSED ELECTRICAL SUBCONTRACTOR OR ENGINEER.
  2. ALL KITCHEN, GARAGES, UNFINISHED BASEMENT, RETIERS AND ALL OUTDOOR RECEPTACLES ARE TO BE GFI PROTECTED.
  3. PROVIDE DUPLEX RECEPTACLE ON DEDICATED CIRCUIT FOR DISHWASHER IN CABINET UNDER THE SINK.
  4. PROVIDE DUPLEX RECEPTACLE FOR GARBAGE DISPOSAL IN CABINET UNDER THE SINK.
  5. PROVIDE SWITCH W/ KEYLESS LIGHT IN ATTIC SPACE.
  6. PROVIDE SWITCH W/ KEYLESS LIGHT AND GFI RECEPTACLE WHEN HVAC EQUIPMENT IS IN ATTIC SPACE.
  7. PROVIDE ARC-FAULT CIRCUIT INTERRUPTERS TO ALL ROOMS EXCEPT BATH AND EXTERIOR RECEPTACLES. WASHER ON LEFT, DRYER ON RIGHT (PER PLAN OR REVERSED).
  8. DRYER RECEPTACLE 110 W/ 6AS OR 220 W/ ELECTRIC.

**ELECTRICAL LEGEND**

Ⓢ	SINGLE POLE SWITCH
Ⓢ	THREE WAY SWITCH
Ⓢ	FOUR WAY SWITCH
Ⓢ	DUPLEX RECEPTACLE
Ⓢ	DUPLEX RECEPTACLE - BOTTOM HALF SWITCHED
Ⓢ	DUPLEX RECEPTACLE - FLOOR MOUNTED
Ⓢ	RECEPTACLE - 220V
Ⓢ	DUPLEX RECEPTACLE - USB
Ⓢ	DUPLEX RECEPTACLE - GROUND FAULT INTERRUPT
Ⓢ	DUPLEX RECEPTACLE - WEATHER PROOF AND GROUND FAULT INTERRUPT
Ⓢ	DUPLEX RECEPTACLE - MICROWAVE
Ⓢ	SMOKE DETECTOR - WIRED IN SERIES
Ⓢ	CARBON MONOXIDE DETECTOR
Ⓢ	EXHAUST FAN MOTOR
Ⓢ	EXHAUST FAN MOTOR WITH LIGHT
Ⓢ	TELEVISION RECEPTACLE
Ⓢ	TELEPHONE RECEPTACLE
Ⓢ	DOOR CHIME
Ⓢ	LIGHT FIXTURE - WALL MOUNTED
Ⓢ	LIGHT FIXTURE - CEILING MOUNTED
Ⓢ	LIGHT FIXTURE - RECESSED
Ⓢ	LIGHT FIXTURE - RECESSED WEATHER PROOF
Ⓢ	LIGHT FIXTURE - CEILING MOUNTED LED
Ⓢ	LIGHT FIXTURE - HANGING
Ⓢ	LIGHT FIXTURE - PENDANT
Ⓢ	LIGHT FIXTURE - FLUORESCENT
Ⓢ	LIGHT FIXTURE - UNDER CABINET LIGHT
Ⓢ	"S" = SMALL "M" = MEDIUM "L" = LARGE
Ⓢ	PULLCHAIN LAMPHOLDER
Ⓢ	KEYLESS LAMPHOLDER



**FIRST FLOOR ELECTRICAL PLAN**  
SCALE: 1/4" = 1'-0"

SHEET NO. <b>E-2</b>	MODEL <b>BIRCH</b>	SET NO. <b>BRH00</b>	VERSION <b>01</b>
	DRAWING TITLE <b>FIRST FLOOR ELECTRICAL PLAN</b>	DRAWN BY	DATE:
OPTION DESCRIPTION <b>24</b>			OPTION

DIV-COMM-LOT-UNIT	
COM-LOT	APT. NO.
STREET ADDRESS	STATE
CITY	ZIP

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**NVR**  
NVR, Inc. Suite 100  
Frederick, MD 21703

5285 Woodside Lane, Suite 100  
Frederick, MD 21703

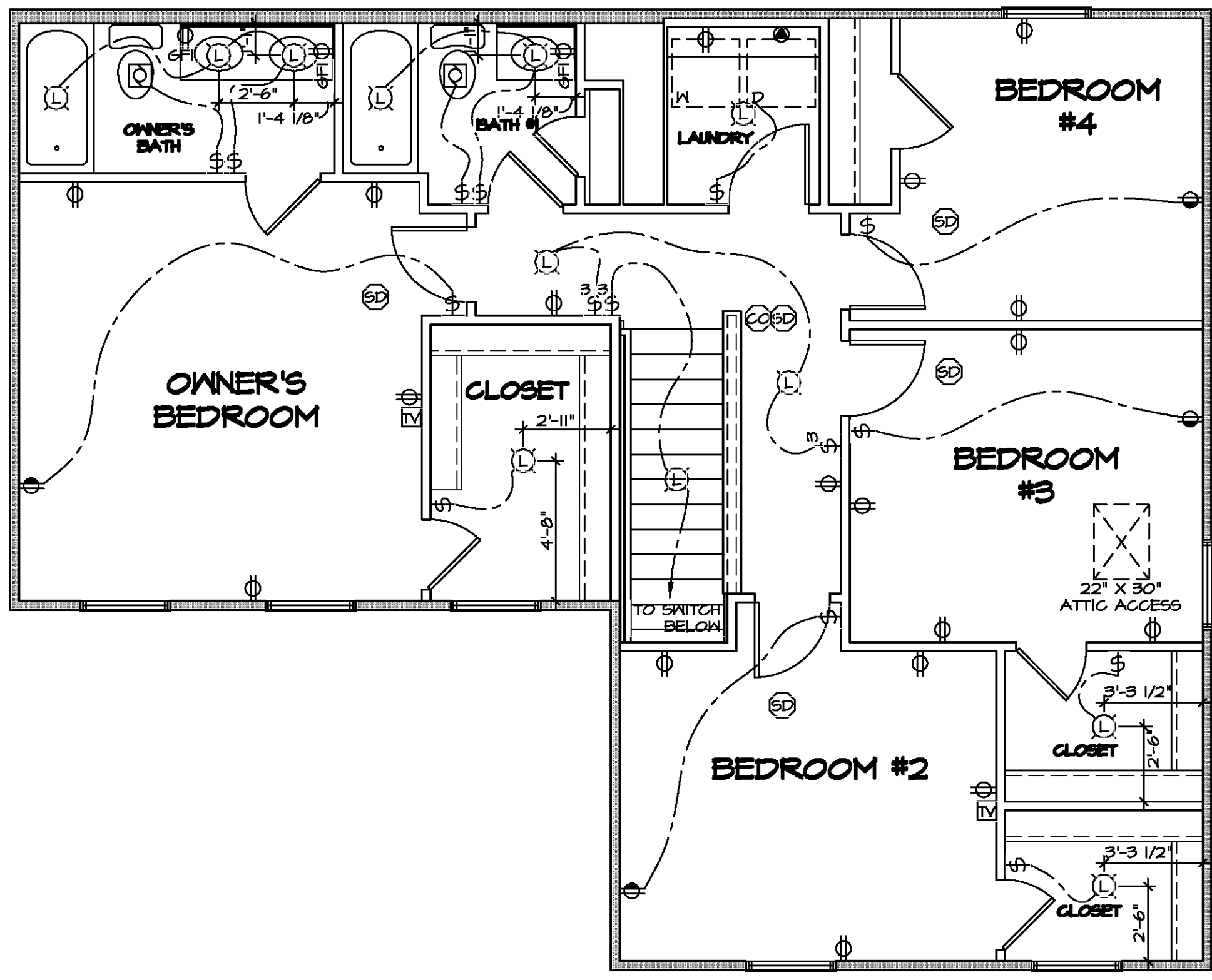
VA-As-Sold-2-565-ASD-A 2021 1stHalf-Complete\BIRCH\DETACHED\BIRCH-BR00-01\ELEC-B-06-0102\24 E-2 PLNT-ELEC-LS.dwg 03/17/21 - 10:02 gm



- NOTES:**
1. ALL ELECTRICAL PLANS ARE SCHEMATIC ONLY AND NOT INTENDED AS ENGINEERED DRAWINGS. THESE PLANS REPRESENT THE DESIGN INTENT FOR SWITCH AND RECEPTACLE LOCATIONS. ADDITIONAL INFORMATION, IF REQUIRED, SHALL BE PROVIDED BY A LICENSED ELECTRICAL SUBCONTRACTOR OR ENGINEER.
  2. ALL KITCHEN GARAGES, UNFINISHED BASEMENT, NETBARS AND ALL OUTDOOR RECEPTACLES ARE TO BE GFI PROTECTED.
  3. PROVIDE DUPLEX RECEPTACLE ON DEDICATED CIRCUIT FOR DISHWASHER IN CABINET UNDER THE SINK.
  4. PROVIDE DUPLEX RECEPTACLE FOR GARBAGE DISPOSAL IN CABINET UNDER THE SINK.
  5. PROVIDE SWITCH W/ KEYLESS LIGHT IN ATTIC SPACE.
  6. PROVIDE SWITCH W/ KEYLESS LIGHT AND GFI RECEPTACLE WHEN HVAC EQUIPMENT IS IN ATTIC SPACE.
  7. PROVIDE ARC-FAULT CIRCUIT INTERRUPTERS TO ALL ROOMS EXCEPT BATH AND EXTERIOR RECEPTACLES.
  8. WASHER ON LEFT, DRYER ON RIGHT (PER PLAN OR REVERSED).
  9. DRYER RECEPTACLE 110 W/ GAS OR 220 W/ ELECTRIC.

**ELECTRICAL LEGEND**

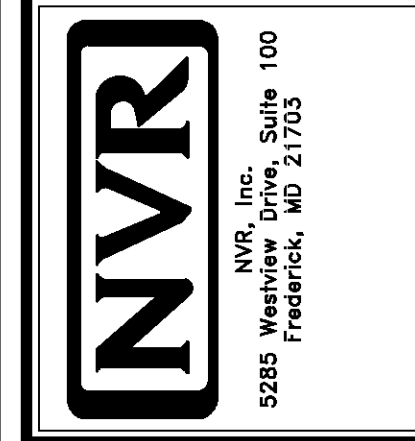
⊕	SINGLE POLE SWITCH
⊕⊕	THREE WAY SWITCH
⊕⊕⊕	FOUR WAY SWITCH
⊕⊕	DUPLEX RECEPTACLE
⊕⊕⊕	DUPLEX RECEPTACLE - BOTTOM HALF SWITCHED
⊕⊕⊕	DUPLEX RECEPTACLE - FLOOR MOUNTED
⊕⊕	RECEPTACLE - 220V
⊕⊕	DUPLEX RECEPTACLE - USB
⊕⊕	DUPLEX RECEPTACLE - GROUND FAULT INTERRUPT
⊕⊕	DUPLEX RECEPTACLE - WEATHER PROOF AND GROUND FAULT INTERRUPT
⊕⊕	DUPLEX RECEPTACLE - MICROWAVE
⊕⊕	SMOKE DETECTOR - WIRED IN SERIES
⊕⊕	CARBON MONOXIDE DETECTOR
⊕⊕	EXHAUST FAN MOTOR
⊕⊕	EXHAUST FAN MOTOR WITH LIGHT
⊕⊕	TELEVISION RECEPTACLE
⊕⊕	TELEPHONE RECEPTACLE
⊕⊕	DOOR CHIME
⊕⊕	LIGHT FIXTURE - WALL MOUNTED
⊕⊕	LIGHT FIXTURE - CEILING MOUNTED
⊕⊕	LIGHT FIXTURE - RECESSED
⊕⊕	LIGHT FIXTURE - RECESSED WEATHER PROOF
⊕⊕	LIGHT FIXTURE - CEILING MOUNTED LED
⊕⊕	LIGHT FIXTURE - HANGING
⊕⊕	LIGHT FIXTURE - PENDANT
⊕⊕	LIGHT FIXTURE - FLUORESCENT
⊕⊕	LIGHT FIXTURE - UNDER CABINET LIGHT
⊕⊕	FULLCHAIN LAMPHOLDER
⊕⊕	KEYLESS LAMPHOLDER



**1 SECOND FLOOR ELECTRICAL PLAN**  
E-3 SCALE: 1/4" = 1'-0"

---  
 DIV-COMM-LOT-UNIT  
 COMM-LOT  
 STREET ADDRESS  
 CITY STATE ZIP  
 APT. NO.

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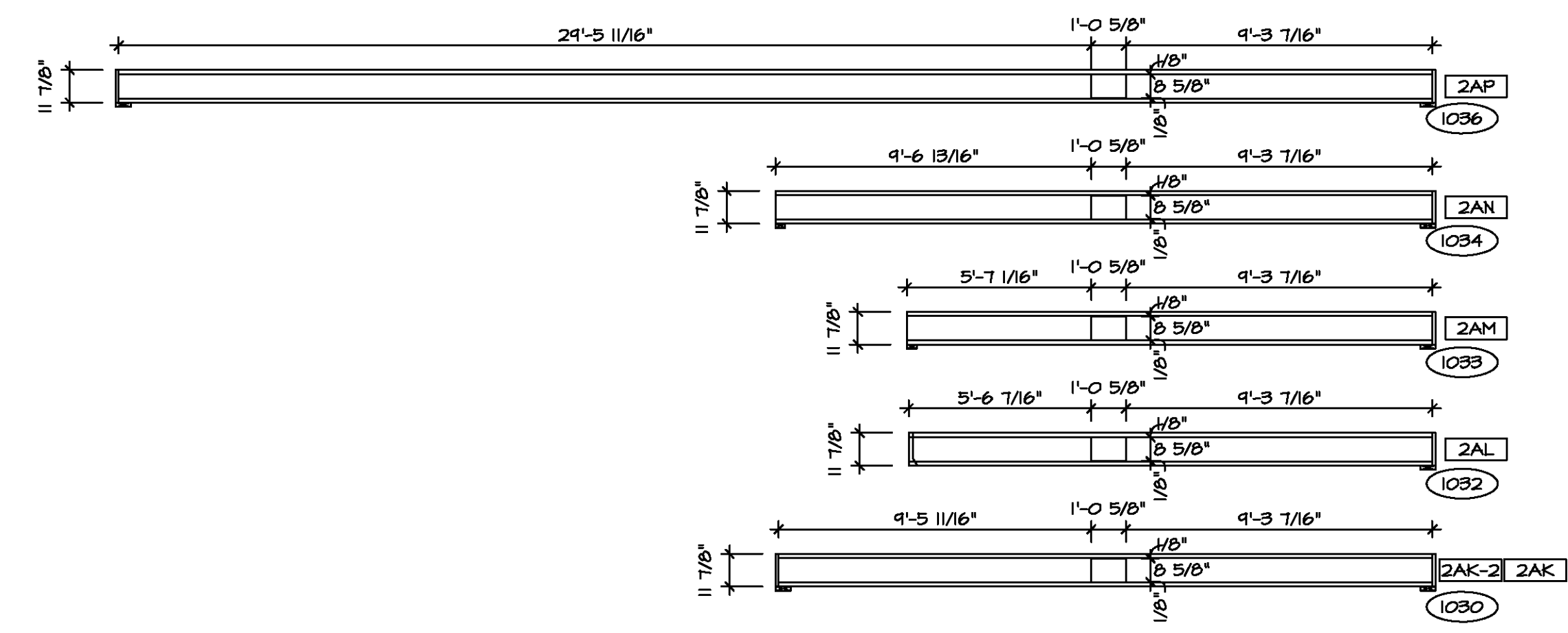
SHEET NO. <b>E-3</b>	MODEL <b>BIRCH</b>	SET NO. <b>BRH00</b>	VERSION <b>01</b>
	DRAWING TITLE <b>SECOND FLOOR ELECTRICAL PLAN</b>	DRAWN BY	DATE:
25	OPTION DESCRIPTION	OPTION	



**LEGEND**

- BEARING WALL
- ⊗ INDICATES BEARING FROM POINT-LOAD ABOVE
- J JACKS
- B BEAM/HEADER
- F PAD FOOTING
- ◇ STEEL COLUMN
- X TRUSS TIE DOWN
- X PORTAL FRAME
- X JOIST/TRUSS
- LVL
- ⊙ ENGINEERING PAGE NUMBER

SEE FC DETAILS FOR FRAMING CONNECTORS



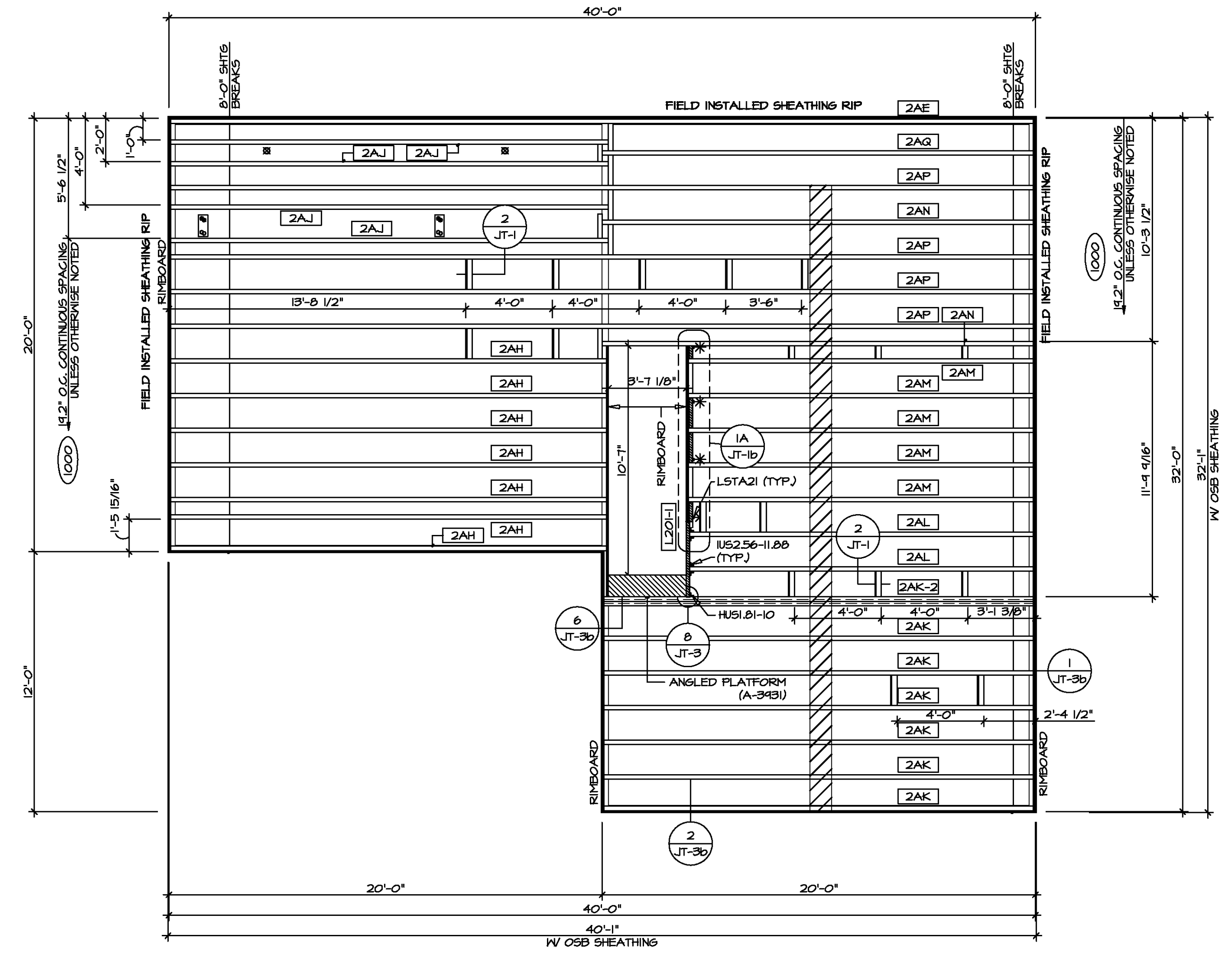
**2 HOLE CUT DETAIL**  
SCALE: 1/4" = 1'-0"

**1-JOIST FLOOR SYSTEM**

- SUBFLOOR IS 3/4" TONGUE AND GROOVE OSB STANDARD.
- JOIST LENGTHS SHIPPED IS THE NEXT HIGHEST LENGTH TO CUT FROM.
- ALL RIMBOARD TO BE 1-1/8" THICK W.O.
- REFER TO STANDARD DETAIL T/JT-3 FOR HOLE CUTTING GUIDELINES.
- PROVIDE RIMBOARD SOLID BLOCKING AT EXTERIOR WALLS AND BELOW ALL JACKS AS REQUIRED.
- REFER TO DETAIL B/JT-3 FOR HANGER DETAIL.
- ALL JOISTS TO BE FR140, FR160 OR FR180. REFERENCE SCHEDULE FOR SPECIFIC SERIES PER MEMBER.
  - A. FR140 SERIES ARE SHOWN AS SHADED ON FRAMING PLAN.
- SEE CONNECTOR / NAIL CHART IN STANDARD DETAILS (FC-4) FOR TYPICAL HANGERS.
- ALL LVL BLOCKING CUT FROM 14'-0" MATERIAL.
- ADHESIVE TO BE APPLIED AT THE RATE OF (1) TUBE PER TWO AND ONE-HALF SHEETS; SHEETS ARE TO BE GLUED AND PLACED ONE AT A TIME. **APPLY GLUE TO TONGUE AND GROOVE.**
- 1-JOIST BLOCKING CUT FROM 2'-0" MATERIAL.
- ADHESIVE TO BE ADDED TO ALL JOIST HANGERS PRIOR TO SETTING JOISTS.

**LVL PLY TO PLY FASTENING SCHEDULE:** (WHERE APPLICABLE BASED ON LVL USAGE)

- 1A - (2) PLY UP TO AND INCLUDING 11 7/8" TALL; FASTEN PLYS W/ (2) ROWS 16D NAILS AT 12" O.C. OR ALT 1 1/2" WIDE LVL FASTEN PLYS W/ (3) ROWS 12D NAILS AT 12" O.C.
- 2A - (2) PLY 14" TO AND 18" TALL (INCLUSIVE); FASTEN PLYS W/ (3) ROWS 16D NAILS AT 12" O.C. OR ALT 1 1/2" WIDE LVL FASTEN PLYS W/ (4) ROWS 12D NAILS AT 12" O.C.
- 3A - (2) PLY 20" TALL AND OVER; FASTEN PLYS W/ (4) ROWS 16D NAILS AT 12" O.C. OR ALT 1 1/2" WIDE LVL FASTEN PLYS W/ (5) ROWS 12D NAILS AT 12" O.C.
- 4A - (3) PLY UP TO AND INCLUDING 11 7/8" TALL; FASTEN PLYS W/ (2) ROWS 16D NAILS AT 12" O.C. FROM EACH SIDE OR ALT 1 1/2" WIDE LVL FASTEN PLYS W/ (3) ROWS 12D NAILS AT 12" O.C. FROM EACH SIDE.
- 5A - (3) PLY 14" TO AND 18" TALL (INCLUSIVE); FASTEN PLYS W/ (3) ROWS 16D NAILS AT 12" O.C. FROM EACH SIDE OR ALT 1 1/2" WIDE LVL FASTEN PLYS W/ (4) ROWS 12D NAILS AT 12" O.C. FROM EACH SIDE.
- 6A - (3) PLY 20" TALL AND OVER; FASTEN PLYS W/ (4) ROWS 16D NAILS AT 12" O.C. FROM EACH SIDE OR ALT 1 1/2" WIDE LVL FASTEN PLYS W/ (5) ROWS 12D NAILS AT 12" O.C. FROM EACH SIDE.
- 7A - (4) PLY (ALL SIZES); FASTEN PLYS W/ (2) ROWS 1/2" DIAMETER A307 BOLTS AT 24" O.C. SEE SHOP DRAWING FOR ADDITIONAL INFORMATION.



**1 SECOND FLOOR FRAMING PLAN**  
SCALE: 1/4" = 1'-0"

**SECOND FLOOR FRAMING LENGTH SCHEDULE**

IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
2AE	PRI 60 - 11-14	34'-4 3/4"	1000	
2AH	PRI 60 - 11-14	20'-1 1/4"	1000	
2AJ	PRI 60 - 11-14	20'-2 3/8"	1000	
2AK	PRI 60 - 11-14	19'-4 3/4"	1030	J-C0088
2AK-2	PRI 60 - 11-14 DBL	19'-4 3/4"	1031	J-C0089
2AL	PRI 60 - 11-14	15'-10 1/2"	1032	J-C0087
2AM	PRI 60 - 11-14	15'-11 1/8"	1033	J-C0086
2AN	PRI 60 - 11-14	14'-10 7/8"	1034	J-C0085
2AP	PRI 60 - 11-14	34'-4 3/4"	1036	J-C0084
2AQ	PRI 60 - 11-14	14'-10 7/8"	1000	

**SECOND FLOOR LVL LENGTH SCHEDULE**

IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
L20I-1	LVL 1.75 - 11-14	3'-5 13/16"	1002	

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Frederick, MD 21703

5285 Walkers Lane, Suite 100  
Frederick, MD 21703

SET NO. BRH00  
VERSION 01  
DRAWN BY  
DATE:  
OPTION

MODEL  
**BIRCH**  
DRAWING TITLE  
SECOND FLOOR JOIST LAYOUT  
OPTION DESCRIPTION

DIV-COMM-LOT-UNIT  
COM-LOT  
STREET ADDRESS  
CITY  
STATE  
APT. NO.  
ZIP

SHEET NO. **S-2**

OPTION DESCRIPTION **2B**

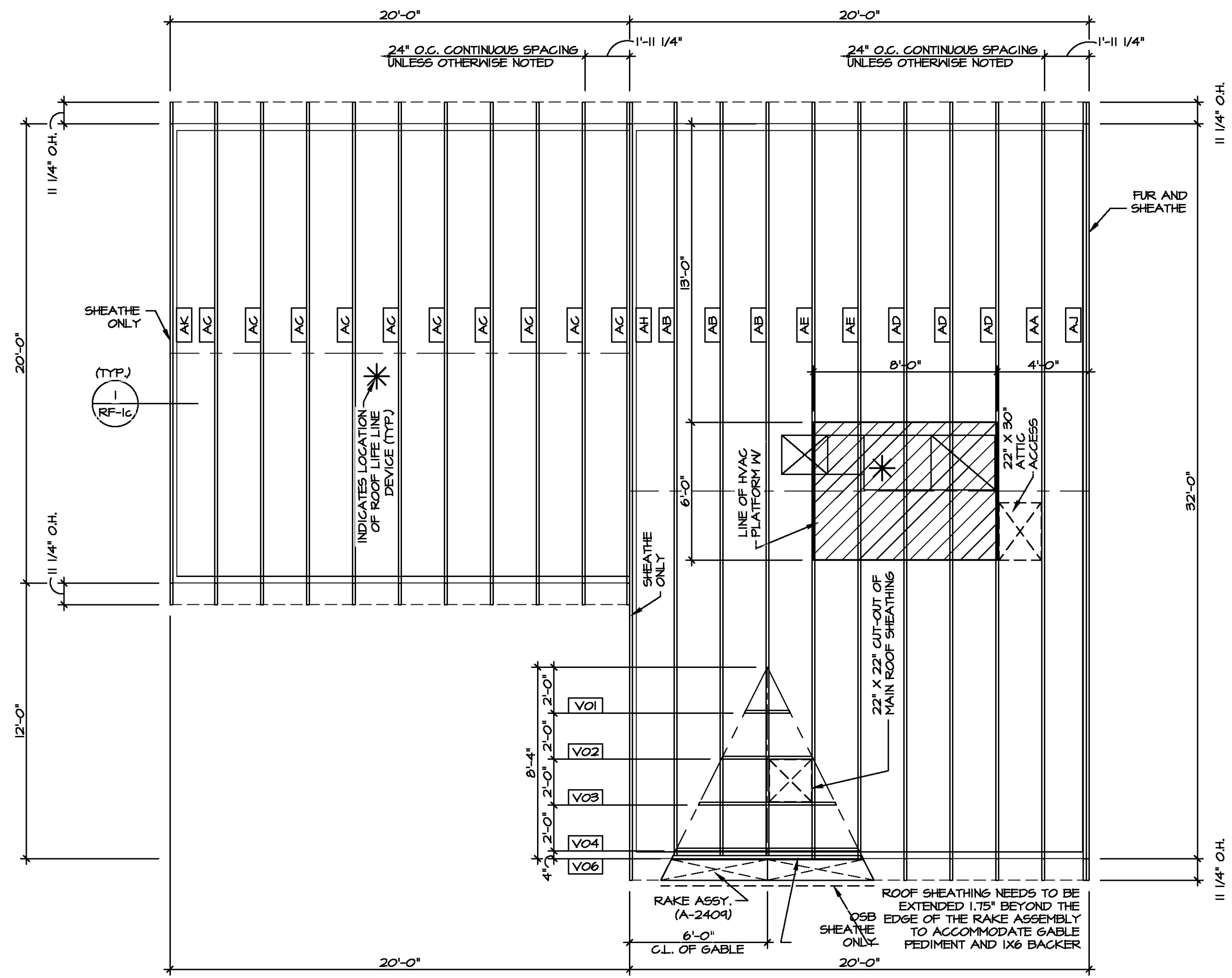
DATE: 03/17/21

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

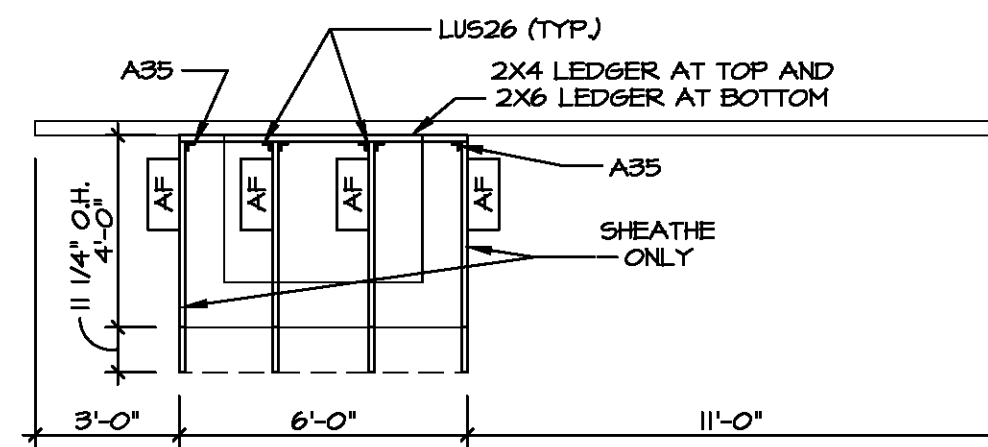


TRUSS SCHEDULE					
IDENTIFIER	SPECS	TRUSS NUMBER	LENGTH	ROOF PITCH (X/12)	TYPE
AA	9E	13176	32'-0"	6/12	COMMON
AB	9E	13177	32'-0"	6/12	SPECIAL
AC	9E	13152	20'-0"	6/12	COMMON
AD	9E	13178	32'-0"	6/12	COMMON
AE	9E	13174	32'-0"	6/12	SPECIAL
AF	9E	13155	3'-10 1/2"	4/12	MONO
AH	9E	16440	32'-0"	6/12	STUDDED GABLE
AJ	9E	16441	32'-0"	6/12	GABLE END
AK	9E	16442	20'-0"	6/12	GABLE END
VO1	VT	01261	2'-0"	12-6/12	VALLEY
VO2	VT	01262	4'-0"	12-6/12	VALLEY
VO3	VT	01263	6'-0"	12-6/12	VALLEY
VO4	VT	01264	8'-0"	12-6/12	VALLEY
VO6	VT	94708	8'-4"	12-6/12	VALLEY

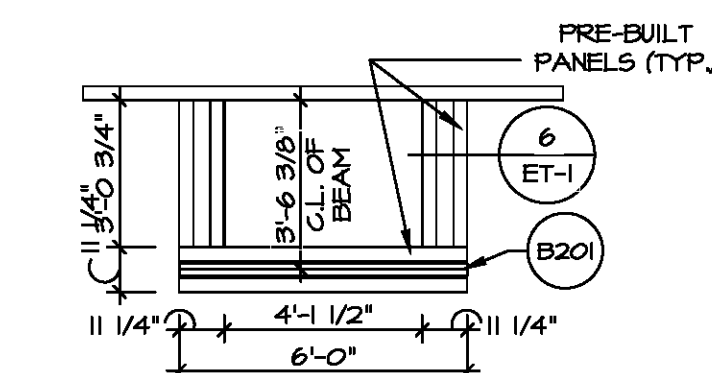
FIELD INSTALLED ROOF FRAMING BEAM/HEADER SCHEDULE				
IDENTIFIER	DESCRIPTION	LENGTH	ENG. NUM.	REMARKS
B201	BEAM BUILT 2X6 - 2 PLY RFF	6'-0"	1013	



1 ROOF FRAMING PLAN  
SCALE: 1/4" = 1'-0"



2 PORCH ROOF FRAMING PLAN  
SCALE: 1/4" = 1'-0"



3 PORCH BEAM FRAMING PLAN  
SCALE: 1/4" = 1'-0"

NOTES:  
1. SEE GENERAL NOTES (N-1) FOR ADDITIONAL INFORMATION.  
2. SCHEDULES (N-2)  
3. LVL NAILING SCHEDULE (N-1)

LEGEND	
	BEARING WALL
	INDICATES BEARING FROM POINT-LOAD ABOVE
	JACKS
	BEAM/HEADER
	PAD FOOTING
	STEEL COLUMN
	TRUSS TIE DOWN
	PORTAL FRAME
	JOIST/TRUSS
	LVL
	ENGINEERING PAGE NUMBER

SEE FC DETAILS FOR FRAMING CONNECTORS

ROOF FRAMING NOTES  
1. REFER TO THE STANDARD DETAILS FOR THE FOLLOWING:  
1.1. TRUSS TIE-DOWNS (1/RF-1)  
1.2. PIGGYBACK TRUSS ATTACHMENT (2/RF-1)  
1.3. VALLEY GABLE TRUSS BRACING (3/RF-1)  
1.4. GABLE BRACING (1/RF-1c)  
1.5. TRUSS BRACING (2/RF-1c)  
1.6. LIFELINE ATTACHMENT (5/RF-1)  
1.7. FALL PROTECTION ON PLATFORM TRUSSES (11/RF-1)  
2. IF TRUSS DOES NOT APPEAR ON THE TRUSS BRACING SHEET, NO ADDITIONAL LATERAL BRACING REQUIRED.

DIV.-COMM.-LOT-UNIT  
COM.-LOT  
STREET ADDRESS  
CITY STATE ZIP

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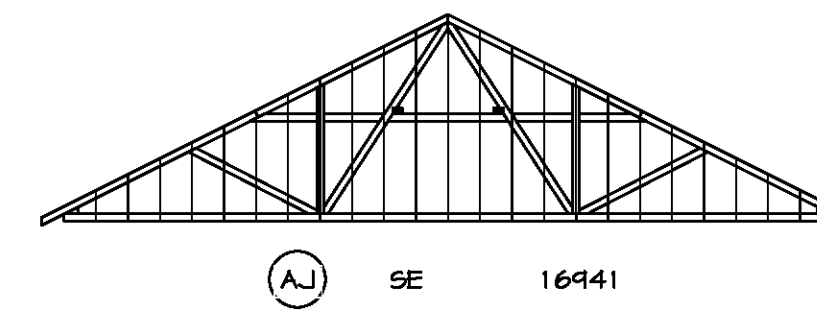
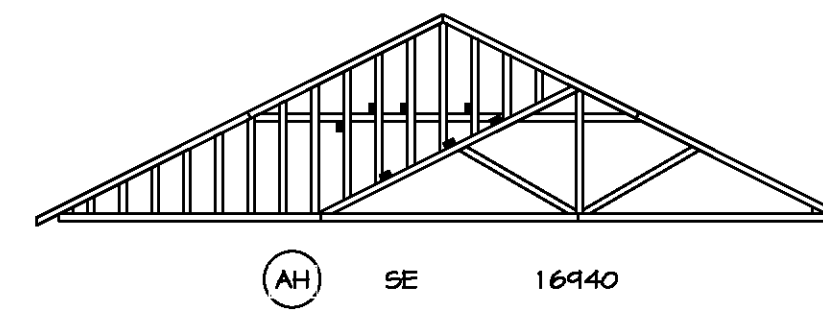
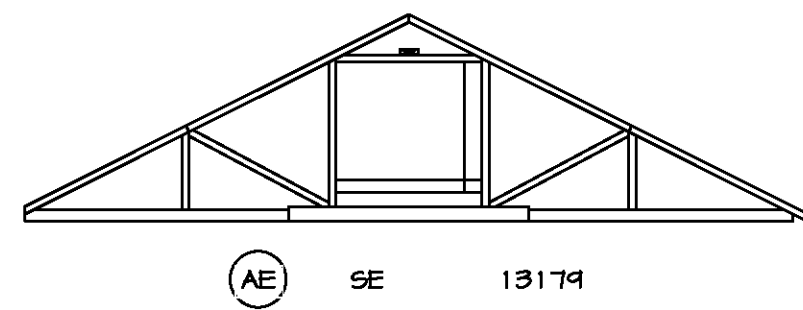
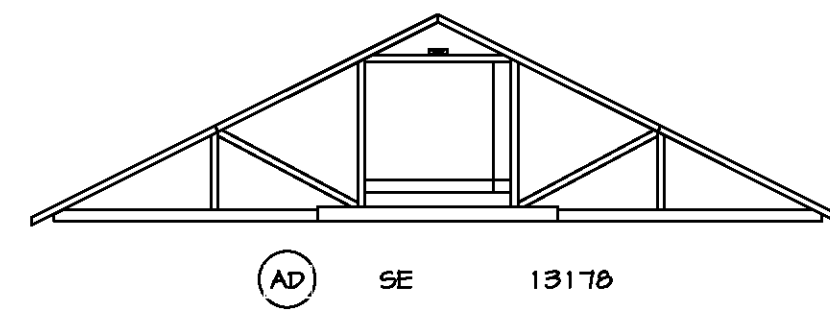
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Frederick, MD 21703

SET NO. BRH00  
VERSION 01  
DRAWN BY  
DATE:  
OPTION

MODEL  
**BIRCH**  
DRAWING TITLE  
ROOF FRAMING PLAN  
OPTION DESCRIPTION

SHEET NO.  
**S-3**  
30

VA-AS-Std12-16a.ASDA 2021 1.rft-1-Complete\BIRCH DETACHED\BIRCH-BR00-01\ELC.B.06-0102A.S0 S-3.RFF.LS.dwg 03/17/21 10:02 gm



**TRUSS BRACING**

SCALE: 1/8" = 1'-0"

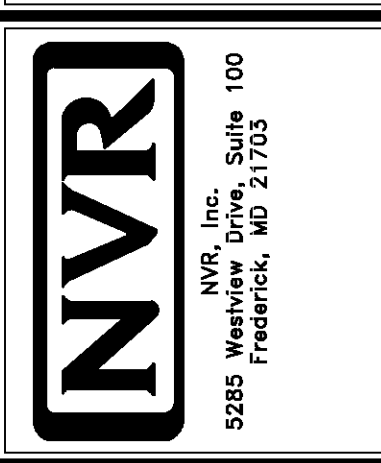
**TRUSS BRACING NOTES**

- IF TRUSS DOES NOT APPEAR ON THIS TRUSS BRACING SHEET, NO ADDITIONAL LATERAL BRACING IS REQUIRED.
- 1X6 SPP#2 LATERAL BRACES SHALL BE NAILED TO MINIMUM (3) TRUSS MEMBERS WITH MINIMUM (2) 10D NAILS. PROVISIONS MUST BE MADE AT ENDS OR SPECIFIED INTERVALS TO RESTRAIN OR ANCHOR LATERAL BRACING.
- WEB "T" BRACE, DETAIL 3/RF-1c, IS REQUIRED WHERE LATERAL BRACING IS NOT CONTINUOUS ACROSS THREE (3) OR MORE TRUSSES AND MAY BE USED IN LIEU OF 1X6 LATERAL BRACING.
- DIAGONAL BRACING REQUIRED WHEN LATERAL BRACING IS REQUIRED (1/RF-1).
- STUDDED GABLE BRACING DETAIL 1/RF-1c TO BE UTILIZED FOR TRUSSES 6'-4" IN HEIGHT OR GREATER.
- PARTIALLY SHEATHED GABLES, SEE 5/RF-1c FOR "L" BRACING WHEN REQUIRED.
- LATERAL BRACING CAN BE APPLIED TO EITHER SIDE OF THE WEB MEMBER IDENTIFIED IN THE DRAWING.
- SHEATHING (OSB OR GYPSUM) REPLACES LATERAL AND DIAGONAL TRUSS BRACING.



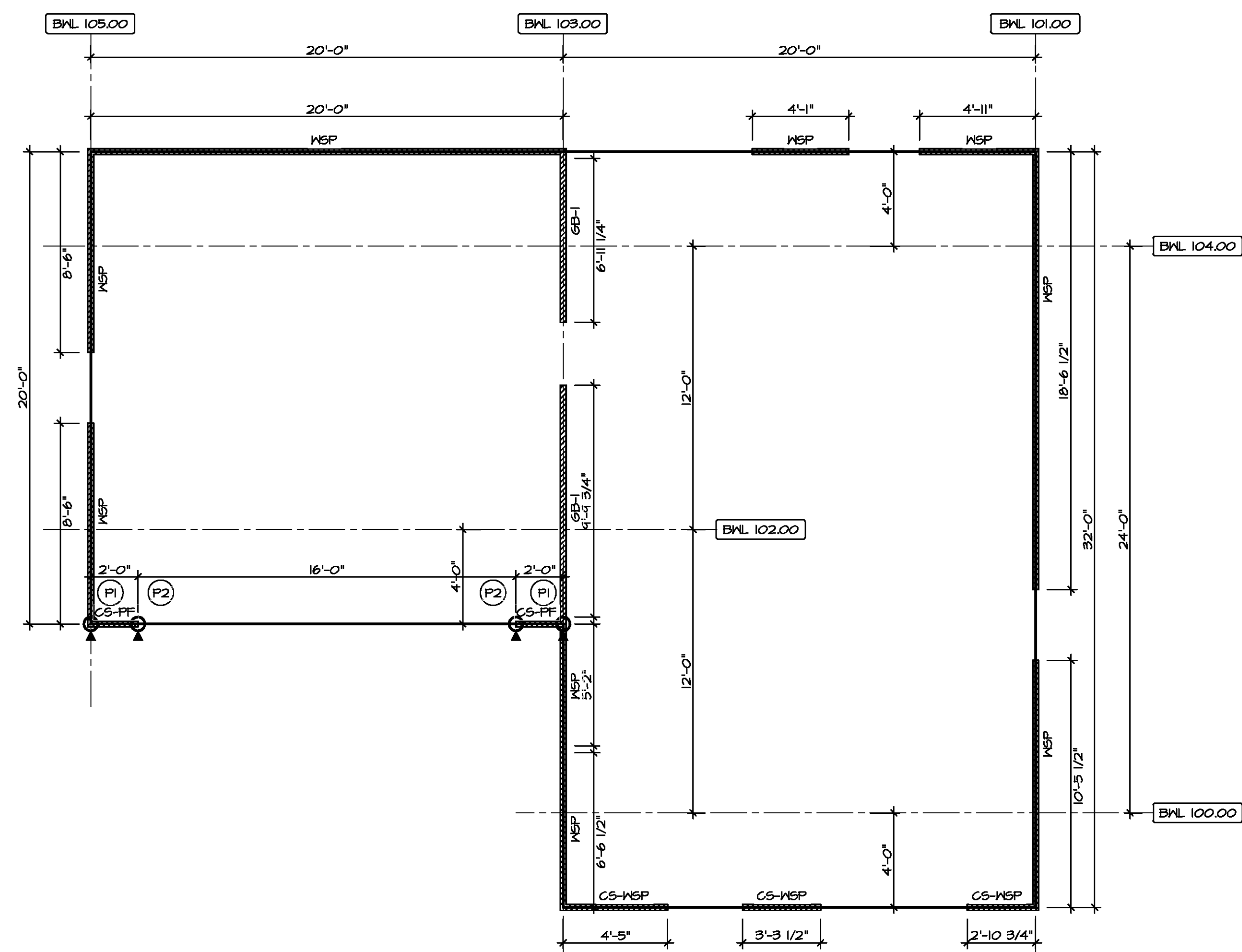
DIV-COMM-LOT-UNIT  
 COMM-LOT  
 STREET ADDRESS  
 CITY STATE ZIP  
 APT. NO.

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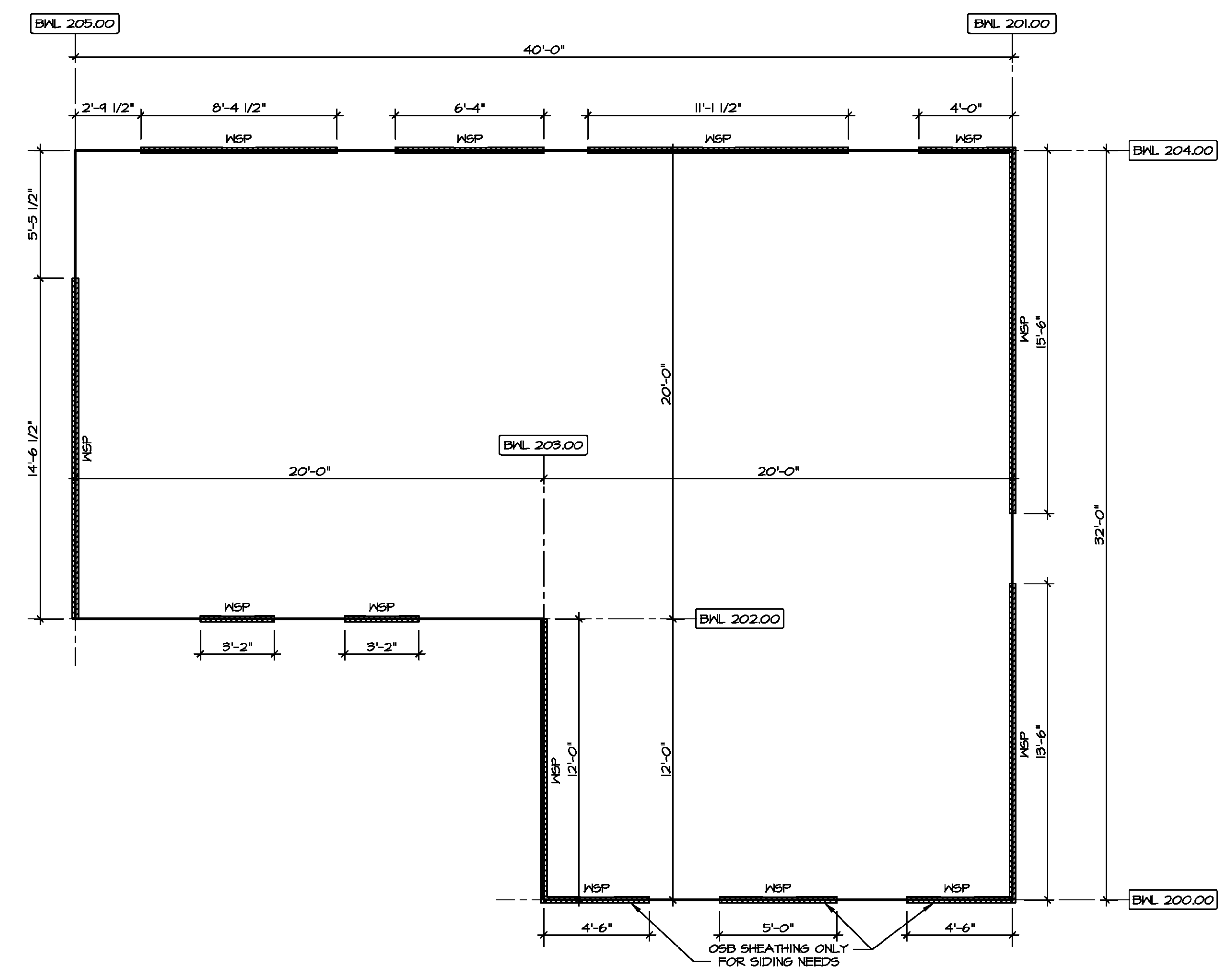


SHEET NO.	MODEL	SET NO.	BRANCH
S-4	BIRCH	01	BIRCH
32	DRAWING TITLE	DRAWN BY	DATE:
	TRUSS BRACING	OPTION	
	OPTION DESCRIPTION		





**1 FIRST FLOOR WALL BRACING DETAIL**  
SCALE: 1/4" = 1'-0"



**2 SECOND FLOOR WALL BRACING DETAIL**  
SCALE: 1/4" = 1'-0"

BRACED WALL LINE SCHEDULE				
WIND SPEED (ULT)	IDENTIFIER	ACTUAL (FT)	REQUIRED (FT)	METHOD
130 MPH	BWL 100.00	10.61'	8.27'	CONTINUOUS (2 SIDES)
130 MPH	BWL 101.00	24.00'	10.76'	WSP (2 SIDES)
130 MPH	BWL 102.00	6.00'	5.84'	CONTINUOUS (2 SIDES)
130 MPH	BWL 103.00	20.04'	18.13'	GB
130 MPH	BWL 104.00	24.00'	9.74'	WSP (2 SIDES)
130 MPH	BWL 105.00	17.00'	10.76'	WSP (2 SIDES)
130 MPH	BWL 200.00	14.00'	5.84'	WSP (2 SIDES)
130 MPH	BWL 201.00	24.00'	7.63'	WSP (2 SIDES)
130 MPH	BWL 202.00	6.88'	4.72'	WSP (2 SIDES)
130 MPH	BWL 203.00	12.00'	5.45'	CONTINUOUS (2 SIDES)
130 MPH	BWL 204.00	24.84'	6.76'	WSP (2 SIDES)
130 MPH	BWL 205.00	14.54'	7.63'	WSP (2 SIDES)

FASTENING SCHEDULE			
SHEATHING	FASTENER	SPACING	
		EDGES	FIELD
7/16" WOOD STRUCTURAL PANELS OR EQUIVALENT (W METHOD WSP, CS-WSP, CS-G)	8d COMMON NAILS  ALTERNATIVE FASTENER 1-3/4" 16-GAUGE CORROSION RESISTANT STAPLES	6' O.C.	12' O.C.
1/2" GYPSUM WALLBOARD (W METHOD GB-1, GB-2)	1-1/4" LONG, 1/4" HEAD, 208d DIA. ANNULAR-RINGED NAILS CORROSION RESISTANT TYPE W 1-1/4" DRYWALL SCREWS	7' O.C.	7' O.C.
LAMINATED FIBROUS STRUCTURAL SHEATHING	10d X 1 1/4" GALVANIZED ROOFING NAILS 1-1/4" 16-GAUGE CORROSION RESISTANT STAPLES	3' O.C.	3' O.C.
1/2" GYPSUM WALLBOARD BLOCKED AT THE EDGES (W METHOD GB-BW-1, GB-BW-2)	BLOCKING REQUIRED AT ALL GYPSUM EDGES. USED CORROSION RESISTANT TYPE W 1-1/4" DRYWALL SCREWS	4' O.C.	12' O.C.

**NOTES:**  
1. MINIMUM 7/16" CROWN WIDTH FOR STAPLES IN WOOD STRUCTURAL PANEL.  
2. SPECIFIED GYPSUM FASTENING REQUIRED ONLY WHERE METHOD GB IS IDENTIFIED. SEE PHASE SPECS FOR TYPICAL GYPSUM FASTENER SPACING.  
3. USE OF STAPLES IN WOOD STRUCTURAL PANEL AS FASTENING METHOD ON WALLS PER ENGINEERED ALTERNATIVE.

LEGEND	
BWL XXXXX	BRACED WALL LINE I.D.
—	BRACED WALL LINE
—	HOUSE WALL
	BRACED WALL PANEL
WSP	WOOD STRUCTURAL PANEL
GB	GYPSUM BOARD (1) SIDED OR (2) SIDED
GB-BW	GYPSUM BOARD BLOCKED WALL CONSTRUCTION (1) SIDED OR (2) SIDED (SEE STANDARD DETAIL 6/MB-2)
LIB	LET-IN BRACING (SEE STANDARD DETAIL F / MB-2)
CS-WSP	CONTINUOUS SHEATHING - WOOD STRUCTURAL PANEL
CS-FF	CONTINUOUS SHEATHING - PORTAL FRAME. SEE FLOOR PLANS FOR PORTAL FRAME HEADER INFORMATION (SEE STANDARD DETAIL A, C / MB-2)
CS-G	CONTINUOUS SHEATHING - WOOD STRUCTURAL PANEL ADJACENT TO GARAGE OPENINGS
○	HOLD-DOWN
○	1. SEE SHEET MB-2 "P." INDICATOR SCHEDULE AND DETAILS
○	2. ARROW INDICATES LOCATION

**NOTES:**  
HOUSE HAS BEEN ANALYZED UTILIZING A PRESCRIPTIVE METHOD IN COMPLIANCE WITH INTERNATIONAL RESIDENTIAL CODES (IRC) UNLESS OTHERWISE NOTED.

DIV-COMM-LOT-UNIT  
COM-LOT  
STREET ADDRESS  
CITY  
STATE  
ZIP

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5285 Walkers Lane

SET NO. BRH00  
VERSION 01  
DRAWN BY SKB  
DATE:  
OPTION

MODEL  
**BIRCH**  
DRAWING TITLE  
**WALL BRACING DETAILS**

SHEET NO.  
**S-5**

OPTION DESCRIPTION  
**33**