

Carvajal Garage

2075NC-55W, Coats, NC 27521

| INDEX OF DRAWINGS | |
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| D1 | Details |

ALL WORK IS TO COMPLY WITH THE 2018 NORTH CAROLINA RESIDENTIAL CODE

DESIGN LOADS:

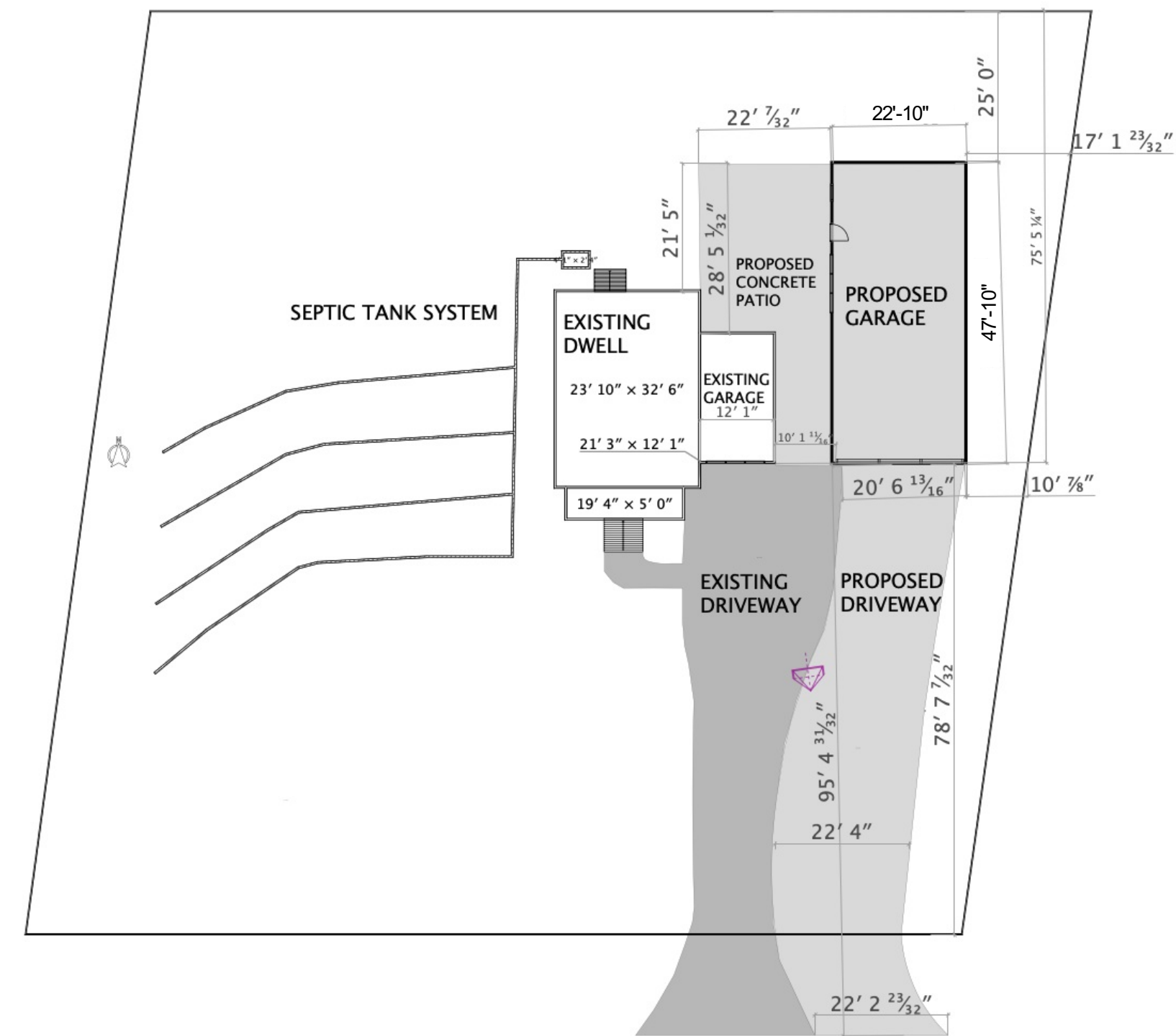
| STRUCTURAL: | |
|-------------------------------|---------|
| ATTICS WITHOUT STORAGE | 10psf |
| ATTICS WITH LIMITED STORAGE | 20psf |
| ASSUMED SOIL BEARING CAPACITY | 1500psf |

| CLIMATIC & GEOGRAPHIC DESIGN CRITERIA (TABLE R301.2(1))* | |
|--|----------|
| ROOF LIVE LOAD* | 20psf |
| ULTIMATE WIND SPEED (V-ult)* | 120mph |
| WIND EXPOSURE CATEGORY* | B |
| SEISMIC DESIGN CATEGORY* | A-B |
| WEATHERING* | MODERATE |
| FROST LINE DEPTH* | 12" |

*Verify all climatic and geographic design criteria with local building official.

ABBREVIATIONS

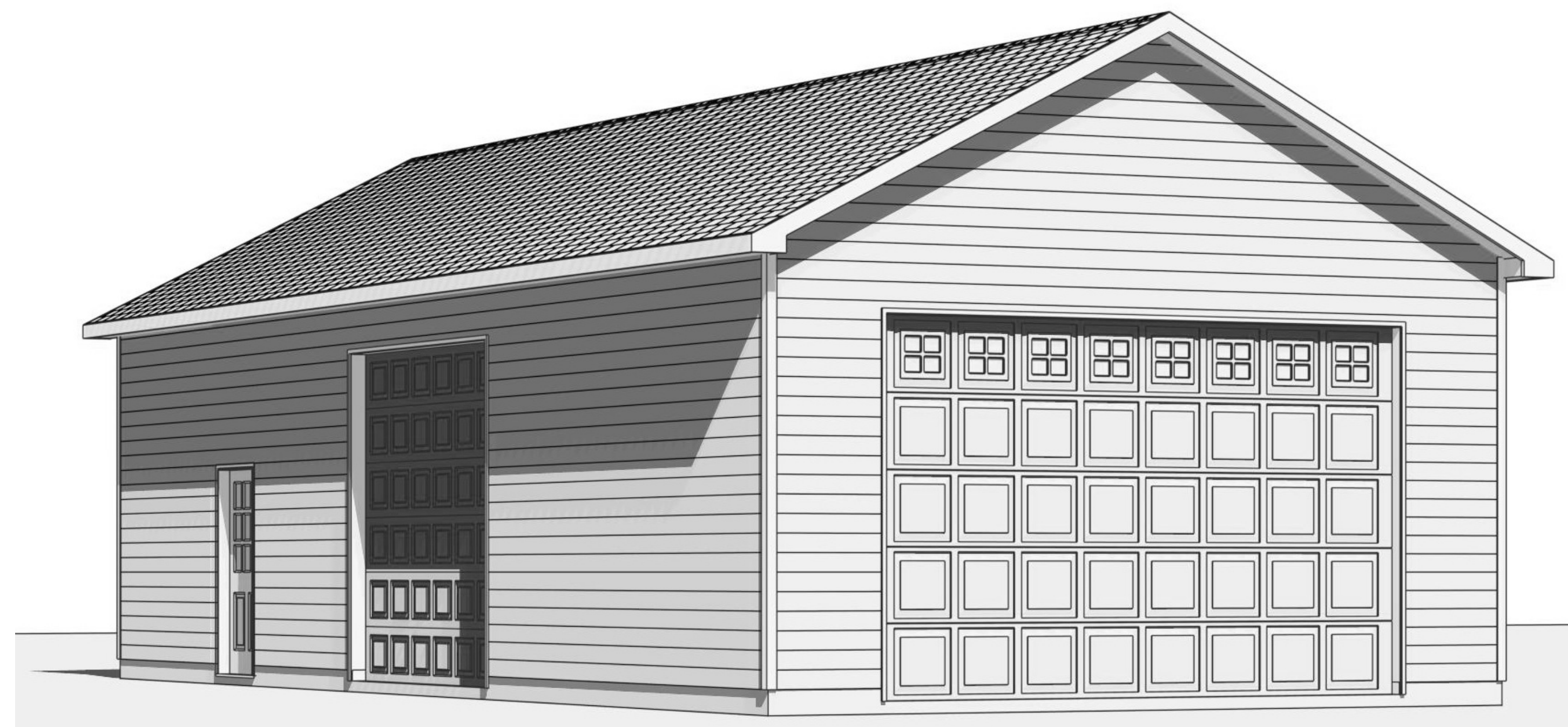
| | |
|-----------|--|
| A.F.F. | ABOVE FIRST FLOOR |
| AT | ARCH TOP WINDOW |
| AWN | AWNING WINDOW |
| BD | BOARD |
| CLG | CEILING |
| CM | CASEMENT WINDOW |
| COL | COLUMN |
| CT | CIRCLE TOP WINDOW |
| DBO | DETERMINED BY OWNER |
| DH | DOUBLE HUNG WINDOW |
| DR | DOOR |
| GL | GLIDING WINDOW |
| HDR | HEADER |
| HGT | HEIGHT |
| LVL | LAMINATED VENEER LUMBER |
| O.C. | ON CENTER |
| O.H. DR. | OVERHEAD DOOR |
| RCH | ROUGH CEILING HEIGHT |
| SL | SIDELIGHT |
| (T) | PRESSURE TREATED OR NATURALLY RESISTANT TO DECAY |
| T.O.W. | TOP OF WINDOW |
| TEMP. GL. | TEMPERED GLASS |
| TR | TRANSOM WINDOW |
| U.N.O. | UNLESS NOTED OTHERWISE |
| WDW | WINDOW |



PLOT PLAN
SCALE: N.T.S.

DRAWING KEY:

| | |
|---|-----------------|
| SECTION INDICATOR: | |
| | DRAWING NUMBER |
| | PAGE |
| DOOR & WINDOW SIZES (SINGLE): | |
| | WIDTH (FEET) |
| | HEIGHT (INCHES) |
| | HEIGHT (FEET) |
| | WIDTH (INCHES) |
| EXAMPLE 1: 6068 = 6'-0" WIDE X 6'-8" HIGH | |
| EXAMPLE 2: 3050 = 3'-0" WIDE X 5'-0" HIGH | |



Ryan Moe Home Design
www.RyanMoe.com

Carvajal Garage
2075NC-55W, Coats, NC 27521

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COVER PAGE

REVISIONS

DRAWN BY:
RM

PROJECT#:
44548

ISSUE DATE:
9/14/2023

PAGE
1 OF 4

SHEET NO.
A1

| FASTENER SCHEDULE FOR STRUCTURAL MEMBERS | |
|--|--|
| DESCRIPTION OF BUILDING ELEMENTS | NUMBER, TYPE & SPACING |
| TOP OR SOLE PLATE TO STUD, END NAIL | 2-16d |
| STUD TO SOLE PLATE, TOENAIL | (3-8d), OR (2-16d) |
| DOUBLE STUDS, FACE NAIL | 10d AT 24" O.C. |
| DOUBLE TOP PLATES, TYP. FACE NAIL | 10d AT 24" O.C. |
| DOUBLE TOP PLATES, LAP SPlice MIN 48" OFFSET OF END JOINTS | 8-16d |
| BLOCKING BETWEEN JOISTS OR RAFTERS TO TOP PLATE, TOENAIL | 3-8d |
| TOP PLATES, LAPS @ CORNERS AND INTERSECTION, FACE NAIL | 2-10d |
| BUILT-UP OR CONT. HEADER, (2) PIECE w/ 1/2" SPACER | 16d AT 16" O.C. ALONG EDGE |
| CEILING JOIST TO PLATE, TOE-NAIL | 3-8d |
| CONTINUOUS HEADER TO STUD, TOE-NAIL | 4-8d |
| CEILING JOISTS, LAPS OVER PARTITIONS, FACE NAIL | 3-10d |
| CEILING JOISTS TO PARALLEL RAFTERS, FACE NAIL | 3-10d |
| TRUSS OR RAFTER TO PLATE, TOE-NAIL | 3-16d |
| BUILT-UP GIRDER AND BEAMS, 2" LUMBER LAYERS | 10d AT 32" O.C. AT T & B AND STAGGERED, 2-10d AT EACH SPLICE & @ ENDS |
| ROOF RAFTERS TO RIDGE, VALLEY OR HIP RAFTERS | 2-16d AT EACH BEARING |
| RAFTER TIES TO RAFTERS, FACE | 4-16d TOENAIL or 3-16d FACENAIL |
| WOOD STRUCTURAL PANELS AND PARTICLE BOARD: | |
| ROOF AND WALL SHEATHING (TO FRAMING) | |
| 5/16"- 1/2" (SUBFLOOR, WALL) | 6d COMMON, 6" O.C. EDGES(I), 12" O.C. INTERMEDIATE(a) |
| 19/32"- 1" | 8d COMMON, 6" O.C. EDGES(I), 12" O.C. INTERMEDIATE(a) |
| GYPSUM SHEATHING | |
| 1/2" (b) | 1 1/2" GA. ROOFING NAIL, 6d COMMON or STAPLE GA. 1 1/2"; 1 1/4 SCREWS, TYPE W OR S.(b,c,d,e) 4" O.C. EDGES(I), 8" O.C. INTERMEDIATE(c,e) |
| 5/8" (b) | 1 3/4" GA. ROOFING NAIL, 8d COMMON or STAPLE GA. 1 5/8"; 1 1/4 SCREWS, TYPE W OR S.(b,c,d,e) 4" O.C. EDGES(I), 8" O.C. INTERMEDIATE(c,e) |
| <p>a. For regions having basic wind speed of 100 mph or less, nails for attaching wood structural panel roof sheathing to gable end wall framing shall be spaced 6 inches on center. When basic wind speed is greater than 100 mph, nails for attaching panel roof sheathing to intermediate supports shall be spaced 6 inches on center for minimum 48-inch distance from ridges, eaves and gable end walls; and 4 inches on center to gable end wall framing.</p> <p>b. Gypsum sheathing shall conform to ASTM C 1396 and shall be installed in accordance with GA 253. Fiberglass sheathing shall conform to ASTM C 208.</p> <p>General Notes:</p> <p>All nails are smooth-common, box or deformed shanks except where otherwise stated. Nails used for framing and sheathing connections shall have minimum average bending yield strengths as shown: 80 ksi for shank diameter of 0.192 inch (20d common nail), 90 ksi for shank diameters larger than 0.142 inch but not larger than 0.177 inch, and 100 ksi for shank diameters of 0.142 inch or less.</p> <p>Staples are 16 gage wire and have a minimum 7/16-inch on diameter crown width.</p> <p>Nails shall be spaced at not more than 6 inches on center at all supports where spans are 48 inches or greater.</p> <p>Four-foot-by-8-foot or 4-foot-by-9-foot panels shall be applied vertically.</p> <p>Spacing of fasteners not included in this table shall be based on Table R602.3(2).</p> <p>THIS TABLE PROVIDES THE MINIMUM NAILING REQUIREMENTS FOR MOST APPLICATIONS. IF THERE ARE ANY DISCREPANCIES BETWEEN THIS TABLE AND WHAT IS SHOWN ELSEWHERE ON THESE PLANS, THE MORE STRINGENT REQUIREMENT SHALL APPLY UNLESS OTHERWISE APPROVED.</p> | |

GENERAL NOTES

GENERAL
Work performed shall comply with these general notes unless otherwise noted on plans. The work shall comply with all applicable local and state codes, ordinances, regulations and amendments and all other authorities having jurisdiction.

All conditions and dimensions shown on the plans shall be verified by the contractor, any discrepancies that require clarification or revisions shall be brought to the attention of the designer before commencing with the work. Ryan Moe Home Design (RMHD), it's owners and affiliates are not responsible for any loss resulting from an error or omission on these plans.

Contractor shall provide the requirements of all detail callouts denoted as "TYPICAL" or "TYP." at specifically noted conditions and at all like conditions throughout the project, unless otherwise noted. All details on detail sheets titled as "TYPICAL", and not directly referenced on plans, shall be incorporated at occurring locations throughout the project. Requirements of details not denoted or titled as "TYPICAL" or "TYP." shall be provided at the specific location shown on the plan and adjacent areas as applicable. Requirements of details denoted as "SIMILAR" or "SIM" shall be provided with differences as indicated or implied on referenced details and plans.

Details may be depicted diagrammatically. For example, roof pitches, floor/roof wall thickness, framing members, etc., may differ in scale from actual proposed conditions. Details shall be understood in context with other drawings conveying structural and architectural design intent. Dimensions and notes shall take preference over the scaling of the drawing. It is recommended that contractors/sub-contractors do not scale dimensions from the drawings but use the written dimensions instead.

Where conflicting information exists between these plans and other referenced requirements, the more stringent requirement shall apply unless otherwise approved.

Contractor shall be responsible for providing adequate structural support of construction loads during all phases of construction including, but not limited to, foundation backfill, bracing of wall framing to resist construction floor loads and lateral building loading, bracing of trusses during installation and subsequent construction loading, and other conditions as dictated by the contractor's construction practice.

On-site verification of all dimensions and conditions shall be the responsibility of the contractor and subcontractors. The contractor shall compare and coordinate all drawings prior to construction and when in the opinion of the contractor a discrepancy or error exists, he shall promptly report it to the designer for proper adjustment before proceeding with the work.

All work shall comply with the manufacturer's or fabricator's instructions or recommendations for the preparation of substrates and installation and use of material. Manufacturer's installation instructions/specifications shall be available on the job site at the time of inspection.

SITE WORK
These drawings do not cover site work, excavation, grading and landscaping.

VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION

EXCAVATION
Shall be sufficient to provide full design dimensions or to allow for forming as required.

BACKFILL AND COMPACTION
Use clean material containing no organic material, trash, muck, roots, logs, stumps, concrete, asphalt or other deleterious substances. Do not backfill against masonry walls until super structure is in place, or adequate bracing is provided. Prior to placing fill, the existing surface shall be cleared of all refuse or organic materials. Equivalent fluid pressure of soil backfill not to exceed 30 P.C.F. uniform class SM or better.

FOUNDATIONS
Soil bearing value assumed to be 1,500 PSF minimum unless otherwise noted on drawings. Builder to be notified immediately should bearing capacity of less than 1,500 psf or high water table be encountered. Foundation walls of masonry and concrete are to be constructed as per plan and in accordance with the applicable building codes.

CONCRETE
CONCRETE SHALL REACH THE FOLLOWING MINIMUM COMPRESSIVE STRENGTH OF (28 days psi) UNLESS NOTED OTHERWISE:

Basement walls, foundations and other concrete not exposed to the weather 2500psi

Basement slabs and interior slabs on grade, except garage floor slabs: 2500psi

Basement walls, foundation walls, exterior walls and other vertical concrete work exposed to the weather: 3000psi and air-entrained.

Porches, carport slabs and steps exposed to the weather, and garage floor slabs: 3000psi and air-entrained.

All concrete to be poured in accordance with ACI 318 specification.

REINFORCING RODS
Shall conform to ASTM A-615 grade 60. WWF shall conform to ASTM A-185

STEEL
All metal anchors, fasteners, joist hangers, etc. to be galvanized. All structural steel to conform to ASTM-36. Pipe to be A53. Tube to be A500 of A501. Detailing to be in accordance with AISC structural steel detailing manual. Connections shall be capable of supporting an allowable uniform load stress of 24 ksi. Steel columns and bases to be given a shop coat of rust inhibitive paint or equivalent. Bottom of steel columns shall be anchored in concrete.

LUMBER EXPOSED TO WEATHER
All exposed exterior lumber or lumber in contact with masonry or concrete shall be pressure preservative treated in and bear quality mark of approved inspection agency. And complies w/ the requirements of the American Lumber Standard Committee Treated Wood Program. Provide fire retardant sheathing and lumber where indicated on drawings. All wood shall be a minimum of 8" above finish grade or pressure preservative treated less than 8" above finish grade.

MAXIMUM MOISTURE CONTENT
Lumber shall be 19%, kiln dried in accordance with AWPA standards.

PLYWOOD & O.S.B.
Plywood & O.S.B. used structurally shall meet the performance standards and all other requirements of applicable commercial standards for the type, grade and species of plywood and shall be so identified by an approved testing agency.

FLASHING
Flash and counter flash at roof and wall intersections, valleys, crickets and saddles, and sidewalls per code. Flashing at vent pipes, soil stacks, vertical front walls to be applied in accordance with manufacturer's printed instructions. Flashing material to be min. .019 corrosion resistant metal, mineral surfaced roll roofing, or approved equal.

Flash all exterior openings and all building corners as required. Flash and caulk wood beams and other projections through exterior walls and roof surfaces.

CAULKING
Fill all joints of different materials and all penetrations as required.

ALL OPERABLE WINDOWS
All operable windows shall have noncorrosive screens and sash locks. Screens are provided to prevent the entry of insects and are not intended to prevent children from falling out of open windows. Windows having the lowest part of their clear opening less than 24" above finished floor and more than 72" above finished grade shall: (1) be allowed to open to such a distance such that a sphere of 4" cannot pass through, or, (2) shall be provided with guards complying with ASTM F 2090, or (3) provided with window opening control devices that comply with ASTM F 2090

WEATHER-PROOFING
All sliding, swinging doors, and window openings to the exterior shall be fully weatherstripped, caulked, gasketed or otherwise treated to limit air infiltration. Doors and windows shall meet air infiltration and other performance factors as required by code.

HEADERS
All headers over 48" in length to have a minimum (2) jack studs at each end.

STRENGTH OF FRAMING MATERIALS
All framing lumber shall be AF&PA/NDS (or other approved agency) rated lumber of the following (or as noted on plans): Joists and rafters shall be southern pine, grade 2 or better.

Wood studs and posts shall be SPF stud grade or better

Headers shall be #2 Douglas fir or #1 Southern Pine, #1 Hem fir or #1 SPF

LVL beams shall have the following minimum properties:
-Bending stress "Fb" = 2600 PSI
-Horizontal shear "Fv" = 285 PSI
-Compression perpendicular to grain "Fc" = 750 PSI
-Compression parallel to grain "Fcx" = 2510 PSI
-Modulus of elasticity "E" = 2,000,000 PSI

ENGINEERED TRUSSES
Trusses shown on this plan are for design and illustrative purposes. The truss manufacturer is to provide truss design drawings which may differ from what is shown on this plan. Notify RMHD if the truss design drawings affect any aspect of the design.

Truss design drawings shall be provided to the building official and approved prior to installation. Truss design drawings shall include, at a minimum, the information specified below. Truss design drawings shall be provided with the shipment of trusses delivered to the jobsite.

- Slope or depth, span and spacing.
- Location of all joints.
- Required bearing widths.
- Design loads as applicable.
- Top chord live load (as determined from Section R301.6).
- Top chord dead load.
- Bottom chord live load.
- Bottom chord dead load.
- Concentrated loads and their points of application.
- Controlling wind and earthquake loads.
- Adjustments to lumber and joint connector design values for conditions of use.
- Each reaction force and direction.
- Joint connector type and description (e.g., size, thickness or gage) and the dimensioned location of each joint connector except where symmetrically located relative to the joint interface.
- Lumber size, species and grade for each member.
- Connection requirements for:
- Truss to girder-truss.
- Truss ply to ply.
- Field splices.
- Calculated deflection ratio and/or maximum description for live and total load.
- Maximum axial compression forces in the truss members to enable the building designer to design the size, connections and anchorage of the permanent continuous lateral bracing. Forces shall be shown on the truss design drawing or on supplemental documents.
- Required permanent truss member bracing location.

Trusses shall be braced to prevent rotation and provide lateral stability in accordance with the requirements of the individual truss design drawings. In the absence of specific bracing requirements, trusses shall be braced in accordance with accepted industry practice such as the SBCA Building Component Safety Information (BCSI) Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses.

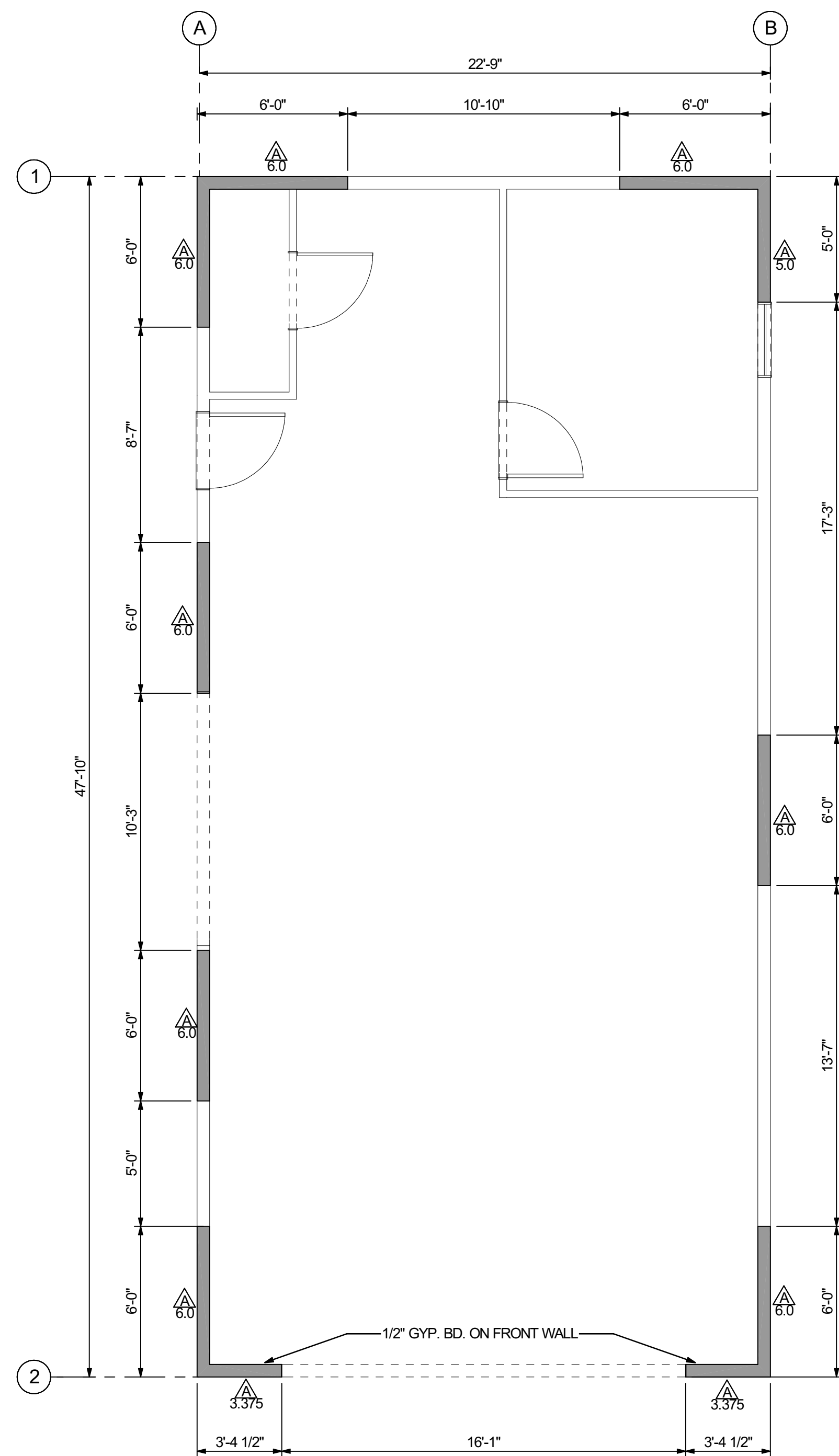
Truss Members shall not be cut, notched, drilled, spliced or otherwise altered in any way without the approval of a registered design professional. Alterations resulting in the addition of load (e.g., HVAC equipment, water heater) that exceeds the design load for the truss shall not be permitted without verification that the truss is capable of supporting such additional loading.

ROOF TRUSSES SHALL BE BRACED IN ACCORDANCE WITH THE BUILDING COMPONENT SAFETY INFORMATION GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES (BCSI-B3)

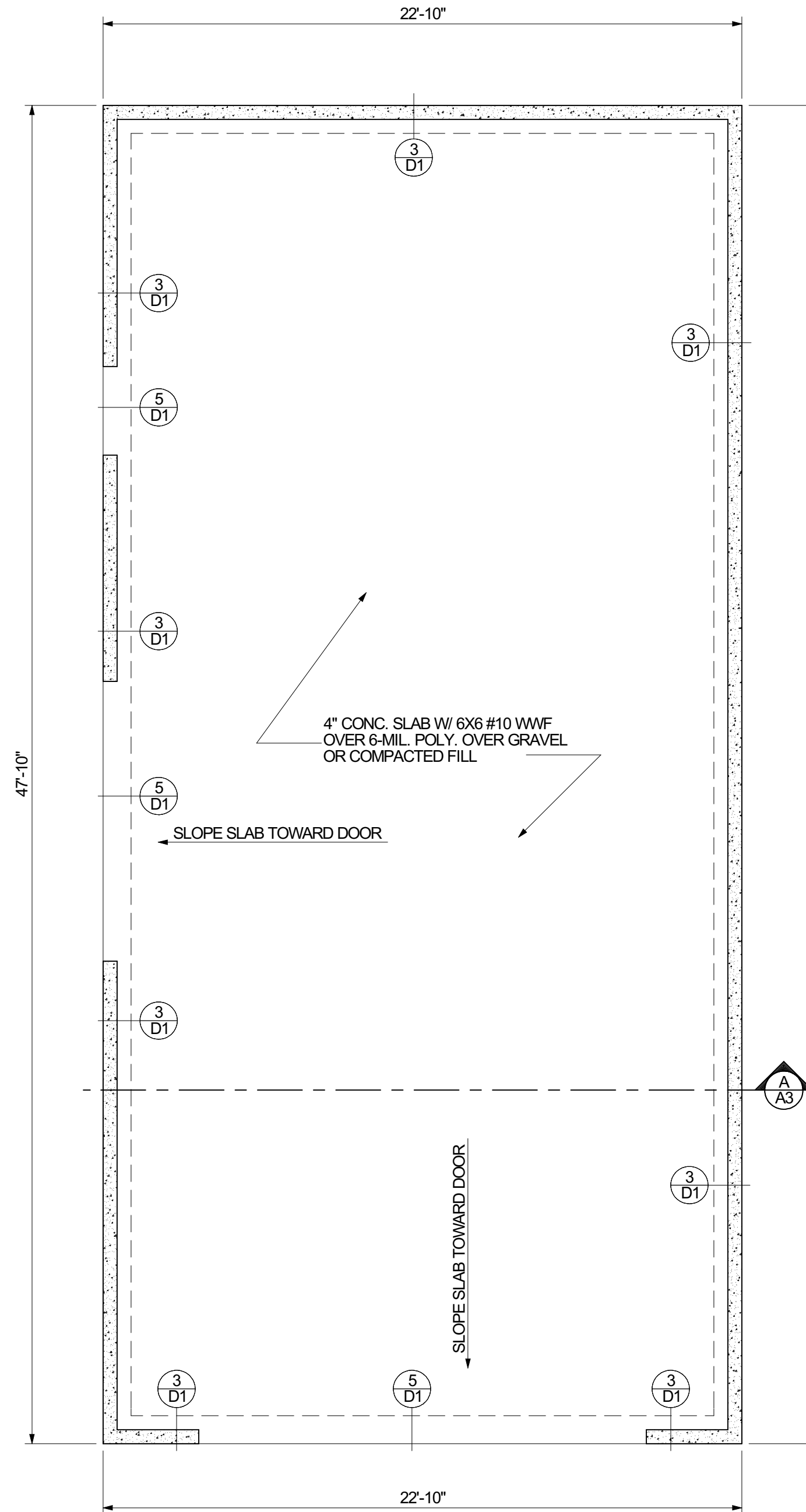
TO PRINT TO SCALE, DRAWING SHALL BE PRINTED ON ARCH D (24" x 36") SIZED PAPER

DRAWING IS PROPERLY PRINTED TO SCALE IF EACH BOX MEASURES ONE INCH BY ONE INCH

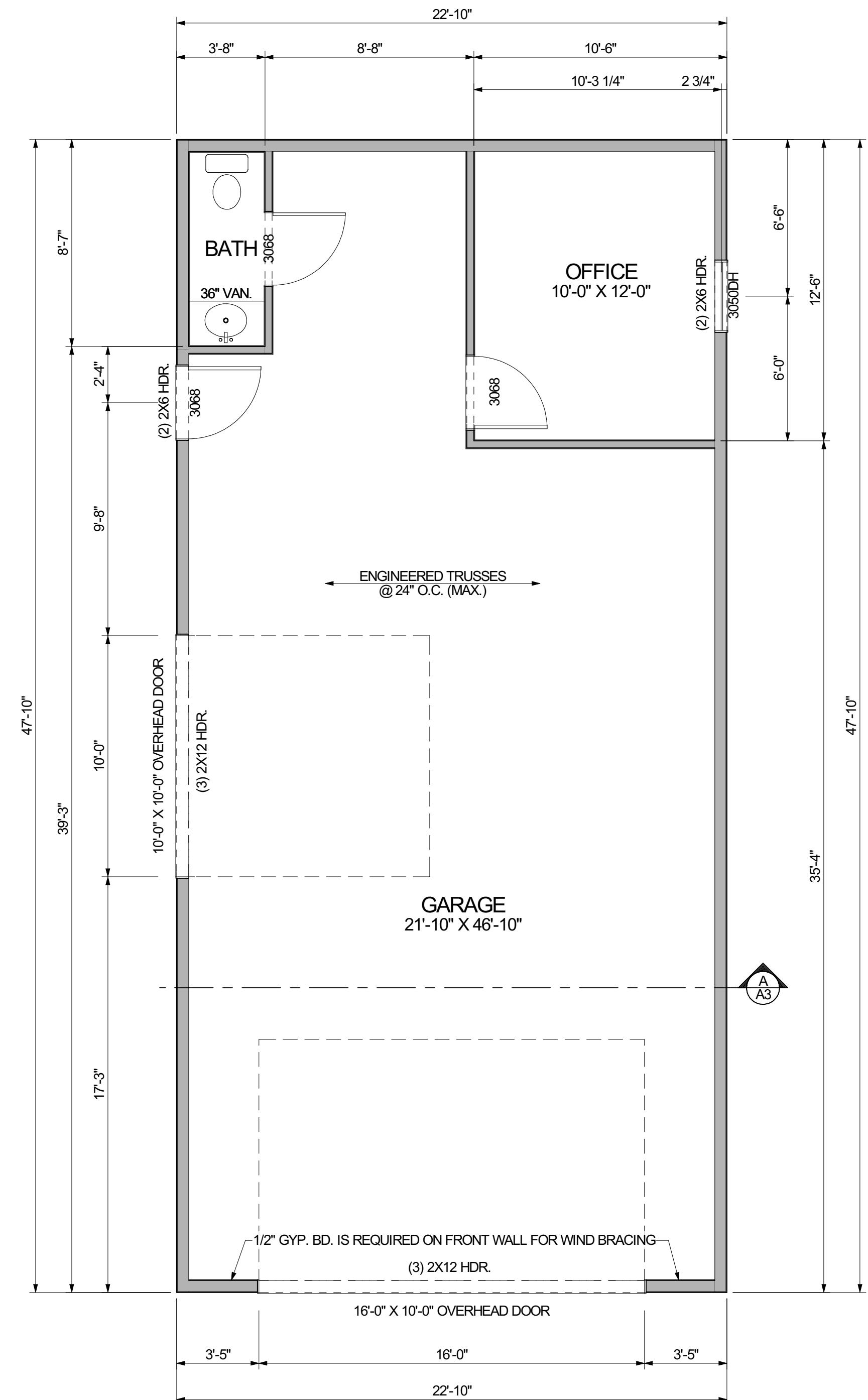
ALL OTHER PAGES WILL HAVE MARKS IN THIS CORNER SPACED ONE INCH APART.



WALL BRACING PLAN
SCALE: 1/4 in = 1 ft



FOUNDATION PLAN
SCALE: 1/4 in = 1 ft



FIRST FLOOR PLAN
SCALE: 1/4 in = 1 ft

| BRACED WALL LINE SCHEDULE | | | | |
|---------------------------------|----------------|----------------|----------------|----------------|
| | WALL LINE 1 | WALL LINE 2 | WALL LINE A | WALL LINE B |
| BRACED-WALL-LINE LOCATION | 1ST OF 1-STORY | 1ST OF 1-STORY | 1ST OF 1-STORY | 1ST OF 1-STORY |
| EAVE TO RIDGE HEIGHT | 6 FT | 6 FT | 6 FT | 6 FT |
| BRACED-WALL-LINE SPACING | 50.25 FT | 50.25 FT | 22.75 FT | 22.75 FT |
| WALL HEIGHT | 12 FT | 12 FT | 12 FT | 12 FT |
| BRACING METHOD | CS-WSP | CS-WSP | CS-WSP | CS-WSP |
| GB CONSTRUCTION TYPE | N/A | N/A | N/A | N/A |
| GYPSUM WALL BOARD ON INSIDE | NO | YES | NO | NO |
| HORIZONTAL JOINTS BLOCKED | YES | YES | YES | YES |
| HOLD-DOWN DEVICE USED | NO | NO | NO | NO |
| WIND | | | | |
| TABULATED WIND BRACING AMOUNT | 8.0375 FT | 8.0375 FT | 3.9125 FT | 3.9125 FT |
| EXPOSURE HEIGHT FACTOR | 1 | 1 | 1 | 1 |
| EAVE-TO-RIDGE HEIGHT FACTOR | 0.76 | 0.76 | 0.76 | 0.76 |
| WIND WALL HEIGHT FACTOR | 1.1 | 1.1 | 1.1 | 1.1 |
| NUMBER OF BWL FACTOR | 1 | 1 | 1 | 1 |
| HOLD-DOWN FACTOR | 1 | 1 | 1 | 1 |
| BLOCKED JOINT FACTOR | 1 | 1 | 1 | 1 |
| GYPSUM ON INSIDE FACTOR | 1.4 | 1 | 1.4 | 1.4 |
| WIND GB CONSTRUCTION FACTOR | 1 | 1 | 1 | 1 |
| REQUIRED WIND BRACING AMOUNT | 9.41 FT | 6.72 FT | 4.58 FT | 4.58 FT |
| RESULTS | | | | |
| LENGTH OF WALL BRACING REQUIRED | 9.41 FT | 6.72 FT | 4.58 FT | 4.58 FT |
| LENGTH OF WALL BRACING PROVIDED | 12.0 FT | 6.75 FT | 24.0 FT | 17.0 FT |

| KEY | |
|-----|-----------------------------|
| | BRACING METHOD (SEE 6.0) |
| | LENGTH OF QUALIFIED BRACING |

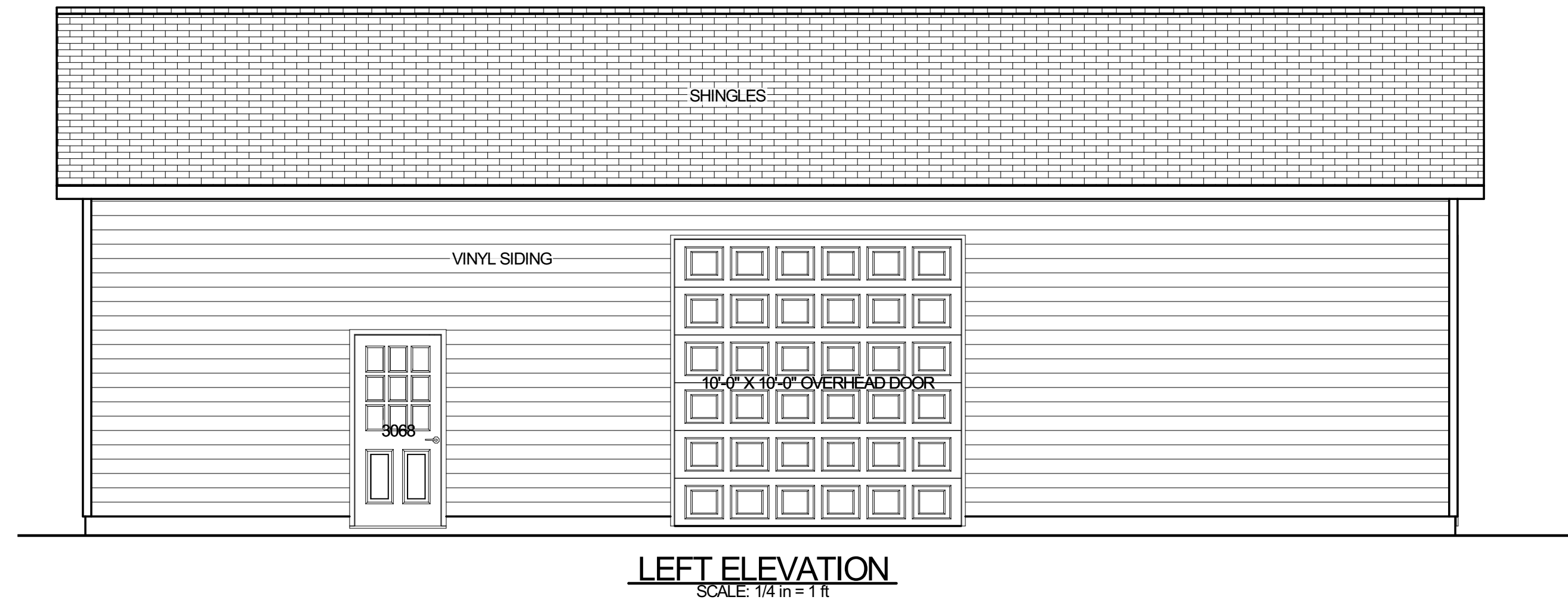
WALL BRACING NOTES

THIS PLAN IS INTENDED TO SHOW THE MINIMUM LOCATION OF BRACED WALL PANELS (CS-WSP) PER R602.10 OF THE 2015 IRC AS ALLOWED UNDER R602.10(4) OF THE NCRC. ALL SURFACES OF EXTERIOR WALLS ARE TO BE COMPLETELY SHEATHED INCLUDING INFILL AREAS ABOVE AND BELOW WINDOWS AND DOORS.

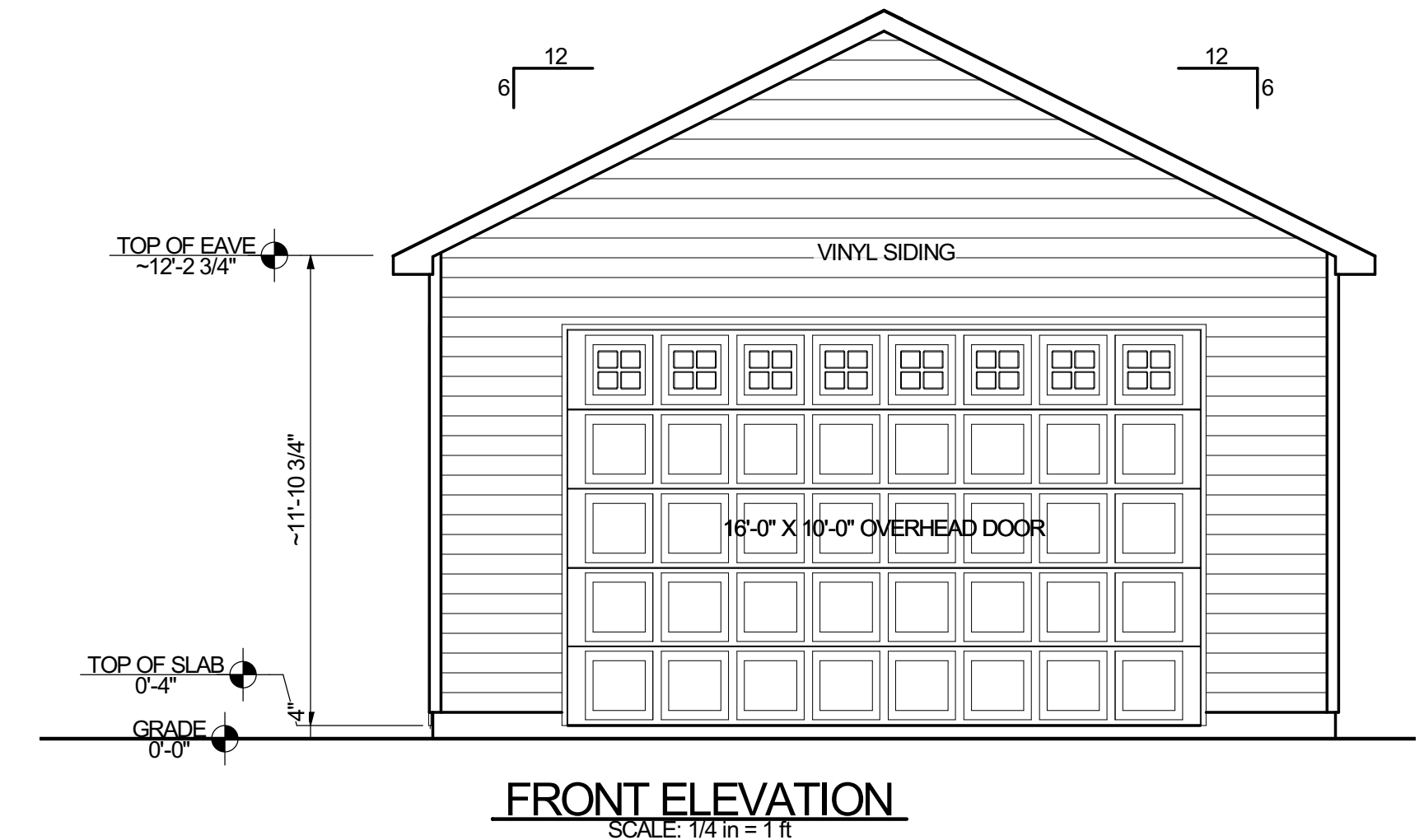
WALL BRACING SHALL BE PROVIDED BY CONTINUOUSLY SHEATHED BRACED WALL PANELS (CS-WSP) PER R602.10 OF THE 2015 IRC AS ALLOWED UNDER R602.10(4) OF THE NCRC. ALL SURFACES OF EXTERIOR WALLS ARE TO BE COMPLETELY SHEATHED INCLUDING INFILL AREAS ABOVE AND BELOW WINDOWS AND DOORS.

FOR CONTINUOUSLY SHEATHED WALLS, THE PANELS SHOWN ON THIS PLAN ARE ONLY INTENDED TO SHOW THAT THE PLAN MEETS THE MINIMUM PANEL REQUIREMENTS. ALL SURFACES OF CONTINUOUSLY SHEATHED WALL LINES ARE TO BE COMPLETELY SHEATHED INCLUDING INFILL AREAS ABOVE AND BELOW WINDOWS AND DOORS.

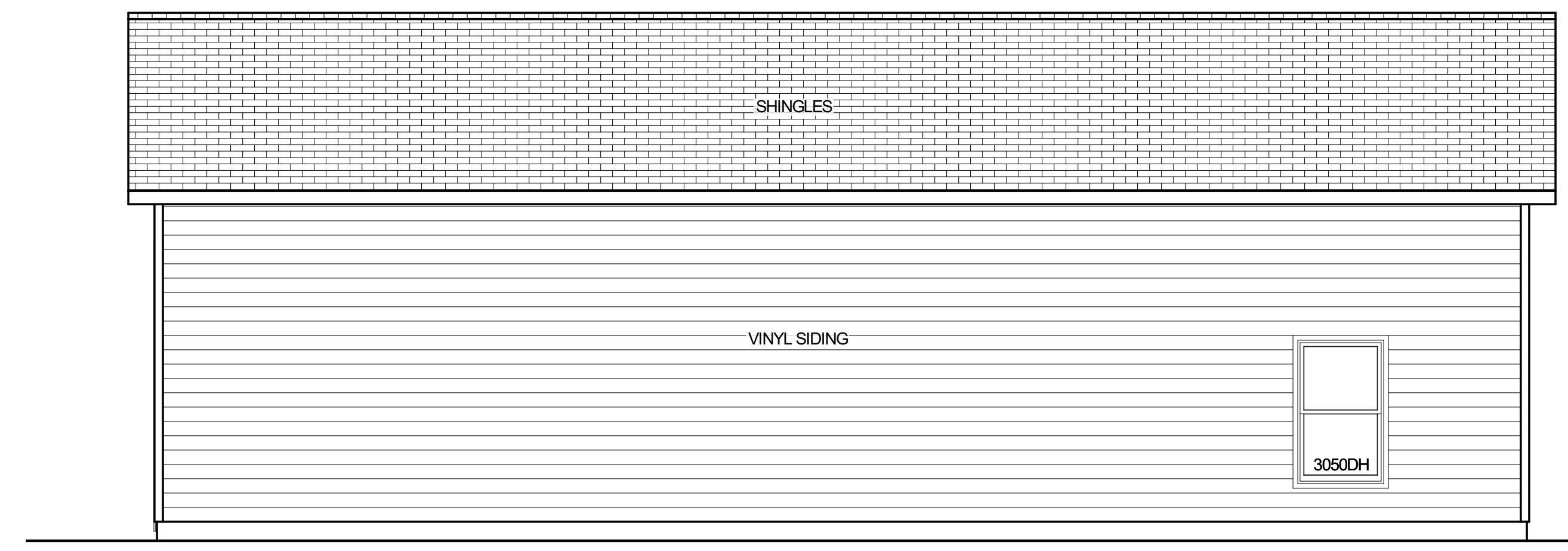
THE REQUIRED LENGTH OF BRACING IN TABLES R602.10.3(1) AND R602.10.3(3) HAS BEEN MULTIPLIED BY THE APPROPRIATE ADJUSTMENT FACTOR IN TABLES R602.10.3(2) AND R602.10.3(4), RESPECTIVELY FOR WALLS WHERE A REQUIRED INTERIOR FINISH HAS BEEN OMITTED.



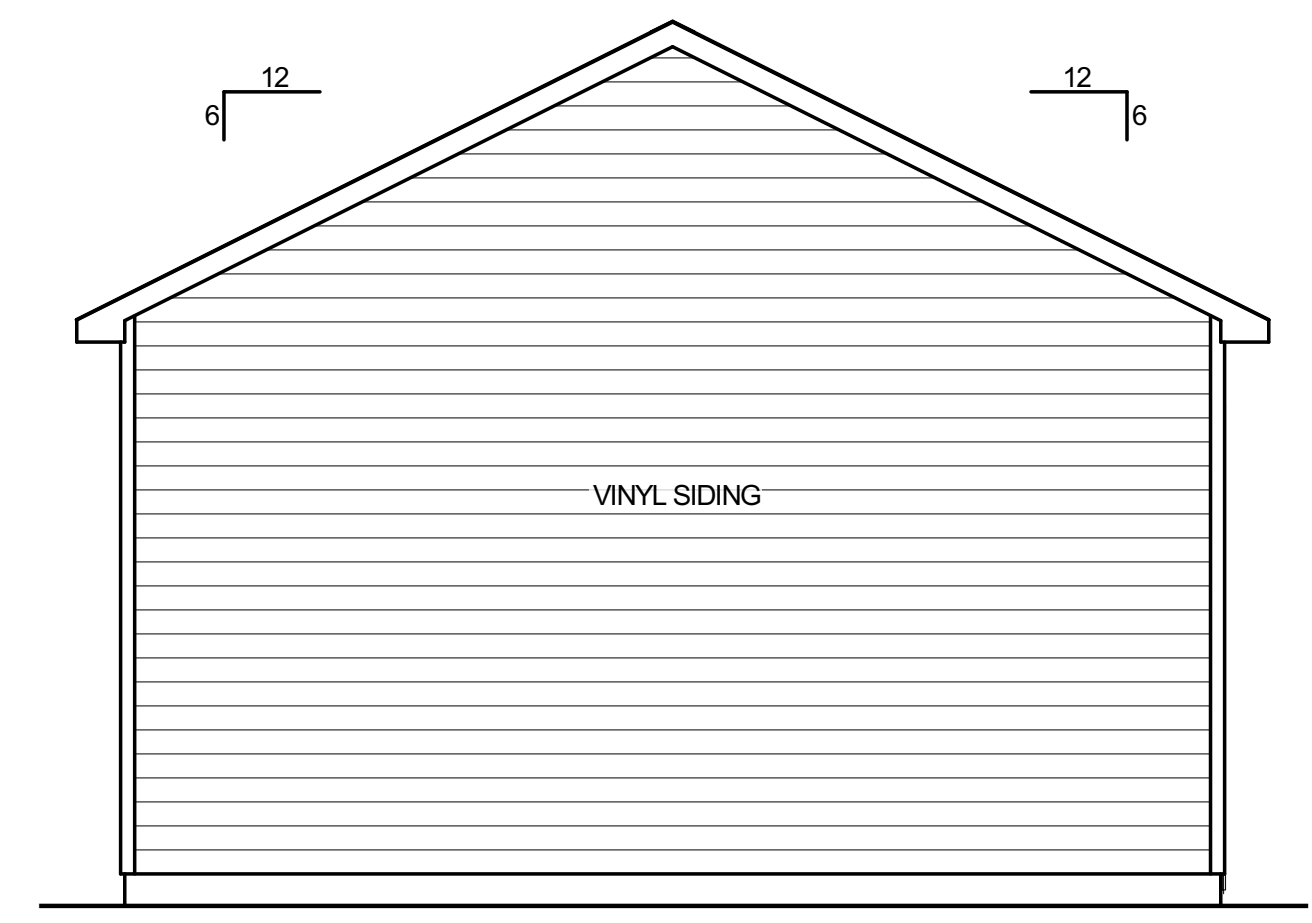
LEFT ELEVATION
SCALE: 1/4 in = 1 ft



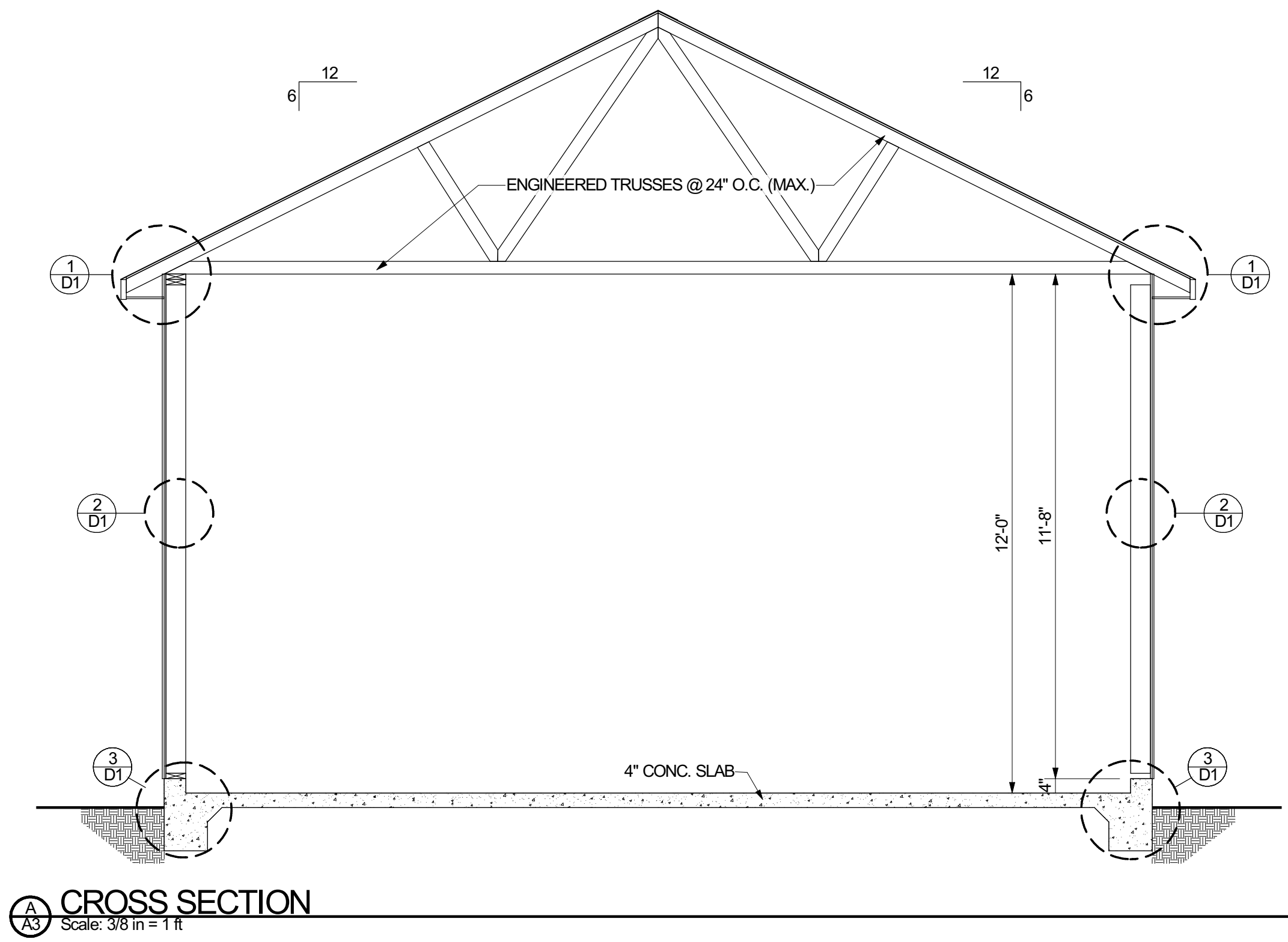
FRONT ELEVATION
SCALE: 1/4 in = 1 ft



RIGHT ELEVATION
SCALE: 1/4 in = 1 ft



REAR ELEVATION
SCALE: 1/4 in = 1 ft



CROSS SECTION
Scale: 3/8 in = 1 ft

ELEVATIONS & CROSS SECTIONS ARE DERIVED FROM A 3D MODEL OF THE PLAN WHICH MAY INCLUDE UNNECESSARY LINES AND MINOR DISCREPANCIES. PLEASE DEFER TO FLOOR PLANS AND INDICATED DETAILS

