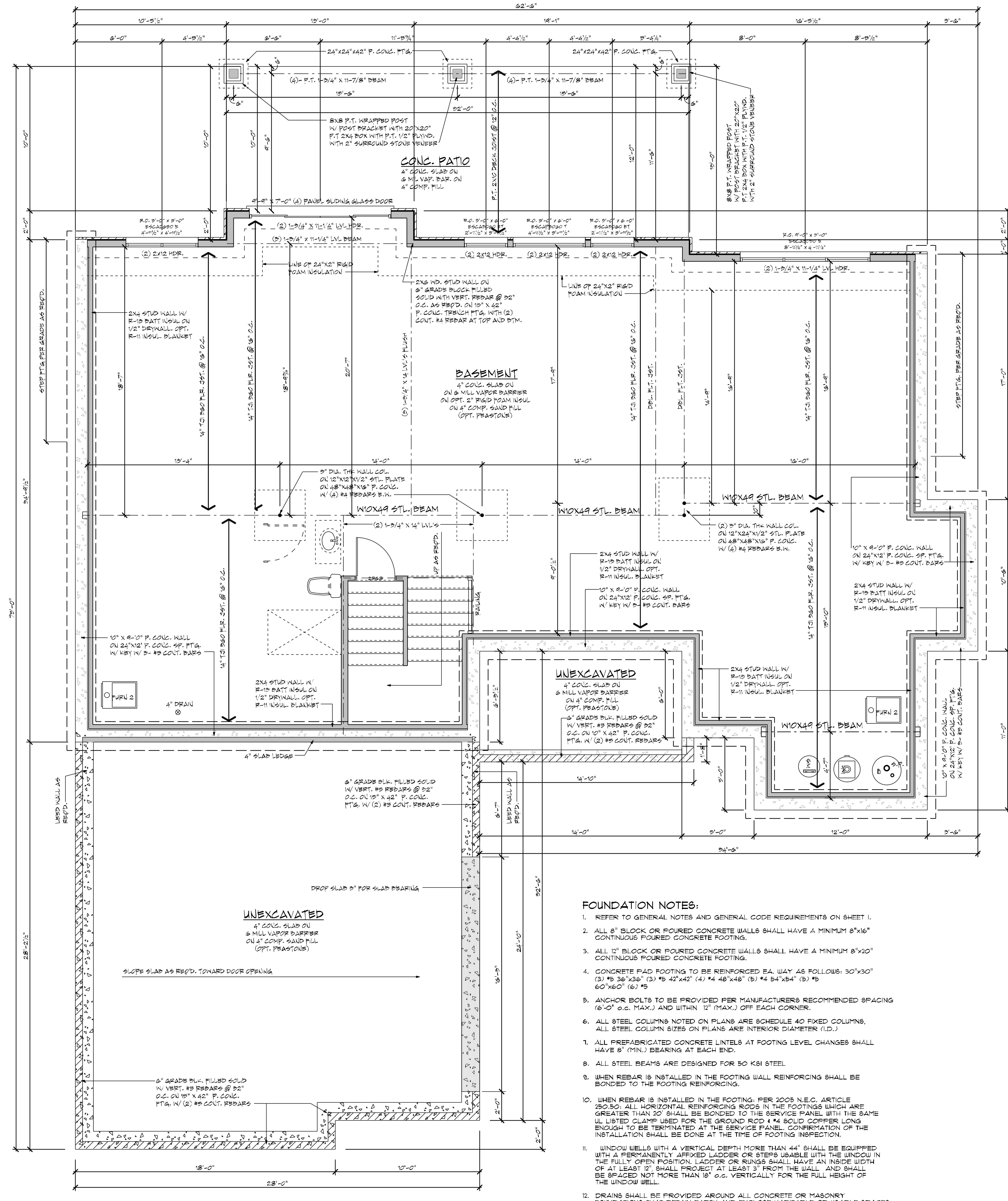

FOUNDATION PLAN

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

FOUNDATION NOTES:

1. REFER TO GENERAL NOTES AND GENERAL CODE REQUIREMENTS ON SHEET 1.
2. ALL 8" BLOCK OR POURED CONCRETE WALLS SHALL HAVE A MINIMUM 8"x16" CONTINUOUS POURED CONCRETE FOOTING.
3. ALL 12" BLOCK OR POURED CONCRETE WALLS SHALL HAVE A MINIMUM 8"x20" CONTINUOUS POURED CONCRETE FOOTING.
4. CONCRETE PAD FOOTING TO BE REINFORCED EA. WAY AS FOLLOWS: 30"x30" (3) #5 36"x36" (3) #5 42"x42" (4) #4 48"x48" (5) #4 54"x54" (5) #5 60"x60" (6) #5
5. ANCHOR BOLTS TO BE PROVIDED PER MANUFACTURERS RECOMMENDED SPACING (6'-0" o.c. MAX.) AND WITHIN 12" (MAX.) OFF EACH CORNER.
6. ALL STEEL COLUMNS NOTED ON PLANS ARE SCHEDULE 40 FIXED COLUMNS, ALL STEEL COLUMN SIZES ON PLANS ARE INTERIOR DIAMETER (I.D.)
7. ALL PREFABRICATED CONCRETE LINTELS AT FOOTING LEVEL CHANGES SHALL HAVE 8" (MIN.) BEARING AT EACH END.
8. ALL STEEL BEAMS ARE DESIGNED FOR 50 KSI STEEL
9. WHEN REBAR IS INSTALLED IN THE FOOTING WALL REINFORCING SHALL BE BONDED TO THE FOOTING REINFORCING.
10. WHEN REBAR IS INSTALLED IN THE FOOTING: PER 2005 N.E.C. ARTICLE 250.50: ALL HORIZONTAL REINFORCING RODS IN THE FOOTINGS WHICH ARE GREATER THAN 20' SHALL BE BONDED TO THE SERVICE PANEL WITH THE SAME UL LISTED CLAMP USED FOR THE GROUND ROD & #4 SOLID COPPER LONG ENOUGH TO BE TERMINATED AT THE SERVICE PANEL. CONFIRMATION OF THE INSTALLATION SHALL BE DONE AT THE TIME OF FOOTING INSPECTION.
11. WINDOW WELLS WITH A VERTICAL DEPTH MORE THAN 44" SHALL BE EQUIPPED WITH A PERMANENTLY AFFIXED LADDER OR STEPS USABLE WITH THE WINDOW IN THE FULLY OPEN POSITION. LADDER OR RUNGS SHALL HAVE AN INSIDE WIDTH OF AT LEAST 12", SHALL PROJECT AT LEAST 3" FROM THE WALL AND SHALL BE SPACED NOT MORE THAN 18" o.c. VERTICALLY FOR THE FULL HEIGHT OF THE WINDOW WELL.
12. DRAINS SHALL BE PROVIDED AROUND ALL CONCRETE OR MASONRY FOUNDATIONS THAT RETAIN EARTH AND ENCLOSE HABITABLE OR USABLE SPACES BELOW GRADE. APPROVED DRAINAGE SYSTEMS OR MATERIALS SHALL BE INSTALLED AT OR BELOW THE AREA TO BE PROTECTED AND SHALL DISCHARGE BY GRAVITY OR MECHANICAL MEANS INTO AN APPROVED DRAINAGE SYSTEM. GRAVEL OR CRUSHED STONE DRAINS SHALL EXTEND AT LEAST 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, AND THE DRAINAGE TILES OR PERFORATED PIPE SHALL BE PLACED ON 2 INCHES (MIN.) OF WASHED GRAVEL OR CRUSHED ROCK AT LEAST ONE SIEVE SIZE LARGER THAN THE TILE JOINT OPENING OR PERFORATION AND COVERED WITH NOT LESS THAN 6 INCHES OF THE SAME MATERIAL.
13. FIELD VERIFY THE FINISHED FOUNDATION WALL HEIGHT AT ALL EXTERIOR PORCHES, TO PROVIDE A 1-1/2" (MIN.) TO 7-3/4" (MAX.) STEP-DOWN AT EXTERIOR DOORS. ADJUST THE FOUNDATION WALL HEIGHT AT PORCHES AS REQUIRED TO ALLOW FOR DESIRED FINISHES AND/OR DETAILS.

STRUCTURAL NOTES

1. SOILS, FOOTING and SLABS

The design soil bearing capacity is 2,500 PSF minimum for this structure. The footing sizes detailed herein were based on soils of this capacity or greater. If soils of lesser capacity are encountered at time of excavation, the general contractor/builder and Architect shall be promptly notified. The Architect shall re-design the footings based on the actual soil bearing capacity established by a soils test by a qualified professional. In the absence of a soils test, the soils bearing capacity and the footing design shall be established by Chapter 14 of the current Michigan Residential Code as noted in the Project Codes.

All footing shall bear on undisturbed soils or engineered fill free from frost and/or organic matter.

All concrete slabs shall be placed on compacted or self-compacting granular fill base.

All metal strap sill plate anchors shall be placed and embedded in the trench footings and basement walls and be continuous through any block course(s) as shown in the exterior wall section details shown herein.

2. CONCRETE

All concrete work and placement shall conform to the latest recommendations of A.C.I.
Minimum compressive strength (PSI) at 28 days shall be as follows:

A. Basement Walls, Footings, and Concrete not exposed to the weather = 3,000 PSI
B. Basement Slabs and other Interior Slabs on grade (except garage slabs) = 2,500 PSI
C. Basement Walls, Foundation Walls, and other vertical concrete work exposed to weather = 3,000 PSI
D. Porches, Carports, Garage Slabs, and Steps exposed to weather = 3,500 PSI

NOTE: All concrete exposed to weather (including basement walls without brick) shall be air entrained. Air content shall be between 5 and 7 percent.

All reinforcing bars, dowels, and ties shall conform to ASTM A615 Grade 60. Reinforcing steel shall be continuous and shall have a minimum 36 bar diameter overlap and be fabricated and placed in accordance with ACI recommendations. Reinforced concrete trench footings shall have corner bars at all intersections of the same size and spacing as the main horizontal reinforcing. Provide (2) #5 diagonal re-bars at corners of all wall openings.

All concrete reinforcing shown in the plans and details herein is recommended to minimize differential settlement of the structure. Plain Concrete (un-reinforced) footings and walls may be permitted if constructed in accordance with the prescriptive requirements of the Michigan Residential Code, Section R403, Footings and Table 404.1(1) Plain Concrete Foundation Walls.

3. MASONRY

All masonry work shall be done in accordance with the latest ACI and NCMA recommendations and specifications.

All block masonry shall conform to ASTM C90 or C145 Type-N-I, Mortar shall be Type-s.

Provide flashing at top of windows and doors, window and door sills, chimneys, roof intersections, and at the first course above grade. Unless otherwise noted, use L 5x3-1/2x5/16 L.L.V. Steel Lintel for 4" nominal brick veneer spanning openings up to 6'-0" with two stories above and up to 8'-0" with one story above or up to 10'-0" with no story above. Weep holes shall be placed 32" on center maximum, 3/16" minimum diameter, and be located in the first course above grade and at all through wall flashing. Anchor masonry veneer with metal corrugated ties, minimum 7/8" wide and 22-gauge spaced not more than 24" on center each way, and within 12" of all openings.

4. DESIGN CRITERIA
DESIGN LOADING

Floor Loading:
Live Load = 30 PSF (Second Floor Sleeping Rooms)
Live Load = 40 PSF (All other Floors)
Dead Load w/Carpet = 10 PSF (Second Floor)
Dead Load w/Carpet = 15 PSF (First Floor)
Dead Load Tile = 20 PSF
Balcony Loading:
Live Load = 60 PSF (Balconies are cantilevers and supported without posts)
Deck Loading:
Live Load = 40 PSF (Decks are supported by the building and posts on the opposite side)
Roof Loading:
Live Load = 30 PSF
Dead Load = 17 PSF
Deflection:
Floors and Ceilings = L/360
Other Structural Members = L/240

CLIMATIC and GEOGRAPHIC DESIGN CRITERIA
Seismic:
Seismic Design Criteria = B
Snow Ground Snow Load = 25 PSF
Wind:
Basic Wind Speed = 90 MPH
Wind Load Importance Factor I = 1
Wind Exposure Category = B
Climate:
Weathering = Severe
Frost Line Depth = 42 Inches
Termite = Slight to Moderate
Decay = None to Slight
Winter Design Temperature = 6-degrees Fahrenheit

5. WOOD FRAMING SYSTEM

Bearing wall studs shall be 2X6 engineered wd. studs @ 16" o.c.
All wall plate material shall provide a minimum of 425 PSI (Fc) perpendicular to the grain.
All wood in contact with concrete and/or within 8 inches of soils shall be preservative treated lumber and shall conform to AWPA standards and be labeled. Provide continuous solid wood blocking to steel beam(s) and concrete foundation bearing at all point loads and/or built-up columns, see architectural plans and floor joist framing plans with TJI joists.

6. ENGINEERED LUMBER

All laminated veneer lumber (LVL) shall be 1.9 E, 2600 Fb, 285 Fv or better. All Glue Lam Beams shall be 24F-V4 DF/DF or better. If a substitution is proposed that does not meet or exceed these specifications, it is the responsibility of the party proposing the substitution to provide documentation and engineering calculations showing sufficient structural capacity for the Architects review and approval prior to making the substitution.

7. WALL BRACING

Install metal strap bracing (Simpson Strong-Tie TWB wall brace or equal) on all exterior walls and interior load bearing walls. Install bracing a minimum of every 25 ft. of wall length in an "X" or "V" configuration at each end of the wall. Fasten metal strap per manufacturer's specifications. Knee walls and cripple walls shall be continuously braced with minimum 7/16" OSB sheathing with nailing per Project Codes.

8. ENGINEERED ROOF TRUSSES

All trusses including roof and floor trusses shall be prepared by a qualified truss manufacturer and bear the seal of a registered engineer. Truss manufacturer shall notify Architect of any additional bearing points and/or increased structural support that may be required for the truss system(s). All trusses shall be installed and braced in accordance with the manufacturers specifications as indicated in the truss specification package and diagrams to be provided by the manufacturer with delivery of the trusses to the site.

All trusses shall be attached to the top wall plates with metal strap anchors that resist a minimum of 175 pounds uplift. If any bearing point, structural member, or specification indicated on the Architects plans conflicts with the truss diagram package, the Architect shall be promptly notified to resolve the matter with the truss manufacturer.

All floor joists are to be hung off rim joist using simpson joist hangers as specified in hanger schedule on sheet S101 and fastened to rim joist per details shown on wall sections 2,3, & 4 on sheets A400 and 401.

SOIL BEARING REQUIREMENTS:

1. All top soil, organic and vegetative material should be removed prior to construction. Any required fill shall be clean, granular material compacted to at least 95% of maximum dry density as determined by ASTM D-1557.
2. Foundations bearing on existing soils are designed for a minimum allowable soil bearing capacity of 3000 psf, u.n.o. The allowable soil bearing capacity must be verified by a registered soils engineer prior to the start of construction and is the responsibility of the owner or contractor.
3. Notify the Engineer/Architect if the allowable soil bearing capacity is less than 3000 PSF so that the foundations can be redesigned for the new allowable bearing capacity.

STRUCTURAL STEEL SPECIFICATIONS:

1. Structural steel shapes, plates, bars, etc. are to be ASTM A-36 (unless noted otherwise) designed and constructed per the 1989 AISC "Specifications for the Design, Fabrication and Erection of Structural Steel for Buildings", and the latest edition of the AISC "Manual of Steel Construction".
2. Steel pipe columns shall be ASTm A-501, Fy=36 ksi. Structural tubing shall be ASTM A500, Grade B, Fy=46 ksi.
3. Welded connections shall conform with the latest AWS D1.1 "Specifications for Welding in Building Construction", and shall utilize E70XX electrodes unless noted otherwise.
4. Bolted connections shall utilize ASTM A-325 bolts tightened to a "snug tight" condition (unless noted otherwise.

REINFORCING STEEL SPECIFICATIONS:

1. Reinforcing bars, dowells, and ties shall conform with ASTM-615 GRADE 60 requirements and shall be free of rust, dirt, and mud.
2. Welded wire fabric shall conform with ASTM A-185 and be positioned at the mid height of slabs, u.n.o.
3. Reinforcing shall be placed and securely tied in place sufficiency ahead of placing of concrete to allow inspection and correction, if necessary, without delaying the concrete placement.
4. Extend reinforcing bars a minimum of 36" around corners and lap bars at splices a minimum of 24" u.n.o.
5. Welding of reinforcing steel is not allowed.

TEMPORARY CONSTRUCTION SHORING:

1. Habitat Engineering assumes no responsibility for design or proper installation of temporary building bracing and shoring or the means and methods required to complete this project. The contractor and his engineer are responsible for the design and proper installation of both temporary shoring and bracing required for a safe and structurally sound project. The structural members indicated on these drawings are not self-bracing and shall be considered unstable until attached to the completed structure as indicated by these drawings and specifications. The contractor is responsible for all damages incurred due to improper shoring and bracing during the construction project. Acceptance of the construction project by the contractor is proof of acceptance of the above mentioned items.

R403 Footings. R403.1 General. All exterior walls shall be supported on continuous solid or fully grouted masonry or concrete footings, wood foundation, or other approved structural systems which shall be of sufficient design to accommodate all loads according to Section R301 and to transmit the resulting loads to the soil. Footings shall be supported on undisturbed natural soils or engineered fill.

HOLLOW AND SOLID UNREINFORCED MASONRY AND PLAIN CONCRETE:
TABLE R404.1.1 (1) Maximum depth of unbalanced fill for a 10" poured concrete wall, or fully grouted masonry wall is 8 feet.
TABLE R4041.1 (1) Maximum depth of unbalanced fill for a 10" masonry - hollow - ungrouted wall is 5 feet.

R406.1 Except where required by Section R406.2 to be waterproofed, foundation walls that retain earth and enclose interior spaces and floors below grade shall be dampproofed from the top of the footing to the finished grade.

SUBSOIL DRAINAGE:
Subsoil drainage system shall be provided under all basements floors consisting of:
R506.2.2 BASE. A 4" thick base course consisting of clean graded sand, gravel, crushed stone or crushed blast - furnace slag passing a 2" sieve shall be placed on the prepared subgrade when the slab is below grade. EXCEPTION: A base course is not required when the concrete slab is installed on well - drained or sand - gravel mixture soils classified as group I according to the united soil classification system in accordance with TABLE R405.1.

R405.1 Drains shall be provided around all 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 area to be protected and shall discharge by gravity or mechanical means into an approved drainage systems.

Sump Pump:Provide sealed & vented sump pump.

Crawl Spaces:In compliance with section 408. 408.1 Ventilation . The under-floor space between the bottom of the floor joists and the earth under any building (except space occupied by a basement or cellar) shall be provided with ventilation openings through foundation walls or exterior walls. The minimum net area of ventilation openings shall not be 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 said building.

WALL CONSTRUCTION:
R403.1.6 When braced wall panels are supported directly on continuous foundations, the wall wood sill plate or cold-formed steel bottom track shall be anchored to the foundation in accordance with this section. The wood sole plate at exterior walls on monolithic slabs and wood sill plate shall be anchored to the foundation with anchor bolts spaced a maximum of 6 feet on center. There shall be a minimum of two bolts per plate section with one bolt located not more than 12" or less than seven bolt diameters from each end of the plate section. Anchor bolts shall also be located within 12" from the ends of each plate section. Bolts shall be at least 1/2" in diameter and shall extend a minimum of 7" into masonry or concrete. Interior bearing wall sole plates on monolithic slab foundations shall be positively anchored with approved fasteners. A nut and washer shall be tightened on each bolt to the plate. Sills and sole plates shall be protected against decay and termites where required by Sections R319 and R320. Cold-formed steel framing systems shall be fastened to the wood sill plates or anchored directly to the foundation as required in Section R505.3.1. or R603.1.1.
Exception:Foundation anchor straps, spaced as required to provide equivalent anchorage to 1/2-inch- diameter anchor bolts.

R408.4 Access to crawl spaces minimum size 18" x 24".

R502.6 Bearing: The ends of each joist, beam or girder shall not have less than 1.5 inches of bearing on wood or metal and not less than 3 inches on masonry or concrete except where supported on a 1-inch-by-4-inch ribbon strip and nailed to the adjacent stud or The ends of each joist, beam or girder shall not have less than 1.5 inches of bearing on wood or metal and not less

R502.6.1 Floor systems: Joists framing from opposite sides over a bearing support shall lap a minimum of 3 inches and shall be nailed together with a minimum three 10d face nails. A wood or metal splice with strength equal to or greater than that provided by the

R502.6.2 Joist framing: Joists framing into the side of a wood girder shall be supported by approved framing anchors or on ledger strips not less than nominal 2 inches by 2 inches.

R502.8 Drilling and notching. Structural floor members shall not be cut, bored or notched in excess of the limitations specified in this section. See Figure R502.8.

R502.8.1 Sawn lumber. Notches in solid lumber joists, rafters and beams shall not exceed one-sixth of the depth of the member, shall not be longer than one-third of the depth of the member and shall not be located in the middle one-third of the span. Notches at the ends of the member shall not exceed one-fourth the depth of the member. The tension side of members 4 inches or greater in nominal thickness shall not be notched except at the ends of the members. The diameter of holes bored or cut into members shall not exceed one-third the depth of the member. Holes shall not be closer than 2" to the top or bottom of the member, or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch.

R502.8.2 Engineered wood products. Cuts, notches and holes bored in trusses, laminated veneer lumber, glue-laminated members or I-joists are not permitted unless the effects of such penetration are specifically considered in the design of the member.

R506.2.3: Vapor retardeA 6 mil polyethylene or approved vapor retarder with joints lapped not less than 6 inches shall be placed between the concrete floor slab and the base course or the prepared subgrade where no base course exists.
Exceptions:
1. From detached garages, utility buildings and other unheated accessory structures.
2. From driveways, walks, patios and other flat work not likely to be enclosed and heated at a later date.
3. Where approved by the building official, based on local site conditions.

All walls 14'-0" and beyond in height and supporting a roof only to be continuous 2 x 6 studs. Refer to table R602.3.1

R602.6 Drilling and notching - studs. Any stud in an exterior wall or bearing partition may be cut or notched to a depth not exceeding 25 percent of its width. Studs in nonbearing partitions may be notched to a depth not to exceed 40 percent of a single stud width. Any stud may be bored or drilled, provided that the diameter of the resulting hole is no greater than 40 percent of the stud width, the edge of the hole is no closer than 5/8" to the edge of the stud, and the hole is not located in the same section as a cut or notch. See Figures R602.6(1) and R602.6(2).

Exceptions: Approved stud shoes may be used when installed in accordance with the manufacturer's recommendation.

R602.6.1 Drilling and notching of top plate. When piping or ductwork is placed in or partly in an exterior wall or interior load bearing wall, necessitating cutting, drilling or notching of the top plate by more than 50 percent of its width, a galvanized metal tie not less than 0.054 inch thick (16 gage) and 1.5 inches wide shall be fastened to each plate across and to each side of the opening with not less than eight 16d nails at each side or equivalent (see Figure R602.6.1).
Exception:When the entire side of the wall with the notch or cut is covered by wood structural panel sheathing.

R602.10 WALL BRACING. All exterior walls shall braced in accordance with this section. In addition, interior braced wall lines shall be provided in accordance with section R602.10.1.1

R602.10.1 BRACED WALL LINES. Braced wall lines shall consist of brace wall panel construction methods in accordance with Section R602.10.3. The amount and location of bracing shall be in accordance with Table 602.10.1 and the amount of bracing shall be the greater of that required by the Seismic Design Category or the design wind speed. Braced wall panels shall begin no more then 12.5 feet from each end of a braced wall line. Braced wall panels that are counted as part of a braced wall line shall be in line, except that offsets out-of-plane of up to 4 feet shall be permitted provided that the total out-to-out offset dimension in any braced wall line is not more then 8 feet.

R602.10.3 BRACED WALL PANEL CONSTRUCTION METHODS. The construction of braced wall panels shall be in accordance with the following method:

6. Particle Board wall sheathing panels installed in accordance with Table R602.3(4): 6. 1/2" particle board wall sheathing w/ m-2 exterior glue.

R602.10.6 Alternate braced wall panels. Alternate braced wall lines constructed in accordance with one of the following provisions shall be permitted to replace each 4 feet of braced wall panel as required b Section R602.10.4:

1. In one-story buildings, each panel shall be sheathed on one face with 3/8" - minimum thickness wood structural panel sheathing nailed with 8d common or galvanized box nails in accordance with Table R602.3(1) and blocked at all wood structural panel sheathing edges. Two anchor bolts installed in accordance with Figure R403.1(1) shall be provided in each panel. Anchor bolts shall be placed at panel quarter points. Each panel end stud shall have a tie-down device fastened to the foundation, capable of providing an uplift capacity of at least 1,800 pounds. The tie-down device shall be installed in accordance with the manufacturer's recommendations. The panels shall be supported directly on a foundation or on floor framing supported directly on a foundation which is continuous across the entire length of the braced wall line. This foundation shall be reinforced with not less than one No. 4 bar top and bottom. When the continuous foundation is required to have a depth greater than 12", a minimum 12" x 12" continuous footing or turned down slab edge is permitted at door openings in the braced wall line. This continuous footing or turned down slab edge shall be reinforced with not less than one No. 4 bar top and bottom. This reinforcement shall be lapped 15" with the reinforcement required in the continuous foundation located directly under the braced wall line.

2. In the first story of two-story buildings, each braced wall panel shall be in accordance with Item 1 above, except that the wood structural panel sheathing shall be provided on both faces, at least three anchor bolts shall be placed at one-fifth points, and tie-down device uplift capacity shall not be less than 3,000 pounds.

R702.4.2 Gypsum backer.m Gypsum board utilized as the base or backer board for adhesive application of ceramic tile or other nonabsorbent finish material shall conform with ASTM C 630 or C 1178. Water-resistant gypsum backing board shall be permitted to be used on ceiling where framing spacing does not exceed 12" on center for 1/2" thick or 16" for 5/8" thick gypsum board. Water-resistant gypsum board shall not be installed over a vapor retarder in a shower or tub compartment. All cut or exposed edges, including those at wall intersections, shall be sealed as recommended by the manufacturer.
wit

POINT LOADS: ALL POINT LOADS SHALL BE SUPPORTED BY MINIMUM 4 STUDS U.N.O.

R703.2 WEATHER - RESISTANT SHEATHING PAPER. A minimum of one layer on No. 15 asphalt felt complying with ASTM D 226, as listed in chapter 43, for type 1 felt or other approved weather-resistive materials shall be applied over sheathing of all exterior walls. See TABLE R703.4.

Notes:
R703.7.4 Anchorage. Masonry veneer shall be anchored to the supporting wall with corrosion - resistant metal ties. Where veneer is anchored to wood backings through the use of corrugated sheet metal ties, the distance separating the veneer from the sheathing material shall be a maximum of 1". Where the veneer is anchored to wood backings through the use of metal strand wire ties, the distance separating the sheathing material shall be maximum of 4 1/2". Where the veneer is anchored to cold - formed steel backings, adjustable metal strand wire ties shall be used. Where veneer is anchored to cold - formed steel backings, the distance separating the veneer from the sheathing material shall be a maximum of 4 1/2".

R703.7.4.1, Size and spacing. Veneer ties, if strand wire, shall not be less in thickness than No. 9 U.S. gauge wire and shall have a hook embedded in the mortar joint, or if sheet metal, shall be not less than No. 22 U.S. gauge by 7/8" corrugated. Each tie shall be spaced not more than 24" on center horizontally and vertically and shall support not more than 2.67 square feet of wall area.

R703.7.4.1.1 Veneer ties around wall openings. Additional metal ties shall be provided around all wall openings greater than 16" in either dimension. Metal ties around the perimeter of openings shall be space note more than 3 feet on center and placed within 12" of the wall opening. Additional metal ties shall be provided around all wall openings greater than 16" in either

A Flashing Inspection will be required prior to installing the full wall of brick.

R703.7.5 FLASHING. Approved flashing shall be installed beneath the first course of masonry above finished ground level above the foundation wall or slab and at other points of support, including structural floors, shelf angles and lintels when masonry veneers are designed in accordance with SECTION R703.7 of the code. See section R703.8 of the code for additional requirements.

R703.7.6 WEEPHOLES. Weepholes shall be provided in the outside wythe of masonry walls at a maximum spacing of 33" on center. Weepholes shall not be less than 3/16" in diameter. Weepholes shall be located immediately above and directly on the flashing.

BUILDER/OWNER INFO:

NOTE: BUILDER TO VERIFY ALL DRAWINGS AND DIMENSION BEFORE WORK BEGINS. BUILDER TAKES FULL RESPONSIBILITY OF DRAWINGS AND CONSTRUCTION OF BUILDING.

ALL CONTRACTORS AND ROOF SUPPLIER TO VERIFY SITE AND PRE-EXISTING STRUCTURES AND/OR GRADES

RESSLER DESIGN, INC.
3203 WHITFIELD DR., WATERFORD, MI. 48329
PHONE: 248-860-4421 FAX: 248-927-0313
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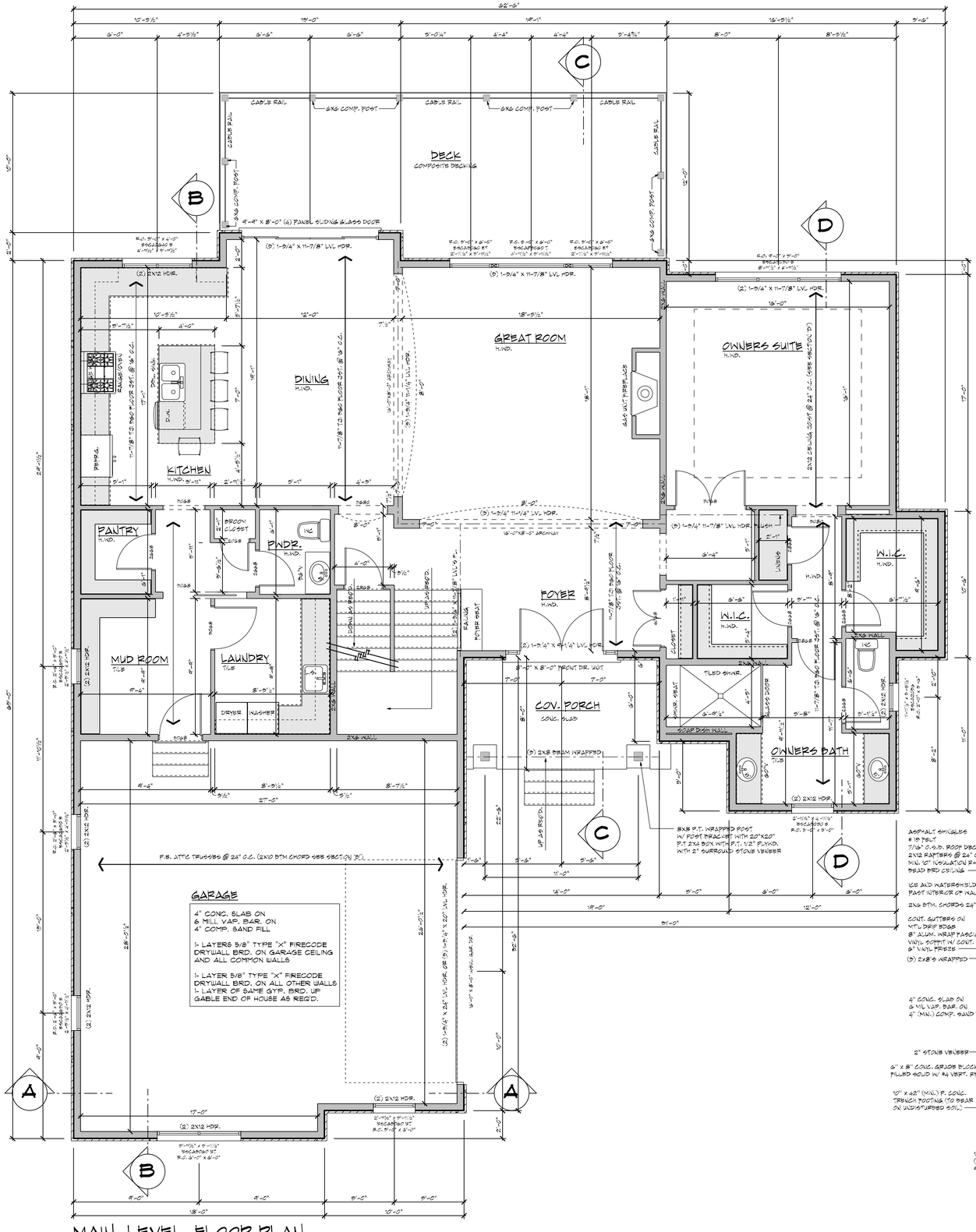
Designing Where People Live, Work and Play!

HOUSE PLAN:

GRIESE RESIDENCE

TOTAL SQ.FT.: (HOUSE BILL 5819)	3290.00
UN-HABITAL SQ./FT.	1746.00
TOTAL HABITABLE SQ./FT.	1544.00
PROJECT NO.:	1443-2025
SCALE:	1/4" = 1' - 0"
ORIGINAL PLAN SET DATE:	04-14-2025
REVISION PLAN SET DATE:	5/12/2025
SHEET NO.:	A-1



MAIN LEVEL FLOOR PLAN

UPPER LEVEL SQ. / FT. = 2048.00 SCALE: 1/4" = 1' - 0"

GENERAL NOTES - MICHIGAN RESIDENTIAL CODE - 2015

Consult Design Office for meaning of any symbol or abbreviation not defined.
The Design Office shall determine governing information if a conflict should occur between various contract documents. Although every precaution has been taken in the preparation of these drawings, the Design Office cannot guarantee against human error and omission. Therefore, the contractor should verify and use figured dimensions only. Do not scale drawings for construction. Any conflicts or questions that arise due to these drawings should be brought to the attention of the Design Office prior to construction.

The contractor shall verify all dimensions, elevations, materials, and conditions at the job site and shall notify the Design Office of any discrepancies, omissions, and / or conflicts before proceeding with the work.

All work shall be performed in a thoroughly first class and workmanlike manner by mechanics skilled in their respective trades, and shall conform to the standards of recognized trade associations. The contractor shall visit the site and check all existing conditions prior to commencing his work. The contractor shall be responsible for the coordination of work by all trades involved in the project.

The contractor shall secure and pay for all necessary permits and fees required in the performance of his work.

Unless noted otherwise, (U.N.O.) Dimensions are from finish face to finish face. Nominal thickness dimensions are used for masonry. Interior frame partition thickness to be 4-1/2", (2 X 4 wood stud) U.N.O.

Steel shall be domestic ASTM-36.

Dimensional framing lumber shall be No.1 Douglas Fir-larch (North) surfaced dry or No.2 Hem-Fir (North) surfaced dry or No.2 Southern Pine kiln dried. Minimum extreme fiber bending stress of 1200 P.S.I.

Structural Laminated Wood Beams (GLU-LAMS) shall be 24F Southern Pine with extreme fiber bending stress of 2,400 P.S.I.

MICRO-LAM Beams shall have an extreme fiber bending stress of 2,800 P.S.I. as manufactured by "TRUSS JOIST CORP." or equal.

Interior finishes shall be determined by owner or his representative.

EXHAUST FANS-PROVIDE FANS AT ALL BATHROOMS AND LAUNDRY ROOM.

R106.1.4 TRUSS DESIGN DATA. As an alternative to the submission of truss design drawings, the truss design data sheet may be provided to the building official as part of the construction documents at the time of application. Truss design drawings shall be submitted to the building official prior to truss installation as required by Section R802.10.1

R301.5 Live loading minimum uniformly distributed live load shall be as provide in Table R301.5.

Attics without storage (b): 10 pounds per square foot. Table R301.5
Attics with limited storage (b) (g) (h): 20 pounds per square foot. Table R301.5

b. Attics without storage are those where the maximum clear height between joist and rafter is less than 42 inches, or where there are not two or more adjacent trusses with the same web configuration capable of containing a rectangle 42 inches high by 2 feet wide, or greater, located within the plane of the truss. For attics without storage, this live load need not be assumed to act concurrently with any other live load requirements.

g. For attics with limited storage and constructed with trusses, this live load need be applied only to those portions of the bottom chord where there are two or more adjacent trusses with the same web configuration capable of containing a rectangle 42 inches high or greater, by 2 feet wide or greater, located within the plane of the truss. The rectangle shall fit between the top of the bottom chord and the bottom of any other truss member, provided that each of the following criteria is met:

1. The attic area is accessible by a pull-down stairway or framed opening in accordance with Section R807.1, and
2. The truss has a bottom chord pitch less than 2:12.

h. Attic spaces served by a fixed stair shall be designed to support the minimum live load specified for sleeping rooms.

R303.1Light required minimum glazing area of not less than 8% of the floor area of habitable rooms.

R303.1Ventilation required minimum openable area to the outdoors shall be 4% of the floor area being ventilated.

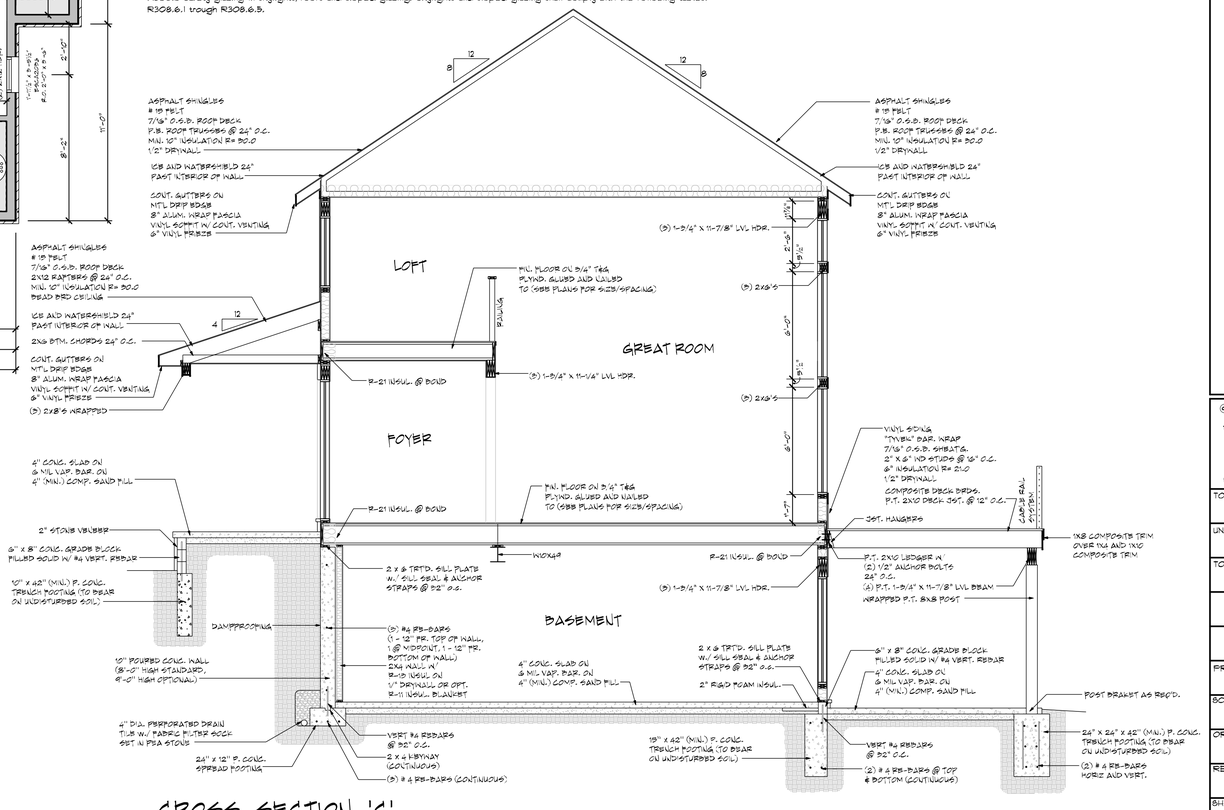
R305.1Minimum ceiling height 7'-0".

R307.2 Bathtub and shower spaces. Bathtub and shower floors and walls above bathtubs with installed shower heads and in shower

R308 GLAZING All windows in which the bottom edge is less than 18" above the floor shall be tempered safety glass as specified in section R308.

R308.4 Hazardous Locations. Safety glazing in doors and adjacent to doors within the same wall space. Safety glazing in fixed panels more than 9 square feet with the lowest edge less than 18" to floor. Safety glass in walls enclosing bathtubs, showers and whirlpool.

R308.6 Safety glazing in skylights, roofs and sloped glazing. Skylights and sloped glazing shall comply with the following tables: R308.6.1 trough R308.6.9.



CROSS SECTION 'C'

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

BUILDER/OWNER INFO:
NOTE: BUILDER TO VERIFY ALL DRAWINGS AND DIMENSION BEFORE WORK BEGINS. BUILDER TAKES FULL RESPONSIBILITY OF DRAWINGS AND CONSTRUCTION OF BUILDING.
ALL CONTRACTORS AND ROOF SUPPLIER TO VERIFY SITE AND PRE-EXIST'G STRUCTURES AND/OR GRADES

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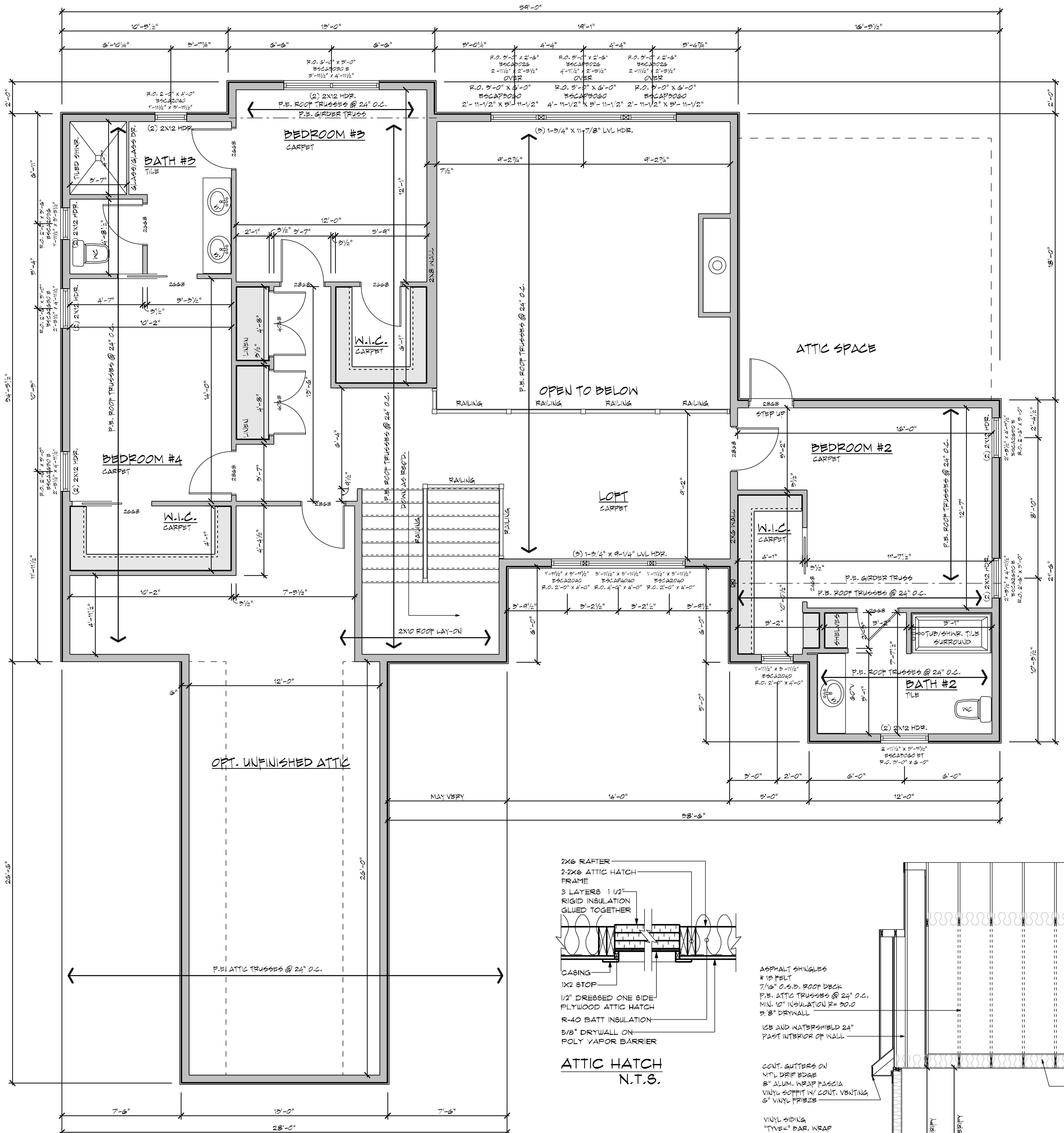
RONALD R. RESSLER

Designing Where People Live, Work and Play!

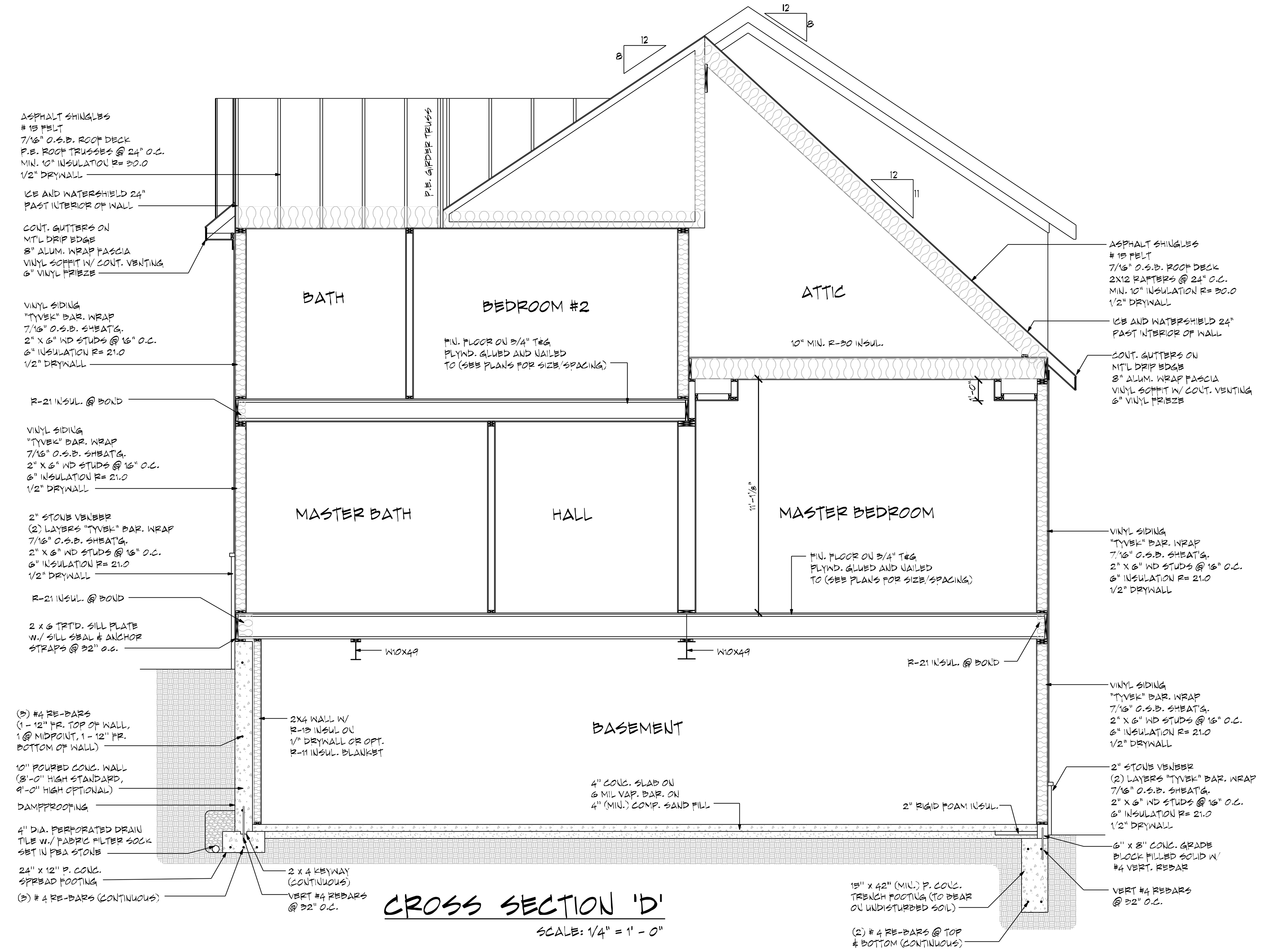
HOUSE PLAN: GRIESE RESIDENCE

TOTAL SQ.FT. (HOUSE BILL 5819)	3290.00
UN-HABITAL SQ./FT.	1746.00
TOTAL HABITABLE SQ./FT.	1544.00
PROJECT NO.:	1443-2025
SCALE:	1/4" = 1' - 0"
ORIGINAL PLAN SET DATE:	04-14-2025
REVISION PLAN SET DATE:	5/12/2025
SHEET NO.:	A-2



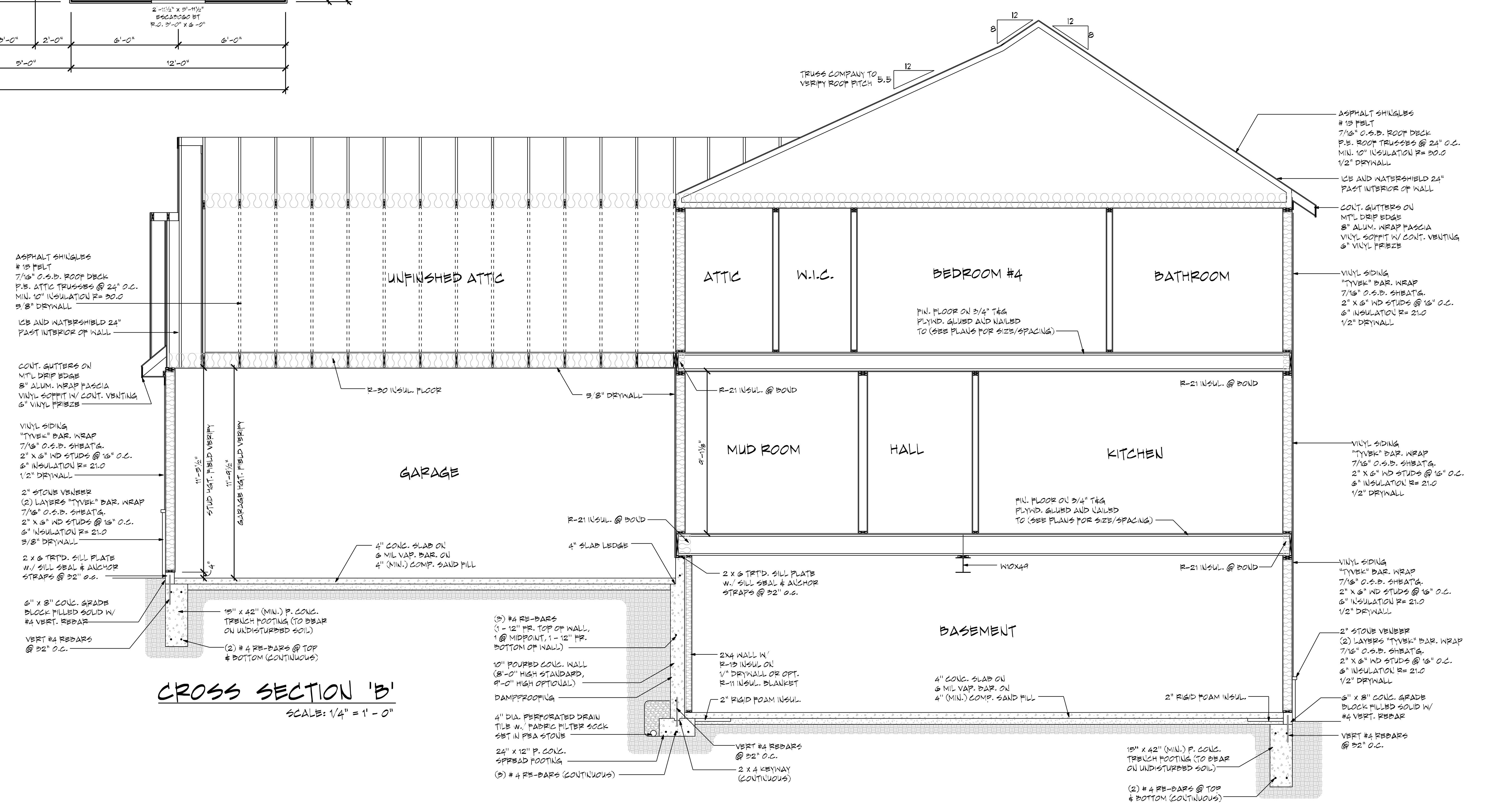
UPPER LEVEL FLOOR PLAN

UPPER LEVEL SQ. / FT. = 1242.00 SCALE: 1/4" = 1' - 0"
UNFINISHED ATTC SQ. / FT. = 484.00



CROSS SECTION 'D'
SCALE: 1/4" = 1' - 0"

ATTIC HATCH
N.T.S.



CROSS SECTION 'B'
SCALE: 1/4" = 1' - 0"

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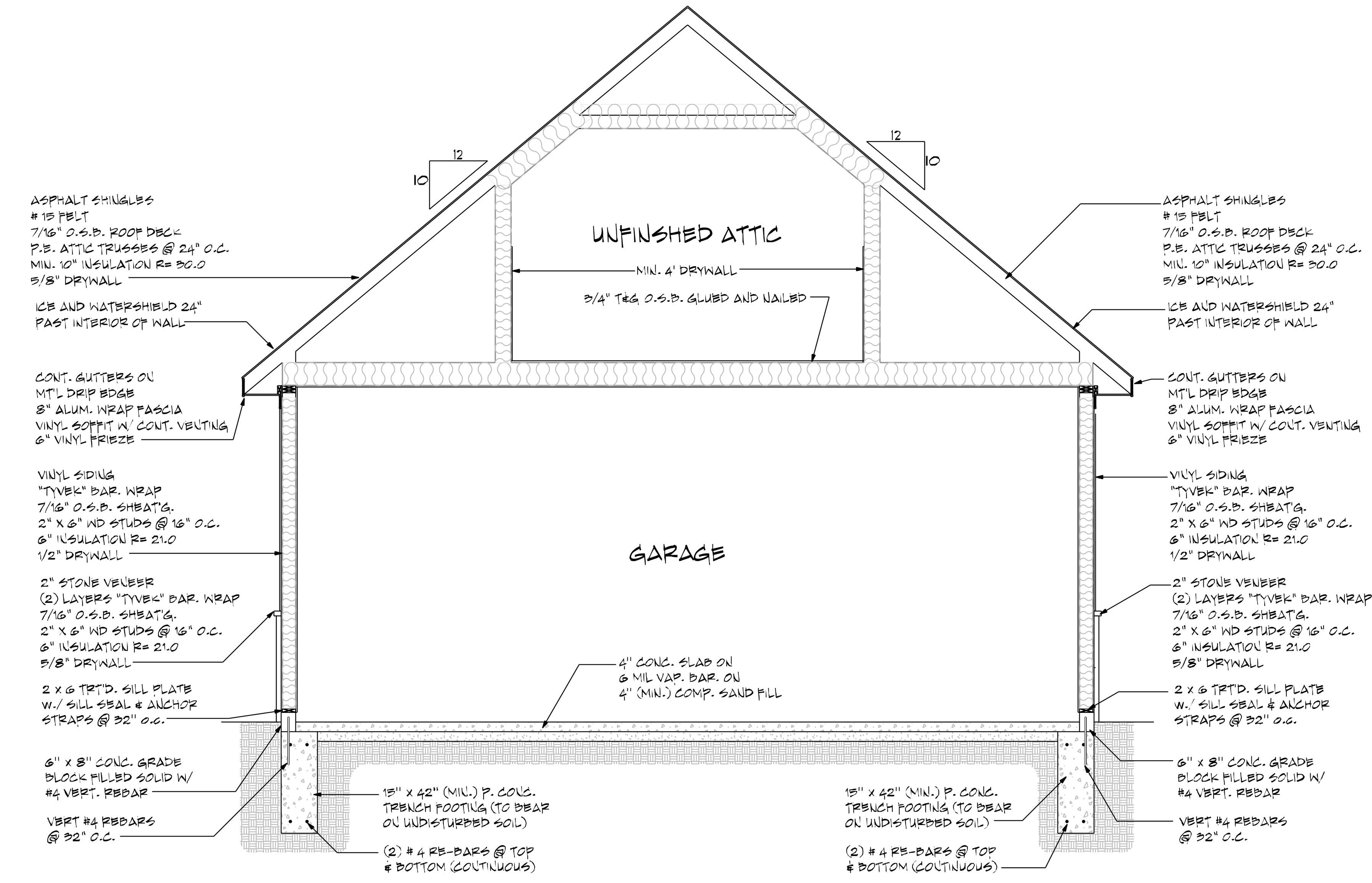
TOTAL HABITABLE SQ./FT.	1544.00
PROJECT NO.:	1443-2025
SCALE:	1/4" = 1' - 0"
ORIGINAL PLAN SET DATE:	04-14-2025
REVISION PLAN SET DATE:	5/12/2025
SHEET NO.:	A-3

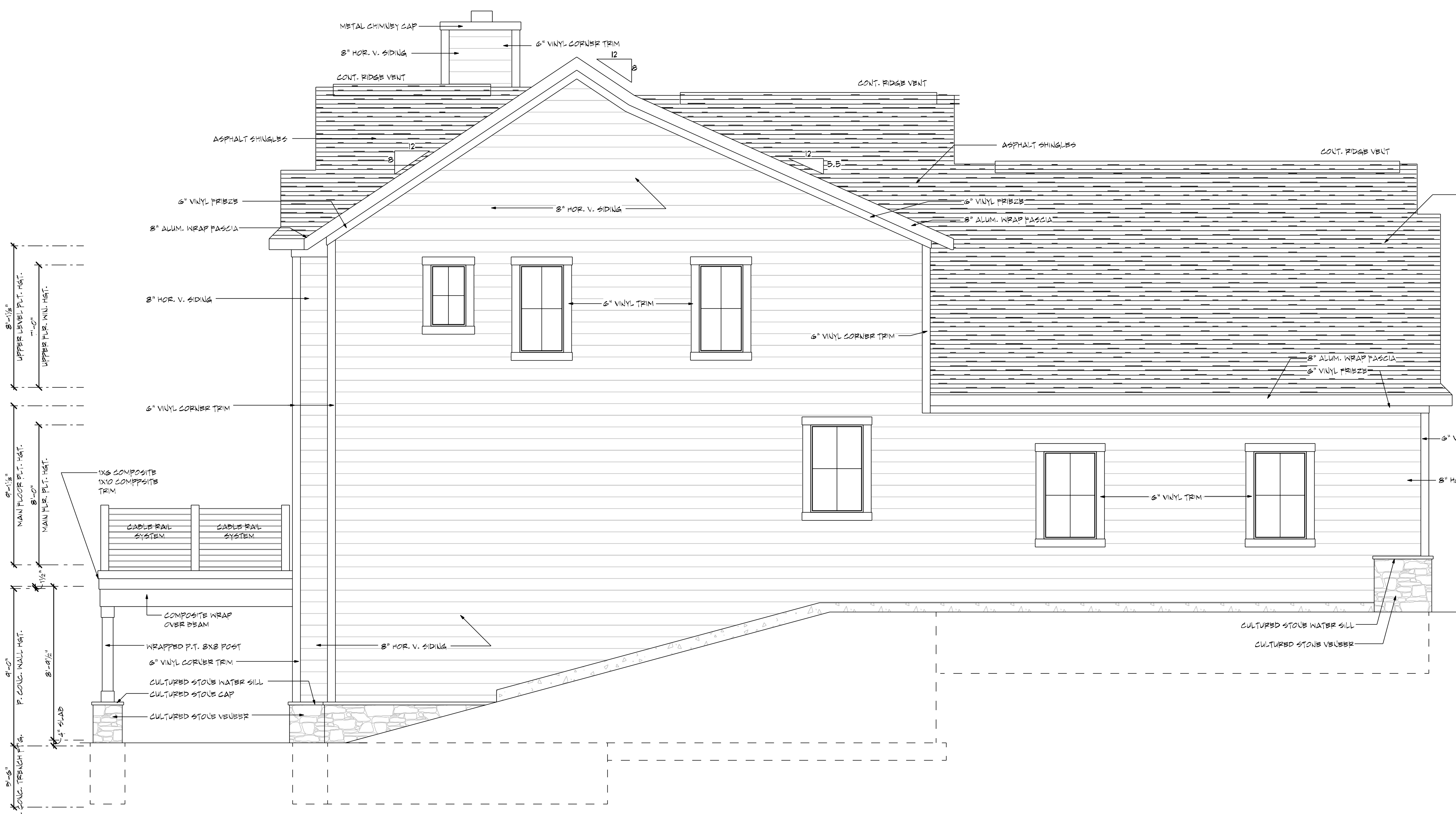
FRONT ELEVATION

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



CROSS SECTION 'A'

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



LEFT ELEVATION

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

BIDDING SPECIFICATIONS

1. ARCHITECTURAL DRAWINGS

The architectural drawings are intended to show the general scope and arrangement of spaces, design features, and note the extent of the work and are partly diagrammatic. The drawings are not intended to be scaled for measurements or estimating material quantities, use figured dimensions only. The drawings are not intended to replace detailed shop drawings, manufacturers installation instructions, and on site supervision, as required and/or referenced herein. In the case of an inconsistency between drawings and specifications, or between plans and details, the greater quantity and better quality shall be bid. The architectural drawings contemplate a finished work of the character and quality described, implied, or reasonably inferred by them. All sub-bidders are responsible for verifying all applicable requirements/conditions, and to coordinate with the work of others with the Client and/or the Prime Bidder as may be applicable. All sub-bidders agree that minor discrepancies or the failure to include repeated details and/or notations provided in one area and not in another, shall not be cause for a claim for additional charges. Correspondence regarding questions and interpretations from sub-bidders shall be in writing and directed through the Client and/or the Prime Bidder as may be directed by the Client. Architect shall correspond only with the Client and shall issue written responses, if any, to the Client for distribution to the Prime Bidder and/or sub-bidders. Any discrepancies, conflicts, and/or errors or omissions in the drawings and specifications shall be reported to the Prime Bidder and Client in order to notify the Architect. Architect, shall at its sole discretion, determine if an addendum need be issued.

All bidders and sub-contractors shall be responsible for providing a firm bid that includes sufficient allowance to make their portion of the work complete and operable, fitting with the work of other contractors, and the Client and in compliance with the Performance Requirements below.

2. PERFORMANCE REQUIREMENTS

All work shall be completed and installed in accordance with the applicable Project Codes and/or the latest accepted Residential Construction Performance Guidelines by the NAHB as applicable.

All work and materials provided shall be designed and/or approved as may be applicable for the intended purpose and location of installation and shall accommodate without damage or failure, the weathering conditions and seasonal temperature cycles of the area. Moisture entering, or condensation occurring in any material and/or assembly shall be directed to the exterior.

3. QUALITY ASSURANCE

Materials shall be obtained from reputable and experienced manufacturers of products that provide warranties to the Client. Sample warranty(s) shall be submitted with the bid. To ensure functionality, compatibility, and consistency in color, appearance, and installation, products shall be coordinated through a single source manufacturer where practical. Client reserves the right to accept or reject any proposed product and/or bidder and request a specific product or manufacturer to be re-bid.

All products shall meet or exceed the requirements and standards of the Project Codes and Performance Guidelines noted herein.

4. PRODUCT HANDLING

The delivery, storage, and handling of all products and/or materials shall be coordinated through the Client and the Clients General Contractor and shall be the responsibility of the sub-contractors unless otherwise stated in the bid.

5. SUBMITTAL

Sub-bidders shall provide the following submittals as applicable to the product(s) material(s) and/or system(s) included in the bid:

1. Product Data, including material descriptions, dimensions, and profiles
2. Shop drawings showing layout, location of products/assemblies, dimensions, penetration, trim, supporting structure/backing required (if any), and installation methods.
3. Color samples for selection and approval by Owner and Architect.
4. Samples shall be minimum 4" long or larger pieces showing actual product, color, and finish.
5. Certificates documenting product/system compiles with applicable Project Codes and requirements.
6. Copy of the manufacturer's installation instructions.
7. Copy of warranty as noted above.

6. ADDITIONAL REQUIREMENTS

The Client and Prime Bidder may include additional requirements, terms and conditions, which shall be in addition to those herein, however in no case shall the requirements noted herein be reduced, or any sub-bidder be relieved of providing any of the submittals required herein.

BUILDER/OWNER INFO:

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GRIESE RESIDENCE

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UN-HABITAL SQ./FT.	1746.00
TOTAL HABITABLE SQ./FT.	1544.00
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REVISION PLAN SET DATE:	5/12/2025
SHEET NO.:	A-4

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

R703.8 Flashing. Approved corrosion - resistant flashing shall be applied shingle-fashion in such a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. The flashing shall extend to the surface of the exterior wall finish. Approved corrosion-resistant flashings shall be installed at all of the following locations:

1. 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 for subsequent drainage.
2. At the intersection of chimneys or other masonry construction with frame or stucco walls, with projecting lips on both sides under stucco copings.
3. Under and at the ends of masonry, wood or metal copings and sills.
4. Continuously above all projecting wood trim.
5. Where exterior porches, decks or stairs attach to a wall or floor assembly of wood - frame construction.
6. At wall and roof intersections.
7. At built-in gutters.

R806.2 Roof VentilatioMinimum area. The total net free ventilation area shall not be less than 1 to 150 of the area of the space ventilated except that the total area is permitted to be reduced to 1 to 300, provided at least 50 percent and not more than 80 percent of the required ventilating area is provided by ventilator located in the upper portion of the space to be ventilated at least 3 feet above eave or cornice vents with the balance of the required ventilation provided by eave or cornice vents. As an alternative, the net free cross -ventilation area may be reduced to 1 to 300 when a vapor barrier having a transmission rate not exceeding 1 perm is installed on the warm side of the ceiling.

R807.1Access to attic minimum 22" x 30".

R309.2 SEPARATION REQUIRED. The garage shall be separated from the residence and its 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- inch Type X gypsum board or equivalent. Where the separation is a floor - ceiling assembly, the structure supporting the separation shall also be protected by not less than 1/2- inch gypsum board or equivalent. Garages located less than 3 feet from a dwelling unit on the same lot shall be protected with not less than 1/2 inch gypsum board applied to the interior side of exterior walls that are within this area. Openings in these areas shall be regulated by Section R309.1. This provision does not apply to garage walls that are perpendicular to the adjacent dwelling unit wall.

ASPHALT SHINGLES:
R905.2.7 UNDERLAYMENT APPLICATION. For roof slopes from 2 units vertical in 12 units horizontal (17- percent slope), up to 4 units vertical in 12 units horizontal (33- percent slope), underlayment shall be two layers. For roof slopes 4 units vertical in 12 units horizontal (33- percent slope), or greater, underlayment shall be one layer. See 905.2.8.2 for more details.

R905.2.7.1 ICE BARRIER. In areas where there has been a history of ice forming along the eaves causing a backup of water as designated in Table R301.2(1), an ice barrier that consists of a least two layers of underlayment cemented together or of a self-adhering polymer modified bitumen sheet, shall be used in lieu of normal underlayment and extend from the lowest edges of all roof surfaces to a point at least 24 inches inside the exterior wall line of the building.

MASONRY CHIMNEYS AND FIREPLACES:

R1001.2 FOOTING AND FOUNDATIONS. Footings for masonry fireplace and their chimneys shall be constructed of concrete or solid masonry at least 12 inches thick and shall extend at least 6 inches beyond the face of the foundation or support wall on all sides. Footings shall be founded on natural undisturbed earth or engineered fill below frost depth. In areas not subjected to freezing, footings shall be at least 12 inches below finished grade.

R1001.6 FIREBOX DIMENSIONS. The firebox of a concrete or masonry fireplace shall have a minimum depth of 20". The throat shall not be less than 8 inches above the fireplace opening. The throat opening shall not be less than 4 inches deep. The cross sectional area of the passageway above the firebox, including the throat, damper and smoke chamber, shall not be less than the cross-sectional area of the flue.

R1001.9 HEARTH AND HEARTH EXTENSION. Masonry fireplace hearths and hearth extensions shall be constructed of concrete or masonry, supported by noncombustible materials, and reinforced to carry their own weight and all imposed loads. No combustible material shall remain against the underside of hearths and hearth extensions after construction.

R1001.9.1 HEARTH THICKNESS. The minimum thickness of fireplace hearth shall be 4 inches.

R1001.9.2 HEARTH EXTENSION THICKNESS. The minimum thickness of hearth extensions shall be 2 inches.
Exception: When the bottom of the firebox opening is raised at least 8 inches above the top of the hearth extension, a hearth extension of not less than 3/8" thick brick, concrete, stone, tile or other approved noncombustible material in permitted.

R1001.10 HEARTH EXTENSION DIMENSIONS. Hearth extensions shall extend at least 16" in front of and at least 8" beyond each side of the fireplace opening. Where the fireplace opening is 6 square feet or larger, the hearth extension shall extend at least 20" in front of and at least 12" beyond each side of the fireplace opening. See R1003 for more details.

R1001.11 FIREPLACE CLEARANCE All wood beams, joists, studs and other combustible material shall have a clearance of not less than 2 inches from the front faces and sides of masonry fireplaces and not less than 4 inches from the back faces of masonry fireplaces. The air space shall not be filled, except to provide fire blocking in accordance with Section R1001.12

E3802Provide ground fault circuit - interrupters at all exterior electrical outlets and interior outlets adjacent to water sources.

E3802.12 BEDROOM OUTLETS. ALL BRANCH CIRCUITS THAT SUPPLY 120 - VOLT, SINGLE - PHASE, 15 AND 20 - AMPERE OUTLETS INSTALLED IN BEDROOMS SHALL BE PROTECTED BY A COMBINATION TYPE ARC - FAULT CIRCUIT INTERRUPTER INSTALLED TO PROVIDE PROTECTION OF THE ENTIRE BRANCH.

R-21 Wall RequirementIf R-21 wall requirement is in effect at time of construction, then use 1" rigid insulation over structural sheathing, in addition to R-13 insulation.
If R-21 wall requirement is in effect at time of construction, then use 1" rigid insulation over structural sheathing.

GENERAL CONDITIONS

1. PROJECT CODES
The architectural plans and specifications are intended to be consistent with the following codes, as may be applicable (collectively, the "Project Codes"):
2015 INTERNATIONAL RESIDENTIAL CODE (IRC)
for a SINGLE FAMILY DWELLING

2. BUILDING OFFICIAL
The Building Official is hereby requested (a) to confirm that these plans are consistent with the applicable Project Codes, and (b) to return a noted set of plans to the Applicant upon issuance of any permit, and (c) to promptly notify the Architect and the Applicant if these plans and specifications are suspected (or determined) to be inconsistent with the applicable Project Codes.

3. SCOPE
It is beyond the scope of the architectural plans and specifications to incorporate the full text of the applicable Project Codes and to otherwise detail every condition and/or aspect thereof. All persons, entities, contractors, trades, product suppliers, or others using and/or relying on these plans and specifications are encouraged to review and familiarize themselves with the Project Codes, and all such parties are directed to resolve any code question regarding these plans in favor of the applicable Project Codes.

4. NOTES AND SPECIFICATIONS
All notes and specifications contained herein, on the specifications sheet N100, and/or on any other individual sheet, shall apply to all the architectural sheets listed in the sheet index on sheet T100.

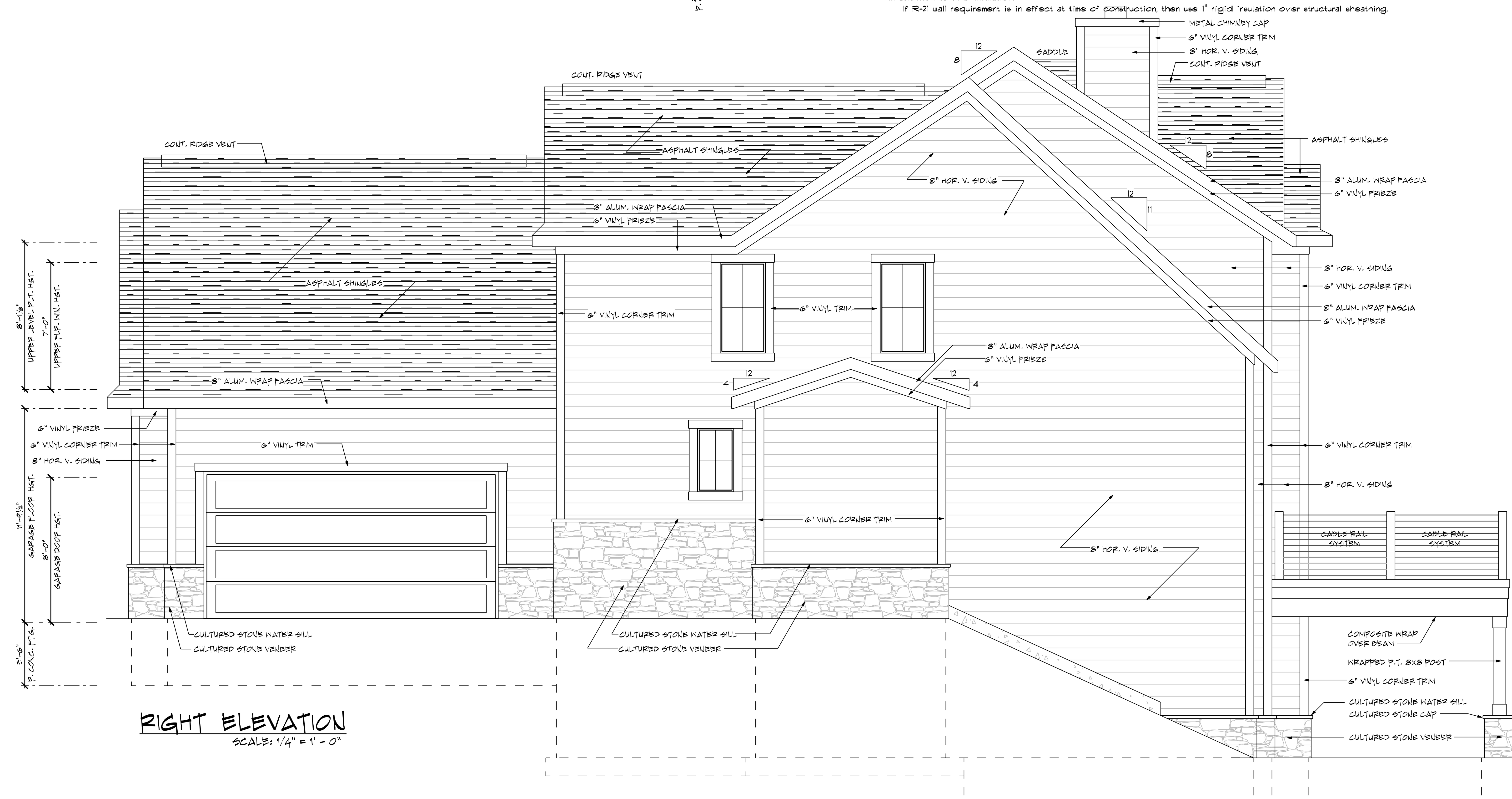
5. CONFLICTING NOTATIONS
If any general notation conflicts with any detail notation or note on a plan or elevation, then the strictest shall apply. Confirm all conflict resolutions with the on site supervisor and the Architect.

6. SAFETY REQUIREMENTS
The code requirements of MI OSHA, OSHA, and MI DEQ shall be determined and provided the by the Building Company and/or the General Contractor. These safety code requirements shall be enforced by the On-Site Supervisor and shall apply to all persons entering and/or working on the site. The Architect and the Architects Consultants assume no responsibility for the absence, presence, or adequacy of any safety program, precaution and/or equipment.

7. TEMPORARY STRUCTURAL BRACING
Temporary bracing, guying, and/or tie-downs of the structure shall be determined, provided, and maintained by the erector, sub-contractor and/or the General Contractor and shall be monitored by the On-Site Supervisor. The Architect and the Architects Consultants assume no responsibility for the absence, presence, or adequacy of any temporary bracing, guying, and/or tie-downs. All existing structures and/or new work in place that may be affected by the construction shall be adequately protected and/or braced as necessary to prevent any damage or settlement.

8. CONSULTANT DOCUMENTATION
The architectural plans and specifications may be supplemented with additional documentation provided by bidders/contractors and/or the Owner's consultants. Any additional consultant documentation (collectively, the "Consultant Documentation") shall be the sole responsibility of the consultant preparing the documentation, and when professional certification of performance criteria of materials, systems or equipment is required, the Architect shall be entitled to rely upon the accuracy, completeness, and authenticity of such calculations and certifications.

The Architect may review and approve or take other appropriate action upon submittals such as Shop Drawings, Product Data and Samples, but only for the limited purpose of checking for conformance with information given and the design concept expressed in the architectural plans and specifications. The Architects review of such submittals is not conducted for the purpose of determining the accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, all of which remain the responsibility of the Contractor. The Architects approval of a specific item shall not indicate approval of an assembly of which the item is a component nor shall it constitute approval of any safety precautions, construction means, methods, techniques, sequences or procedures.



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

BUILDER/OWNER INFO:
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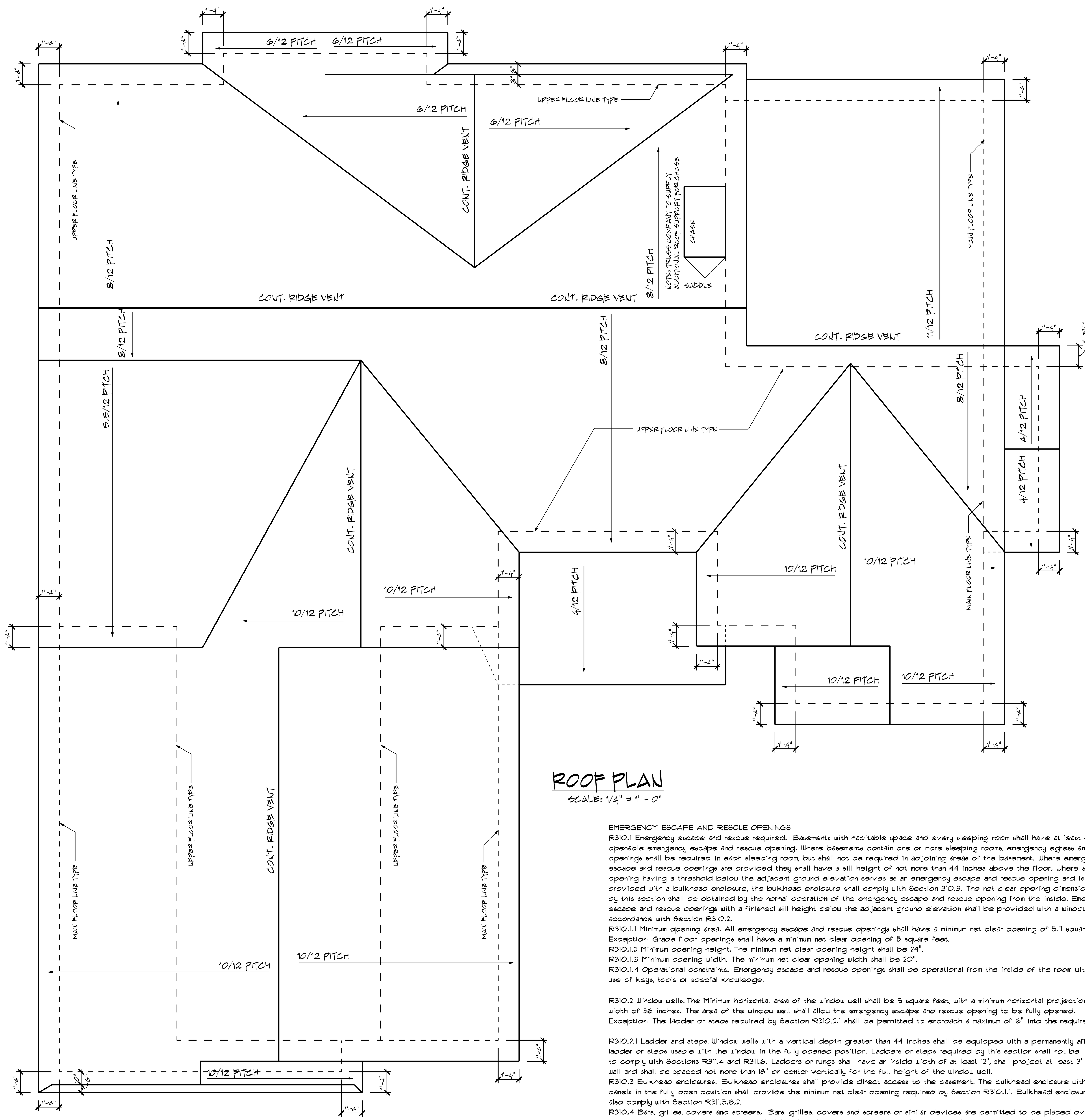
SHEET NO.:	A-5



ROOF PLAN

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

ROOF ASSEMBLIES SUBJECT TO WIND UPLIFT PRESSURE OF 20lbs. PER FOOT OR GREATER SHALL HAVE ROOF RAFTERS OR TRUSSES ATTACHED TO THEIR SUPPORTING WALL ASSEMBLIES BY CONNECTIONS CAPABLE OF PROVIDING THE RESISTANCE REQUIRED IN TABLE R802.11 OF THE 2015 IRC.

NOTE: 1" THEMAL BAFFLE REQ'D. FOR VENT CLEARANCE. REFER TO THE 2015 IRC R806.3

NOTE: HURRICANE TIES AS REQ'D.

EMERGENCY ESCAPE AND RESCUE OPENINGS

R310.1 Emergency escape and rescue required. Basements with habitable space and every sleeping room shall have at least one openable emergency escape and rescue opening. Where basements contain one or more sleeping rooms, emergency egress and rescue openings shall be required in each sleeping room, but shall not be required in adjoining areas of the basement. Where emergency escape and rescue openings are provided they shall have a sill height of not more than 44 inches above the floor. Where a door opening having a threshold below the adjacent ground elevation serves as an emergency escape and rescue opening and is provided with a bulkhead enclosure, the bulkhead enclosure shall comply with Section 310.3. The net clear opening dimensions required by this section shall be obtained by the normal operation of the emergency escape and rescue opening from the inside. Emergency escape and rescue openings with a finished sill height below the adjacent ground elevation shall be provided with a window well in accordance with Section R310.2.

R310.1.1 Minimum opening area. All emergency escape and rescue openings shall have a minimum net clear opening of 5.7 square feet. Exception: Grade floor openings shall have a minimum net clear opening of 5 square feet.

R310.1.2 Minimum opening height. The minimum net clear opening height shall be 24".

R310.1.3 Minimum opening width. The minimum net clear opening width shall be 20".

R310.1.4 Operational constraints. Emergency escape and rescue openings shall be operational from the inside of the room without the use of keys, tools or special knowledge.

R310.2 Window wells. The Minimum horizontal area of the window well shall be 9 square feet, with a minimum horizontal projection and width of 36 inches. The area of the window well shall allow the emergency escape and rescue opening to be fully opened. Exception: The ladder or steps required by Section R310.2.1 shall be permitted to encroach a maximum of 6" into the required

R310.2.1 Ladder and steps. Window wells with a vertical depth greater than 44 inches shall be equipped with a permanently affixed ladder or steps usable with the window in the fully opened position. Ladders or steps required by this section shall not be required to comply with Sections R311.4 and R311.6. Ladders or rungs shall have an inside width of at least 12", shall project at least 3" from the wall and shall be spaced not more than 18" on center vertically for the full height of the window well.

R310.3 Bulkhead enclosures. Bulkhead enclosures shall provide direct access to the basement. The bulkhead enclosure with the door panels in the fully open position shall provide the minimum net clear opening required by Section R310.1.1. Bulkhead enclosures shall also comply with Section R311.5.8.2.

R310.4 Bars, grilles, covers and screens. Bars, grilles, covers and screens or similar devices are permitted to be placed over emergency escape and rescue openings, bulkhead enclosures, or window wells that serve such openings, provided the minimum net clear opening size compiles with Sections R310.1.1 to R310.1.3, and such devices shall be releasable or removable from the inside without the use of a key, tool or force greater than that which is required for normal operation of the escape and rescue opening.

STAIRWAYS R311.5:

R311.5.1 WIDTH. Stairways shall not be less than 36" in clear width at all points above the permitted handrail height and below the required headroom height.

R311.5.3.1 & R311.5.3.2 TREADS AND RISERS. The maximum riser height shall be 8 1/4" and the minimum tread depth shall be 9".

R311.5.2 HEADROOM. The minimum headroom in all parts of the stairway shall not be less than 6'-8" measured vertically from the sloped plane adjoining the tread nosing or from the floor surface of the landing or platform.

R311.5.3.2 WINDERS. The width of the tread at a point not more than 12" from the side where the treads are narrower is not less that 10" and the minimum width of any tread is not less than 6".

R311.5.6 Handrails Handrails shall be provided on at least one side of each continuous run of treads or flight with four or more risers.

R311.5.6.1 Height 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.

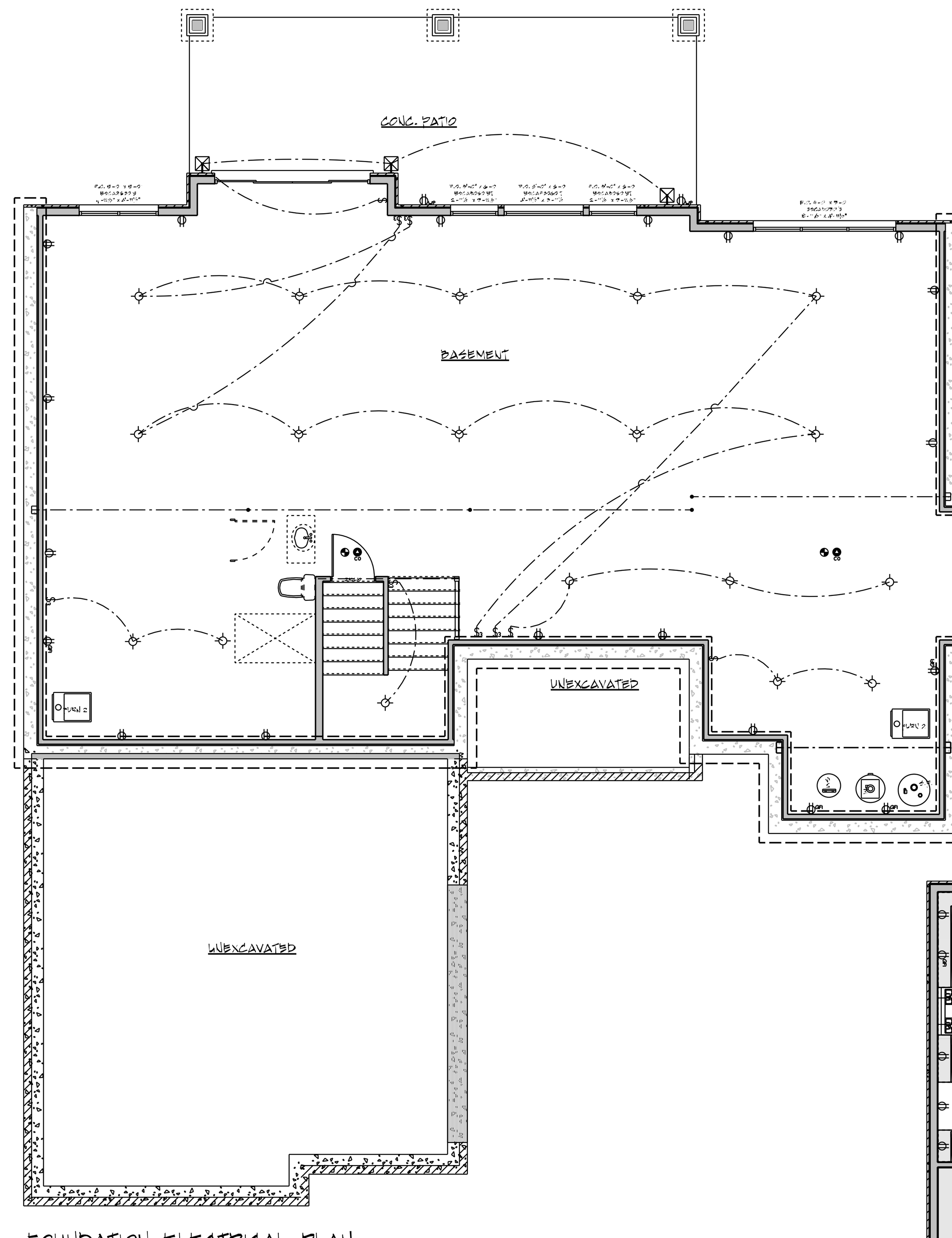
R311.5.6.2 Continuity Handrails for stairways shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point directly above lowest riser of the flight. Handrail ends shall be returned or shall terminate in newel posts or safety terminals. Handrails adjacent to a wall shall have a space of not less than 1 1/2 inch between the wall and the handrails.

R311.5.8 Circular stairways, spiral stairways, winders and bulkhead enclosure stairways shall comply with all requirements of Section R311.5 except as specified in sections R311.5.8.1 and R311.5.8..2

R311.5.8.1 SPIRAL STAIRS. The minimum width shall be 26" with each tread having a 7 1/2 inch width at 12" from the narrow edge.

R312.1 GUARDS REQUIRED. Porches, balconies or raised floor surfaces located more than 30" above the floor or grade below shall have guards not less than 36" in height. Open sides of stairs with a total rise of more than 30" above the floor or grade below shall have guards not less than 34" in height measured vertically form the nosing of the treads.

R312.2 GUARD OPENING LIMITATIONS. Required guards on open sides of stairways, raised floor areas, balconies and porches shall have intermediate rails or ornamental closures that do not allow passage of a sphere 4" in diameter.



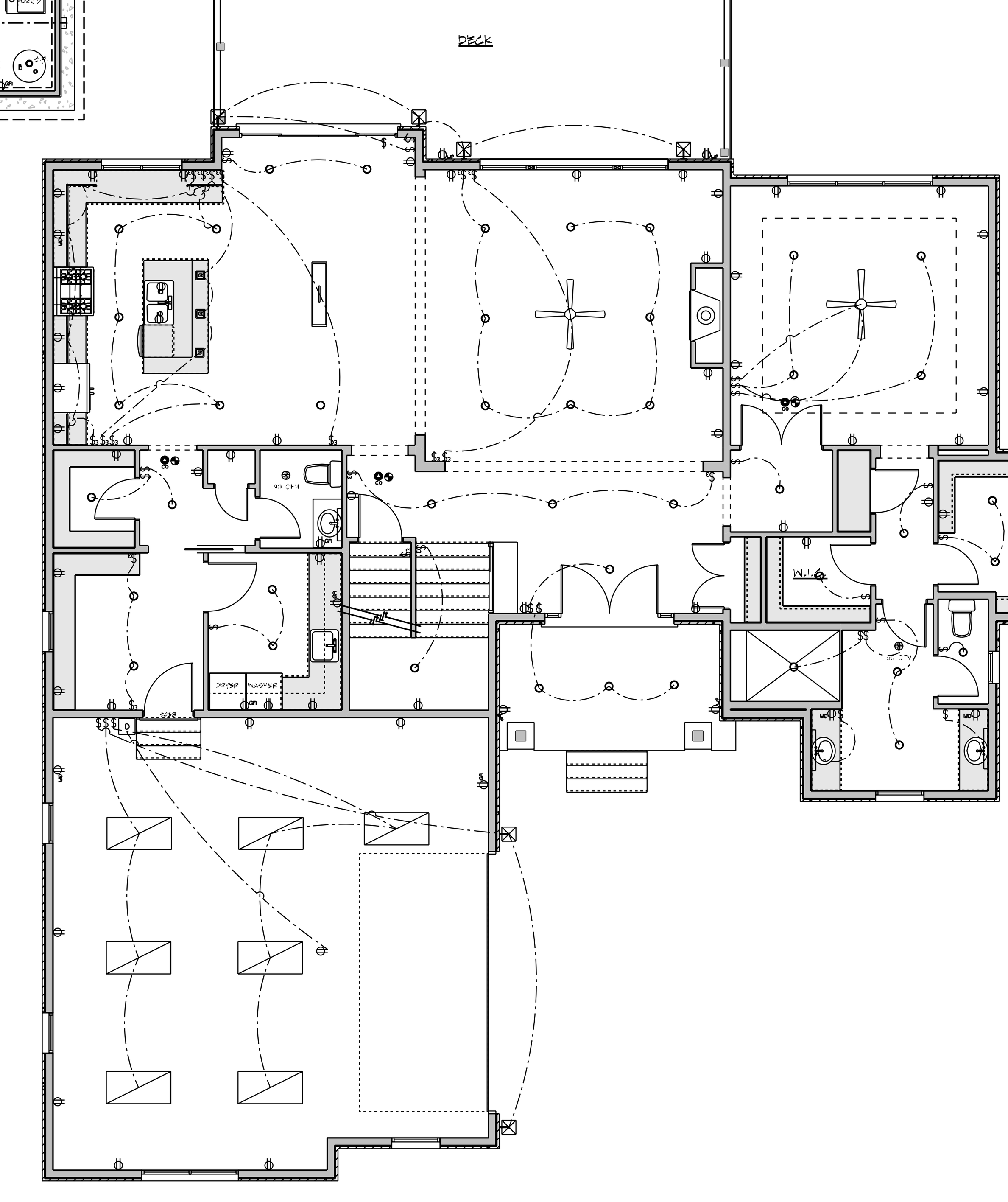
FOUNDATION ELECTRICAL PLAN

SMOKE DETECTORS

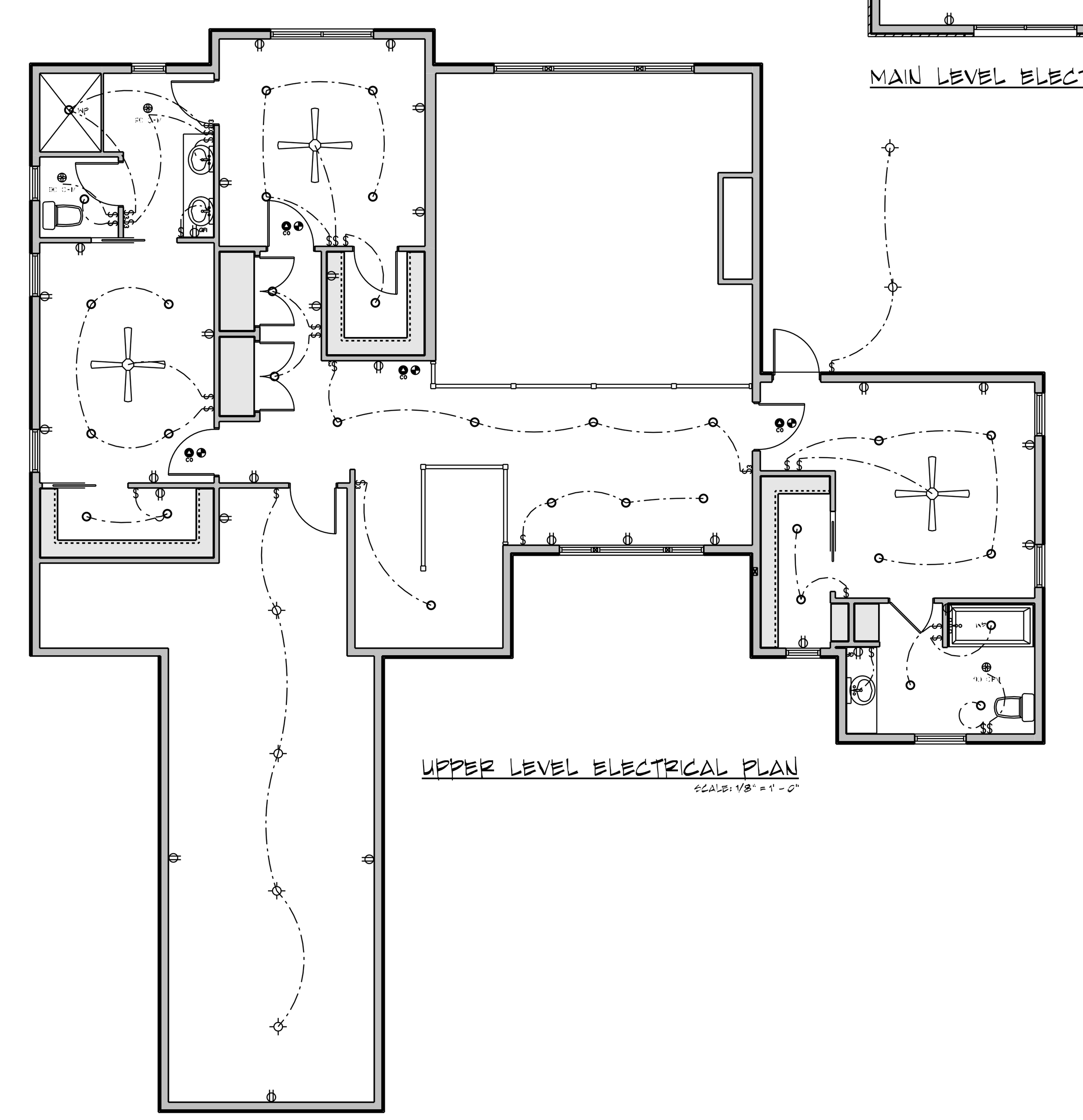
PROVIDE SMOKE DETECTORS IN EACH SLEEPING ROOM, OUTSIDE OF EACH SEPARATE SLEEPING AREA IN THE IMMEDIATE VICINITY OF THE BEDROOMS AND ON EACH ADDITIONAL STORY OF THE DWELLING, INCLUDING BASEMENTS. ALL SMOKE DETECTORS TO BE HARD-WIRED AND WITH BATTERY BACK-UP.

GENERAL ELECTRICAL NOTES

1. ELECTRICAL CONTRACTOR MUST VISIT JOB SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS. FAILURE TO DO SO WILL NOT CONSTITUTE GROUNDS FOR ANY 'EXTRAS'.
2. ALL ELECTRICAL WORK MUST CONFORM TO THE LATEST APPROVED EDITION OF THE NATIONAL ELECTRIC CODE AND ANY STATE OR LOCAL REGULATIONS.
3. THE ELECTRICAL CONTRACTOR SHALL OBTAIN ALL ELECTRICAL PERMITS, PAY ALL ASSOCIATED FEES AND ARRANGE FOR ALL ELECTRICAL INSPECTIONS. AT THE COMPLETION OF THE JOB, THE ELECTRICAL CONTRACTOR SHALL FURNISH A CERTIFICATE OF FINAL INSPECTION AND APPROVAL TO THE OWNER AND GENERAL CONTRACTOR.
4. THE ELECTRICAL CONTRACTOR MUST FIELD VERIFY ALL LOCATIONS AND HEIGHT REQUIREMENTS OF DEVICES, DISCONNECTS AND OTHER ELECTRICAL ITEMS WITH THE OWNER AND OTHER TRADES.
5. ALL ELECTRICAL MATERIALS SHALL BE NEW AND BEAR THE "UL" LABEL.
6. THE ELECTRICAL CONTRACTOR WILL FURNISH AND INSTALL ALL LIGHT FIXTURES AND LAMPS AS SHOWN ON THE DRAWINGS ACCORDING TO THE FIXTURE SCHEDULE, U.N.O. UNLESS OTHERWISE MARKED BY GENERAL CONTRACTOR.
7. ANY NEW ELECTRICAL PANELS SHALL BE PANEL BOARD CONFIGURATION AND WILL HAVE BOLT ON CIRCUIT BREAKERS.
8. ELECTRICAL PANEL SCHEDULE SHALL BE CLEARLY MARKED USING TYPEWRITTEN OR EQUAL IDENTIFICATION FOR EACH CIRCUIT.
9. ELECTRICAL CONTRACTOR MUST FIELD VERIFY THE LOCATION HEIGHT AND ELECTRICAL REQUIREMENTS OF ALL KITCHEN EQUIPMENT WITH THE OWNER AND EQUIPMENT SUPPLIER PRIOR TO COMMENCEMENT OF WORK.
10. CARBON MONOXIDE ALARMS MUST BE INSTALLED IN THE IMMEDIATE VICINITY OF SLEEPING AREAS IN UNITS WITH FUEL FIRED APPLIANCES AND/OR ATTACHED GARAGES.
11. RECESSED LIGHTS MUST BE INSULATION-CONTACT RATED AND SEALED AT CEILING PRESENTATION PER CODE.
12. A MINIMUM OF 50% OF ALL PERMANENTLY INSTALLED LIGHTING FIXTURES MUST USE CFL OR OTHER HIGH EFFICIENCY LAMPS.
13. ALL 125 VOLT, 15 & 20 AMP RECEPTACLES INSTALLED IN GARAGES AND UNFINISHED BASEMENTS MUST HAVE GROUND-FAULT CIRCUIT INTERRUPTER PROTECTION.
14. ARC-FAULT PROTECTION FOR BRANCH CIRCUITS SHALL INCLUDE ALL HABITABLE SPACES EXCEPT KITCHENS, INCLUDING HALLWAYS, CLOSETS, LAUNDRY ROOMS, BATHROOMS AND SIMILAR SPACES.
15. ALL 125 VOLT, 15 & 20 AMP RECEPTACLES INSTALLED IN DWELLING UNITS, ON THE OUTSIDE OF DWELLING UNITS AND IN ATTACHED GARAGES SHALL BE LISTED TAMPER RESISTANT RECEPTACLES.



MAIN LEVEL ELECTRICAL PLAN



UPPER LEVEL ELECTRICAL PLAN

BUILDER/OWNER INFO:

NOTE: BUILDER TO VERIFY ALL DRAWINGS AND DIMENSION BEFORE WORK BEGINS. BUILDER TAKES FULL RESPONSIBILITY OF DRAWINGS AND CONSTRUCTION OF BUILDING.

ALL CONTRACTORS AND ROOF SUPPLIER TO VERIFY SITE AND PRE-EXISTING STRUCTURES AND/OR GRADES

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HOUSE PLAN:

GRIESE RESIDENCE

TOTAL SQ.FT.: (HOUSE BILL 5819)	3290.00
UN-HABITAL SQ./FT.	1746.00
TOTAL HABITABLE SQ./FT.	1544.00
PROJECT NO.:	1443-2025
SCALE:	1/4" = 1' - 0"
ORIGINAL PLAN SET DATE:	04-14-2025
REVISION PLAN SET DATE:	5/12/2025
SHEET NO.:	A-6