### GENERAL STRUCTURAL NOTES (The following apply unless shown otherwise on the plans)

### DESIGN CRITERIA:

- 1. ALL MATERIALS, WORKMANSHIP, DESIGN, AND CONSTRUCTION SHALL CONFORM TO THE DRAWINGS, SPECIFICATIONS, THE 2021 OREGON RESIDENTIAL SPECIALTY CODE AND/OR 2022 OREGON STRUCTURAL SPECIALTY CODE WITH LOCAL BUILDING CODE AMENDMENTS.
- 2. DESIGN LOADING CRITERIA

FLOOR LIVE LOAD (ASSEMBLY, GYMNASIUM) ..... 100 PSF FLOOR LIVE LOAD (ASSEMBLY, PLATFORMS) 100 PSF MECHANICAL UNITS ..... WEIGHTS FURNISHED BY MANUFACTURER 97 MPH , EXPOSURE "B" EARTHQUAKE . . . . . . . . . . DESIGN CATEGORY D, SOIL TYPE D RISK CATEGORY 

- SEE PLANS FOR ADDITIONAL LOADING CRITERIA
- 3. STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS FOR BIDDING AND CONSTRUCTION. CONTRACTOR SHALL VERIFY DIMENSIONS AND CONDITIONS FOR COMPATIBILITY AND SHALL NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- 4. CONTRACTOR SHALL PROVIDE TEMPORARY BRACING FOR THE STRUCTURE AND STRUCTURAL COMPONENTS UNTIL ALL FINAL CONNECTIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE PLANS.
- 5. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAFETY PRECAUTIONS AND THE METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES REQUIRED TO PERFORM THE CONTRACTORS WORK. THE STRUCTURAL ENGINEER HAS NO OVERALL SUPERVISORY AUTHORITY OR ACTUAL AND/OR DIRECT RESPONSIBILITY FOR THE SPECIFIC WORKING CONDITIONS AT THE SITE AND/OR FOR ANY HAZARDS RESULTING FROM THE ACTIONS OF ANY TRADE CONTRACTOR. THE STRUCTURAL ENGINEER HAS NO DUTY TO INSPECT, SUPERVISE, NOTE, CORRECT, OR REPORT ANY HEALTH OR SAFETY DEFICIENCIES OF THE OWNER, CONTRACTORS, OR OTHER ENTITIES OR PERSONS AT THE PROJECT SITE.
- 6. CONTRACTOR-INITIATED CHANGES SHALL BE SUBMITTED IN WRITING TO THE ARCHITECT AND STRUCTURAL ENGINEER FOR APPROVAL PRIOR TO FABRICATION OR CONSTRUCTION. CHANGES SHOWN ON SHOP DRAWINGS ONLY WILL NOT SATISFY THIS REQUIREMENT.
- 7. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW AND APPROVAL BY THE ARCHITECT AND THE STRUCTURAL ENGINEER.
- 8. ALL STRUCTURAL SYSTEMS WHICH ARE TO BE COMPOSED OF COMPONENTS TO BE FIELD ERECTED SHALL BE SUPERVISED BY THE SUPPLIER DURING MANUFACTURING, DELIVERY, HANDLING, STORAGE AND ERECTION IN ACCORDANCE WITH INSTRUCTIONS PREPARED BY THE SUPPLIER.

### <u>GEOTECHNICAL</u> (N/A)

9. FOUNDATION NOTES: SUBGRADE PREPARATION INCLUDING DRAINAGE, EXCAVATION COMPACTION, AND FILLING REQUIREMENTS, SHALL CONFORM STRICTLY WITH RECOMMENDED PRACTICES IN THE SUBDIVISION GIVEN OR AS DIRECTED BY THE SOILS ENGINEER. FOOTINGS SHALL BEAR ON SOLID UNDISTURBED EARTH AT LEAST 18" BELOW LOWEST ADJACENT FINISHED GRADE. FOOTING DEPTHS/ELEVATIONS SHOWN ON PLANS (OR IN DETAILS) ARE MINIMUM AND FOR GUIDANCE ONLY; THE ACTUAL ELEVATIONS OF FOOTINGS MUST BE ESTABLISHED BY THE CONTRACTOR IN THE FIELD WORKING WITH THE TESTING LAB AND SOILS ENGINEER. BACKFILL BEHIND ALL RETAINING WALLS WITH FREE DRAINING GRANULAR FILL AND PROVIDE FOR SUBSURFACE DRAINAGE.

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Per 2021 ORSC/2022 OSSC, no geotechnical report available. COEFFICIENT OF FRICTION (FACTOR OF SAFETY OF 1.5 INCLUDED). . . . . . 0.25 <u>CONCRETE</u>

10. CONCRETE SHALL BE MIXED, PROPORTIONED, CONVEYED AND PLACED IN ACCORDANCE WITH OSSC/IBC SECTIONS 1904 AND 1905, AND ACI 301 INCLUDING TESTING PROCEDURES. STRENGTHS AT 28 DAYS AND MIX CRITERIA SHALL BE AS FOLLOWS:

TYPE OF CONSTRUCTION 28 DAY STRENGTH-(f'c) MAX. SLUMP MIN. CEMENT/C.Y. WALLS, SLABS ON GRADE 2,500 PSI 5" 5–1/2 SACKS STAIR LANDINGS AND TREADS MIXES SHALL BE PROPORTIONED NOT TO EXCEED THE MAX SLUMPS INDICATED

- 11. THE MINIMUM AMOUNTS OF CEMENT MAY BE CHANGED IF A CONCRETE PERFORMANCE MIX IS SUBMITTED TO THE STRUCTURAL ENGINEER AND THE BUILDING DEPARTMENT FOR APPROVAL TWO WEEKS PRIOR TO PLACING ANY CONCRETE. THE PERFORMANCE MIX SHALL INCLUDE THE AMOUNTS OF CEMENT, FINE AND COARSE AGGREGATE, WATER AND ADMIXTURES AS WELL AS THE WATER CEMENT RATIO, SLUMP, CONCRETE YIELD AND SUBSTANTIATING STRENGTH DATA IN ACCORDANCE WITH OSSC 2019 1905.3. THE USE OF A PERFORMANCE MIX REQUIRES BATCH PLANT INSPECTION, THE COST OF WHICH SHALL BE PAID BY THE GENERAL CONTRACTOR. REVIEW OF MIX SUBMITTALS BY THE ENGINEER OF RECORD INDICATES ONLY THAT INFORMATION PRESENTED CONFORMS GENERALLY WITH CONTRACT DOCUMENTS. CONTRACTOR OR SUPPLIER MAINTAINS FULL RESPONSIBILITY FOR SPECIFIED PERFORMANCE.
- ALL CONCRETE WITH SURFACES EXPOSED TO STANDING WATER SHALL BE AIR-ENTRAINED WITH AN AIR-ENTRAINING AGENT CONFORMING TO ASTM C260, C494, and C618.
- 12. REINFORCING STEEL SHALL CONFORM TO ASTM A615 (INCLUDING SUPPLEMENT S1), GRADE 60, fy = 60,000 PSI. EXCEPTIONS: ANY BARS SPECIFICALLY SO NOTED ON THE DRAWINGS SHALL BE GRADE 40, fy = 40,000 PSI. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185. SPIRAL REINFORCEMENT SHALL BE PLAIN WIRE CONFORMING TO ASTM A615, GRADE 60, fy = 60,000 PSI.
- 13. REINFORCING STEEL SHALL BE DETAILED (INCLUDING HOOKS AND BENDS) IN ACCORDANCE WITH ACI 315 AND 318, LATEST EDITION. LAP ALL REINFORCEMENTS IN ACCORDANCE WITH "THE REINFORCING SPLICE AND DEVELOPMENT LENGTH SCHEDULE." PROVIDE CORNER BARS AT ALL WALL AND FOOTING INTERSECTIONS. LAP ADJACENT MATS OF WELDED WIRE FABRIC A MINIMUM OF 8" AT SIDES AND ENDS.
- NO BARS PARTIALLY EMBEDDED IN HARDENED CONCRETE SHALL BE FIELD BENT UNLESS SPECIFICALLY SO DETAILED OR APPROVED BY THE STRUCTURAL ENGINEER.
- 14. CONCRETE PROTECTION (COVER) FOR REINFORCING STEEL SHALL BE AS FOLLOWS: FOOTINGS AND OTHER UNFORMED SURFACES CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH . . . SLABS AND WALLS (INT. FACE). . . .GREATER OF BAR DIAMETER PLUS 1/8" OR 3/4"
- 15. CAST-IN-PLACE CONCRETE: SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND DIMENSIONS OF DOORS AND FOR ALL FLOOR SLOPES.
- EXISTING CONDITIONS THIS OLD CHURCH HAS BEEN PREVOUSLY CONVERTED INTO ASSEMBLY/GYM AREA. ENGINEER PERFORMED SITE VISIT/INSPECTION ON 3/18/2024.

### SPECIAL INSPECTIONS (N/A)

- 16. SPECIAL INSPECTIONS SHALL BE CONDUCTED BY A QUALIFIED SPECIAL INSPECTOR APPROVED BY THE BUILDING OFFICIAL AND UNDER SUPERVISION OF OR PROFESSIONAL ENGINEER. \* CONCRETE SPECIAL INSPECTION
- \* SPECIAL INSPECTION FOR EPOXIED DOWELS
- 17. INSPECTION REPORTS SHALL BE FURNISHED TO THE BUILDING OFFICIAL. FINAL INSPECTION SHALL BE SUBMITTED TO THE BUILDING OFFICIAL, PRIOR TO FINAL COUNTY/CITY INSPECTION AND UPON COMPLETION OF ALL SPECIAL STRUCTURAL INSPECTIONS.
- 18. COPIES OF REPORTS BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD ON A REGULAR BASIS. A SEALED COPY OF THE SPECIAL STRUCTURAL INSPECTION CERTIFICATE OF COMPLIANCE SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD AND TO THE BUILDING OFFICIAL PRIOR TO BEGINNING OF ANY SPECIAL STRUCTURAL INSPECTIONS.

### GENERAL FRAMING NOTES

- 19. FRAMING LUMBER SHALL BE KILN DRIED OR MC-19, AND GRADED AND MARKED IN CONFORMANCE WITH W.C.L.B. STANDARD GRADING RULES FOR WEST COAST LUMBER NO. FURNISH TO THE FOLLOWING MINIMUM STANDARDS:
- (2X & 3X MEMBERS) DOUGLAS FIR-LARCH, NO. 2 JOISTS AND BEAMS: MINIMUM BASE VALUE, Fb = 900 PSI
- (4X MEMBERS OR LARGER) DOUGLAS FIR-LARCH, NO. 1 MINIMUM BASE VALUE, Fb = 1000 PSI
- (4X MEMBERS OR LARGER) POSTS MINIMUM BASE VALUE, Fc = 1000 PSI
- STUDS, PLATES & MISC. FRAMING: MINIMUM BASE VALUE, Fb = 900 PSI
- 20. WHERE REQUIRED BY ORSC R317.1, ALL LUMBER SHALL BE GRADE #2 DOUGLAS-FIR, LARCH OR BETTER, AND SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AMERICAN WOOD-PRESERVERS' ASSOCIATION STANDARDS.
- DECK SURFACE AND TRIM MATERIALS OF REDWOOD, CEDAR OR OTHER WOOD WITH A NATURAL RESISTANCE TO DECAY DOES NOT REQUIRE PRESSURE TREATMENT. THE LEVEL OF TREATMENT IS AS FOLLOWS: DECKING MATERIAL, RAILING, JOIST AND BEAMS MUST BE TREATED TO A CATEGORY UC3B.
- POSTS AND OTHER WOOD LOCATED ON, IN, OR IN CONTACT WITH THE GROUNDS MUST BE A CATEGORY UC4B. C. ANY WOOD LESS THAN SIX (6") INCHES ABOVE THE GROUND OR IN CONTACT WITH CONCRETE MUST BE A CATEGORY UC4A.
- HARDWOOD AND PLASTIC OR COMPOSITE DECKING PRODUCTS MAY BE SUBSTITUTED FOR CONVENTIONAL WOOD DECKING, BUT INSTALLATION AND SPAN LENGTHS MUST BE IN STRICT ACCORDANCE WITH THE PRODUCT MANUFACTURER'S LISTING AND INSTRUCTIONS.
- 21. ALL HARDWARE BRACKETS, POST CAPS, HANGERS, HURRICANE TIES, ETC SHALL BE BY SIMPSON STRONG TIE AND INSTALLED AS MANUFACTURER'S RECOMMENDATION.
- 22. UNLESS SHOWN OTHERWISE ON PLANS, TYPICAL DECKING SHALL BE 1X4, 2X4, OR 2X6 BOARDS. ATTACH DECKING TO EACH JOIST WITH MIN (2) 10d NAILS OR (2) #8 SCREWS. DECKING MUST HAVE SPAN LENGTH SUCH THAT EACH BOARD BEARS ON A MIN OF TWO JOISTS.
- 23. PLYWOOD SHEATHING SHALL BE GRADE C-D, EXTERIOR GLUE OR STRUCTURAL II, EXTERIOR GLUE IN CONFORMANCE WITH ORSC, CHAPTER 6 REQUIREMENTS FOR SHEARWALLS AND DIAPHRAGMS, NDS OR OSSC, CHAPTER 23 REQUIREMENTS. ORIENTED STRAND BOARD OF EQUIVALENT THICKNESS, EXPOSURE RATING AND PANEL INDEX MAY BE USED IN LIEU OF PLYWOOD.
- ROOF SHEATHING SHALL BE 5/8" (NOMINAL) WITH SPAN RATING 32/16. FLOOR SHEATHING SHALL BE 3/4" (NOMINAL) WITH SPAN RATING 48/24.
- WALL SHEATHING SHALL BE 1/2" (NOMINAL) WITH SPAN RATING 24/0 REFER TO WOOD FRAMING NOTES BELOW FOR TYPICAL NAILING REQUIREMENTS. 24. WOOD FASTENERS
- A. NAIL SHALL BE COMMON NAILS AND GALVANIZED, HOT-DIPPED GALVANIZED OR STAINLESSS STEEL OR EQUIVALENT SCREWS. SIZES SPECIFIED ON DRAWINGS ARE BASED ON THE FOLLOWING SPECIFICATIONS:

SIZE	LENGTH	DIAMETER	
6d	2"	0.113"	
8d	2-1/2"	0.131"	
10d	3"	0.148"	
12d	3-1/4"	0.148"	
16d BOX	3-1/2"	0.135"	
	DDADACEC THE	LICE OF ALTERNATE NAUC	THEN

IF CONTRACTOR PROPOSES THE USE OF ALTERNATE NAILS, THEY SHALL SUBMIT NAIL SPECIFICATIONS TO THE STRUCTURAL ENGINEER (PRIOR TO CONSTRUCTION) FOR REVIEW AND APPROVAL.

- B. NAILS PLYWOOD (APA RATED SHEATHING) FASTENERS TO FRAMING SHALL BE DRIVEN FLUSH TO FACE OF SHEATHING WITH NO COUNTERSINKING PERMITTED.
- 25. WOOD FRAMING NOTES--THE FOLLOWING APPLY UNLESS OTHERWISE SHOWN ON THE PLANS:
- ALL WOOD FRAMING DETAILS NOT SHOWN OTHERWISE SHALL BE CONSTRUCTED TO THE MINIMUM STANDARDS OF THE ORSC OR OSSC. MINIMUM NAILING, UNLESS OTHERWISE NOTED, SHALL CONFORM TO OSSC, TABLE 2304.9.1
- B. WALL FRAMING: REFER ARCHITECTURAL DRAWINGS FOR THE SIZE OF ALL WALLS. ALL STUDS SHALL BE SPACED AT 16" O.C. UNO. TWO STUDS MINIMUM SHALL BE PROVIDED AT THE END OF ALL WALLS AND AT EACH SIDE OF ALL OPENINGS, AND AT BEAM OR HEADER BEARING LOCATIONS. TWO 2x8 HEADERS SHALL BE PROVIDED OVER ALL OPENINGS NOT OTHERWISE NOTED. SOLID BLOCKING FOR WOOD COLUMNS SHALL BE PROVIDED THROUGH FLOORS TO SUPPORTS BELOW. PROVIDE CONTINUOUS SOLID BLOCKING AT MID-HEIGHT OF ALL STUD WALLS OVER 10'-0" IN HEIGHT.

ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND A DOUBLE TOP PLATE. END NAIL TOP PLATE TO EACH STUD WITH TWO 16d NAILS, AND TOENAIL OR END NAIL EACH STUD TO BOTTOM PLATE WITH TWO 16d NAILS. FACE NAIL DOUBLE TOP PLATE WITH 16d @ 12" O.C. AND LAP MINIMUM 4'-0" AT JOINTS AND PROVIDE EIGHT 16d NAILS @ 4" O.C. EACH SIDE JOINT.

ALL STUD WALLS SHALL HAVE THEIR LOWER WOOD PLATES ATTACHED TO WOOD FRAMING BELOW WITH 16d NAILS @ 12" O.C. STAGGERED OR BOLTED TO CON-CRETE WITH 5/8" DIAMETER ANCHOR BOLTS (WITH 7" MINIMUM EMBEDMENT) 4'-0" O.C. UNLESS INDICATED OTHERWISE. INDIVIDUAL MEMBERS OF BUILT-UP POSTS SHALL BE NAILED TO EACH OTHER WITH 16d @ 12" O.C. STAGGERED. WHEN NOT OTHERWISE NOTED, PROVIDE GYPSUM WALLBOARD ON INTERIOR SURFACES NAILED TO ALL STUDS, TOP AND BOTTOM PLATES, AND BLOCKING WITH NAILS @ 7" O.C. NAIL 1/2" GWB WITH 5d COOLER NAILS AND 5/8" GWB WITH 6d COOLER NAILS. PROVIDE 1/2" (NOMINAL) APA RATED SHEATHING (SPAN RATING 24/0) ON EXTERIOR SURFACES NAILED AT ALL PANEL EDGES (BLOCK UN-SUPPORTED EDGES), AND TOP AND BOTTOM PLATES WITH NAILS @ 6" O.C. AND TO ALL INTERMEDIATE STUDS AND BLOCKING WITH NAILS @ 12" O.C. ALLOW 1/8" SPACING AT ALL PANEL EDGES AND ENDS.

## NAILING SCHEDULE (as per OSSC Table 2304.10.1):

DESCRIPTION	_	GALV.	COMMON	NAILS	

### ROOF/CEILING:

ROOFING SHINGLES RAFTER OR TRUSS/TOP PLATE (TOE-NAILED) RAFTER /RIDGE, VALLEY, HIP RAFTERS (TOE-NAILED) CEILING JOIST/TOP PLATE (TOE-NAILED) CEILING JOIST/LAPS OVER PARTITION CEILING JOIST/ATTACHED TO PARALLEL RAFTER COLLAR TIE TO RAFTER (FACE-NAILED)

BLOCK TO RAFTER (TOENAILED) BLOCK TO CEILING JOIST, TO TOP PLATE (TOENAILED) RIM (FASCIA) TO RAFTER (END-NAILED) GYPSUM BOARD - CEILING

### WALL: GYPSUM BOARD - WALL

STRUCTURAL SHEATHNG TOP PLATE TO TOP PLATE (FACE-NAILED) TOP PLATE AT INTERSECTIONS (FACE-NAILED) STUD TO STUD (FACE NAILED) BUILT-UP HEADER (FACE-NAILED) TOP/BOTTOM PLATE TO STUD (END-NAILED) TOP BOTTOM PLATE TO STUD (TOE-NAILED) BOTTOM PLATE TO FLOOR JOIST/RIM

### FLOOR: STRUCTURAL T&G SUBFLOOR - GLUED JOIST TO SILL/PLATE/GIRDER (TOE-NAILED) BRIDGING TO JOIST (TOE-NAILED)

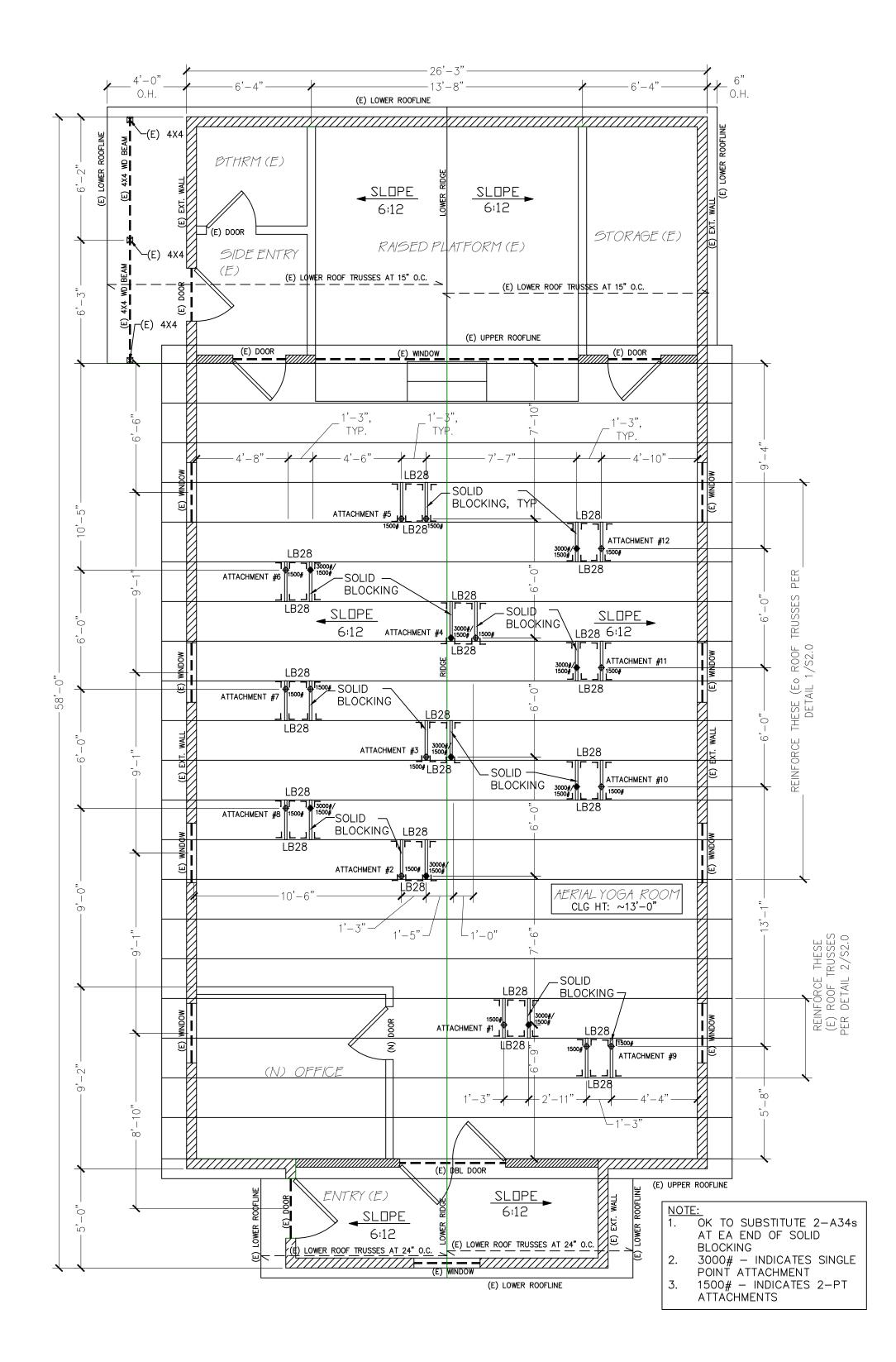
BLOCKING TO JOIST (TOE-NAILED) BLOCKING TO SILL OR TOP PLATE (TOE-NAILED) LEDGER STRIP TO BEAM (FACE-NAILED) JOIST ON LEDGER TO BEAM BAND JOIST TO JOIST (END-NAILED)

I-JOISTS IF APPLICABLE TO BE IN CONFORMANCE WITH MANUFACTURER'S INSTRUCTIONS.

DOUGLAS FIR-LARCH, NO. 1

DOUGLAS FIR-LARCH, NO. 2

	NAIL SPACING
6 4-10d(box) 4-10d(box) 3-8d 3-16d see Table 2308.7.3.1	ROOFING NAILS PER SHINGLE PER RAFTER/TRUSS PER RAFTER/TRUSS PER JOIST EACH LAP
4-10d 2-8d 2-8d 3-16d 5d COOL	EACH END EACH END EACH END 6" O.C. EDGE, 12" O.C. FIELD
5d COOL see Shearwall Schedule 2-16d 4-16d 2-16d 16d 2-16d 4-10d 2-16d	6"O.C. EDGE, 12"O.C. FIELD 16"O.C. JOINTS – EACH SIDE 24"O.C. 12"O.C. ALONG EDGES PER STUD PER STUD PER FOOT
8d 4-8d 2-8d 2-8d 10d 3-16d use Hangers as per plan 3-16d	6"O.C. EDGE, 12"O.C. FIELD PER JOIST EACH END EACH END 6"O.C. EACH JOIST PER JOIST





# DRAWING SCHEDULE

S1.0	GSN & ROOF FRAMING PLAN
S2.0	BUILDING SECTION, AND STR DE



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SET ISSUED: 6/25/2024 **REVISIONS:** Job No: 2024-0004 Scale: AS-SHOWN Drawn by: MS Checked by: MS Sheet No:



