GENERAL NOTES

REV. #1

1. THESE DRAWINGS & SPECIFICATIONS ("PLANS") BY WOODHOUSE POST & BEAM HOMES ("WOODHOUSE") HAVE BEEN PREPARED IN ACCORDANCE WITH THE COLORADO RESIDENTIAL CODE 2021, 2021 IECC, 2021 IWUIC, 2023 NEC, AND 2023 COLORADO SOLAR AND ELECTRIC READY CODE. ALL CONSTRUCTION SHALL ALSO CONFORM TO APPLICABLE LOCAL & CO STATE BUILDING ORDINANCES, LAWS, AND CONSTRUCTION CODES.
2. IT IS THE RESPONSIBILITY OF EACH CONTRACTOR AND SUB-CONTRACTOR TO BE KNOWLEDGEABLE OF CODE AND ORDINANCE PROVISIONS AFFECTING THE CONSTRUCTION, AND TO PERFORM ALL WORK IN ACCORDANCE WITH THE APPLICABLE CODES AND ORDINANCES, WHETHER OR NOT EACH REQUIREMENT IS SPECIFICALLY NOTED ON THESE PLANS.
3. THESE PLANS ARE INTENDED TO CONVEY APPROPRIATE GENERAL INFORMATION NECESSARY FOR CONSTRUCTION OF THE HOME DEPICTED, WITH THE EXCEPTION OF MECHANICAL AND ELECTRICAL SYSTEMS. THE PLANS INCLUDE CONSTRUCTION TO BE PERFORMED BY WOODHOUSE AND BY OTHERS. THE LIMIT OF RESPONSIBILITY FOR CONSTRUCTION TO BE PERFORMED BY WOODHOUSE SHALL BE IN ACCORDANCE WITH THE HOUSE PACKAGE PURCHASE AGREEMENT ("AGREEMENT") BETWEEN WOODHOUSE AND THE CLIENT. THESE PLANS DO NOT SHOW, INDICATE OR SPECIFY EVERY COMPONENT OF THE CONSTRUCTION; THEY ARE INTENDED TO BE UTILIZED BY EXPERIENCED PROFESSIONAL CONTRACTORS, KNOWLEDGEABLE OF GENERAL CONSTRUCTION PROCESSES, REQUIREMENTS, METHODS AND TECHNIQUES, AND WITH TIMBER FRAME CONSTRUCTION METHODS AND TECHNIQUES. THERE ARE NO WARRANTIES STATED OR IMPLIED IN THE USE OF THESE PLANS, ALL WARRANTIES ARE CONTAINED IN THE AGREEMENT BETWEEN WOODHOUSE AND THE CLIENT.
4. ALL MANUFACTURED AND/OR FABRICATED ITEMS, MATERIALS, AND ASSEMBLIES SHALL BE INSTALLED AND INCORPORATED INTO THE CONSTRUCTION IN ACCORDANCE WITH THE MANUFACTURER'S AND/OR FABRICATORS SPECIFICATIONS AND INSTALLATION INSTRUCTIONS. ALL MATERIALS SHALL BE DELIVERED, STORED AND HANDLED IN ACCORDANCE WITH THE MANUFACTURER'S AND/OR FABRICATOR'S RECOMMENDATIONS, PROTECTED AGAINST CONTACT WITH WET SURFACES, EXPOSURE TO WEATHER, BREAKAGE AND DAMAGE. ALL MATERIALS SHALL BE PROPERLY PROTECTED FROM EXPOSURE TO WEATHER DURING CONSTRUCTION, INCLUDING PARTIALLY COMPLETED STRUCTURES, AND SHALL BE IMMEDIATELY PROTECTED WITH FINISH, ROOFING, AND SIDING MATERIALS UPON COMPLETION OF THE TIMBER FRAME STRUCTURE AND PANEL INSTALLATION.
5. THE CLIENT AND/OR THE CLIENT'S CONTRACTORS AND SUB-CONTRACTORS SHALL VERIFY ALL DIMENSIONS AND INFORMATION PROVIDED ON THE PLANS AS IT APPLIES TO THEIR WORK. NOTIFY WOODHOUSE OF ANY DISCREPANCIES OR INCOMPLETE INFORMATION, OR FOR INTERPRETATION AND CLARIFICATION OF DRAWINGS, SPECIFICATIONS AND DETAILS IN QUESTION PRIOR TO PROCEEDING WITH THE WORK. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DIMENSIONS. INTERIOR COMPONENTS, FIXTURES, CABINETS, AND ACCESSORIES SHOWN ARE INDICATED ON THE PLANS AS A GRAPHIC REPRESENTATION OF A STANDARD SIZE. IT IS THE RESPONSIBILITY OF THE CLIENT AND/OR THE CLIENT'S CONTRACTORS TO VERIFY SIZES, INSTALLATION AND ROUGH-IN DIMENSIONS AND REQUIREMENTS.
6. WOODHOUSE SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, PROCEDURES, SEQUENCES, SCHEDULES, OR SAFETY PRECAUTIONS OF WORK AND WORKERS NOT EMPLOYED BY WOODHOUSE.

FOUNDATIONS

1. PROPER CONSTRUCTION OF THE FOUNDATION SYSTEM IS ABSOLUTELY CRITICAL TO THE CORRECT AND SUCCESSFUL CONSTRUCTION OF THE TIMBER FRAME STRUCTURE. THE FOUNDATION CONTRACTOR SHALL ASSURE THAT THE FOUNDATION IS CONSTRUCTED ACCURATELY, IS SQUARE AND LEVEL, AND THAT SUPPORTS FOR THE TIMBER FRAME SYSTEM ARE STRUCTURALLY ADEQUATE AND PROPERLY LOCATED.
2. ALL FOOTINGS AND FOUNDATIONS SHALL BEAR ON SOLID, UNDISTURBED SUB-SOIL, BELOW FROST DEPTH AS REQUIRED BY THE APPLICABLE CODE. WOODHOUSE SHALL NOT BE RESPONSIBLE TO DETERMINE THE SAFE SOIL BEARING CAPACITY, NOR FOR THE DESIGN OF ENGINEERED FILL OR OTHER SUPPORT SYSTEM, IF REQUIRED.
3. NO FOUNDATIONS SHALL BE PLACED ON FROZEN SOIL OR STANDING WATER.
4. MANUFACTURED, PRE-CAST, OR PRE-FABRICATED FOUNDATION SYSTEMS SHALL BE MANUFACTURED AND INSTALLED IN ACCORDANCE WITH APPLICABLE BUILDING CODES AND THE MANUFACTURER'S SPECIFICATIONS.
5. POURED-IN-PLACE CONCRETE FOOTING AND WALL SYSTEMS SHALL BE MINIMUM 3,000 PSI, ULTIMATE COMPRESSIVE STRENGTH. CONCRETE SHALL BE FULLY FORMED TO THE DIMENSIONS GIVEN. CONCRETE MATERIALS AND WORK SHALL CONFORM TO OR EXCEED THE FOLLOWING APPLICABLE ACI (AMERICAN CONCRETE INSTITUTE) PUBLICATIONS:
   a. ACI-301 SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDING
   b. ACI-305 RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING
   c. ACI-306 RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING
   d. ACI-315 MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE
   e. ACI-318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE
   f. ACI-347 RECOMMENDED PRACTICE FOR CONCRETE FORMWORK
6. SEE NEXT SECTION FOR MASONRY FOUNDATION CONSTRUCTION.
7. FOUNDATION AND FOOTING REINFORCING STEEL SHALL CONFORM TO ASTM A-615, GRADE 60.
8. SLAB REINFORCING SHALL CONFORM TO ASTM A-185 OR ASTM C-94, C-116 & C-1018.
9. SEAL ALL FOUNDATION AND SLAB PENETRATIONS AND JOINTS. INSTALL RADON VENTILATION SYSTEM IF REQUIRED BY CODE OR LOCAL SITE CONDITIONS.

MASONRY

1. MASONRY CONSTRUCTION SHALL CONFORM TO OR EXCEED THE FOLLOWING APPLICABLE STANDARDS:
   a. ACI-530.1 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES
   b. CONCRETE MASONRY UNITS: ASTM C-90
   c. MORTAR: ASTM C-270
   d. FACE BRICK: ASTM C-216
   e. JOINT REINFORCEMENT: ASTM A-951
2. CONSTRUCT ALL MASONRY FOUNDATION WALLS WITH A CONTINUOUS BOND BEAM TOP COURSE WITH (2) #4 REBAR CONTINUOUS.
3. GROUT MASONRY CORES SOLID TO FOOTING AT ALL BEAM POCKETS AND BEARING LOCATIONS, MINIMUM 16" WIDTH WITH #4 REBAR VERTICAL IN EACH GROUTED CORE
4. ATTACH MASONRY VENEER TO WALLS WITH CORROSION RESISTANT 22 GA. 1" WIDE CORRUGATED SHEET METAL TIES SPACED NOT MORE THAN 24" O.C. AND MAXIMUM 3 S.F. OF WALL AREA. FASTENERS TO STUD WALL SHALL BE CORROSION RESISTANT.
5. PROVIDE AND INSTALL FLASHING AND WEEP HOLES 24" O.C. IN ALL EXTERIOR MASONRY WALL VENEERS, AT THE BASE OF THE WALL AND ABOVE ALL WALL OPENINGS (DOORS, WINDOWS, ETC.). EXTEND FLASHING UP MINIMUM 8" BEHIND VENEER AND LAP UNDER WALL WRAP, EXTEND FLASHING 1/8" TO 1/4" BEYOND FACE OF WALL VENEER ON EXTERIOR.

STRUCTURAL STEEL

1. ALL STEEL BEAMS, COLUMNS, connections SHALL BE A36, NEW STRUCTURAL STEEL.
2. BOLT OR WELD ALL BEAM, COLUMN, AND PLATE CONNECTIONS IN ACCORDANCE WITH AISC (AMERICAN INSTITUTE OF STEEL CONSTRUCTION).
3. PROVIDE MINIMUM 8" X 8" X 1/4" BASE PLATE ON ALL STEEL COLUMNS.
4. PROVIDE MINIMUM 4" X 8" X 1/4" CAP PLATE ON ALL STEEL COLUMNS, FASTEN TO BEAMS.
5. EXTERIOR STEEL ELEMENTS EXPOSED TO WEATHER TO BE HOT DIPPED GALVANIZED.

GENERAL CARPENTRY AND LIGHT FRAMING

1. SAWN LUMBER (NON-TIMBER FRAME) JOISTS, RAFTERS AND HEADERS SHALL BE NO. 2, OR BETTER LUMBER MEETING THE FOLLOWING MINIMUM SPECIFICATIONS:
   a. FB = 1,000 PSI NORMAL DURATION, 1,150 PSI SNOW LOADING
   b. E = 1,200,000 PSI, FOR MEMBERS IN REPETITIVE USAGE SPACED NOT MORE THAN 24" O.C.

SAWN JOISTS SHALL BE DOUBLED UNDER ALL PARALLEL PARTITIONS AND AROUND FRAMED OPENINGS. INSTALL SOLID BRIDGING SAME SIZE AS JOIST UNDER PERPENDICULAR PARTITIONS; INSTALL DIAGONAL CROSS BRIDGING AT CENTER OF SPAN OF ALL JOISTS, MAXIMUM 8'-0" O.C.

2. RIDGE BOARDS, VALLEY AND HIP RAFTERS SHALL BE MINIMUM1-3/4" ENGINEERED LUMBER, MINIMUM DEPTH 2" LARGER THAN ADJACENT RAFTERS.
3. STUDS AND WALL PLATES SHALL BE LOCALLY COMMERCIALLY AVAILABLE SOFTWOOD SPECIES, STUD GRADE.
4. ENGINEERED I- JOISTS AND LAMINATED VENEER LUMBER (LVL) BEAMS AND HEADERS SHALL MEET THE REQUIREMENTS OF ANSI (AMERICAN NATIONAL STANDARDS INSTITUTE) AND THE APA (AMERICAN PLYWOOD ASSOCIATION) - THE ENGINEERED WOOD ASSOCIATION STANDARDS, APPROVED BY THE APPLICABLE CONSTRUCTION CODES. FLOOR SYSTEMS SHALL BE DESIGNED FOR THE LIVE LOAD AS SPECIFIED AND ACTUAL DEAD LOAD, FLOOR JOIST DEFLECTION NOT TO EXCEED L/480. THE MANUFACTURER SHALL FURNISH LAYOUT DRAWINGS AND INSTALLATION DETAILS.
5. GLU-LAM BEAMS AND COLUMNS SHALL MEET THE REQUIREMENTS OF ANSI A190.1 AND APA - THE ENGINEERED WOOD ASSOCIATION STANDARDS. GLU-LAM BEAMS SHALL MEET THE FOLLOWING SPECIFICATIONS: FB = 2,400 PSI E = 1,800,000 PSI. GLU-LAM COLUMNS SHALL MEET THE FOLLOWING SPECIFICATIONS: FB = 2,000 PSI FC = 2,300 PSI PARALLEL TO GRAIN E = 1,800,000 PSI.
6. DESIGN AND ENGINEERING OF WOOD TRUSSES SHALL BE THE RESPONSIBILITY OF THE TRUSS FABRICATOR IN ACCORDANCE WITH APPLICABLE CONSTRUCTION CODES, FOR THE LOADS SPECIFIED. THE TRUSS FABRICATOR SHALL FURNISH LAYOUT DRAWINGS AND DETAILS AS REQUIRED. THE TRUSS SUPPLIER SHALL FURNISH ALL MATERIALS REQUIRED FOR THE INSTALLATION OF THE TRUSSES, INCLUDING FASTENERS AND HANGERS.
7. PLYWOOD SUB-FLOORS SHALL BE T&G APA RATED STURD-I-FLOOR (OR EQUAL) SINGLE LAYER FLOOR CONSTRUCTION, OR APA RATED 3/4"CDX (OR EQUAL), USED WITH MINIMUM 3/8" UNDERLAYMENT UNDER OTHER FINISH FLOOR MATERIALS. STAGGER ALL JOINTS.
8. EXTERIOR DECKS, EXPOSED POSTS AND RAILINGS SHALL BE CONSTRUCTED WITH SMOOTH EXTERIOR GRADE MATERIAL. CONCEALED JOISTS, BEAMS AND POSTS, ALL MATERIALS IN CONTACT WITH EARTH OR FOUNDATIONS TO BE PRESSURE PRESERVATIVE TREATED MATERIAL.
9. EXTERIOR FINISH MATERIALS SHALL BE AS SHOWN ON THE DRAWINGS OR AS SELECTED BY THE OWNER.
10. ROOFING MATERIALS SHALL BE AS INDICATED ON THE PLANS OR AS SELECTED BY THE OWNER. INSTALL ICE AND WATER BARRIER AT ALL ROOF EAVES AND VALLEYS, MINIMUM 30" WIDTH OR IN ACCORDANCE WITH APPLICABLE LOCAL & CO STATE CODES.
11. INTERIOR FINISH MATERIALS, TRIM, CABINETS, DOORS, MILLWORK, ETC. TO BE SELECTED BY THE OWNER.
12. EXTERIOR DOORS AND WINDOWS: REFER TO DOOR AND WINDOW SCHEDULES, DETAILS, AND SPECIFICATIONS.

TIMBER FRAMING

1. TIMBER FRAME MATERIALS:
   a. EASTERN WHITE PINE, BOXED HEART, NO. 2 OR BETTER, FB = 575 PSI FV = 65 PSI E = 900,000 PSI
   b. RED OR WHITE OAK, BOXED HEART, NO. 2 OR BETTER, FB = 725 PSI FV = 80 PSI E = 800,000 PSI
   c. DOUGLAS FIR, FREE OF HEART CENTER (FOHC), NO. 1 DENSE OR BETTER FB = 1,400 PSI FV = 85 PSI E = 1,700,000 PSI
   d. SOUTHERN YELLOW PINE, NO. 1 OR BETTER, KILN DRIED TO 20% OR LESS M.C. FB =1350 PSI FV =110 PSI FC =825 PSI E =1,500,000 PSI
2. TIMBER FRAMES ARE DESIGNED FOR THE LOADING INDICATED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION BY THE AF&PA (AMERICAN FOREST AND PAPER ASSOCIATION) AND THE LATEST EDITION OF THE TIMBER CONSTRUCTION MANUAL BY THE AITC (AMERICAN INSTITUTE OF TIMBER CONSTRUCTION).
3. TIMBER FRAMES SHALL BE HANDLED, INSTALLED AND FASTENED IN ACCORDANCE WITH THE ABOVE REFERENCED STANDARDS; SHALL BE HANDLED WITH STRAPS OR SLINGS SO AS NOT TO MARK WOOD SURFACES. TIMBER MEMBERS SHALL NOT BE CUT, MODIFIED, OR REMANUFACTURED WITHOUT THE WRITTEN APPROVAL OF THE DESIGNER.
4. WHEN TIMBER STRUCTURAL MEMBERS ARE IN CONTACT WITH OTHER CONSTRUCTION MATERIALS, THE APPROVING PARTY MUST ASSUME RESPONSIBILITY TO ACCOMMODATE DEFLECTION. ACCOMMODATIONS SHALL ALSO BE MADE FOR SHRINKAGE, AND FOR THE TEMPORARY SWELLING OF WOOD MEMBERS DUE TO CHANGES IN MOISTURE CONTENT.
5. WOOD PEGS SHALL BE A HARDWOOD SPECIES WITH A SPECIFIC GRAVITY NO LESS THAN 0.68. ALL PEGS ARE NOMINAL 1" DIAMETER UNLESS NOTED OTHERWISE.
6. STEEL PINS SHALL BE CHAMFERED ASTM A-36 STEEL UNLESS NOTED OTHERWISE. DRILLED HOLES SHALL BE SAME DIAMETER AS PIN FOR SNUG FIT. WOOD PLUGS TO CONCEAL PINS SHALL BE GLUED IN PLACE, SIZED TO MAINTAIN 1/8" SPACE BETWEEN WOOD PLUG AND STEEL PIN. ALL BOLTS TO BE ASTM A-307, GRADE 2, ZINC PLATED CONFORMING TO ASTM B-633. HEX NUTS TO BE ASTM A-563, GRADE A. WASHERS TO BE SAE FLAT. DRILLED HOLES TO BE 1/16" LARGER THAN BOLT DIAMETER. STEEL PLATES SHALL BE ASTMA-572, GRADE A. PLATE ASSEMBLIES ARE TO BE SHOP WELDED; NO FIELD WELDING IS PERMITTED. ALL PLATE HARDWARE TO BE COATED WITH RUST INHIBITIVE PAINT.

EXTERIOR WALL & ROOF PANELS

1. STRUCTURAL INSULATED PANEL SYSTEM
   a. REFER TO PUBLISHED PANEL MANUFACTURER SPEC/DATA SHEETS FOR DETAILED SPECIFICATIONS, INSULATION VALUES, AND CONSTRUCTION CODE APPROVALS.
   b. REFER TO PUBLISHED PANEL MANUFACTURER INSTALLATION AND FINISHING MANUAL FOR STRUCTURAL PANEL CONSTRUCTION.
   c. THE SIPS ARE DESIGNED TO CREATE AN EXTREMELY WELL INSULATED AND TIGHT EXTERIOR ENCLOSURE. TO MAINTAIN A MINIMUM AMOUNT OF AIR INFILTRATION, PANEL SEAMS, JOINT, AND PENETRATIONS MUST BE PROPERLY AND COMPLETELY SEALED. REFER TO PANEL MANUFACTURER LITERATURE FOR RECOMMENDED MATERIALS AND METHODS. THE CONTRACTOR IS RESPONSIBLE TO SEAL ALL PENETRATIONS CREATED BY HIS WORK.
2. PER THE MANUFACTURER'S WARRANTY, THE SIP ENCLOSURE NEEDS TO BE KEPT DRY THROUGH THE USE OF BOTH EXTERIOR FINISHES THAT PROTECT THE SIPS FROM WEATHER AS WELL AS A DRAINAGE PLANE. THE PURPOSE OF A DRAINAGE PLANE IS TO ALLOW ANY WATER THAT DOES PENETRATE THE EXTERIOR FINISH TO DRAIN AWAY FROM THE SIP. DRAINAGE PLANES ARE MADE UP OF WATER REPELLENT MATERIALS (BUILDING PAPER, HOUSE WRAP, SHEET MEMBRANES, ETC) THAT ARE LOCATED BETWEEN THE SIP AND THE EXTERIOR FINISH AND ARE DESIGNED AND CONSTRUCTED TO DRAIN WATER. THE CHOICE OF WHICH TYPE OF DRAINAGE PLANE MATERIAL TO USE WILL BE DETERMINED BY THE INSTALLATION INSTRUCTIONS FROM THE MANUFACTURER OF THE EXTERIOR FINISH BEING INSTALLED. IN ADDITION, WHEN INSTALLING MASONRY AND STUCCO PRODUCTS, A VENTILATED AIR SPACE IS TO BE PROVIDED.

MECHANICAL AND ELECTRICAL

1. ALL FIXTURES TO BE SELECTED BY THE OWNER. ALL FIXTURES SHOWN ARE A GRAPHIC REPRESENTATION ONLY; VERIFY ALL FIXTURE TYPES, SIZES, AND LOCATIONS WITH THE OWNER PRIOR TO COMMENCING THE WORK.
2. MECHANICAL AND ELECTRICAL DESIGN, ENGINEERING AND DRAWINGS ARE TO BE PREPARED AND FURNISHED BY OTHERS, NOT BY WOODHOUSE. DESIGN SHALL BE BY A LICENSED PROFESSIONAL OR THE RESPECTIVE CONTRACTOR AS REQUIRED BY APPLICABLE LAWS AND CONSTRUCTION CODES OF THE LOCATION OF PROJECT.
3. HIGH HUMIDITY LEVELS DURING CONSTRUCTION AND AFTER COMPLETION OF THE CONSTRUCTION WILL CAUSE DAMAGE TO THE BUILDING. THE CONTRACTOR SHALL ASSURE THAT THE BUILDING IS PROPERLY VENTILATED UNTIL CONSTRUCTION IS COMPLETED AND THE HVAC SYSTEM IS INSTALLED AND OPERATING.
4. THE STRUCTURAL INSULATING PANEL WALL, CEILING AND ROOF SYSTEMS CREATE AN EXTREMELY AIRTIGHT ENCLOSURE, LIMITING AIR INFILTRATION. WOODHOUSE REQUIRES THE INCLUSION OF A HEAT RECOVERY VENTILATOR (HRV) OR AIR-TO-AIR HEAT EXCHANGE DEVICE THAT WILL OPERATE 24 HOURS PER DAY IN THE DESIGN AND INSTALLATION OF THE HVAC SYSTEM. THE HVAC SYSTEM WITH HRV SHALL BE DESIGNED TO MAINTAIN A POSITIVE AIR PRESSURE WITHIN THE STRUCTURE. THE DESIGNER SHALL TAKE INTO ACCOUNT EXHAUST FANS AND FUEL BURNING APPLIANCES THAT AFFECT THE INTERIOR AIR PRESSURE
5. INTERIOR RELATIVE HUMIDITY SHOULD BE MAINTAINED BETWEEN 30-55%. IT IS RECOMMENDED THAT THE HRV BE DESIGNED TO EXHAUST AIR FROM HIGH HUMIDITY ROOMS AND USES (BATHS, KITCHEN, ETC.) AND FOR MAKEUP AIR TO BE DISTRIBUTED EVENLY THROUGHOUT THE STRUCTURE.
6. HVAC SYSTEM DESIGN SHALL BE IN ACCORDANCE WITH ASHRAE (AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS) STANDARDS.

ABBREVIATIONS

@	-AT
#	-NUMBER
Ø	-DIAMETER
A.B.	-ANCHOR BOLT
A/C	-AIR CONDITIONING
ADJ.	-ADJUSTABLE
AFF	-ABOVE FINISH FLOOR
ALUM.	-ALUMINUM
ALT.	-ALTERNATE
APA	-AMERICAN PLYWOOD ASSOCIATION
APPROX.	-APPROXIMATE
BD.	-BOARD
BITUM.	-BITUMINOUS
BLDG.	-BUILDING
BLKG.	-BLOCKING
BM.	-BEAM
B.M.	-BENCH MARK
B.O.	-BOTTOM OF
BRG.	-BEARING
BTM.	-BOTTOM
BTR.	-BETTER
CAB.	-CABINET
C.B.	-CATCH BASIN
C/C	-CENTER TO CENTER
CEIL.	-CEILING
CLG.	-CEILING
CFM	-CUBIC FEET PER MINUTE
C.J.	-CEILING JOIST
℄	-CENTERLINE
C.L.	-CENTERLINE
C.M.U.	-CONCRETE MASONRY UNIT
C.O.	-CONCRETE OPENING
COL.	-COLUMN
CONC.	-CONCRETE
CONSTR.	-CONSTRUCTION
CONT.	-CONTINUOUS
COS	-CUT ON SITE
C.T.	-CERAMIC TILE
DBL.	-DOUBLE
D.H.	-DOUBLE HUNG
DIA.	-DIAMETER
DIAG.	-DIAGONAL
D.L.	-DEAD LOAD
DN	-DOWN
D.S.	-DOWNSPOUT
D/W	-DISHWASHER
DWG	-DRAWING
EA.	-EACH
ELEC.	-ELECTRICAL
ELEV.	-ELEVATION
ENCL.	-ENCLOSURE
EPS	-EXPANDED POLYSTYRENE
EQ.	-EQUAL
EXH.	-EXHAUST
EXIST.	-EXISTING
EXP.	-EXPANSION
EXPOS.	-EXPOSURE
EXT.	-EXTERIOR
F.D.	-FLOOR DRAIN
FIN.	-FINISH
FIXT.	-FIXTURE
FLR.	-FLOOR
FNDTN.	-FOUNDATION
F.P.	-FIREPLACE
FT.	-FOOT/FEET
FTG.	-FOOTING/FOOTER
GA.	-GAUGE
GALV.	-GALVANIZED
G.C.	-GENERAL CONTRACTOR
G/L	-GLULAM (BEAM)
GYP.	-GYPSUM
H.B.	-HOSE BIBB
H.C.	-HOLLOW CORE
HDG	-HOT DIPPED GALVANIZED
HDR.	-HEADER
HOR.	-HORIZONTAL
HORIZ.	-HORIZONTAL
HTG.	-HEATING
HT.	-HEIGHT
HVAC	-HEATING, VENTILATING, AIR CONDITIONING
I.D.	-INSIDE DIAMETER
ICF	-INSULATED CONCRETE FORM
IN.	-INCH/INCHES
INSUL.	-INSULATION
INT.	-INTERIOR
JCT.	-JUNCTION
JST.	-JOIST
JT.	-JOINT
K.D.	-KILN DRIED
LAV.	-LAVATORY
LB.	-POUND
LBR.	-LUMBER
L.F.	-LINEAR FEET
LIN.	-LINEN
L.L.	-LIVE LOAD
LLV.	-LONG LEG VERTICAL
LOC.	-LOCATION
L.V.L.	-LAMINATED VENEER LUMBER
MANUF.	-MANUFACTURER
MAX.	-MAXIMUM
M.C.	-MOISTURE CONTENT
MECH.	-MECHANICAL
MIL	-MILLIMETER
MIN.	-MINIMUM
MISC.	-MISCELLANEOUS
MLDG.	-MOULDING
M.O.	-MASONRY OPENING
MTL.	-METAL
MTRL.	-MATERIAL
N/A	-NOT APPLICABLE
N.I.C.	-NOT IN CONTRACT
NOM.	-NOMINAL
NTS	-NOT TO SCALE
O.C.	-ON CENTER
O.D.	-OUTSIDE DIAMETER
O.H.	-OVERHANG
O.H.D.	-OVERHEAD DOOR
O/O	-OUT TO OUT
OPNG.	-OPENING
OPP.	-OPPOSITE
OSB	-ORIENTED STRAND BOARD
P.C.	-PULL CHAIN
PERF.	-PERFORATED
PL.	-PLATE
PLMBG.	-PLUMBING
PLYWD.	-PLYWOOD
PNL.	-PANEL
P.O.	-PANEL OPENING
POLY	-POLYETHYLENE
PR.	-PAIR
PREFAB.	-PREFABRICATED
PSF	-POUNDS PER SQUARE FOOT
PSI	-POUNDS PER SQUARE INCH
P.S.L.	-PARALLEL STRAND LUMBER
P.T.	-PRESSURE TREATED
Q.T.	-QUARRY TILE
QTY.	-QUANTITY
R	-RISER (OR RADIUS)
RAD.	-RADIUS
REF.	-REFERENCE
REINF.	-REINFORCED/ REINFORCING
REQD.	-REQUIRED
REV.	-REVISED/ REVISION
R.O.	-ROUGH OPENING
RUM	-ROOF UNDERLAYMENT MEMBRANE
S.I.	-SQUARE INCH
S.C.	-SOLID CORE
S.F.	-SQUARE FOOT/FEET
SH.	-SHELF
SHTG.	-SHEATHING
SHWR.	-SHOWER
SIM.	-SIMILAR
SIP	-STRUCTURAL INSULATED PANEL
SPEC.	-SPECIFICATION
SQ.	-SQUARE
S.S.	-STAINLESS STEEL
STD.	-STANDARD
STL.	-STEEL
STRUCT.	-STRUCTURAL
T.B.D.	-TO BE DETERMINED
TEMP.	-TEMPERED
T&G	-TONGUE & GROOVE
T.O.	-TOP OF
TYP.	-TYPICAL
U.N.O.	-UNLESS NOTED OTHERWISE
VAN.	-VANITY
V.B.	-VAPOR BARRIER
VERT.	-VERTICAL
V.I.F.	-VERIFY IN FIELD
W/	-WITH
WC	-WATER CLOSET (TOILET)
WD.	-WOOD
WDO	-WINDOW
WH	-WATER HEATER
WIC	-WALK IN CLOSET
WIN.	-WINDOW
W/O	-WITHOUT
WP	-WEATHERPROOF
W'STRIP	-WEATHERSTRIP
WT.	-WEIGHT
WWM	-WELDED WIRE MESH

BUILDING DATA

PROJECT ADDRESS
24660 CREEK RANCH ROAD
OAK CREEK, CO 80467
GPS: *N/A*

DESIGN LOADS

ROOF LIVE LOADS
SNOW LOAD: ***90.43 PSF***

FLOOR LIVE LOADS
LIVING AREAS: ***40 PSF***
GARAGES: ***50 PSF***
ATTICS: ***20 PSF***
DECKS & BALCONIES: ***90.43 PSF***

TIMBER FRAME
DEAD LOAD: ***18 PSF***

CONVENTIONAL FRAMING
DEAD LOAD: ***10 PSF***

SIP PANEL DEAD LOADS
WALL PANELS: ***3.93 PSF***
ROOF PANELS: ***4.34 PSF***

WIND LOADS
WIND SPEED: ***115 MPH***
EXPOSURE: ***C***
SEISMIC CATEGORY: ***C***

FRAME SYSTEM

SPECIES	*DESCRIPTION*
☐ EASTERN WHITE PINE	
☐ OAK	
■ DOUGLAS FIR	EXTERIOR TIMBER PORCHES, GABLE EMBELLISHMENTS, & BRACKETS
■ SOUTHERN YELLOW PINE	INTERIOR TIMBER FRAME, (1) SET TIMBER STAIRS

CHAMFERING

■ BEVELED
☐ CONCAVE
☐ NO CHAMFER

SIGN AND SEAL

☐ ARCHITECTURAL
■ ENGINEERING
☐ NO SIGN AND SEAL

REScheck

■ REScheck
☐ NO REScheck

BRACES

■ STRAIGHT
☐ CURVED

CONNECTORS

☐ STRUCTURAL
☐ DECORATIVE
■ NONE
☐ EXPOSED
☐ HIDDEN

PANEL SYSTEM

☐ STANDARD ■ WRAPPED FLOOR SYSTEM

4 5/8" WALL PANELS (R-27)	OSB / FOAM CORE / OSB
6 5/8" ROOF PANELS (R-41)	OSB / FOAM CORE / OSB

FLOOR SYSTEM

FIRST FLOOR SYSTEM	STEEL PIPE COLUMNS & CAPS, L.V.L. BEAMS, AND/OR STEEL BEAMS, P.T. SILL PLATES, SILL SEALER, INSECT SHIELD, ENGINEERED WOOD I-JOISTS & RIM BOARDS, 3/4" A.P.A. RATED SUBFLOOR GLUED AND NAILED TO JOISTS (DO NOT GLUE OR NAIL AT POST LOC.), & 1 1/2" GYP-CRETE
SECOND FLOOR SYSTEM	ENGINEERED WOOD I-JOISTS & RIMBOARDS, & A.P.A. RATED 3/4" SUBFLOOR GLUED AND NAILED TO JOISTS
LOFT SYSTEM	

DECKING SYSTEM

SECOND FLOOR DECK	
THIRD FLOOR DECK	
LOFT DECK	
ROOF DECK	1X8 EASTERN WHITE PINE T&G CLADDING OVER GREAT ROOM, STAIRWAY, LOFT, BATHROOM, FRONT ENTRY PORCH, & REAR COVERED PORCHES
OTHER	

ENERGY CODE SUMMARY

- SCOPE OF WORK: CONSTRUCTION OF NEW SINGLE FAMILY HOME OF HEAVY TIMBER STRUCTURE, SIP WALL-CEILING-ROOF PANELS ALONG WITH CONVENTIONAL FRAME WALL AND PRE-MANUFACTURED ROOF TRUSSES AND EXPOSED STEEL.
- MECHANICAL SYSTEM EFFICIENCY RATING AND BTUs TO BE PROVIDED BY GC, BUT SHALL MEET OR EXCEED 95% EFFICIENCY RATING.
- 100% OF LIGHT FIXTURES ARE TO BE LED.
- ALL PENETRATIONS FOR HEAT, ELECTRIC, A/C, PLUMBING AND/OR GAS (IF USED) WILL BE FOAMED USING POLYURETHANE FOAM BY 'GREAT STUFF / POWERS' OR EQUAL.
- WHERE PENETRATIONS OF ANY KIND ARE THROUGH THE FIRE SEPARATION WALLS OR CEILING, FIRE FOAM WILL BE USED.
- ANY PLUMBING / PIPE PENETRATIONS SHALL BE WRAPPED WITH MINIMUM R-21 WHEN NOT ABLE TO USE AN INTERNAL WALL. ALL EFFORT SHOULD BE USED TO KEEP TO INTERIOR CONDITIONED SPACE.
- ALL WALL TO FLOOR OR WALL TO PLATE CONNECTIONS WILL BE SEALED USING POLYURETHANE FOAM 'GREAT STUFF / POWERS' OR EQUAL TO FORM AN AIR BARRIER PER CODE.
- COMPLIANCE PATHWAY = PRESCRIPTIVE WITH UA TRADEOFFS DUE TO CONTINUOUS WALL/ ROOF INSULATION AT PERIMETER USING SIPS. COLORADO ENERGY CODE 2021, (2021 IECC) PER LOCAL CO CODE. SEE RESCHECK FOR MORE INFORMATION.
- WOOD BURNING MASONRY FIREPLACES MUST HAVE EITHER TIGHT FITTING DAMPER OR DOORS, AND OUTDOOR COMBUSTION AIR MUST BE PROVIDED.

Woodhouse
THE TIMBER FRAME COMPANY™
P.O. BOX 219 3295, ROUTE 549, MANSFIELD, PA, USA 16933
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DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF WOODHOUSE. THEY ARE INTENDED TO BE USED SOLELY FOR THE CONSTRUCTION OF A "WOODHOUSE" POST & BEAM HOME AND SHALL NOT BE USED OTHERWISE WITHOUT WRITTEN CONSENT

GENERAL NOTES

REV. #1

DESIGN CRITERIA

A. DESIGN DATA

1. THE DESIGN AND CONSTRUCTION OF THIS PROJECT IS GOVERNED BY THE **INTERNATIONAL RESIDENTIAL CODE 2021 EDITION**, AS MODIFIED BY THE STATE AND LOCAL JURISDICTION REQUIREMENTS, AS IS HEREAFTER REFERRED TO AS THE "GOVERNING CODE". WHERE A STATE SPECIFIC CODE IS THE GOVERNING CODE, ALL REFERENCES ARE SUPERSEDED BY THE APPLICATE STATE CODE CHAPTERS/SECTIONS.
2. RISK CATEGORY: **II**

B. ROOF DESIGN DATA:

1. ROOF DEAD LOAD: **18** PSF
2. ROOF LIVE LOAD: **20** PSF
3. GROUND SNOW LOAD, (PG): **90.43** PSF
4. FLAT ROOF SNOW LOAD, (PF): **63.3** PSF
5. SNOW IMPORTANCE FACTOR, (IS): **1.0**
6. SNOW EXPOSURE FACTOR, (CE): **1.0**
7. THERMAL FACTOR, (CT): **1.0**
8. SLOPE FACTORS(S), (CS): **1.0**
9. SEE FRAMING PLANS FOR DRIFT LOCATION, WIDTHS AND LOADS IF APPLICABLE.

C. FLOOR DESIGN DATA:

1. FLOOR DEAD LOAD: **12** TO **25** PSF
2. FLOOR LIVE LOAD: **40** PSF (TYP) **60** PSF (DECK)

D. SEISMIC DESIGN DATA:

1. MAPPED SPECTRAL RESPONSE ACC. FOR SHORT PERIOD, (SS): **0.628** G
2. MAPPED SPECTRAL RESPONSE ACC. FOR 1-SEC PERIOD, (S1): **0.106** G
3. DESIGN SPECTRAL RESPONSE ACC. FOR SHORT PERIOD, (SDS): **0.543** G
4. DESIGN SPECTRAL RESPONSE ACC. FOR 1-SEC PERIOD, (SD1): **0.170** G
5. SITE CLASS: **D**
6. SEISMIC DESIGN CATEGORY: **D**
7. SEISMIC IMPORTANCE FACTOR, (IE): **1.0**
8. SEISMIC RESPONSE COEFFICIENT(S), (CS): **0.084**
9. RESPONSE MODIFICATION COEFFICIENT(S), (R): **6.5**
10. BASIC SEISMIC-FORCE-RESISTING-SYSTEM(S): **SHEATHED WOOD FRAMED SHEAR WALLS**
11. ANALYSIS PROCEDURE USED: **EQUIVALENT LATERAL FORCE PROCEDURE**

E. WIND DESIGN DATA:

1. BASIC WIND SPEED (V): **105** MPH
2. WIND EXPOSURE: **C**
3. INTERNAL PRESSURE COEFFICIENT(S): **+/-0.18**

F. SOILS DESIGN DATA:

1. ALLOWABLE SOIL BEARING PRESSURE: **40,000** PSF (END BEARING)
2. MINIMUM FROST/BEARING DEPTH: **48** IN
3. GEOTECHNICAL REPORT PREPARED BY, (REPORT #): **NORTHWEST COLORADO CONSULTANTS, INC. (JOB 23-12974 DATED OCTOBER 7, 2024)**

G. SPECIAL DESIGN DATA:

1. SEE FRAMING PLANS FOR ALL EQUIPMENT AND PHOTOVOLTAIC PANEL SYSTEM DESIGN WEIGHTS IF APPLICABLE.

GENERAL

A. GENERAL REQUIREMENTS

1. THE TERM CONTRACTOR (G.C.) AS USED IN THESE DOCUMENTS REFERS TO THE CONTRACTOR / CONSTRUCTION MANAGER IN RESPONSIBLE CHARGE OF THE PROJECT IN TERMS OF COORDINATION, SCHEDULING, SUBCONTRACTOR COORDINATION, ETC. THE TERM IS REFERENCING THE ENTITY THAT COORDINATES THE WORK OF OTHER TRADES.
2. ALL REFERENCED STANDARDS, SUCH AS CODES, SPECIFICATIONS, AND OTHER PUBLICATIONS NOTED HEREIN, ARE INTENDED TO REFER TO THE EDITION OF SAID STANDARD AS REFERENCED BY THE GOVERNING CODE OR THE LATEST EDITION PUBLISHED AS OF THE DATE ON THE CONSTRUCTION DOCUMENTS.
3. THE CONSTRUCTION DOCUMENTS ARE INTENDED TO SHOW THE GENERAL CHARACTER AND EXTENT OF THE PROJECT ARE NOT INTENDED TO SHOW ALL DETAILS OF WORK. DETAILS, SECTIONS AND NOTES SHOWN ON DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL APPLY TO SIMILAR CONDITIONS ELSEWHERE, U.N.O. IF LOCATIONS ARE FOUND WHERE NO TYPICAL DETAIL, TYPICAL SCHEDULE OR SPECIFIC DETAIL APPLIES, NOTIFY E.O.R.
4. DIMENSIONS ARE NOT TO BE DERIVED BY SCALING THE CONSTRUCTION DOCUMENTS FOR LOCATIONS, QUANTITY TAKEOFFS, MATERIAL SIZES, ETC. IF THERE IS A QUESTION ABOUT DIMENSIONS, CONTACT THE ARCHITECT OR E.O.R. FOR CLARIFICATION.
5. WHERE CONFLICTS EXIST BETWEEN CONSTRUCTION DOCUMENTS, THE STRICTEST REQUIREMENTS AS INDICATED BY THE E.O.R. SHALL GOVEN.
6. THE CONTRACTOR SHALL COORDINATE ARCHITECTURAL, MECHANICAL, ELECTRICAL, CIVIL, PLUMBING AND DEFERRED SUBMITTAL DRAWINGS TO HAVE A COMPLETE SCOPE OF WORK INVOLVED IN THIS PROJECT. REFER TO PROJECT SPECIFICATIONS ISSUED AS PART OF THE CONSTRUCTION DOCUMENTS FOR INFORMATION SUPPLEMENTAL TO THESE DRAWINGS.
7. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE. CONFLICTS BETWEEN THE CONSTRUCTION DOCUMENTS AND ACTUAL SITE CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND E.O.R. PRIOR TO PROCEEDING WITH CONSTRUCTION.
8. THE CONTRACTOR IS RESPONSIBLE FOR ANY DEVIATIONS FROM THE CONSTRUCTION DOCUMENTS, UNLESS SUCH CHANGES ARE AUTHORIZED IN WRITING BY THE E.O.R.
9. THE CONTRACTOR SHALL PERFORM ALL CONSTRUCTION FOR THE PROJECT IN A MANNER AND SEQUENCE THAT ARE BASED ON ACCEPTED INDUSTRY STANDARDS THAT RECOGNIZE THE INTERACTION OF THE COMPONENTS THAT COMPRISE THE STRUCTURE WITHOUT CAUSING DISTRESS, UNANTICIPATED MOVEMENTS OR IRREGULAR LOAD PATHS AS A RESULT OF THE CONSTRUCTION MEANS AND METHODS EMPLOYED.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE MEANS OF CONSTRUCTION AND THE STRENGTH AND STABILITY OF THE STRUCTURE DURING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE SAFE AND ADEQUATE SHORING, BRACING AND TEMPORARY STRUCTURAL STABILITY THROUGHOUT CONSTRUCTION. E.O.R. IS RESPONSIBLE ONLY FOR THE PRIMARY STRUCTURE IN ITS COMPLETED FORM.
11. FALL PROTECTION SUPPORT FROM PERIMETER OF THE STRUCTURE SHALL BE PROVIDED IN ACCORDANCE WITH OSHA REQUIRED AS REQUIRED.
12. THE CONTRACTOR IS RESPONSIBLE TO ENFORCE ALL APPLICABLE SAFETY CODES AND REGULATIONS DURING ALL PHASES OF CONSTRUCTION.
13. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED OR OTHERWISE REDUCED IN STRENGTH UNLESS APPROVED BY THE E.O.R.
14. CONSTRUCTION LOADS AND MATERIALS SHALL BE SPREAD OUT WHEN PLACED ON FRAMED FLOORS OR ROOFS. LOADS ON THE STRUCTURE DURING CONSTRUCTION SHALL NOT EXCEED THE DESIGN LOADS AS NOTED IN THE DESIGN CRITERIA.
15. ALTERNATE PRODUCTS OF SIMILAR STRENGTH, NATURE AND FORM FOR SPECIFIED ITEMS MAY BE SUBMITTED WITH ADEQUATE TECHNICAL DOCUMENTATION TO THE E.O.R. FOR REVIEW. ALTERNATE MATERIALS THAT ARE SUBMITTED WITHOUT ADEQUATE TECHNICAL DOCUMENTATION OR THAT SIGNIFICANTLY DEVIATE FROM THE DESIGN INTENT OF MATERIALS SPECIFIED MAY BE RETURNED WITHOUT REVIEW. ALTERNATES THAT REQUIRE SUBSTANTIAL EFFORT TO REVIEW WILL NOT BE REVIEWED UNLESS AUTHORIZED BY THE OWNER.
16. ANCHORAGE AND SUPPORT OF MECHANICAL AND ELECTRICAL EQUIPMENT, DUCTWORK AND PIPING IS TO BE DESIGN BY OTHERS. ALL SUSPENDED EQUIPMENT IS TO BE SECURED WITH LATERAL BRACING BY OTHERS.
17. SITE VISITS BY REPRESENTATIVES OF THE E.O.R. DO NOT INCLUDE INSPECTION OF CONSTRUCTION MEANS AND METHODS. SITE VISIT DURING CONSTRUCTION ARE NOT CONTINUOUS AND DETAILED INSPECTION SERVICES, (WHICH ARE TO BE PERFORMED BY OTHERS). OBSERVATIONS DO NOT GUARANTEE CONTRACTORS PERFORMANCE AND ARE NOT TO BE CONSTRUED AS SUPERVISION OR VERIFICATION OF CONSTRUCTION.

B. SHOP DRAWING AND DEFERRED SUBMITTAL REQUIREMENTS

1. ALL SHOP DRAWINGS AND DEFERRED SUBMITTAL DOCUMENTS SHALL BE SUBMITTED TO THE E.O.R. FOR REVIEW AND APPROVAL. SUBMITTED DOCUMENTS SHALL BEAR THE CONTRACTORS REVIEW STAMP WITH THE CHECKERS INITIALS BEFORE BEING SUBMITTED TO E.O.R. FOR APPROVAL.
2. ALL DIFFERED SUBMITTALS SHALL BE STAMPED AND SIGNED BY AN ENGINEER REGISTERED IN THE APPROPRIATE JURISDICTION OF THE PROJECT AND IT SHALL BE THE SOLE RESPONSIBILITY OF THE SPECIALTY ENGINEER INCLUDING, BUT NOT LIMITED TO, DESIGN, COORDINATION, DIMENSIONS AND INTENDED PURPOSE.
3. REVIEW OF SUBMITTED DOCUMENTS BY THE E.O.R. SHALL BE FOR GENERAL CONFORMANCE TO THE DESIGN SET FORTH ON THE CONSTRUCTION DOCUMENTS AND SPECIFICATIONS.
4. DEFERRED SUBMITTAL ITEMS SHALL NOT BE FABRICATED OR INSTALLED UNTIL THE DESIGN AND SUBMITTAL DOCUMENTS HAVE BEEN REVIEWED AND APPROVED BY THE E.O.R. AND BUILDING OFFICIAL.
5. WHERE DIMENSIONS AND ELEVATIONS OF EXISTING CONSTRUCTION COULD AFFECT THE NEW CONSTRUCTION, IT IS THE CONTRACTORS RESPONSIBLY TO MAKE FIELD MEASUREMENTS IN TIME FOR THEIR INCORPORATION INTO THE SHOP DRAWINGS.
6. ALL DEFERRED SUBMITTAL DOCUMENTS SHALL INCLUDE A QUALITY ASSURANCE PROGRAM FOR SPECIAL INSPECTIONS WHERE REQUIRED BY THE GOVERNING CODE.

FOUNDATIONS AND SLABS

A. SOIL PREPARATION:

1. IT IS RECOMMENDED THAT ALL GRADING, EXCAVATION, PLACEMENT AND INSTALLATION OF STRUCTURAL FILL AND FOUNDATIONS BE PERFORMED UNDER THE INSPECTION AND TESTING OF A QUALIFIED GEOTECHNICAL CONSULTANT DURING THE CRITICAL STAGES OF CONSTRUCTION.
2. IF A GEOTECHNICAL REPORT HAS BEEN CONDUCTED FOR THE SITE, THE CONTRACTOR SHALL FULLY REVIEW THE REPORT FOR ADDITIONAL REQUIREMENTS AND INFORMATION PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL INVESTIGATE THE SITE DURING CLEARING AND EARTHWORK OPERATION FOR FILLED EXCAVATIONS OR BURIED STRUCTURES AND NOTIFY THE E.O.R. IF ANY STRUCTURES ARE FOUND PRIOR TO CONSTRUCTION.
4. DURING EXCAVATION, LOCATE AND PROTECT UNDERGROUND OR CONCEALED UTILITIES WHERE WORK IS BEING PERFORMED. WHEN OVERSIZE MATERIALS, CONCRETE, OR ASPHALT ARE ENCOUNTERED, THESE MATERIALS SHOULD BE HAULED OFF SITE AND DISPOSED OF IN ACCORDANCE WITH APPLICABLE CODES AND REGULATIONS.
5. ALL SHALLOW SPREAD FOUNDATIONS SYSTEMS SHALL BEAR ON COMPETENT NATIVE SOILS OR STRUCTURAL FILL PLACED PER THE GEOTECHNICAL REPORT RECOMMENDATIONS. IF THE SITE HAS A LOWER BEARING CAPACITY THAN LISTED, THEN THE FOUNDATION PLAN WILL NEED TO BE REDESIGNED.
6. MINIMUM FROST DEPTH LISTED IS FROM LOWEST ADJACENT FINISH GRADE TO BOTTOM OF THE FOOTING. THE MINIMUM FROST DEPTH SHALL BE MAINTAINED FOR ALL EXTERIOR FOOTINGS. THE CONTRACTOR SHALL COORDINATE AND VERIFY WITH ENGINEER OF RECORD PRIOR TO THE PLACEMENT OF FOUNDATIONS.
7. ALL STRUCTURAL FILL BELOW FOOTINGS SHALL EXTEND OUT PAST THE EDGE OF THE FOOTING AND SLOPE AT 2 TO 1 (2 VERTICAL TO 1 HORIZONTAL) UNTIL REACHING COMPETENT SOILS.
8. ALL WATER SHALL BE REMOVED FROM FOUNDATION EXCAVATIONS PRIOR TO THE PLACEMENT OF CONCRETE. THE CONTRACTOR IS RESPONSIBLE FOR THE GOUND WATER CONTROL SYSTEM DESIGN.
9. ALL STRUCTURAL FILL MATERIAL SHOULD BE PLACED IN UNIFORM 12" THICK LOOSE LIFTS AND COMPACTED TO 95% OF ITS MAXIMUM DRY DENSITY AS DETERMINED BY A STANDARD PROCTOR AT OPTIMUM MOISTURE CONTENT, IN ACCORDANCE WITH ASTM D1557. IN RESTRICTED AREAS WHERE ONLY HAND-OPERATED EQUIPMENT IS PERMITTED, THE MAXIMUM LOOSE LIFT SHALL BE 8".

B. SLAB REQUIREMENTS

1. ALL CONCRETE SLABS SHALL HAVE A MINIMUM 4" THICKNESS AND CONTROL JOINTS AT 10'-0" O.C. MAX SPACING.
2. WHERE RECOMMENDED INTERIOR CONCRETE SLABS SHALL HAVE A PLASTIC VAPOR RETARDER PER ASTM E1745 UNDER A MINIMUM OF 6" OF COMPACTED CLEAN GRANULAR STRUCTURAL FILL.
3. SEAL ALL VAPOR RETARDER COMPLETELY AROUND ALL PIPES AND CONDUITS. INSPECT VAPOR RETARDER THOROUGHLY AND REPAIR ALL PUNCTURES AND TEARS PRIOR TO PLACING CONCRETE. ALL ALPS SHALL BE 18" MINIMUM AND SEALED CONTINUOUSLY WITH PRESSURE SENSITIVE TAPE.
4. ALL SLAB SAWN CONTROL AND CONSTRUCTION JOINTS SHALL BE MADE AS SOON AS POSSIBLE WITHOUT DAMAGE TO THE SURACE. FILLING OF SAWN JOINTS WHERE REQUIRED SHALL BE DELAYED AS LONG AS POSSIBLE TO ALLOW MAXIMUM SHRINKAGE TO OCCUR IN SLABS.
5. SEE ARCHITECTURAL PLANS FOR LOCATIONS OF SLAB SLOPES, DEPRESSIONS, CURBS, DRAINS, NON-STRUCTURAL PARTITIONS AND OTHER EMBEDDED ITEMS NOT SHOWN ON THE FOUNDATION PLAN.

C. RETAINING WALL REQUIREMENTS:

1. ALL FILL MATERIALS BEHIND RETAINING WALLS SHALL BE FULLY DRAINED BY MEANS OF SUB-DRAIN, WEEP HOLES, OR FREE DRAINING AGGREGATE. BACKFILL FINISHED GRADE SHALL BE SLOPED AWAY FROM THE BACKFACE OF RETAINING WALL. THE DESIGN OF RETAINING WALLS AND SUBTERRANEAN BUILDING WALLS ARE BASED ON DRAINED SOILS.
2. DO NOT PLACE BACKFILL BEHIND WALLS BEFORE THEY HAVE ATTAINED THEIR DESIGN STRENGTH.
3. ANY SUPERIMPOSED LOADS, OTHER THAN RETAINED EARTH, SHALL BE CONSIDERED AS SURCHARGES AND ACCOUNTED FOR IN DESIGN. LOADS APPLIED WITHIN A HORIZONTAL DISTANCE EQUAL TO WALL STEM HEIGHT AS MEASURED FROM BACK FACE OF THE WALL SHALL BE CONSIDERED AS SURCHARGE. TEMPORARY CONSTRUCTION LOADS SHALL NOT BE APPLIED WITHIN A HORIZONTAL DISTANCE EQUAL TO STEM WALL HEIGHT FROM THE BACK FACE OF THE WALL. NOTIFY EOR IF TEMPORARY CONSTRUCTION LOADS WILL BE APPLIED WITHIN THE SPECIFIED HORIZONTAL ZONE PRIOR TO CONSTRUCTION.
4. THE CONTRACTOR IS RESPONSIBLE TO ADEQUATELY PROTECT ALL EXCAVATION SLOPES. WHERE NECESSARY, SHEET PILES AND SHORING OF EXCAVATION SHALL BE PROVIDED WITH ALL REQUIRED TIEBACKS AND BRACING.
5. APPROPRIATE FOUNDATION WATERPROOFING METHODS SHALL BE PROVIDED ON BACKSIDE OF SUB-SURFACE RETAINING WALLS FROM BASE OF WALL TO FINISHED GRADE.

CONCRETE

A. GENERAL REQUIREMENTS

1. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO REQUIREMENTS SET FORTH IN ACI 318, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE", AND ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
2. CAST-IN-PLACE AND PRECAST CONSTRUCTION TOLERANCES FOR MEMBER SIZE AND LOCATION SHALL BE IN CONFORMANCE WITH ACI 117 AND ACI ITG-7, RESPECTIVELY.
3. NORMAL WEIGHT CONCRETE SHALL BE IN CONFORMANCE WITH ASTM C33 WITH A NOMINAL MAXIMUM AGGREGATE SIZE OF 3/4".
4. LIGHTWEIGHT CONCRETE SHALL BE IN CONFORMANCE WITH ASTM C330 AND THE RESULTS OF ASTM C330 SHALL BE SUBMITTED TO E.O.R. FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT. THE VOLUMETRIC FRACTIONS OF THE AGGREGATE SHALL ALSO BE SUBMITTED TO E.O.R. FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT.
5. PORTLAND CEMENT SHALL BE TYPE I/II IN CONFORMANCE WITH ASTM C150.
6. OTHER CEMENTITIOUS MATERIALS SHALL CONFORM TO THE FOLLOWING:
   a. BLENDED HYDRAULIC CEMENTS: = ASTM C595
   b. EXPANSIVE HYDRAULIC CEMENT: = ASTM C845
   c. HYDRAULIC CEMENT: = ASTM C1157
   d. FLY ASH AND NATURAL POZZOLAN: = ASTM C618
   e. SLAG CEMENT: = ASTM C989
   f. SILICA FUME: = ASTM C1240
7. MIXING WATER SHALL CONFORM TO ASTM C1602.
8. ADMIXTURES MAY BE USED TO INCREASE THE WORKABILITY OF THE CONCRETE UPON WRITTEN APPROVAL OF THE CONCRETE MANUFACTURER OR THE PROJECT TESTING LABORATORY. TESTING ON CONCRETE SHALL BE DONE PRIOR TO THE ADDITION OF ADMIXTURES.
9. ADMIXTURES SHALL CONFORM TO THE FOLLOWING:
   a. WATER REDUCTION AND SETTING TIME MODIFICATION: = ASTM C494
   b. PRODUCING FLOWING CONCRETE: = ASTM C1017
   c. AIR ENTRAINMENT: = ASTM C260
   d. INHIBITING CHLORIDE-INDUCED CORROSION: = ASTM C1528
10. CONCRETE MIXTURE PROPORTIONS SHALL CONFORM WITH ACI 301 AND ESTABLISHED SO CONCRETE CAN BE PLACED READILY WITHOUT SEGREGATION INTO FORMS AND AROUND REINFORCEMENT.
11. ALL CONCRETE MIXING AND TRANSPORTATION OF CONCRETE SHALL CONFORM TO THE REQUIREMENTS OF ATM C94 AND ASTM C685.
12. STAIN AND TEXTURE OF EXPOSED CONCRETE SURFACES PER OWNER'S DIRECTION, IF APPLICABLE.
13. THE SLUMP OF THE CONCRETE SHALL BE BETWEEN:
   a. BEAMS/COLUMNS: 3" ± 1"
   b. WALLS/FOUNDATIONS: 5" ± 1"
   c. SLABS-ON-GRADE: 4" ± 1"
14. THE CONCRETE SHALL MEET THE MOST STRINGENT REQUIREMENTS FROM THE FOLLOWING EXPOSURE CLASSES:
15. ALL FOOTINGS, FOUNDATIONS, AND STEM WALLS: = **F1, S0, W0, C0**
16. INTERIOR SLABS-ON-GRADE: = **F0, S0, W0, C0**
17. EXTERIOR SLABS-ON-GRADE: = **F2, S0, W0, C0**
18. CONCRETE EXPOSURE CLASSES AND REQUIREMENTS:

EXPOSURE CATEGORY: F

EXPOSURE CLASS	MAXIMUM w/cm	MINIMUM f'_c (psi)	AIR CONTENT (%)	LIMITS ON MAXIMUM PERCENT OF TOTAL CEMENTITIOUS MATERIALS BY MASS				
F0	N/A	2500	N/A	N/A				
F1	0.55	3500	5	N/A				
F2	0.45	4500	6	N/A				
F3	0.40	5000	6	ASTM C618	ASTM C989	ASTM C1240	TOTAL OF ASTM C618 & ASTM C1240	TOTAL OF ASTM C618 & ASTM C989 & ASTM C1240
				25%	50%	10%	35%	50%

EXPOSURE CATEGORY: S

EXPOSURE CLASS	MAXIMUM w/cm	MINIMUM f'_c (psi)	CEMENTITIOUS MATERIALS			
			ASTM C150	ASTM C595	ASTM C1157	CALCIUM CHLORIDE ADMIXTURE
S0	N/A	2500	N/A	N/A	N/A	N/A
S1	0.50*	4000	II	IP(MS), IS(MS), OR IT(MS)	MS	N/A
S2	0.45	4500	V	IP(HS), IS(HS), OR IT(HS)	HS	NOT PERMITTED
S3	0.45	4500	V + POZZOLAN OR SLAG CEMENT	IP(HS), IS(HS), OR IT(HS) + POZZOLAN OR SLAG CEMENT	HS + POZZOLAN OR SLAG CEMENT	NOT PERMITTED

EXPOSURE CATEGORY: W

EXPOSURE CLASS	MAXIMUM w/cm	MINIMUM f'_c (psi)
W0	N/A	2500
W1	0.50	4000

EXPOSURE CATEGORY: C

EXPOSURE CLASS	MAXIMUM w/cm	MINIMUM f'_c (psi)	MAXIMUM WATER-SOLUBLE CHLORIDE ION (Cl^-) CONTENT IN NONPRESTRESSED CONCRETE, PERCENT BY WEIGHT OF CEMENT
C0	N/A	2500	1.00
C1	N/A	2500	0.30
C2	0.40	5000	0.15

* FOR SEAWATER EXPOSURE THE MAXIMUM W/CM RATIO SHALL BE 0.40.

19. TEMPERATURE REQUIREMENTS OF THE CONCRETE SHALL CONFORM TO THE FOLLOWING:
   a. CONCRETE SHALL BE MAINTAINED AT A TEMPERATURE MINIMUM OF 50°F AND IN A MOIST CONDITION FOR AT LEAST THE FIRST 7 DAYS AFTER PLACEMENT.
   b. ADEQUATE EQUIPMENT SHALL BE PROVIDED FOR HEATING CONCRETE MATERIALS AND PROTECTING CONCRETE DURING FREEZING OR NEAR-FREEZING WEATHER.
   c. FROZEN MATERIALS OR MATERIALS CONTAINING ICE SHALL NOT BE USED.
   d. FORMS, FILLERS, AND GROUND WITH WHICH CONCRETE IS TO COME IN CONTACT SHALL BE FREE FROM FROST AND ICE.
   e. CONCRETE SHALL NOT EXCEED A TEMPERATURE MAXIMUM OF 95°F AT THE TIME OF PLACEMENT.
   f. HANDLING, PLACING, PROTECTION, AND CURING PROCEDURES SHALL LIMIT CONCRETE TEMPERATURES OR WATER EVAPORATION THAT COULD REDUCE STRENGTH SERVICEABILITY, AND DURABILITY OF THE MEMBER OR STRUCTURE.
   g. HOT WEATHER AND COLD WEATHER CONCRETE CONSTRUCTION SHALL BE DONE IN COMPLIANCE WITH ACI 305.1 AND ACI 306.1, RESPECTIVELY.
   h. CONCRETE MATERIALS AND PRODUCTION METHODS SHALL BE SELECTED SO THAT THE CONCRETE TEMPERATURE AT DELIVERY COMPLIES WITHIN THE SPECIFIED TEMPERATURE LIMITS.
   i. PROVISIONS LISTED DO NOT PROTECT CONCRETE AGAINST CHEMICALLY AGGRESSIVE SOLUTIONS, CONTACT E.O.R. IF SUCH CONDITIONS APPLY.

B. PLACEMENT REQUIREMENTS

1. STANDING WATER SHALL BE REMOVED FROM THE PLACE OF DEPOSIT BEFORE CONCRETE IS PLACED UNLESS A TREMIE IS USED.
2. CONCRETE MASONRY UNITS THAT WILL BE IN CONTACT WITH CONCRETE SHALL BE PRE-WETTED PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL NOT BE CONVEYED WITH PIPES, TREMIES, OR CHUTES MADE OF ALUMINUM OR ALUMINUM ALLOYS.
4. CONCRETE SHALL BE PLACED:
   a. AT A RATE SO CONCRETE AT ALL TIMES HAS SUFFICIENT WORKABILITY TO BE CONSOLIDATED APPROPRIATELY.
   b. WITHOUT SEGREGATION OR LOSS OF MATERIALS.
   c. WITHOUT INTERRUPTIONS TO MAINTAIN WORKABILITY BETWEEN SUCCESSIVE PLACEMENTS TO PREVENT AN UNINTENTIONAL COLD JOINT.
   d. AS NEAR TO ITS FINAL LOCATION AS PRACTICABLE TO AVOID SEGREGATION DUE TO REHANDLING OR FLOWING.
5. CONCRETE THAT HAS BEEN CONTAMINATED OR HAS LOST ITS INITIAL WORKABILITY TO THE EXTENT THAT IT CAN NO LONGER BE CONSOLIDATED APPROPRIATELY SHALL NOT BE USED.
6. RETEMPERING CONCRETE IN ACCORDANCE WITH ASTM C94 SHALL BE PERMITTED AS LONG AS THE LIMITS ON MAXIMUM MIXING TIME AND W/CM ARE NOT VIOLATED.
7. AFTER STARTING, CONCRETING SHALL BE A CONTINUOUS OPERATION UNTIL THE COMPLETION OF A PANEL OR SECTION, AS DEFINED BY ITS BOUNDARIES OR PREDETERMINED JOINTS.
8. CONCRETE SHALL BE CONSOLIDATED APPROPRIATELY DURING PLACEMENT AND SHALL BE WORKED AROUND REINFORCEMENT AND EMBEDMENTS AND INTO CORNERS OF FORMS.
9. TOP SURFACES OF VERTICALLY FORMED LIFTS SHALL BE GENERALLY LEVEL.
10. JOINT LOCATIONS OR JOINT DETAILS NOT SHOWN OR THAT DIFFER FROM THOSE INDICATED IN THE CONSTRUCTION DOCUMENTS SHALL BE SUBMITTED FOR REVIEW BY THE E.O.R.
11. CONSTRUCTION JOINTS SHALL BE CLEANED AND LAITANCE REMOVED BEFORE NEW CONCRETE IS PLACED.
12. THE SURFACE OF CONCRETE CONSTRUCTION JOINTS SHALL BE INTENTIONALLY ROUGHENED.
13. IMMEDIATELY BEFORE THE NEW CONCRETE IS PLACED, CONSTRUCTION JOINTS SHALL BE PRE-WETTED AND STANDING WATER REMOVED.
14. CONCRETE BEAMS, GIRDERS, OR SLABS SUPPORTED BY COLUMNS OR WALLS SHALL NOT BE CAST UNTIL CONCRETE IN THE VERTICAL SUPPORT MEMBERS IS NO LONGER WORKABLE AND SOFT.
15. CONCRETE BEAMS, GIRDERS, HAUNCHES, DROP PANELS, SHEAR CAPS, AND CAPITALS SHALL BE PLACED MONOLITHICALLY AS PART OF A SLAB SYSTEM, U.N.O.
16. SAW CUTTING IN SLABS-ON-GRADE IDENTIFIED IN THE CONSTRUCTION DOCUMENTS AS STRUCTURAL DIAPHRAGMS OR PART OF THE SEISMIC-FORCE-RESISTING SYSTEM SHALL NOT BE PERMITTED U.N.O.
17. ALUMINUM EMBEDMENTS SHALL BE COATED OR COVERED TO PREVENT ALUMINUM-CONCRETE REACTION AND ELECTROLYTIC ACTION BETWEEN ALUMINUM AND STEEL.
18. IN SOLID SLABS, PIPING, EXCEPT FOR RADIANT HEATING FOR SNOW MELTING, SHALL BE PLACED IN THE CENTER OF THE SLAB ABOVE REINFORCEMENT OR BETWEEN TOP AND BOTTOM REINFORCEMENT.
19. CONDUIT AND PIPING SHALL BE FABRICATED AND INSTALLED SO THAT CUTTING, BENDING, OR DISPLACEMENT OF REINFORCEMENT FROM ITS SPECIFIED LOCATION IS NOT REQUIRED

C. FORMWORK REQUIREMENTS

1. FORMWORK SHALL BE DESIGNED, FABRICATED, INSTALLED, AND REMOVED BY THE CONTRACTOR.
2. DESIGN OF FORMWORK SHALL TAKE INTO CONSIDERATION:
   a. METHOD OF CONCRETE PLACEMENT.
   b. RATE OF CONCRETE PLACEMENT.
   c. CONSTRUCTION LOADS, INCLUDING VERTICAL, HORIZONTAL, AND IMPACT.
   d. AVOIDANCE OF DAMAGE TO PREVIOUSLY CONSTRUCTED MEMBERS.
3. FORMWORK FABRICATION AND INSTALLATION SHALL RESULT IN A FINAL STRUCTURE THAT CONFORMS TO SHAPES, LINES, AND DIMENSIONS OF THE MEMBERS AS REQUIRED BY THE CONSTRUCTION DOCUMENTS.
4. FORMWORK SHALL BE SUFFICIENTLY TIGHT TO INHIBIT LEAKAGE OF PASTE OR MORTAR.
5. FORMWORK SHALL BE BRACED OR TIED TOGETHER TO MAINTAIN POSITION AND SHAPE.
6. PRIOR TO START OF CONSTRUCTION, THE CONTRACTOR SHALL DEVELOP A PROCEDURE AND SCHEDULE FOR REMOVAL OF FORMWORK AND INSTALLATION OF RESHORES AS NEEDED TO ACCOMMODATE ANY LOADS TRANSFERRED TO THE STRUCTURE DURING THIS PROCESS.
7. STRUCTURAL ANALYSIS AND CONCRETE STRENGTH REQUIREMENTS USED IN PLANNING AND IMPLEMENTING THE FORMWORK REMOVAL AND RESHORE INSTALLATION SHALL BE GIVEN BY THE CONTRACTOR TO THE E.O.R. AND TO THE BUILDING OFFICIAL, WHEN REQUESTED OR REQUIRED
8. NO CONSTRUCTION LOADS SHALL BE PLACED ON, NOR ANY FORMWORK REMOVED FROM, ANY PART OF THE STRUCTURE UNDER CONSTRUCTION EXCEPT WHEN THAT PORTION OF THE STRUCTURE IN COMBINATION WITH REMAINING FORMWORK HAS ACHIEVED DESIGN STRENGTH TO SUPPORT ITS WEIGHT AND LOADS PLACED ON IT SAFELY AND WITHOUT IMPAIRING SERVICEABILITY.
9. NO CONSTRUCTION LOADS EXCEEDING THE COMBINATION OF SUPERIMPOSED DEAD LOAD PLUS LIVE LOAD INCLUDING REDUCTION SHALL BE PLACED ON ANY UNSHORED PORTION OF THE STRUCTURE UNDER CONSTRUCTION, UNLESS ANALYSIS INDICATES ADEQUATE STRENGTH TO SUPPORT SUCH ADDITIONAL LOADS AND WITHOUT IMPAIRING SERVICEABILITY.

D. SUBMITTAL REQUIREMENTS

1. SUBMIT PRODUCT DOCUMENTATION OF CONCRETE MIXTURE CHARACTERISTICS, INCLUDING STRENGTH, SLUMP, AIR CONTENT, ADMIXTURES, WATER CONTENT, CEMENTITIOUS MATERIALS, AND LOCATION OF CONCRETE PLACEMENT RELATIVE TO SPECIFIC MIX.

REINFORCING STEEL

A. GENERAL REQUIREMENTS

1. ALL ARRANGEMENT, FABRICATION AND DETAILING OF REINFORCING STEEL, INCLUDING BAR SUPPORTS AND SPACERS SHALL BE IN ACCORDANCE WITH THE ACI 315 DETAILING MANUAL.
2. REINFORCING SHALL BE AS FOLLOWS:
   a. #4 BARS AND SMALLER: = ASTM A615, GRADE 40
   b. #5 BARS AND LARGER: = ASTM A615, GRADE 60
   c. TIES AND STIRRUPS: = ASTM A615, GRADE 60
   d. REBAR TO BE WELDED: = ASTM A706, GRADE 60
   e. HEADED DEFORMED BARS: = ASTM A970, GRADE 60
   f. EPOXY COATED BARS: = ASTM D3963 AND A775 OR A934, GRADE 60
   g. SMOOTH WELDED WIRE REINFORCEMENT: = ASTM A185 AND ASTM A1064
   h. DEFORMED WELDED WIRE REINFORCEMENT: = ASTM A497 AND ASTM A1064
   i. FIBER REINFORCEMENT: = ASTM C1116
3. ALL REINFORCING STEEL SHALL BE KEPT CLEAN AND FREE OF RUST.
4. ALL REINFORCING STEEL SHALL BE SUPPORTED IN FORMS, SPACED WITH NECESSARY ACCESSORIES AND SHALL BE SECURELY WIRED TOGETHER, IN ACCORDANCE WITH THE LATEST EDITION OF THE CRSI MANUAL OF STANDARD PRACTICE.
5. ALL REINFORCING SHALL BE BENT COLD. BARS SHALL NOT BE UN-BENT AND RE-BENT. FIELD BENDING OF REBAR SHALL NOT BE ALLOWED UNLESS SPECIFICALLY NOTED.
6. ALL WELDED WIRE REINFORCEMENT (WWR) SHALL BE FLAT SHEETS WITH A MINIMUM YIELD STRENGTH OF 60 KSI.
7. ALL DOWELS, ANCHOR BOLTS AND OTHER HARDWARE TO BE SET IN CONCRETE SHALL BE TIED IN PLACE PRIOR TO THE PLACEMENT OF CONCRETE. NO WET SETTING, STABBING, RODDING, OR OTHER MOVEMENT OF EMBEDDED ITEMS SHALL BE P

PLYWOOD AND OSB SHEATHING

A. PANEL REQUIREMENTS

1. SHEATHING SHALL BE INSTALLED IN ACCORDANCE WITH THE APA RECOMMENDATIONS AND THE GOVERNING CODE.
2. ORIENTED STRAND BOARD (OSB) OF THE SAME STRENGTH EQUIVALENCE CAN BE SUBSTITUTED FOR PLYWOOD.
3. WALL SHEATHING MAY BE INSTALLED VERTICALLY OR HORIZONTALLY. ROOF/FLOOR SHEATHING TO BE INSTALLED HORIZONTALLY. ALL SHEATHING SHALL BE PLACED PERPENDICULAR TO THE FRAMING WITH STAGGERED END JOINTS AT 4'-0".
4. NO SHEATHING PANEL LESS THAN 24" WIDE IN ANY DIRECTION SHALL BE USED.
5. ALL SHEATHING SHALL BE A MINIMUM OF 7/16" THICK FOR ROOF/WALL AND 3/4" THICK FOR FLOOR, U.N.O.
6. PROVIDE 1/8" SPACE AT ALL SHEATHING PANEL EDGES FOR EXPANSION/SHRINKAGE.
7. INTERMEDIATE FRAMING, PANEL EDGES AND BLOCKING TO BE 2X NOMINAL MEMBERS MINIMUM, U.N.O.
8. ALL SHEATHING SHALL HAVE AN EXPOSURE DURABILITY OF EXPOSURE 1, UNLESS PANELS ARE SUBJECT TO PERMANENT EXPOSURE TO WEATHER OR MOISTURE, THEN PANELS SHALL HAVE AN EXPOSURE DURABILITY OF EXTERIOR.
9. ALL SHEATHING SHALL HAVE A MINIMUM SPAN RATING OF (24/16) U.N.O. AND NO LESS THAN THE TYPICAL FRAMING SPACING LISTED ON PLANS.
10. ALL SHEATHING SHALL BE PROTECTED FROM EXPOSURE TO WEATHER PRIOR TO AND DURING CONSTRUCTION TO AVOID DELAMINATION.

B. FASTENER REQUIREMENTS

1. REFERENCE CONSTRUCTION DOCUMENTS FOR ALL SHEAR WALL LOCATIONS, DIMENSIONS AND PLACEMENTS AND COORDINATE FRAMING PLAN LOCATIONS WITH FOUNDATION PLAN LOCATIONS FOR PROPER HOLDOWN INSTALLATIONS, WHERE APPLICABLE, TYP.
2. SHEATHING SHALL HAVE THE FOLLOWING MINIMUM FASTENER SIZE, SPACING AND PATTERN:
   a. WOOD FRAMED WALLS - 8D NAILS, 6" O.C. AT PANEL EDGES AND 12" O.C. @ INTERMEDIATE SUPPORTS. U.N.O.
   b. WOOD FRAMED ROOF/FLOOR DIAPHRAGMS -8D NAILS, 6" O.C. AT PANEL EDGES AND 12" O.C. @ INTERMEDIATE SUPPORTS. U.N.O.
   c. LIGHT GAUGE FRAMED WALLS- #8 SMS SCREWS, 6" O.C. AT PANEL EDGES AND 12" O.C. @ INTERMEDIATE SUPPORTS. U.N.O.
3. THE MINIMUM EDGE DISTANCE FOR NAILS IN THE RECEIVING MEMBERS AND SHEATHING SHALL BE 3/8" FOR 2" NOMINAL RECEIVING MEMBERS AND 1/2" FOR 3" OR LARGER NOMINAL RECEIVING MEMBERS.
4. U.N.O., FRAMING CLIPS SHALL BE EITHER A35 OR LTP4, OR APPROVED EQUIVALENT. USE 1-1/2" LONG NAILS TO ATTACH FRAMING CLIPS DIRECTLY TO FRAMING OR 2-1/2" NAILS WHEN CLIPS ARE INSTALLED OVER SHEATHING.
5. STAGGER ALL EDGE NAILS AT PANEL JOINTS WHERE SHEATHING IS APPLIED TO BOTH FACES OF A WALL.
6. ALL FLOOR SHEATHING SHALL BE BONDED W/ INTERMEDIATE OR EXTERIOR GLUE, IN ADDITION TO MECHANICAL FASTENERS.
7. DRIVE NAILS FLUSH WITH PANEL SURFACE. DO NOT FRACTURE SURFACE BY OVERDRIVING NAILS. SUPPLEMENT ANY OVERDRIVEN NAILS BY ADDING AN EQUAL NUMBER FOR PROPERLY DRIVEN NAILS IN NEW HOLES. ANY SHINERS OR NAILS THAT MISS FRAMING MEMBERS WHEN ATTACHING SHEATHING CAN REMAIN. HOWEVER, ADDITIONAL NAILS ARE REQUIRED, WHICH DIRECTLY ATTACHED THE SHEATHING TO THE FRAMING.

LUMBER AND ENGINEERED WOOD

A. GENERAL REQUIREMENTS

1. ALL WOOD CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE "NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION" (NDS), THE "AMERICAN FOREST AND PAPER ASSOCIATION REFERENCE STANDARDS" (AF&PA) AND THE GOVERNING BUILDING CODE.
2. ALL METAL HANGERS AND CONNECTIONS SHALL BE MANUFACTURED BY "SIMPSON STRONG-TIE COMPANY, INC" AND INSTALLED PER MANUFACTURER'S REQUIREMENTS U.N.O.
3. ALL ROOF OPENINGS GREATER THAN 12" SHALL BE FRAMED IN WITH DECK EDGE SUPPORT FRAMING.
4. ALL BOLTS FOR BOLTED CONNECTIONS SHALL CONFORM TO ASTM A307, U.N.O. BOLTS SHALL BE INSTALLED IN HOLES BORED WITH A BIT 1/16" LARGER THAN THE DIAMETER FOR THE BOLT. PROVIDE STANDARD CUT WASHERS AT ALL BOLT HEADS AND NUTS BEARING ON WOOD.
5. DO NOT SPLICE STRUCTURAL MEMBERS BETWEEN SUPPORTS U.N.O.
6. ALL CONNECTORS AND FASTENERS IN CONTACT WITH CHEMICALLY TREATED LUMBER SUCH AS FIRE TREATED, SHALL BE GALVANIZED OR STAINLESS STEEL AS FOLLOWS:
   a. HOT DIPPED GALVANIZED FASTENERS AND ANCHORS: ASTM A153
   b. HOT DIPPED GALVANIZED CONNECTORS: ASTM A123
   c. GALVANIZED CONNECTORS: ASTM A653, GRADE G185
   d. STAINLESS STEEL: TYPE 304 OR 316
7. ALL PNEUMATIC NAILING SHALL BE PLAIN SHANK, COATED OR GALVANIZED AND HAVE THE FOLLOWING DIMENSIONS:
   a. 8D = 0.131" DIA. X 2-1/2" MIN. LENGTH
   b. 10D = 0.131" DIA. X 3" MIN. LENGTH
   c. 16D = 0.131" DIA. X 3-1/2" MIN. LENGTH
8. ALL HAND NAILING SHALL BE SINKERS, COATED AND HAVE THE FOLLOWING DIMENSIONS:
   a. 8D = 0.131" DIA. X 2-3/8" MIN. LENGTH
   b. 10D = 0.131" DIA. X 3" MIN. LENGTH
   c. 16D = 0.131" DIA. X 3-1/2" MIN. LENGTH

B. LUMBER REQUIREMENTS

1. ALL STRUCTURAL LUMBER SHALL BE **DOUGLAS FIR LARCH (DF/L) #2** OR BETTER, U.N.O. ALL INTERIOR NON-LOAD BEARING WALLS CAN BE **DF/L** STUD GRADE, U.N.O. ALL STRUCTURAL LUMBER SHALL BE MARKED AND GRADED BY AND APPROVED GRADING INSPECTION AGENCY.
2. MAXIMUM LUMBER MOISTURE CONTENT SHALL BE 15%.
3. ALL WOOD EXPOSED TO EARTH, WEATHER, OR MOISTURE THAT WOULD BE SUBJECT TO DECAY OR INSTALLED WITHIN 1" OF CONCRETE OR MASONRY, SHALL BE PRESSURE TREATED OR HAVE SUFFICIENT WEATHER RESISTANT PROPERTIES.
4. ALL EXTERIOR WALLS TO BE 2X6 STUD FRAMING AT 16" O.C. AND INTERIOR NON-LOAD BEARING STUD WALLS TO BE 2X4 @ 24" O.C. MINIMUM U.N.O.

C. ENGINEERED WOOD REQUIREMENTS

1. ALL ENGINEERED "I" JOISTS SHALL BE DESIGNED, CERTIFIED, ERECTED, INSTALLED, AND BRACED IN STRICT ACCORDANCE WITH ADA AND MANUFACTURER SPECIFICATIONS AND DETAILS. USE SPECIFIED PRODUCTS OR AN EQUIVALENT APPROVED MANUFACTURER.
2. ALL LAMINATED VENEER LUMBER (LVL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
   a. GRADE = 2.0E
   b. FB = 2,600 PSI
   c. FV = 285 PSI
   d. E = 2,000 KSI
3. ALL LAMINATED STRAND LUMBER (LSL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
   a. GRADE = 1.55E
   b. FB = 2,325 PSI
   c. FV = 310 PSI
   d. E = 1,550 KSI
4. ALL PARALLEL STRAND LUMBER (PSL) SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
   a. GRADE = 1.8E FOR COLUMNS, = 2.0E FOR BEAMS
   b. FB = 2,400 PSI FOR COLUMNS, = 2,900 PSI FOR BEAMS
   c. FV = 190 PSI FOR COLUMNS, = 290 PSI FOR BEAMS
   d. E = 1,800 KSI FOR COLUMNS, = 2,000 KSI FOR BEAMS
5. ALL GLUE-LAMINATED OR GLULAM BEAMS (GLB) SHALL BE DOUGLAS FIR USING WATERPROOF ADHESIVES AND BE FABRICATED IN ACCORDANCE WITH ANSI AND AITC STANDARDS, AND HAVE THE FOLLOWING MINIMUM PROPERTIES:
   a. COMBINATION = 24-V4, FOR SINGLE SPAN OR 24F-V8 FOR CANTILEVERED AND/OR MULTI-SPAN.
   b. GRADE = ARCHITECTURAL APPEARANCE
   c. FB = 2,400 PSI
   d. FV = 265 PSI
   e. E = 1,800 KSI
   f. CAMBER = PER CONSTRUCTION DOCUMENTS
6. ALL GLUE-LAMINATED OR GLULAM COLUMNS (GLB) SHALL BE DOUGLAS FIR USING WATERPROOF ADHESIVES AND BE FABRICATED IN ACCORDANCE WITH ANSI AND AITC STANDARDS, AND HAVE THE FOLLOWING MINIMUM PROPERTIES:
   a. COMBINATION = 3
   b. GRADE = COLUMN
   c. FBY, FBX = 2,100 PSI, 2,000 PSI
   d. FVY, FVX = 230 PSI, 265 PSI
   e. FC (PERPENDICULAR) = 650 PSI
   f. E = 1,900 KSI
7. ANY HOLES AND/OR NOTCHES IN BEAMS SHALL BE IN ACCORANCE WITH MANUFACTURER SPECIFICATIONS.
8. ALL GLULAM BEAMS TO BE INSTALLED WITH THE CORRECT ORIENTATION OF THE BEAM CROWN TO ENSURE PROPER LOAD DISTRIBUTION.

D. EXECUTION REQUIREMENTS

1. ALL BEARING ELEVATIONS AND SLOPES FOR BEAMS, GIRDERS AND COLUMN HEIGHTS SHALL BE COORDINATED AND VERIFIED BY THE CONTRACTOR.
2. THE CONTRACTOR TO INSTALL BEAMS AND JOISTS TRUE, PLUMB AND SECURELY AT EACH END U.N.O.
3. ALL MEMBERS SHALL BE HANDLED DURING MANUFACTURING, DELIVERY AND AT THE JOBSITE SO AS NOT TO BE SUBJECTED TO ANY DAMAGE. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE E.O.R. IMMEDIATELY OF ANY DAMAGE OBSERVED.
4. WHERE ADHESIVES ARE USED, CONTRACTOR TO PROVIDE WET USE ADHESIVES.
5. ALL WINDOW SIZES IN ETERIOR WOOD WALLS ARE NOMINAL. CONTRACTOR TO VERIFY ACTUAL OPENINGS WITH WINDOW MANUFACTURERS.
6. ALL HOLDOWN NUTS SHALL BE RE-TIGHTENED JUST PRIOR TO COVERING THE WALL FRAMING.
7. THE CONTRACTOR TO PROVIDE SIMPSON ST2215 STEEL STRAPS AT PIPES IN STUD WALLS AS REQUIRED BY THE GOVERNING CODE.
8. THE CONTRACTOR TO PROVIDE SOLID BLOCKING AT 24" O.C. AT JOISTS PARALLEL TO ALL BEARING WALLS.
9. AT ALL MULTIPLE STUD (STUD PACK) AND POST LOCATIONS REQUIRED TO SUPPORT VERTICAL LOADS, A CONTINUOUS LOAD PATH SHALL BE PROVIDED TO SUPPORT THOSE LOADS THROUGH THE STRUCTURE, CONTRACTOR TO PROVIDE SOLID BLOCKING TO ENSURE FULL AREA BEARING TO THE FOUNDATION. U.N.O.
10. OVER FRAMING SHALL BE DONE SUCH THAT VERTICAL LOADS ARE TRANSFERRED TO MAIN STRUCTURE BELOW BY DIRECT BEARING AT SPACING NOT TO EXCEED 24" O.C.
11. ALL LUMBER SHALL BE PROTECTED FROM EXPOSURE TO WEATHER PRIOR TO AND DURING CONSTRUCTION.

STRUCTURAL STEEL

A. GENERAL REQUIREMENTS

1. ALL STEEL CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS LISTED IN THE "AMERICAN INSTITUTE OF STEEL CONSTRUCTION" (ASIC) AISC-341 AND AISC-360.
2. ALL STEEL FABRICATION SHALL BE PERFORMED BY A LICENSED FABRICATOR.
3. ALL STRUCTURAL STEEL MATERIALS SHALL MEET THE FOLLOWING MINIMUM REQUIREMENTS:
   a. (W) SHAPES AND (WT) SHAPES: = ASTM A992, FY = 50 KSI
   b. (HSS) SHAPES - SQUARE/RECTANGLE: = ASTM A500 GRADE B, FY = 46 KSI
   c. (HSS) SHAPES - ROUND: = ASTM A500 GRADE B, FY = 42 KSIL
   d. (S) SHAPES, (M) SHAPES, AND (HP) SHAPES: = ASTM A36, FY = 36 KSI
   e. (ST) SHAPES AND (MT) SHAPES: = ASTM A36, FY = 36 KSI
   f. (C) SHAPES AND (MC) SHAPES: = ASTM A36, FY = 36 KSI
   g. (L) SHAPES AND (PL) SHAPES: = ASTM A36, FY = 36 KSI
   h. (P) PIPE: = ASTM A53 (TYPE E OR S), GRADE B, FY = 35 KSI
   i. HIGH STRENGTH BOLTS: = ASTM A325, **GRADE 8**
   j. ANCHOR RODS: = ASTM F1554, **GRADE 36** TYPE S1
   k. DEFORMED BAR ANCHORS: = ASTM A496
   l. WELDED HEADED STUDS: = ASTM A108
   m. MACHINE BOLTS: = ASTM A307
   n. NUTS: = ASTM A563, GRADE C
   o. WASHERS - FLAT OR BEVELED: = ASTM F436
4. ALL STEEL COLUMNS SHALL BE MILLED WITH EACH END TO FIT FLUSH WITH BASEPLATE, CAP OR END TO END.
5. PAINT ALL STRUCTURAL STEEL IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. DO NOT PAINT STEEL SURFACES TO BE ENCASED IN CONCRETE, SURFACES TO RECEIVE FIREPROOFING, CONNECTIONS DESIGNED AS FRICTION TYPE, SURFACES TO BE WELDED, OR SURFACES RECEIVING WELDED STUDS OR DBA'S IN THE FIELD.
6. ALL SHOP AND FIELD CONNECTIONS NOT SPECIFICALLY DETAILED ON THE CONSTRUCTION DOCUMENTS SHALL BE BOLTED OR WELDED. PROVIDE A MINIMUM (2) ¾" DIAMETER BOLTS PER CONNECTION AND/OR MINIMUM WELD SIZE OF 3/16" FILLET ALL AROUND, U.N.O.
7. ALL STRUCTURAL STEEL EXPOSED TO WEATHER SHALL BE PRIME COATED AND PAINTED OR HOT DIPPED GALVANIZED PER ASTM-A123. USE ASTM A325 BOLTS IN HOT DIPPED GALVANIZED WITH GALVANIZED HARDENED WASHERS AND HEAVY HEX NUTS FOR BOLTING OFF-GALVANIZED ITEMS.
8. ALL TUBE AND PIPE SECTIONS EXPOSED TO WEATHER SHALL HAVE OPEN ENDS CAPPED WITH A ¼" PLATE.
9. ALL OVER SIZED OR SLOTTED HOLES SHALL NOT BE USED FOR ANY CONNECTIONS UNLESS SPECIFICALLY INDICATED ON THE CONSTRUCTION DOCUMENTS.

B. EXECUTION REQUIREMENTS

1. ALL HOLES AND CUTS SHALL BE SHOWN ON THE SHOP DRAWINGS AND MADE IN THE SHOP. FIELD BURING IN STRUCTURAL STEEL MEMBERS IS NOT PERMITTED. DO NOT USE GAS CUTTING TORCHES TO CORRECT FABRICATION ERRORS IN STRUCTURAL STEEL FRAMING.
2. ALL BOLTS, ANCHOR BOLTS, ETC, SHALL BE INSTALLED WITH THE APPROPRIATE STEEL WASHERS AND TIGHTENED NUTS FOR THE SPECIFIED BOLTS.
3. ALL BEARING ELEVATIONS AND SLOPES FOR BEAMS, GIRDERS AND COLUMN HEIGHTS SHALL BE COORDINATED AND VERIFIED BY THE CONTRACTOR.
4. THE CONTRACTOR TO INSTALL ALL BEAMS AND GIRDERS TRUE, PLUMB AND SECURELY AT EACH END.
5. THE CONTRACTOR IS RESPONSIBLE FOR NOTIFYING THE STEEL FABRICATOR AND E.O.R. IMMEDIATELY OF ANY STRUCTURAL STEEL MEMBER DAMAGE OBSERVED. EACH DAMAGED AREA MUST BE REPAIRED OR REPLACED BY THE STEEL FABRICATOR AND SUBMITTED TO E.O.R. BEFORE FINAL INSPECTION.
6. ALL BOLTS SHALL BE TIGHTENED WITH A PRE-TENSIONED FORCE TO "SNUG-TIGHT" CONDITION AS DEFINED BY AISC, U.N.O.
7. ALL SLIP CRITICAL BOLTS (SC) SHALL BE USED WHERE DESIGNATED ON THE CONSTRUCTION DOCUMENTS. TIGHTEN SLIP CRITICAL BOLTS USING ONE OF THE FOLLOWING: TWIST-OFF BOLTS, TENSION CONTROL CALIBRATED WRENCH OR DIRECT TENSION INDICATORS.
8. ALL BOLTS SHALL BE INSTALLED AS BEARING-TYPE CONNECTIONS WITH THREADS EXCLUDED FROM THE SHEAR PLANE U.N.O.
9. ALL CONTACT SURFACES OF BOLTS PARTS SHALL BE DESCALED AND FREE OF DIRT, OIL, BURRS, PITS AND OTHER DEFECTS WHICH WOULD PREVENT SOLID SEATING OF PARTS.
10. NATURAL CAMBER IN BEAMS MUST BE INSTALLED CROWN UP.

C. WELDING REQUIREMENTS

1. ALL WELDING SHALL BE IN ACCORDANCE WITH THE "STRUCTURAL WELDING CODE", OF THE AMERICAN WELDING SOCIETY (AWS) AND ALL SHOP AND FIELD WELDING SHALL BE DONE BY CERTIFIED WELDERS QUALIFIED IN ACCORDANCE WITH AWS STANDARDS.
2. ALL WELDS ON MEMBERS COMPRISING THE LATERAL-RESISTING SYSTEM (MOMENT AND BRACE FRAMES) SHALL CONFORM TO THE DETAILING, MATERIALS, WORKMANSHIP, TESTING, AND INSPECTION REQUIREMENTS PER AWS D1.8 AND EMPLOY WELD FILLER METALS CLASSIFIED FOR NOMINAL 70 KSI TENSILE STRENGTH, REFERRED TO AS E70 ELECTRODES, MEETING THE FOLLOWING MINIMUM MECHANICAL PROPERTY REQUIREMENTS.
   a. CVN TOUGHNESS OF 20 FT-LB AT -20°F, USING AWS A5 CLASSIFICATION TEST METHOD.
   b. CVN TOUGHNESS OF 40 FT-LB AT 70°F, USING TEST PROCEDURES PRESCRIBED IN AWS D1.8 - APPENDIX A.
   c. YIELD STRENGTH: 58 KSI MINIMUM, USING BOTH THE AWS A5 CLASSIFICATION TEST (FOR E70 CLASSIFICATION ELECTRODES) AND THE TEST PROCEDURES PRESCRIBED IN AWS D1.8 - APPENDIX A.
   d. TENSILE STRENGTH: 70 KSI MINIMUM, USING BOTH THE AWS A5 CLASSIFICATION TEST (FOR E70 CLASSIFICATION ELECTRODES) AND THE TEST PROCEDURES PRESCRIBED IN AWS D1.8 - APPENDIX A.
   e. ELONGATION: 22% MINIMUM, USING BOTH THE AWS A5 CLASSIFICATION TEST AND THE TEST PROCEDURES PRESCRIBED IN AWS D1.8 - APPENDIX A.
3. ALL WELDING OF STRUCTURAL STEEL SHALL BE PERFORMED PER AWS A1.1 USING E70XX ELECTRODES U.N.O.. BARE ELECTRODES AND GRANULAR FLUX SHALL CONFORM TO AWS.
4. ALL GROOVE OR BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS. ALL EXPOSED BUTT WELDS SHALL BE GROUND SMOOTH.
5. ALL WELDING OF METAL DECK AND LIGHT GAGE STEEL SHALL BE IN ACCORDANCE WITH AWS D1.3.
6. ALL WELDING OF REINFORCING BARS SHALL BE PERFORMED PER AWS D1.4 USING E90XX ELECTRODES.
7. ALL EXPOSED WELDS ON ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS) SHALL COMPLY WITH AISC CODE OF STANDARD PRACTICE.
8. ALL HSS TO HSS WELDS SHALL BE ACHIEVED BY ALL AROUND FILLET AND FLARE BEVEL WELDS TO PROVIDE ½" MINIMUM EFFECTIVE THROAT UNLESS A LARGER AMOUNT IS INDICATED OTHERWISE. PROVIDE ERECTION AIDS FOR FIELD ASSEMBLED HSS TO HSS CONNECTION AS REQUIRED. ERECTION AIDS SHALL BE REMOVED AND HSS SURFACES GROUND SMOOTH WHERE LOCATION IS TO BE EXPOSED IN FINAL CONSTRUCTION OR WHERE ERECTION AIDS WILL CONFLICT WITH OTHER CONSTRUCTION.
9. ALL WELD BACK UP BARS SHALL BE REMOVED AND GROUND SMOOTH AFTER WELD IS COMPLETED, U.N.O.
10. ALL WELD LENGTHS NOT NOTED SHALL BE FULL LENGTH. TERMINATE WELDS IN ACCORDANCE WITH AISC AND AWS.

D. BASEPLATE AND ANCHORAGES REQUIREMENTS

1. ALL GROUT UNDER STEEL BASEPLATES SHALL BE NON-SHRINK, CEMENT-BASED, NON-METALLIC GROUT OR DRYPACK GROUT WITH A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 5,000 PSI. ALLOW GROUT TO FULLY CURE BEFORE APPLYING LOADS.
2. ALL ANCHOR RODS AT STEEL COLUMN BASEPLATES SHALL BE RODS WITH THREADS ON BOTH ENDS WITH HEAVY HEX NUT FULLY THREADED ONTO EMBEDDED END. TO PREVENT ANCHOR NUT FROM BACKING OFF, THE CONTRACTOR SHALL PERFORM ONE OF THE FOLLOWING:
   a. TACK WELD NUT TO ROD.
   b. SPOIL THREADS.
   c. NYLOC NUTS
   d. APPROPRIATE CORROSION RESISTANT ADHESIVE
3. ALL HEADED ANCHOR BOLTS WITH THE SAME PROPERTIES AND CAPACITIES MAY BE USED AS AN ALTERNATIVE TO ANCHOR RODS.

E. SHOP DRAWING AND DIFFERED SUBMITTAL REQUIREMENTS

1. ALL STEEL SHALL BE FABRICATED IN ACCORDANCE WITH AISC 303 AND SHALL BE COMPLETED BY AND APPROVED STEEL FABRICATOR.
2. SHOP DRAWINGS SHALL BE PREPARED IN ACCORDANCE WITH AISC 326. PROVIDE COMPLETE WELDING INFORMATION USING AWS SYMBOLS. USE PREQUALIFIED WELEDED JOISTS PER AISC AND AWS D1.1 "STRUCTURAL WELDING CODE."
3. SUBMIT SHOP DRAWINGS SHOWING STEEL ELEVATIONS, PLAN AND SECTIONS; SIZES AND GRADE OF STEEL TO BE USED; PITCH, SPAN, CAMBER, SUPPORT CONFIGURATION AND SPACING FOR EACH TYPE OF BEAM, JOIST, GIRDER, COLUMN, ETC.; AND CONNECTION AND ANCHORAGE DETAILS.

TIMBER FRAME

A. GENERAL REQUIREMENTS:

1. ALL TIMBER CONSTRUCTION SHALL CONFORM TO REQUIREMENTS SET FORTH IN THE NDS "NATIONAL DESIGN SPECIFICATIONS" FOR WOOD CONSTRUCTION", AND TFEC 1-2019, "STANDARD FOR DESIGN OF TIMBER FRAME STRUCTURES AND COMMENTARY.
2. TIMBERS WILL SHRINK AFTER INSTALLATION UNTIL THEY REACH THE EQUILIBRIUM MOISTURE CONTENT (EMC). THIS WILL CAUSE THE LOOSENING OF BOLTS AND THREADED CONNECTORS. PERIODIC TIGHTENING OF THESE CONNECTIONS BY THE END USER DURING THE FIRST SEVERAL YEARS OF THE STRUCTURE'S SERVICE LIFE MAY BE REQUIRED.
3. NORMAL CONSTRUCTION TOLERANCES/DIMENSIONAL VARIATIONS CAN BE EXPECTED IN THE COMPLETED STRUCTURE AS WELL AS DIMENSIONAL CHANGES DUE TO SHRINKAGE AND SWELLING THROUGHOUT THE LIFE OF THE STRUCTURE. FOR THESE REASONS, DETAILS OF ADJOINING SURFACES AND MATERIALS MUST BE ABLE TO ACCOMMODATE THESE VARIATIONS AND CHANGES. EXPECT JOINERY TO OPEN SOMEWHAT DUE TO SHRINKAGE FROM INITIAL MOISTURE CONTENT AT THE TIME OF FABRICATION UNTIL EMC IS REACHED.
4. SOME WARPING, TWISTING, CHECKING, AND SPLITTING OF TIMBERS AS THEY REACH EQUILIBRIUM MOISTURE CONTENT CAN BE EXPECTED. THE USE OF END GRAIN SEALER IS RECOMMENDED FOR ALL TIMBERS TO HELP RESIST END CHECKING. SURFACE SEALERS TO RESIST MOISTURE PENETRATION ARE RECOMMENDED FOR ALL TIMBER EXPOSED TO WEATHER.
5. THE KEY TO THE LONG-TERM SURVIVABILITY OF THE STRUCTURE DEPENDS ON KEEPING THE TIMBERS SEALED, DRY AND WELL VENTILATED. THESE DESIGN DETAILS ARE THE RESPONSIBILITY OF OTHERS.
6. TIMBER KNEE BRACES MAY PROVIDE SOME LATERAL STABILITY DURING ERECTION DEPENDING ON WIND DIRECTION. IT IS THE RESPONSIBILITY OF THE ERECTOR/INSTALLER OF THE TIMBER FRAME SYSTEM TO PROVIDE TEMPORARY BRACING AND GUYING SYSTEMS UNTIL THE FINAL STRUCTURAL STABILITY ELEMENTS HAVE BEEN INSTALLED.
7. ANY REQUIRED SPACERS BETWEEN THE TIMBER FRAME AND THE WALL SYSTEM TO TUCK DRY WALL SHEATHING BEHIND THE TIMBER FRAME MUST BE STRUCTURAL PLYWOOD OR ORIENTED STRAND BOARD. DRYWALL/GYPSUM BOARD SPACERS ARE NOT PERMITTED FOR THE TRANSFER OF LATERAL LOADING BETWEEN THE TIMBER FRAME AND STUD FRAMED OR SIP WALL SYSTEMS.

B. MEMBER REQUIREMENTS:

1. INTERIOR: **SOUTHERN YELLOW PINE #1**, WCLIB GRADING RULES, "GREEN" AT TIME OF FABRICATION AND EXPECTED TO BE LESS THAN 19% MOISTURE CONTENT IN SERVICE, FREE OF HEART CENTER AND FINISHED S4S IN ACCORDANCE WITH THE MOST RECENT NDS.
   a. NOTE: DOUGLAS FIR IS NOT A "NATURALLY DURABLE WOOD" AS DEFINED IN SECTION 202, WHICH MAY BE REQUIRED BY SECTION 2304.11 OF THE INTERNATIONAL BUILDING CODE. ITS USE IN EXPOSED LOCATIONS REQUIRES SPECIAL CARE IN PROVIDING PROTECTIVE FLASHING, SEALING OR OILING OF TIMBERS, AND ONGOING/ACTIVE MAINTENANCE AND OBSERVATION TO PREVENT PREMATURE DETERIORATION FROM ROT, DECAY AND UV DEGRADATION. THE DESIGN AND DETAILING OF SUCH SYSTEMS AND COATINGS AND INSPECTION/MAINTENANCE PROCEDURES IS THE RESPONSIBILITY OF OTHERS.
2. EXTERIOR: **DOUGLAS FIR, #1 AND BETTER**, "GREEN" AT TIME OF FABRICATION AND EXPECTED TO BE LESS THAN 19% MOISTURE CONTENT IN SERVICE, BOX-HEART, S4S IN ACCORDANCE WITH THE MOST RECENT NDS.
3. PARALLEL CHORD TRUSSES WITH TENSION SPLICES SHALL BE CAMBERED L/180 WHERE L IS THE SPAN IN INCHES.

C. FASTENER REQUIREMENTS:

1. SEE MANUFACTURER SHOP DRAWINGS FOR FASTNER SCREW TYPE. ALL FASTENERS ARE TO BE INSTALLED IN STRICT ACCORDANCE WITH THEIR MANUFACTURED GUIDELINES.
2. LAG SCREWS SHALL BE 'GALVANIZED' UNLESS OTHERWISE NOTED. DRILL TWO LEAD HOLES FOR THE THREADS BASED ON THE A SPECIFIC GRAVITY (SG) NOTED BELOW:
   a. 65% TO 85% OF THE SHANK DIAMETER IN WOOD FOR SG GREATER THAN 0.60;
   b. 60% TO 75% FOR AN SG BETWEEN 0.50 AND 0.60
   c. 40% TO 70% FOR AN SG EQUAL TO OR LESS THAN 0.50 TO ENSURE A 'TIGHT GRIP' INTO THE TIMBER RECEIVING THE THREADS.
   d. THE LEAD HOLE FOR THE SMOOTH SHANK IS EQUAL TO THE DIAMETER OF THE SHANK.
3. PEGS SHALL BE 1" DIAMETER, STRUCTURAL, STRAIGHT GRAINED, BLACK WALNUT, WHITE OAK, RED OAK OR LOCUST TREATED WITH PARAFFIN, LINSEED OIL OR SIMILAR SEALING SUBSTANCE.
4. TENONS SHALL BE THE MINIMUM DIMENSIONS UNLESS OTHERWISE NOTED:
   a. STUB TENONS: 2" THICK BY 3/4" LONG
   b. FULL TENONS: 2" THICK BY 4-1/2" LONG (1 ½" TENONS INTO 51/2" THICK TIMBER)
   c. PEG SPACING: END DISTANCE: 2 ½", EDGE DISTANCE: 2"; SPACING: 2 ½" TO 3"
5. BOLTS AND PINS SHALL BE ASTM GRADE A307 (INTERIOR) OR GRADE 316 STAINLESS STEEL (EXTERIOR) UNLESS OTHERWISE NOTED. AT LEAST TWO FULL THREADS SHALL EXTEND PAST THE FACE OF ANY NUTS. BOLT HOLES IN TIMBER SHALL BE DRILLED TO YIELD A TIGHT FIT REQUIRING 'MODERATE' DRIVING FORCE WITH A MALLET TO SEAT THE BOLTS. TO COMPENSATE FOR THE EFFECTS OF CROSS GRAIN SHRINKAGE ON BOLTED CONNECTIONS IT IS RECOMMENDED THAT BOLTS AND THREADED CONNECTORS BE TIGHTENED IMMEDIATELY PRIOR TO OCCUPANCY AND SIX MONTHS AFTER OCCUPANCY.
6. CONNECT BEAMS TO SIP WALL POCKET WITH TWO (2) SIP PANEL SCREWS ON EACH SIDE OF 7.25" AND 9.25" BEAMS AND THREE (3) SCREWS FROM EACH SIDE FOR 11.25" BEAMS AND LARGER U.N.O.

STRUCTURAL INSULATED PANELS (SIPS)

A. GENERAL REQUIREMENTS

1. STRUCTURAL INSULATED PANELS (SIPS) SHALL BE PROVIDED BY A FIRM WITH DEMONSTRATED EXPERIENCE IN THE FABRICATION AND INSTALLATION OF THAT SYSTEM. MEMBERSHIP IN SIPA (STRUCTURAL INSULATED PANEL ASSOCIATION) WILL SATISFY THIS REQUIREMENT. THE FIRM SHALL HAVE A CURRENT CODE CERTIFICATION REPORT (NTA OR SIMILAR) WITH SIZES, AND SPAN AND LOAD TABLES.
2. THE SIP SYSTEM SHALL BE DESIGNED TO RESIST REQUIRED DESIGN LOADS AS INDICATED OR REFERENCED ON CONSTRUCTION DOCUMENTS. SIP MANUFACTURER ENSURE SUSPENDED AND ROOF MOUNTED UNIT WEIGHTS, SNOW DRIFT AT PROJECTIONS, VALLEYS AND EAVES, AND ANY MISCELLANEOUS WEIGHTS ARE ACCOUNTED FOR. WHERE SIP SYSTEMS ARE INSTALLED ON FRAMING BY OTHERS, FASTENING REQUIREMENTS SHALL BE DESIGNED TO RESIST GRAVITY LOADS, WIND UPLIFT, AND DIAPHRAGM SHEAR.
3. THE SIP SYSTEM SHALL CONFORM TO THE PROPER ASTM AND ICBO/ICC REGULATIONS. ADDITIONAL REQUIREMENTS FROM THE LOCAL JURISDICTION SHOULD BE COORDINATED AND CONFIRMED BY THE CONTRACTOR.
4. THE SIP SYSTEM SHALL BE CONSTRUCTED AND INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS.
5. DIMENSIONAL OR ENGINEERED LUMBER WITHIN PANELS SHALL HAVE AN MINIMUM SPECIFIC GRAVITY OF 0.42.
6. THE SIP SYSTEM SHALL BE MANUFACTURED IN ACCORDANCE WITH A THIRD PARTY MANUFACTURING AND DESIGN CERTIFICATION PROGRAM, (NTA OR ICCES/PFS) WHICH IS IN EFFECT DURING THE DESIGN AND PRODUCTION OF THE PANELS.
7. ALL PANEL SCREWS SHALL HAVE SUFFICIENT LENGTH TO PROVIDE A MINIMUM OF 1 ½" PENETRATION IN RECEIVING TIMBER OR PANEL. UNLESS OTHERWISE NOTED, PROVIDE PANEL SCREWS INTO ALL ADJACENT TIMBERS AT 12" ON CENTER.
8. SECURE ALL SPLINES WITH 0.131"DIA. (8D) COMMON NAILS OR 1½" LONG 16 GAGE WIDE-CROWN (7/16") STAPLES SPACED AS INDICATED ON THE CONSTRUCTION DOCUMENTS AND ORIENTED PARALLEL TO THE EDGES OF THE PANELS. U.N.O., SPACE NAILS OR STAPLES AT 6" ON CENTER ALONG EACH SIDE OF THE JOINT.
9. WHERE THE TOP EDGES OF THE WALL PANELS CONTAIN A SPLINE (WITHIN THE CONFINES OF THE PANEL) AND A CAP PLATE (REQUIRED FOR EITHER VERTICAL LOAD OR PANEL SHEAR), THE CAP PLATE JOINTS SHALL BE STAGGERED WITH THE PANEL EDGES BY 24" AND SECURED TO THE INNER SPLINE WITH 0.131 X 3" FULL-HEADED NAILS, 0.148" 10D NAILS AT 4" O.C., STAGGERED OR APPROVED EQUIVALENT.
10. LAMINATE TRIPLE (3-PLY) LVL BEAMS (LAMINATED VENEER LUMBER OR EQUAL) WITH (2) ROWS OF SIMPSON ½" DIA. X 3½" SIMPSON SDS SCREWS AT 24" O.C. STAGGERED, BOTH SIDES. A TOTAL OF FOUR (4)

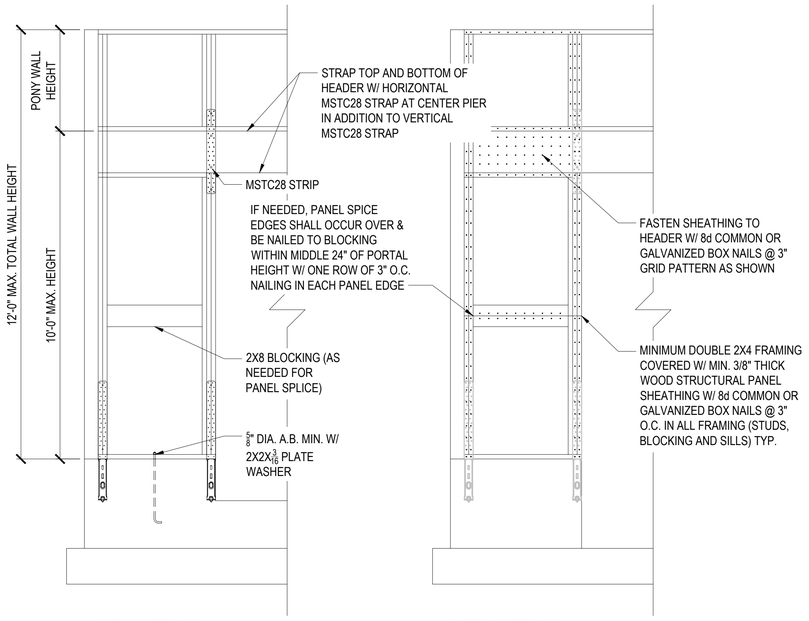
HOLDOWN SCHEDULE					
		MINIMUM MEMBER SIZE	ANCHORAGE TO CONCRETE		
TYPE	MEMBER FASTENERS		TYPE	DIAMETER	EMBEDMENT
HUD2	(6) 1/4" X 2 1/2" SDS	3" X 3 1/2"	SSTB16	5/8"	12 5/8"
HUD4	(10) 1/4" X 2 1/2" SDS	3" X 3 1/2"	SSTB16	5/8"	12 5/8"
HUD5	(14) 1/4" X 2 1/2" SDS	3" X 3 1/2"	SSTB24	5/8"	20 5/8"
HUD8	(20) 1/4" X 2 1/2" SDS	3 1/2" X 4 1/2"	SSTB28	7/8"	24 7/8"

NOTES:
1. ALL HOLDOWNS INDICATED ARE SIMPSON STRONG-TIE; INSTALL PER MANUFACTURER'S SPECIFICATIONS.
2. FOR FLOOR TO FLOOR CONNECTIONS, USE THREADED ROD PER MANUFACTURER'S SPECIFICATIONS.
3. EMBEDMENT INDICATED IS INTO CONCRETE.
4. HOLDOWNS SHOWN ARE FOR CAST-IN-PLACE UNLESS NOTED OTHERWISE.

SHEAR WALL SCHEDULE							
			FASTENER SPACING		FASTENER SPACING		BOT. PLATE FASTENER AND SPACING
MARK	MATERIAL SIZE AND LAYOUT	FASTENER SIZE	FIELD	EDGE	TYPE	SIZE & SPACING	
SW-1	7/16" SHEATHING, EXTERIOR SIDE	8d NAIL	12"	4"	J-BOLT	5/8" DIA. @ 48" O.C.	(2) 16d @ 4'-0" O.C.

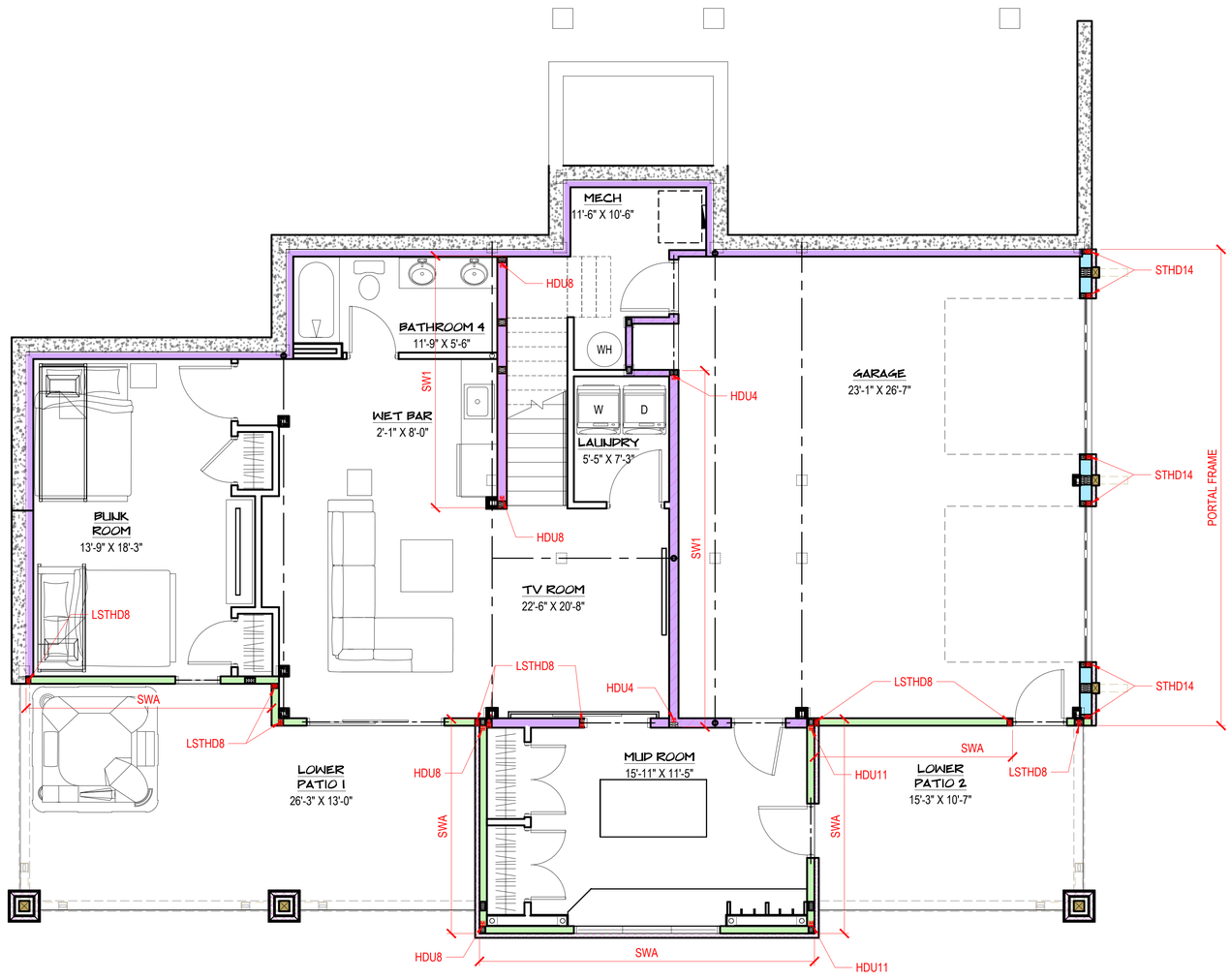
NOTES:
1. SHADED WALLS DENOTE SHEAR WALL LOCATIONS
2. SHEATHING EDGE NAILING REQUIRED AT EACH HOLDOWN POST, STUD OR BUILT-UP STUD REGARDLESS OF PANEL END LOCATIONS.
3. SHEAR WALL SHEATHING AND MAINLING PATTERN TO BE CONTINUOUS ABOVE AND BELOW OPENINGS.
4. SHEAR WALLS MORE THAN ONE VERTICAL PANEL IN HEIGHT SHALL HAVE EITHER VERTICAL OR HORIZONTAL STAGGERED SPLICED JOISTS.

SIP SHEAR WALLS (WIND AND SEISMIC LOADS IN SEISMIC DESIGN CATEGORIES A, B AND C					
	MINIMUM NOMINAL SIP THICKNESS (IN)	MINIMUM FACING CONNECTIONS			SHEAR STRENGTH
SPLINE TYPE		CHORD[2]	PLATE[2]	SPLINE[3]	
SW-A	4 5/8"	0.131" X 2 1/2" COATED NAILS 6" O.C.	0.131" X 2 1/2" COATED NAILS 3" O.C.	CAM-LOCKS SPACED 24" O.C. DOW GREAT STUFF PRO INSULATING FOAM SEALANT (3) LINES OF 5/8" DIA. BEAD AT SIP JOINT	475



X PARTIAL PORTAL WALL (SHEATHING NOT SHOWN)
SCALE: 1/2" = 1'-0"

X PARTIAL PORTAL WALL (W/ SHEATHING & NAILING)
SCALE: 1/2" = 1'-0"



N (MAGNETIC NORTH)

LOWER LEVEL STRUCTURAL PLAN

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

0 5'-0" 10'-0"

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FIRM # 20151163829
PROJECT # 23-22846

COLORADO LICENSED BRIAN JAMES SHELEY PE.0041126 PROFESSIONAL ENGINEER

04/22/2025

REVISION	DATE
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REV. #1 - UPDATED PLANS TO COMPLY WITH 2023 COLORADO SOLAR & ELECTRIC READY & EV CHARGER IN GARAGE	4-17-2025

CONSTRUCTION DRAWINGS

THE SHANLEY HOME

OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

100S

LOWER LEVEL STRUCTURAL PLAN

HOLDOWN SCHEDULE					
		MINIMUM MEMBER SIZE	ANCHORAGE TO CONCRETE		
TYPE	MEMBER FASTENERS		TYPE	DIAMETER	EMBEDMENT
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SHEAR WALL SCHEDULE							
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MARK	MATERIAL SIZE AND LAYOUT	FASTENER SIZE	FIELD	EDGE	TYPE	SIZE & SPACING	
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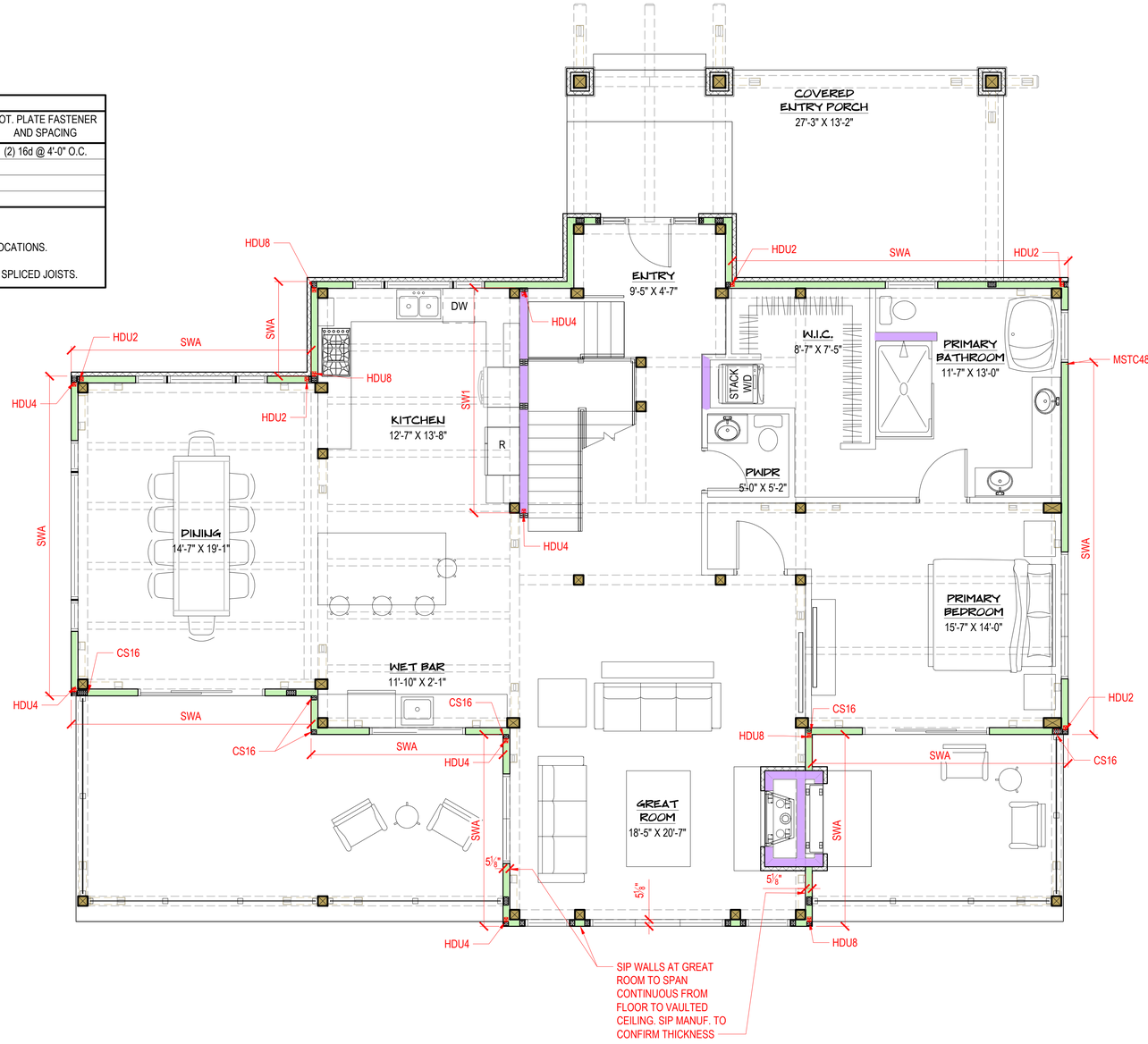
SIP SHEAR WALLS (WIND AND SEISMIC LOADS IN SEISMIC DESIGN CATEGORIES A, B AND C					
		MINIMUM FACING CONNECTIONS			
SPLINE TYPE	MINIMUM NOMINAL SIP THICKNESS (IN)	CHORD[2]	PLATE[2]	SPLINE[3]	SHEAR STRENGTH
SW-A	4 5/8"	0.131" X 2 1/2" COATED NAILS 6" O.C.	0.131" X 2 1/2" COATED NAILS 3" O.C.	CAM-LOCKS SPACED 24" O.C. DOW GREAT STUFF PRO INSULATING FOAM SEALANT (3) LINES OF 5/8" DIA. BEAD AT SIP JOINT	475



FIRST FLOOR STRUCTURAL PLAN

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

MAGNETIC NORTH

N

0 5'-0" 10'-0"

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CONSTRUCTION DRAWINGS

THE SHANLEY HOME

OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

1015

FIRST FLOOR STRUCTURAL PLAN

SIP SHEAR WALLS (WIND AND SEISMIC LOADS IN SEISMIC DESIGN CATEGORIES A, B AND C					
SPLINE TYPE	MINIMUM NOMINAL SIP THICKNESS (IN)	MINIMUM FACING CONNECTIONS			SHEAR STRENGTH
		CHORD[2]	PLATE[2]	SPLINE[3]	
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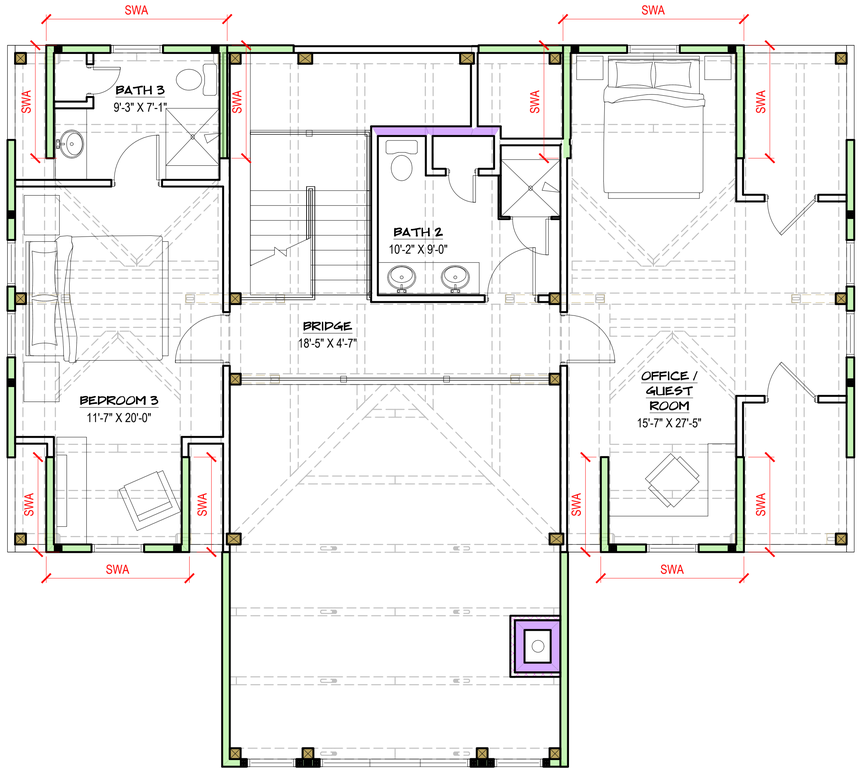

MAGNETIC NORTH

N

SECOND FLOOR STRUCTURAL PLAN

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

0 5'-0" 10'-0"

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THE SHANLEY HOME

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PROJECT NO. 23-018

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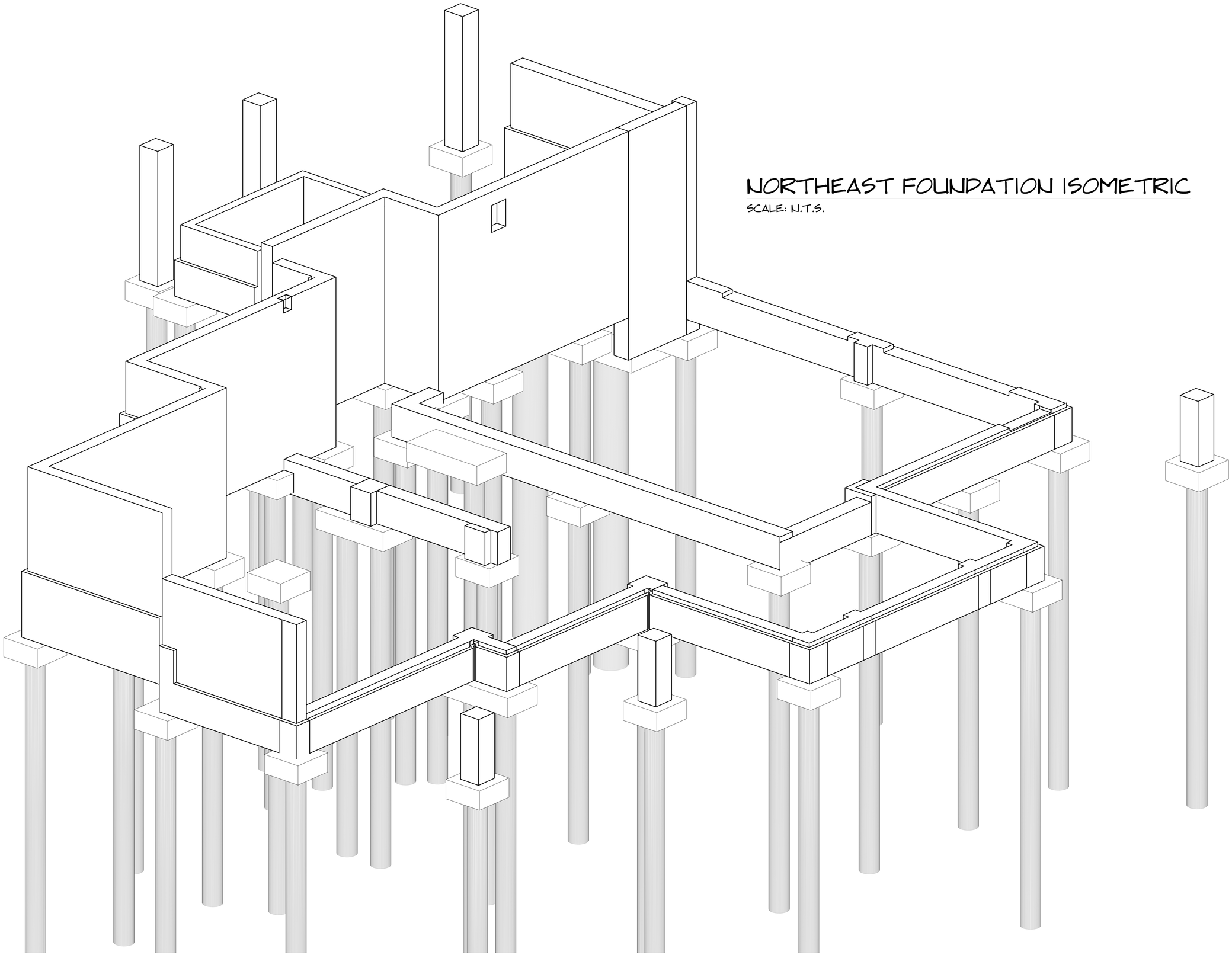
SECOND FLOOR STRUCTURAL PLAN



NORTHEAST FOUNDATION ISOMETRIC

SCALE: N.T.S.

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OAK CREEK, CO

PROJECT NO. 23-018

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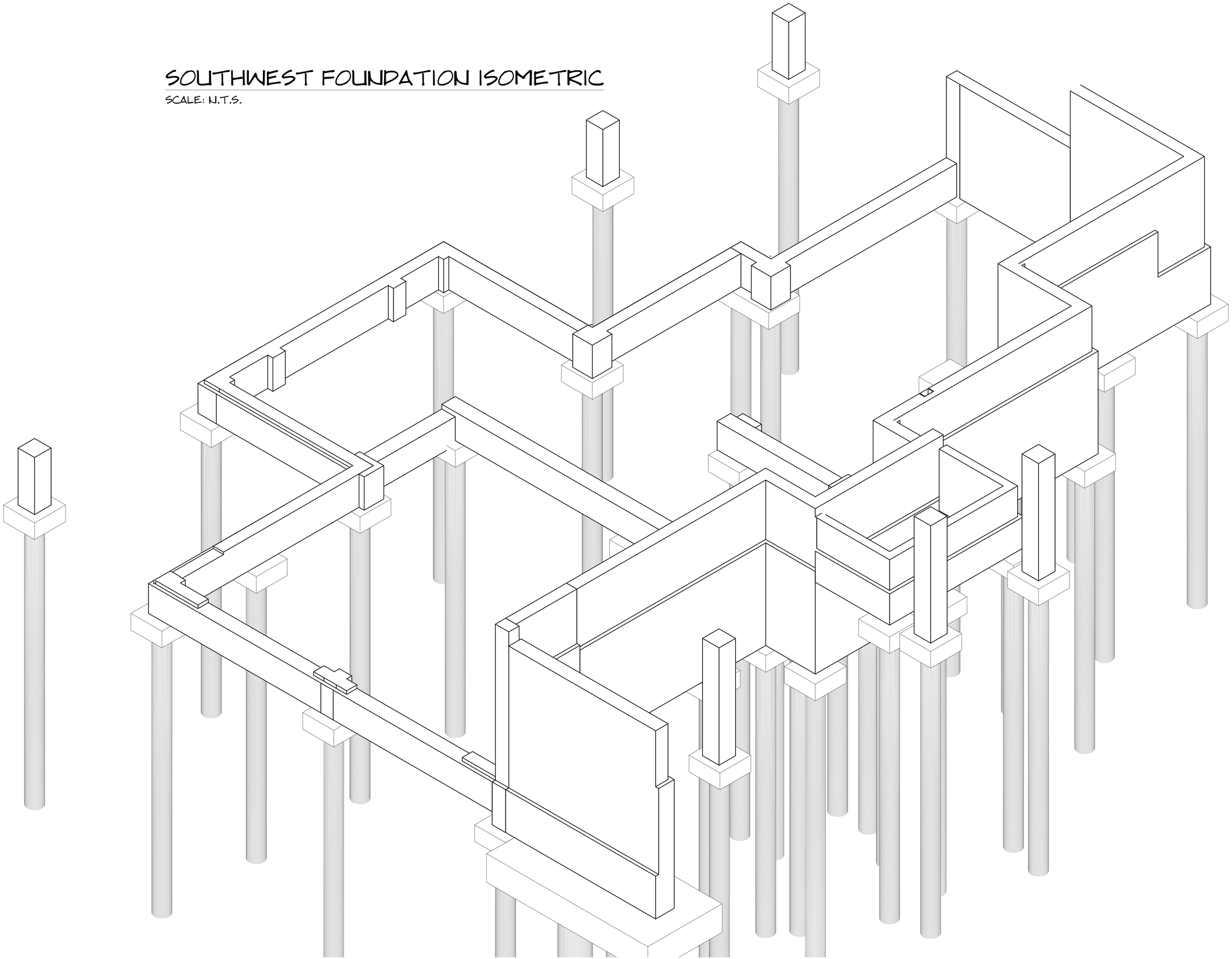
500

FOUNDATION ISOMETRIC

SOUTHWEST FOUNDATION ISOMETRIC

SCALE: N.T.S.



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OAK CREEK, CO

PROJECT NO. 23-018

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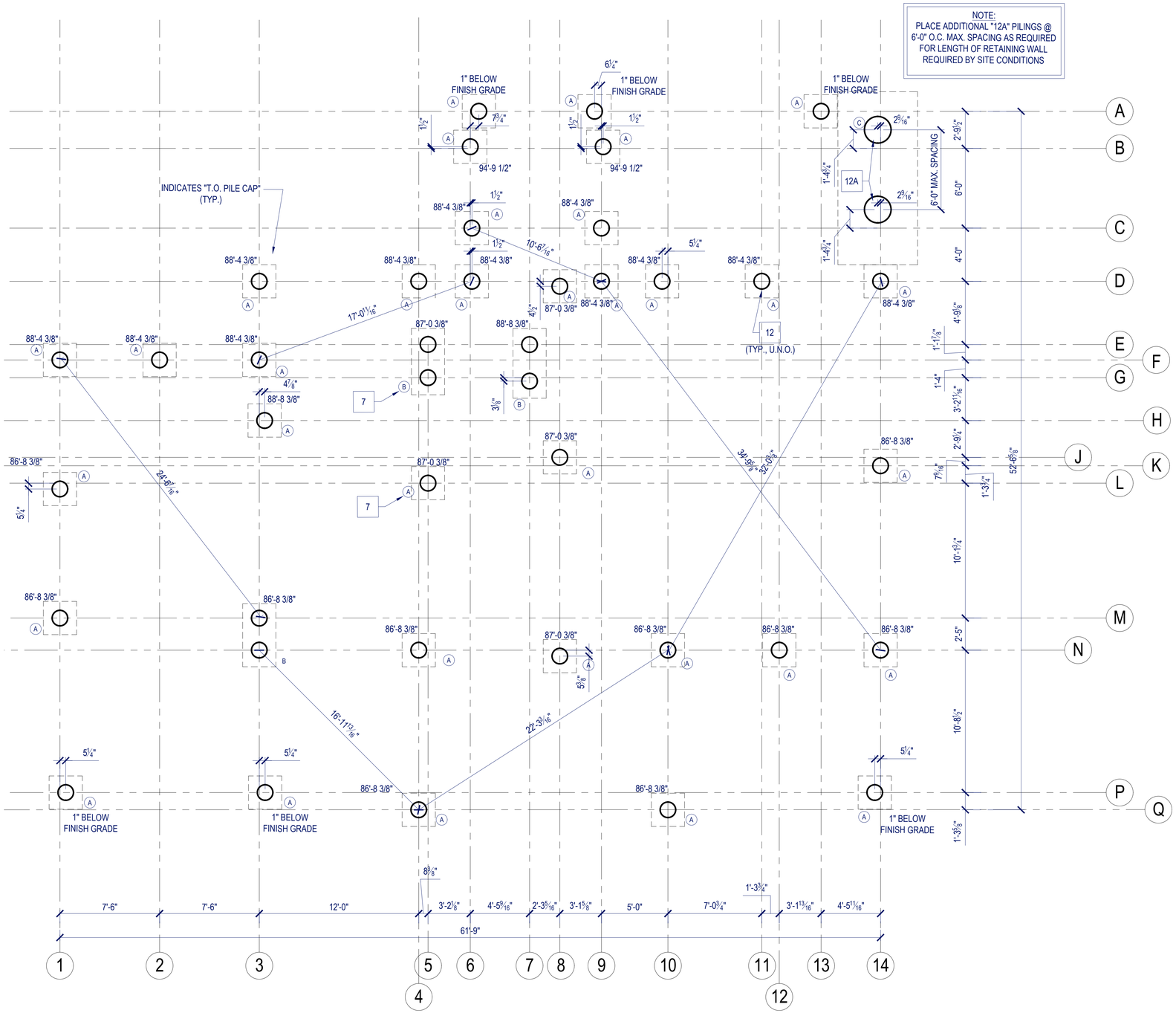
FOUNDATION ISOMETRIC



FOUNDATION PILING PLAN

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

MAGNETIC NORTH

0 5'-0" 10'-0"

GENERAL NOTES

G1. FOUNDATION DESIGN IS BASED ON A 40,000# SOIL BEARING CAPACITY.

G2. 4" THK. CONCRETE SLAB W/ W.W.M. OVER 6 MIL. POLY V.B. OVER 3" RIGID INSUL, OVER WASHED, COMPACTED GRAVEL; TYP. BASEMENT SLAB (U.N.O.)

G3. 5" THK. CONCRETE SLAB W/ W.W.M. OVER WASHED, COMPACTED GRAVEL; SLOPE TO OVERHEAD DOORS OR DRAIN, THICKEN SLAB EDGE @ GARAGE DOOR OPENINGS; TYP. GARAGE SLAB (U.N.O.)

G4. 1/2"Ø x 12" (MIN.) H.D. GALV. "J" ANCHOR BOLTS @ 48" O.C., STAGGERED; DBL @ CORNERS

G5. CONCRETE SLAB CONTROL JOINT LAYOUT TO BE SUBMITTED BY CONTRACTOR TO CLIENT FOR REVIEW AND APPROVAL.

G6. SEE GEO TECHNICAL RECOMMENDATIONS FOR SUB-GRADE PREP

G7. PROVIDE 4" VOID FORM UNDER CONT. CONCRETE GRADE BEAM AND PIER CAPS, SEE GEO-TECH REPORT FOR MORE INFORMATION

CONCRETE PILE CAP SCHEDULE

MARK	DIMENSION	REINFORCING
A	30" SQ. x 1'-2" THK.	(3) #5 REBAR @ 12" O.C., EA. WAY
B	30" X 60" x 1'-2" THK.	#5 REBAR @ 12" O.C., EA. WAY; (2) MATS 8" O.C.
C	6'-0" W x 2'-0" THK.	#5 REBAR @ 12" O.C., EA. WAY; (2) MATS 19" O.C.

KEYNOTES (POURED CONC.)

1.1 13" THK. POURED CONC. FNDTN. WALL W/ #4 REBAR @ 48" O.C. VERT. & (2) #4 REBAR HORIZ. (@ TOP & BOTTOM); WITH PILE CAPS PER LARGE SCALE DETAIL. TOP OF WALL NOTCHED TO 10" THICK FOR STONE LEDGE. PROVIDE (1) ADDITIONAL #4 VERT. REBAR @ ALL LOAD BRG. & GIRDER POCKET LOC. RE: LARGE SCALE DETAILS FOR REBAR SPECS FOR WALL TO PILE CAP CONNECTION. SEE GIRDER POCKET DETAIL FOR REINFORCEMENT UNDER POCKET

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FOUNDATION KEYNOTES

6 TIMBER FRAME POINT LOAD (ABOVE)

7 REFER TO "CONCRETE PILE CAP SCHEDULE"

8 NOT IN USE

9 16" SQ. CONC. PIER W/ (4)- #4 VERT. REBAR SPACED EVENLY, #3 TIES @ 12" O.C.; W/ PILE CAP. SEE TYPICAL PILE CAP DETAIL

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13 3 1/2" O.D. SCHEDULE 40 PIPE COLUMN; TYP., U.N.O.

14 HSS 4"X4"X1/4"

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FIRM # 20151163829
PROJECT # 23-22846

COLORADO LICENSED BRIAN JAMES SHELEY PE.0041126 PROFESSIONAL ENGINEER

04/22/2025

REVISION	DATE
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REV. #1 - UPDATED PLANS TO COMPLY WITH 2023 COLORADO SOLAR & ELECTRIC READY & EV CHARGER IN GARAGE	4-17-2025

CONSTRUCTION DRAWINGS

THE SHANLEY HOME

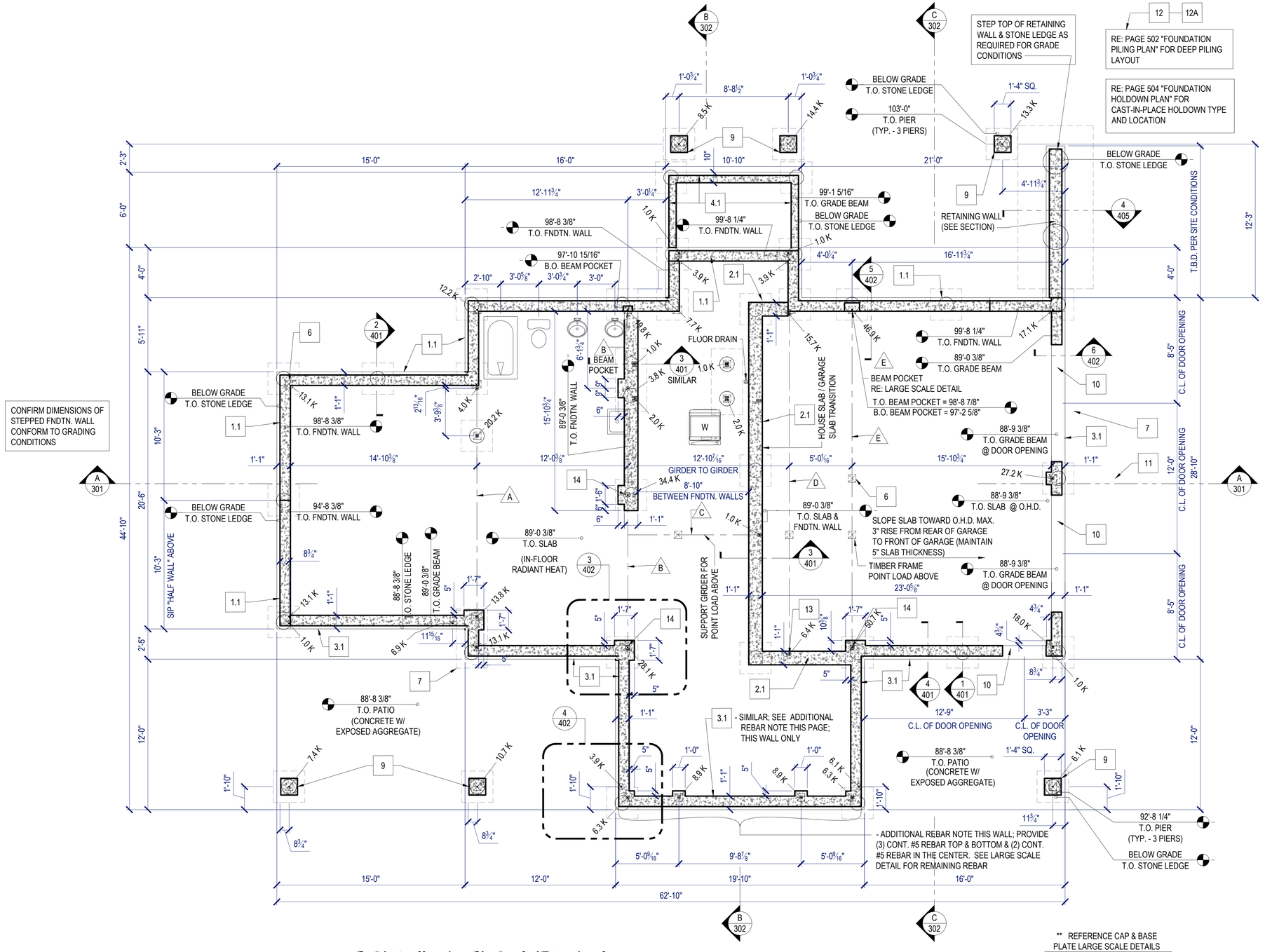
OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

502

FOUNDATION PILING PLAN



FOUNDATION PLAN

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

0 5'-0" 10'-0"

MAGNETIC NORTH

N

BEAM & PIPE SCHEDULE

TYPE	BEAM	BEAM SIZE	BEAM POCKET	BEAM POCKET BEARING PLATE	COL. DIA.	COL. CAP **	COL. BASE **
A	STEEL*	W8X24	N/A	N/A	3 1/2" O.D.; SCHED. 40	6 1/2" X 9" X 1/2" THICK	9" X 9" X 1/2" THICK
B	STEEL*	W8X35	9" W X 9 5/8" H X 5" D	N/A	3 1/2" O.D.; SCHED. 40 HSS 4X4X1/4"	8" X 9" X 1/2" THICK	9" X 9" X 1/2" THICK
C	STEEL*	W8X24	N/A	N/A	3 1/2" O.D.; SCHED. 40	6 1/2" X 9" X 1/2" THICK	9" X 9" X 1/2" THICK
D	STEEL*	W14X43	N/A	N/A	3 1/2" O.D.; SCHED. 40	8" X 9" X 1/2" THICK	9" X 9" X 1/2" THICK
E	STEEL*	W16X100	14 1/2" W X 18 1/4" H X 8" D	12 1/2" W X 8" D X 3/4" THK.	HSS 4X4X1/4"	8" X 9" X 1/2" THICK	9" X 9" X 1/2" THICK

** REFERENCE CAP & BASE PLATE LARGE SCALE DETAILS

* ALL STEEL BEAMS TO BE CONTINUOUS; NO SPLICE.
NOTE FOR STEEL MFR: AT POINT LOAD AND COLUMN LOCATIONS PROVIDE 1/4" STEEL WEB STIFFENER ON BOTH SIDES OF THE WEB W/ 3/16" FILLET WELD

GENERAL NOTES

G1. FOUNDATION DESIGN IS BASED ON A 40,000# SOIL BEARING CAPACITY.

G2. 4" THK. CONCRETE SLAB W/ W.W.M. OVER 6 MIL. POLY V.B. OVER 3" RIGID INSUL, OVER WASHED, COMPACTED GRAVEL; TYP. BASEMENT SLAB (U.N.O.)

G3. 5" THK. CONCRETE SLAB W/ W.W.M. OVER WASHED, COMPACTED GRAVEL; SLOPE TO OVERHEAD DOORS OR DRAIN, THICKEN SLAB EDGE @ GARAGE DOOR OPENINGS; TYP. GARAGE SLAB (U.N.O.)

G4. 1/2"Ø x 12" (MIN.) H.D. GALV. "J" ANCHOR BOLTS @ 48" O.C., STAGGERED; DBL @ CORNERS

G5. CONCRETE SLAB CONTROL JOINT LAYOUT TO BE SUBMITTED BY CONTRACTOR TO CLIENT FOR REVIEW AND APPROVAL.

G6. SEE GEO TECHNICAL RECOMMENDATIONS FOR SUB-GRADE PREP

G7. PROVIDE 4" VOID FORM UNDER CONT. CONCRETE GRADE BEAM AND PIER CAPS, SEE GEO-TECH REPORT FOR MORE INFORMATION

CONCRETE PILE CAP SCHEDULE

MARK	DIMENSION	REINFORCING
A	30" SQ. x 1'-2" THK.	(3) #5 REBAR @ 12" O.C., EA. WAY
B	30" X 60" x 1'-2" THK.	#5 REBAR @ 12" O.C., EA. WAY; (2) MATS 8" O.C.
C	6'-0" W x 2'-0" THK.	#5 REBAR @ 12" O.C., EA. WAY; (2) MATS 19" O.C.

KEYNOTES (POURED CONC.)

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CONSTRUCTION DRAWINGS

THE SHANLEY HOME

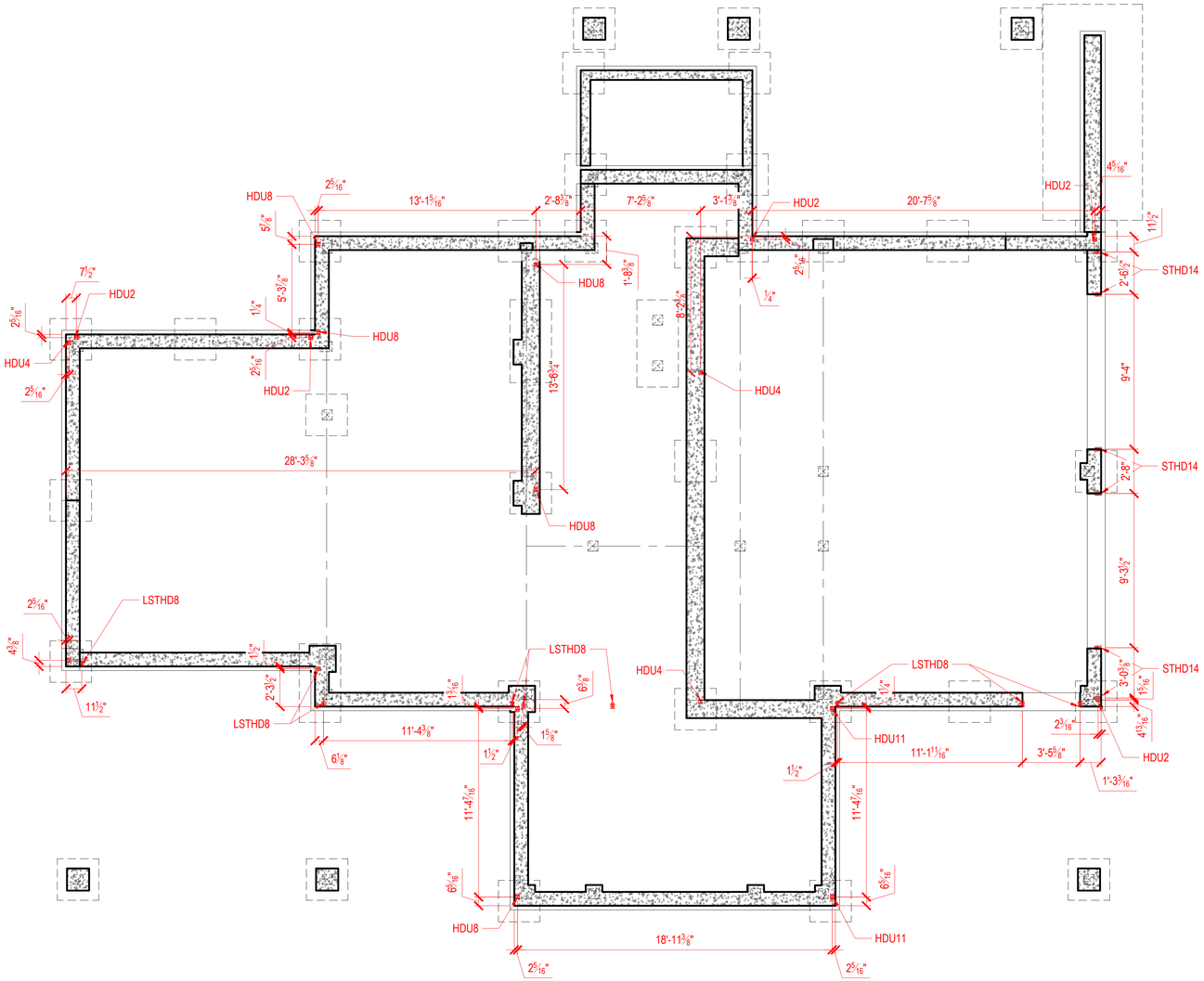
OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

503

FOUNDATION PLAN



MAGNETIC NORTH

N

FOUNDATION HOLD DOWN PLAN

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

0 5'-0" 10'-0"

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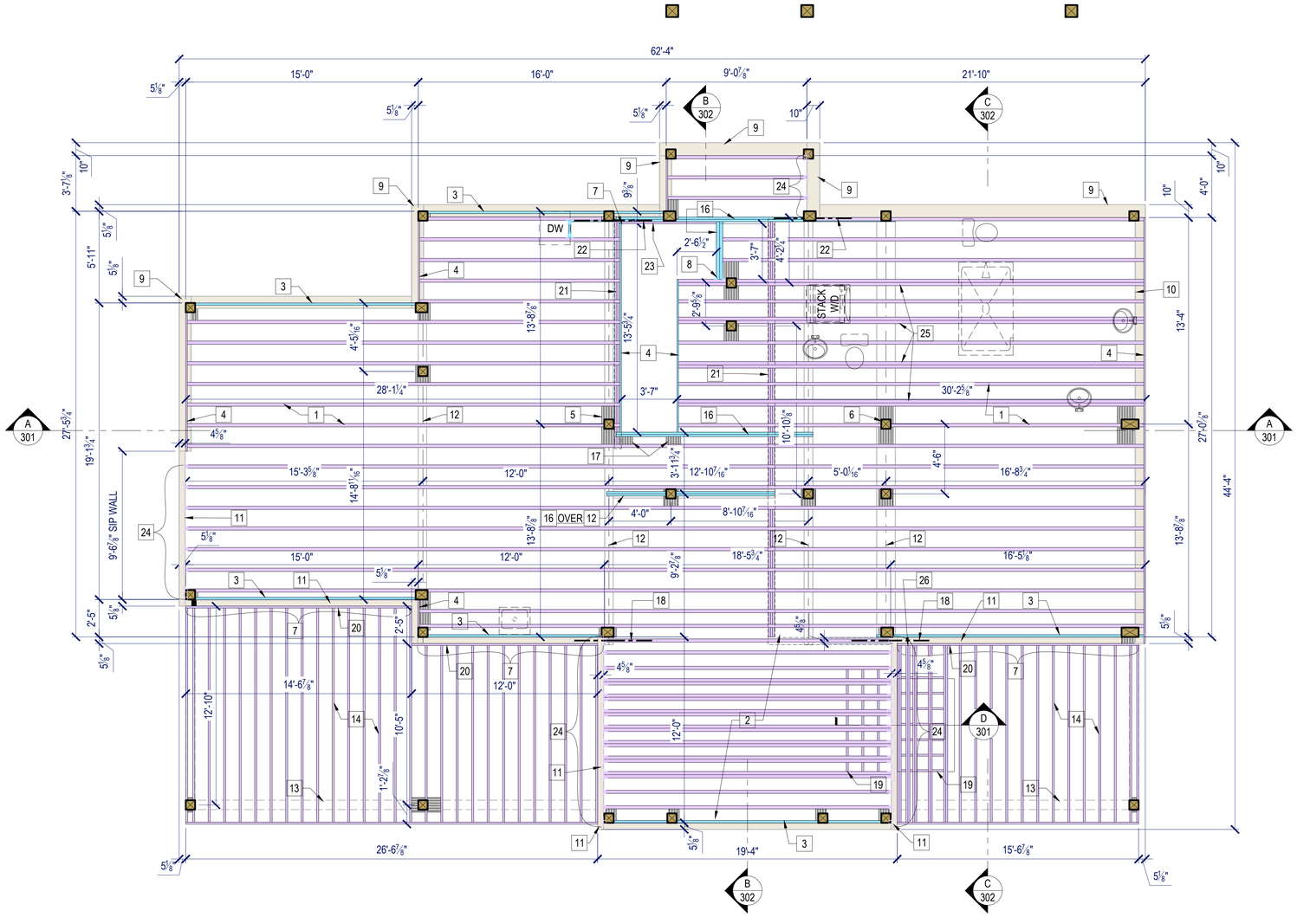
OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

504

FOUNDATION HOLDOWN PLAN



FIRST FLOOR JOIST PLAN

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

GENERAL NOTES

G1. 1 1/2" THK. GYP. CRETE OVER 3/4" A.P.A RATED SUBFLOOR, GLUED & NAILED TO I-JOISTS (DO NOT GLUE & NAIL AT POST LOCATIONS)

G2. MAXIMUM DEFLECTION

A. FLOOR JOIST LIVE LOAD= L/480 MIN.; L/600 PREFERRED

B. FLOOR BEAM LIVE LOAD = L/360

C. ALL OTHER LIVE LOADS = L/240

G3. FOLLOW ALL ENGINEERED I-JOIST MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION, BEARING, BLOCKING, BRIDGING, BRACING, ETC.

G4. AT SIMPSON DECK TENSION TIES, PROVIDE (MIN.) 2X SOLID BLOCKING, BOTH SIDES OF WEB AS PER MANUF. RECOMMENDATIONS. ADDITIONAL DECK JOIST MAY BE NEEDED TO ALIGN WITH INTERIOR JOIST.

G5. INSTALL BLOCKING IN FLOOR SYSTEM AS REQUIRED TO SUPPORT LOWER LEVEL INTERIOR WALLS, PER LARGE SCALE DETAIL, SECTION 400

G6. PARTITION WALLS IN BASEMENT TO BE SUSPENDED FROM 1ST FLOOR FRAMING. JOIST MFR TO USE 100PLF WHERE THIS OCCURS.

G7. FLOOR JOISTS TO BE DOUBLED BELOW FIREPLACES, BOTH INTERIOR & EXTERIOR

FLOOR FRAMING KEY

1. 11 7/8" I-JOISTS @ 16" O.C.; I-JOIST MANUF. TO DETERMINE SERIES TO MEET 25 PSF DEAD LOAD FOR GYP. CRETE. CROSS BRACING AS REQUIRED BY JOIST MANUFACTURER
2. 11 7/8" I-JOISTS @ 12" O.C. I-JOIST MANUF. TO DETERMINE SERIES TO MEET 25 PSF DEAD LOAD FOR GYP. CRETE. CROSS BRACING AS REQUIRED BY JOIST MANUFACTURER; DOUBLED @ GREAT ROOM FIREPLACE LOCATION PER PLAN
3. 1 3/4" X 11 7/8" L.V.L. RIM JOIST
4. 1 1/8" X 11 7/8" RIM JOIST
5. 11 7/8" L.V.L. BLOCKING @ POST LOCATIONS
6. TIMBER POST ABOVE
7. FACE MOUNT JOIST HANGER(S); DOUBLE HANGER AS REQUIRED
8. FACE MOUNT L.V.L. HANGER(S); DOUBLE HANGER AS REQUIRED
9. 2X10 P.T. SILL PLATE
10. DOUBLE 2X8 TOP PLATE (EXTERIOR STUD WALL BELOW)
11. 2X(PANEL WIDTH) TOP PLATE
12. GIRDER BELOW; SEE FOUNDATION PLAN
13. TIMBERS BELOW - SEE FRAME PLANS & ELEVATIONS
14. 2X12 P.T. JOISTS @12" O.C.; DOUBLED AT EXTERIOR FIREPLACE
15. 1 3/4" X 11 7/8" L.V.L. HEADER
16. (2) PLY 1 3/4" X 11 7/8" L.V.L. HEADER
17. 11 7/8" L.V.L. BLOCKING (BELOW TIMBER STRINGERS
18. CS18 COIL STRAP; 5'-0" LONG; 2'-6" EACH SIDE OF GIRDER; CONNECT FLOOR JOIST TO SIP TOP PLATE
19. SOLID BLOCKING @ 12" O.C. BETWEEN JOISTS BELOW FIREPLACE AREA ABOVE
20. 2X P.T. LEDGER; ATTACH PER LARGE SCALE DETAIL
21. SHEAR WALL IN BASEMENT BELOW, PROVIDE SOLID BLOCKING BETWEEN FLOOR JOISTS; PLUMBING DRAIN NEEDS TO GO THROUGH SOLID BLOCKING
22. CS18 COIL STRAP; 5'-0" LONG; 2'-6" EACH SIDE OF GIRDER; CONNECT FLOOR JOIST TO LVL HEADER
23. SOLID INFILL AS REQUIRED TO FRAME STAIRWAY OPENING AS DIMENSIONED
24. TOP MOUNT JOIST HANGER(S); DOUBLE HANGER AS REQUIRED
25. CONTINUOUS, DOUBLE I-JOISTS TO SUPPORT HEADER @ STAIRWAY OPENING
26. INSTALL DOUBLE JOIST BELOW FRONT EDGE OF FIREPLACE FRAMING

0 5'-0" 10'-0"

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CONSTRUCTION DRAWINGS

THE SHANLEY HOME

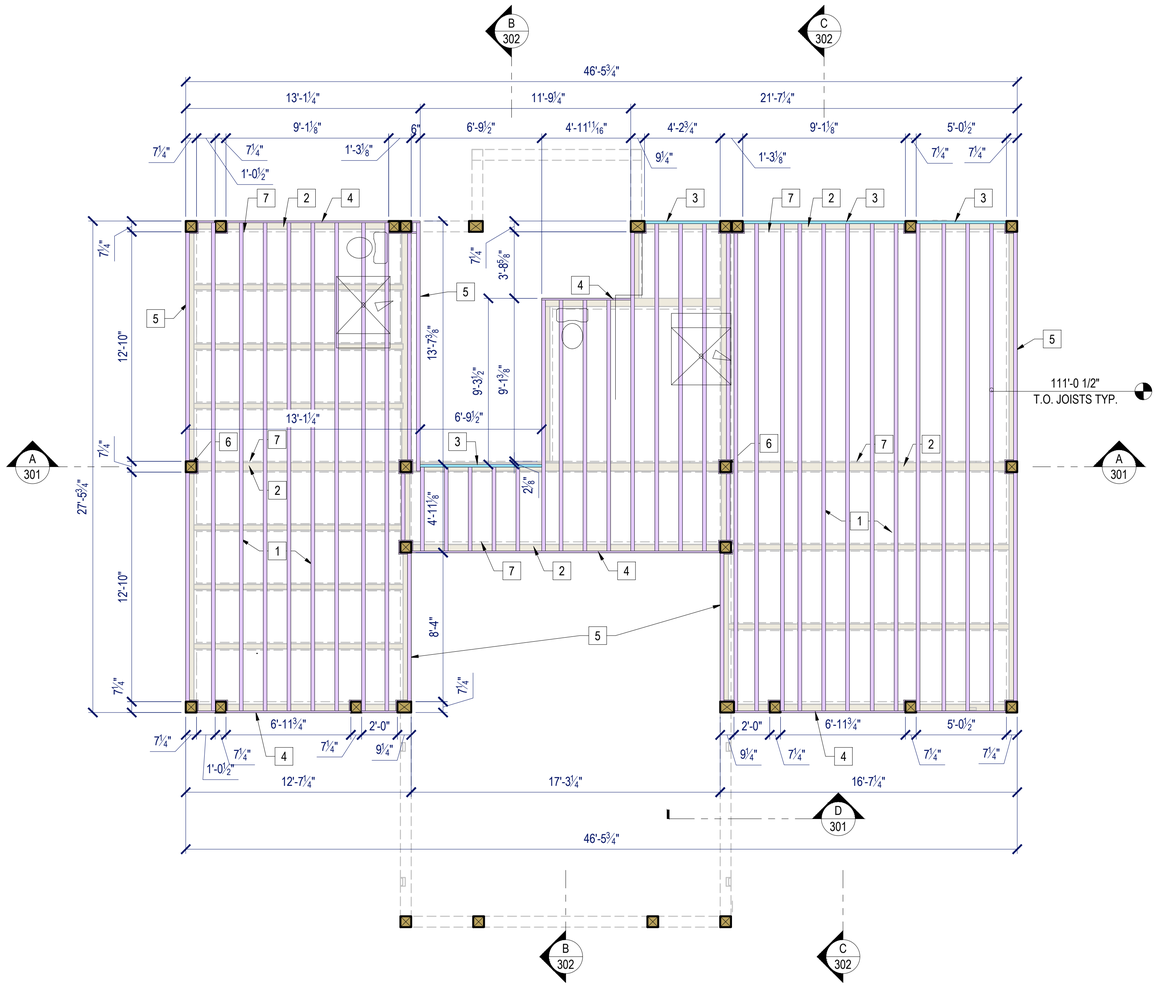
OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

505

FIRST FLOOR JOIST PLAN



MAGNETIC NORTH

N

SECOND FLOOR JOIST PLAN

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

0 5'-0" 10'-0"

GENERAL NOTES

G1. 3/4" APA-RATED SUBFLOOR, GLUED & NAILED TO I-JOISTS (DO NOT GLUE & NAIL AT POST LOCATIONS)

G2. MAXIMUM DEFLECTION

A. FLOOR JOIST LIVE LOAD= L/600

B. FLOOR BEAM LIVE LOAD = L/360

C. ALL OTHER LIVE LOADS = L/240

G3. FOLLOW ALL ENGINEERED I-JOIST MANUFACTURER'S RECOMMENDATIONS FOR INSTALLATION, BEARING, BLOCKING, BRIDGING, BRACING, ETC.

G4. AT SIMPSON DECK TENSION TIES, PROVIDE (MIN.) 2X SOLID BLOCKING, BOTH SIDES OF WEB AS PER MANUF. RECOMMENDATIONS. ADDITIONAL DECK JOIST MAY BE NEEDED TO ALIGN WITH INTERIOR JOIST.

FLOOR FRAMING KEY

1	11 7/8" I-JOISTS @ 16" O.C. "GP" WI 40 SERIES (OR EQ.). CROSS BRACING AS REQUIRED BY JOIST MANUFACTURER
2	5/8" SPACER FOR CEILING FINISH
3	1 3/4" X 11 7/8" L.V.L. RIM JOIST
4	1 1/8" X 11 7/8" RIM JOIST
5	11 7/8" I-JOIST W/ WEB FILLER
6	TIMBER POST ABOVE
7	TIMBERS BELOW - SEE FRAME PLANS & ELEVATIONS

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CONSTRUCTION DRAWINGS

THE SHANLEY HOME

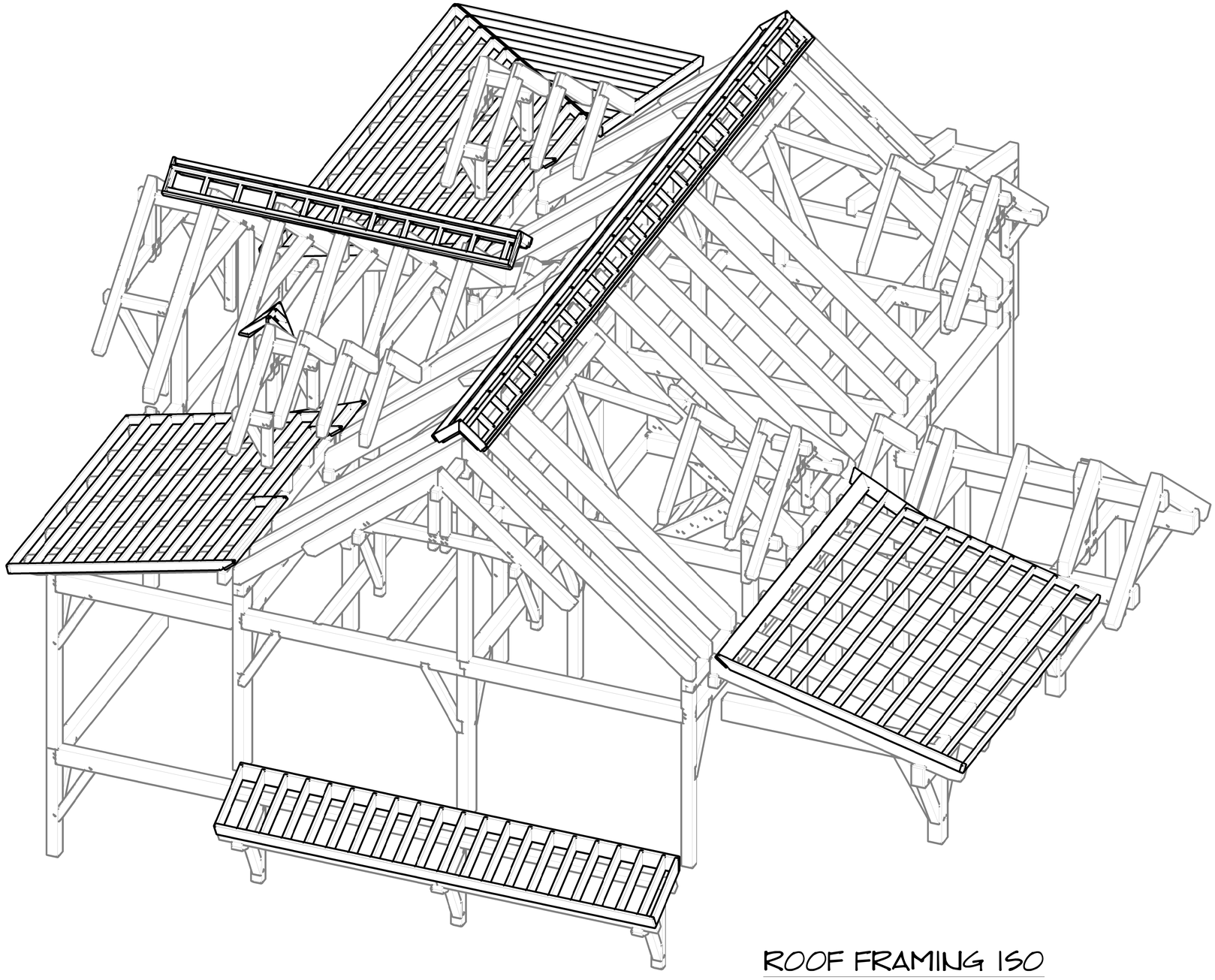
OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

506

SECOND FLOOR JOIST PLAN



ROOF FRAMING ISO

SCALE: N.T.S.

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DRAWN BY: JK

507

ROOF FRAMING ISOMETRIC

VENTILATED ROOF SYSTEM

1. General

a. Woodhouse recommends the construction of a ventilated roof system over the roof structural insulated panels (SIPs), otherwise known as a "cold-roof". The cold-roof system is recommended for all SIP types, regardless of core or skin material. This includes, but is not limited to, expanded polystyrene (EPS), polyurethane (PUR), and extruded polystyrene (XPS) cores. The cold-roof system shall be installed as indicated herein, and as indicated in all applicable Woodhouse and SIP manufacturer's literature and drawings. For additional information see the SIP manufacturer's installation and/or finishing manual" for your type of SIP.

b. The cold-roof system shall provide a continuous, uninterrupted air space from the soffit to the ridge, between the roof SIPs and the roof surface above, in order to reduce the roof system temperature.

c. "High" roof system temperatures, as defined by the manufacturers of the roof assembly components, can damage roof assemblies, as well as void their product warranties. This includes but is not limited to the SIPs, and weather-resistant roof materials such as underlayment and shingles.

2. Shingles

a. Roof shingle manufacturers typically require cold-roofs for conformance with their shingle application requirements and warranties. The construction of such a system may also increase shingle life, and may reduce shingle ridging, lifting, buckling, and shadow and frost lines.

3. SIPs

a The cold-roof system also provides additional protection of the exterior roof SIP skin from water and/or moisture damage resulting from ice damming, wind-driven rain, and roof leaks.

b. The cold-roof system is neither designed nor intended to vent attic spaces or interior spaces of the structure.

c. The maximum service temperature of the EPS and XPS foam cores in the SIPs is approximately 165 degrees Fahrenheit. Temperatures in excess of this value may affect the structural integrity of the SIP's foam core and could potentially soften or melt the core resulting in a product failure. Cold-roofs can aid in minimizing the occurrence of such temperatures.

4. Roof Underlayment

a. Self-adhering roof underlayment, such as "Ice & Water Shield" by Grace Construction Products, is a recommended installation over the cold-roof. Minimum areas of installation shall include all eaves, valleys, hips, roof penetrations, and wall/roof intersections. Installation shall be in accordance with the manufacturer's requirements.

5. Omission Of The Cold-Roof

a. The Client may omit the construction of the cold-roof solely at the Client's own discretion. However the Client shall assume full responsibility for risk of damage and/or loss of any type resulting from the omission of the cold-roof.

b. Damage that could result from omission of the cold-roof includes, but is not limited to: premature failure of roof shingles and/or underlayment; damage and/or failure of SIP cores and/or skins; moisture or water damage; and aesthetic and/or appearance problems such as shingle ridging and/or buckling, and shadow and/or frost lines.

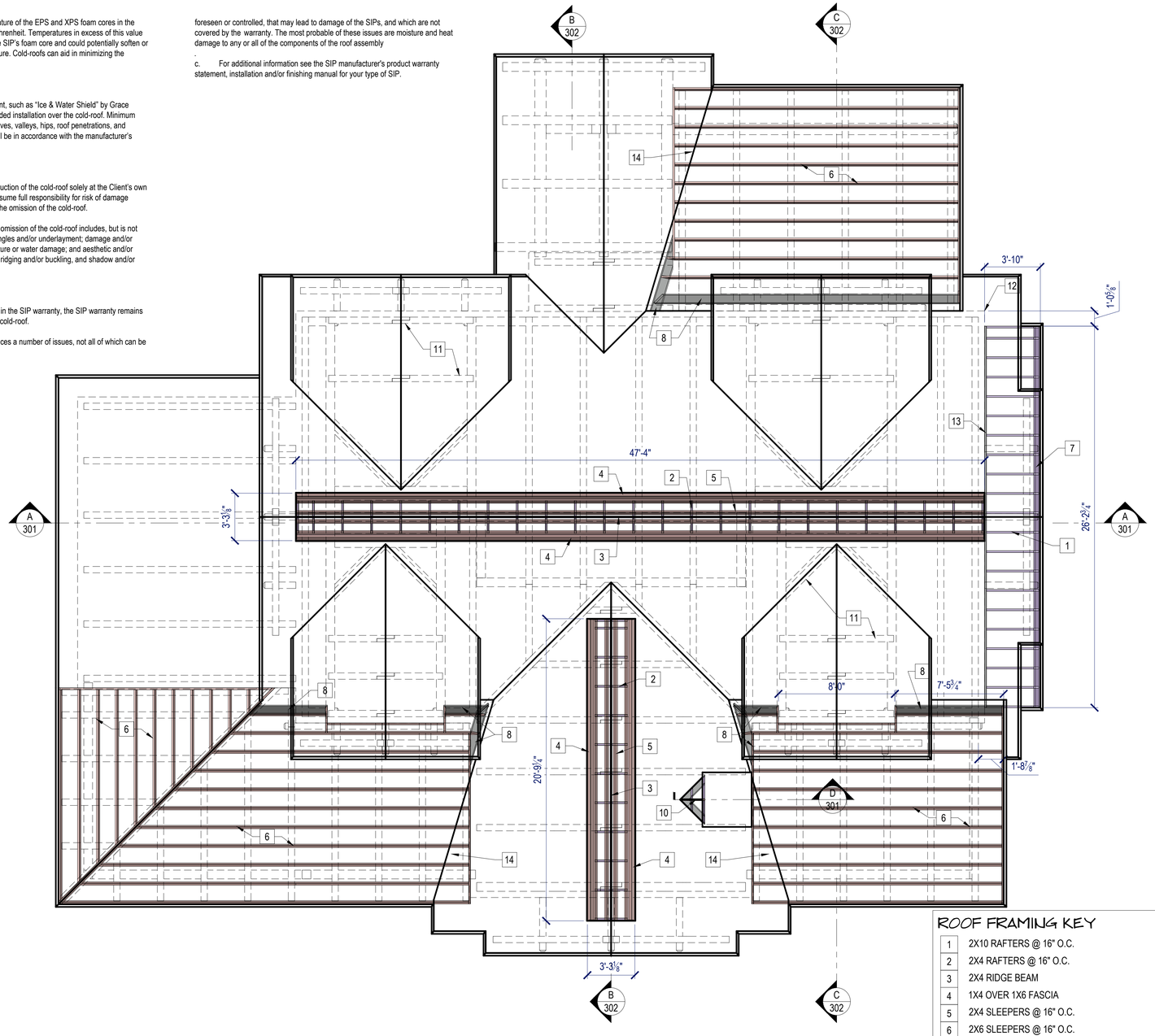
6. SIP Warranty

a. Within the parameters defined in the SIP warranty, the SIP warranty remains valid regardless of the installation of a cold-roof.

b. Omission of a cold-roof introduces a number of issues, not all of which can be foreseen or controlled, that may lead to damage of the SIPs, and which are not covered by the warranty. The most probable of these issues are moisture and heat damage to any or all of the components of the roof assembly

.

c. For additional information see the SIP manufacturer's product warranty statement, installation and/or finishing manual for your type of SIP.



ROOF FRAMING PLAN

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

GENERAL NOTES

G1. NOTE: ROOF FASCIA TO MATCH ADJACENT TIMBER FRAME CONSTRUCTION; G.C. OR TRUSS MANUF. TO FIELD MEASURE TO DETERMINE TRUSS HEEL HEIGHT AND OVERHANG PRIOR TO TRUSS DESIGN & FABRICATION

ROOF FRAMING KEY

1	2X10 RAFTERS @ 16" O.C.
2	2X4 RAFTERS @ 16" O.C.
3	2X4 RIDGE BEAM
4	1X4 OVER 1X6 FASCIA
5	2X4 SLEEPERS @ 16" O.C.
6	2X6 SLEEPERS @ 16" O.C.
7	2X10 SUBFASCIA
8	2X10 VALLEY LAYBOARD
10	2X4 'CRICKET' FRAMING @ 16" O.C.
11	TIMBER FRAME BELOW
12	EXTERIOR WALL LINE
13	2X12 LEDGER BD
14	ROOF SIP RESTS ON CONVENTIONAL SHEATHING & FRAMING

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FIRM # 20151163829
PROJECT # 23-22846

COLORADO LICENSED
BRIAN JAMES SHELTON
PE.0041126
PROFESSIONAL ENGINEER

04/22/2025

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CONSTRUCTION DRAWINGS

THE SHANLEY HOME

OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

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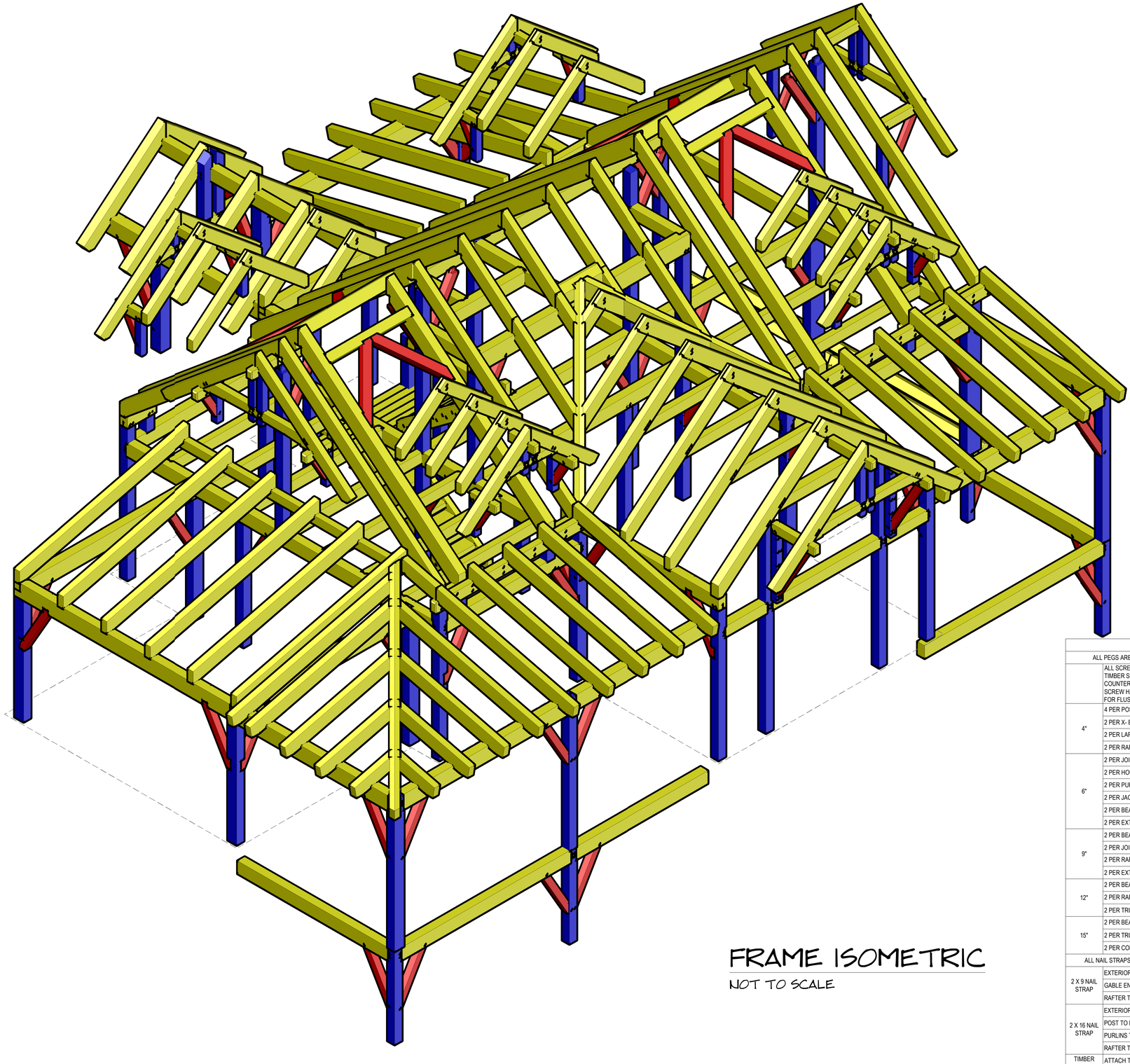
ROOF FRAMING PLAN



FRAME ISOMETRIC

NOT TO SCALE

FASTENER SCHEDULE	
ALL PEGS ARE 1" DIAMETER WHITE OAK UNLESS NOTED OTHERWISE	
	ALL SCREWS TO HAVE MIN. 3" EMBEDMENT INTO ADJOINING MEMBER. TIMBER SCREWS ARE DRIVEN SUCH THAT SCREW HEADS THAT ARE COUNTERSUNK FLUSH TO WOOD SURFACE ARE ACCEPTABLE IF THE SCREW HAS NOT SPUN OUT. IF SPIN OUT OCCURS, PRE-COUNTERBORE FOR FLUSH SCREW HEAD INSTALLATION.
4"	4 PER POST BOTTOM, 1 EACH FACE TOENAILED
	2 PER X- BRACE
	2 PER LAP RAFTER, TOENAILED AT LAP
	2 PER RAFTER FOR RAISING
6"	2 PER JOIST END NOT LOCATED AT POSTS
	2 PER HOUSED GIRT END
	2 PER PURLIN END
	2 PER JACK RAFTER W/ COUNTERBORE & PLUG
	2 PER BEAM MITERS W/ COUNTERBORE & PLUG
	2 PER EXTERIOR POST
9"	2 PER BEAM LAP
	2 PER JOIST END AT POST LOCATION
	2 PER RAFTER END (8" OR LESS IN DEPTH)
	2 PER EXTERIOR CORNER
12"	2 PER BEAM END (EQUAL TO OR LESS THEN 10")
	2 PER RAFTER END (GREATER THAN 8" IN DEPTH)
	2 PER TRUSS HEEL
15"	2 PER BEAM END (GREATER THEN 10")
	2 PER TRUSS HEEL
	2 PER CONTINUOUS BEAM OVER POST
ALL NAIL STRAPS TO BE INSTALLED PER MANUFACTURES SPECIFICATIONS	
2 X 9 NAIL STRAP	EXTERIOR RAFTER PLUMB CUTS TO BEAM
	GABLE END PURLINS TO RAFTER
	RAFTER TO RAFTER AT MID. BEAM BUTT JOINTS
2 X 16 NAIL STRAP	EXTERIOR POST TO FLOOR SYSTEM AT PERIMETER
	POST TO POST ACROSS BEAM AT EXTERIOR
	PURLINS TO PURLIN ACROSS RAFTER
	RAFTER TO RAFTER AT RIDGE BEAM BUTT JOINTS
TIMBER GABLE TRUSSES	ATTACH THROUGH PANEL USING FLAT HEADED PANEL SCREWS
	SPACED AT 8" O.C. WITH MINIMUM 3" PENETRATION INTO TIMBER.

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CONSTRUCTION DRAWINGS

THE SHANLEY HOME

OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

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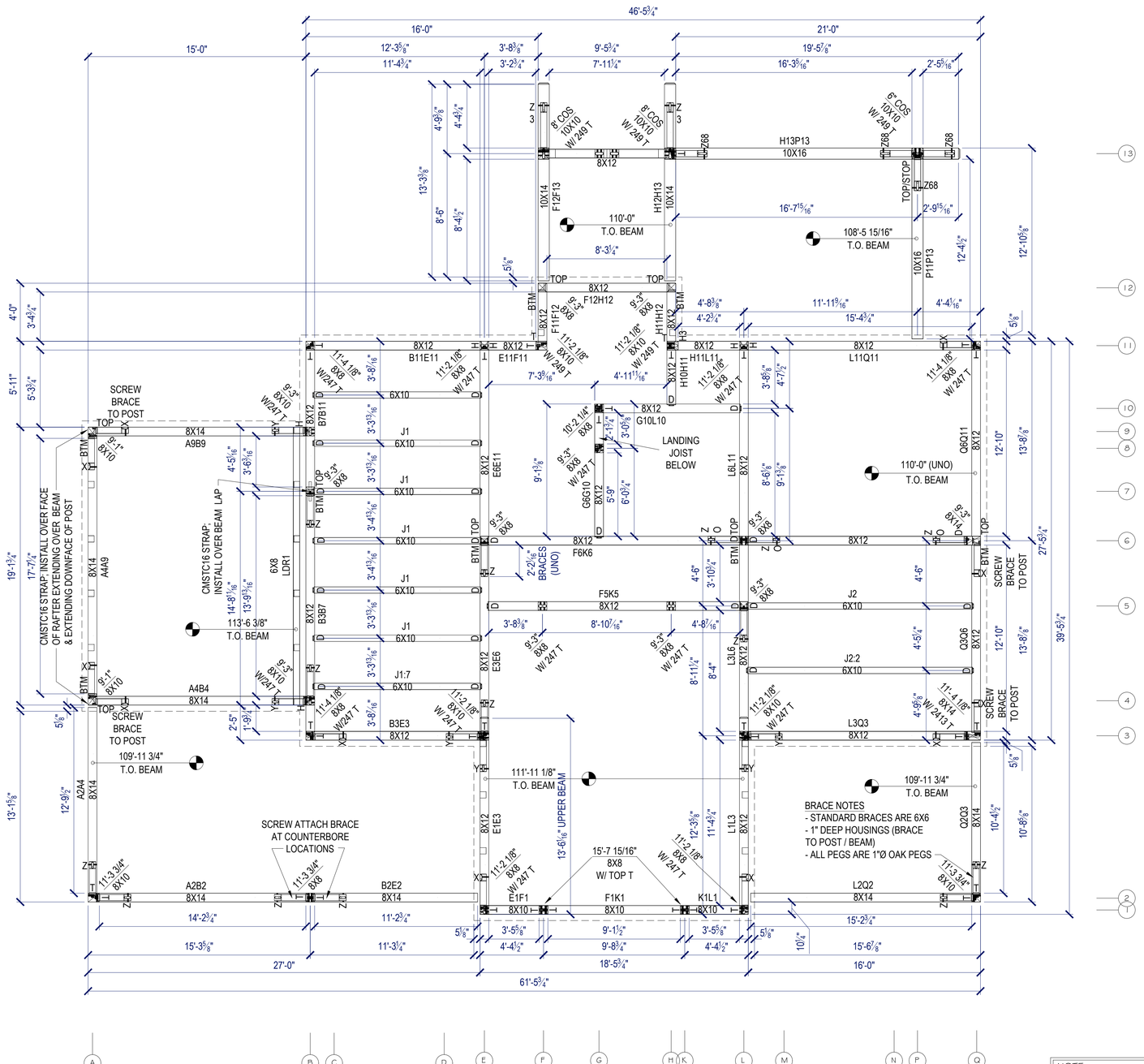
FRAME ISOMETRIC



FIRST FLOOR FRAME PLAN

1/4" = 1'-0"

NOTE:
WOODHOUSE USES RED AND WHITE OAK PEGS.
-RED OAK ARE INTENDED FOR USE AT INTERIOR LOCATIONS.
-WHITE OAK PEGS SHOULD BE USED AT EXTERIOR LOCATIONS AND WHERE NOTED OTHERWISE

ASSEMBLE NOTES:
- ARROWS (↑↓) ARE USE TO INDICATE ASSEMBLY DIRECTION-ALL ARROWS SHOULD POINT IN THE SAME DIRECTION.
- STEEL PLATES WILL HAVE SIMILAR DIRECTION ARROW INDICATORS AND LABELED FOR A SPECIFIC TRUSS LOCATION BY TIMBER MEMBER LABEL.
- LIKE ASSEMBLY SETS (TRUSSES, EMBELLISHMENTS, BRACKETS, ETC.) WILL HAVE AN ALPHA NUMERIC SUFFIX ADDED TO THE THE PART LABEL
  EXAMPLE: GERR A,GERL A,GECT A, GERR B,GERL B,GECT B. ETC..
- TIMBERS WITH NON APPEARANCE GRADE QUALITIES MAY BE USED AT PERIMETER LOCATIONS AND LABELED AS OUTSIDE ON THE UNEXPOSED FACE OR END GRAIN.
- STANDARD PEG LENGTH IS 12" FOR ALL TIMBERS UP TO (X 8). 16" PEGS WILL BE INCLUDED FOR TIMBERS (X10) OR GREATER.

CHAMFERING STANDARDS:
- POST BOTTOMS=8" ABOVE SUB-FLR / SLAB
- KITCHEN / BATH POSTS AT COUNTERS=42" ABOVE SUB-FLR / SLAB
- EXTERIOR POSTS= 12" ABOVE T.O. DECK / T.O. PIER
- POST TOPS / BEAMS / JOISTS / COLLAR TIES=4" FROM TOP OR ENDS
- RAFTER BOTTOMS=8" FROM FLR OR BEAM TOP
- RAFTER TOPS=4" FROM BEAM
- BRACES=6" FROM EACH END
  - Z=BOTH EDGES; X,Y, & ZO 1 EDGE
- TIMBERS EDGES ARE NOT CHAMFERED WHEN AGAINST EXTERIOR WALL SURFACES
- CHAMFERING IS EXCLUDED ON STAIR FRAMING - LEADING TREAD EDGE HAS A MICRO ROUNDOVER

WOODHOUSE USES THE MOST CURRENT PLANS AT THE TIME OF PRODUCTION AND WILL NOT BE RESPONSIBLE FOR PLAN CHANGES THAT EFFECT THE CHAMFER. WOODHOUSE USES THE "WHEN IN DOUBT" POLICY TO EXCLUDE CHAMFERING OR MODIFY THE STOPS ON SPECIFIC TIMBERS. IT IS THE OWNER / CONTRACTORS DISCRETION TO CHAMFER THESE AREAS ON SITE.

NOTE:
ALL TIMBERS ARE FINISHED TO ¾" UNDER NOMINAL.
IE: 8X8 = 7¼" X 7¼" ACTUAL

NOTE:
PREFIT:
-ALL TRUSSES
-ALL HIP / VALLEY & JACK RAFTERS
-ALL LAP RAFTERS & COLLAR TIES

PROGRAM #
23018300 (SYP) INT
23018310 (SYP) STAIRS
23018100 (DF) EXT

NOTE:
STRAIGHT 60 ° BRACES
⅜" BEVEL CHAMFER

BRACE COUNT (SYP) | (DF)

TYPE	Z	ZOL	ZOR	X	Y	Z25	Z	Z2	Z3	ZG8
COUNT	7	2	1	11	5	6	9	3	2	4
EXTRAS	0	0	0	0	0	0	0	0	0	0
TOTAL	7	2	1	11	5	6	9	3	2	4

(PREFIT 1 IN 12)

ABREVIATIONS

T = BEAM OR POST TENON LOCATION
D = DOVETAIL LOCATION
DS = SHOULDERED DOVETAIL
H = HOUSE
HS = SHOULDERED HOUSE
RB = RETURN BRACE ABOVE
L = OFFSET TENON
M = MITER
COS = CUT ON SITE
T&B = TOP & BOTTOM
PC = PLUMB CUT
SC = SEAT CUT
CS = CHAMFER STOP

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CONSTRUCTION DRAWINGS

THE SHANLEY HOME

OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

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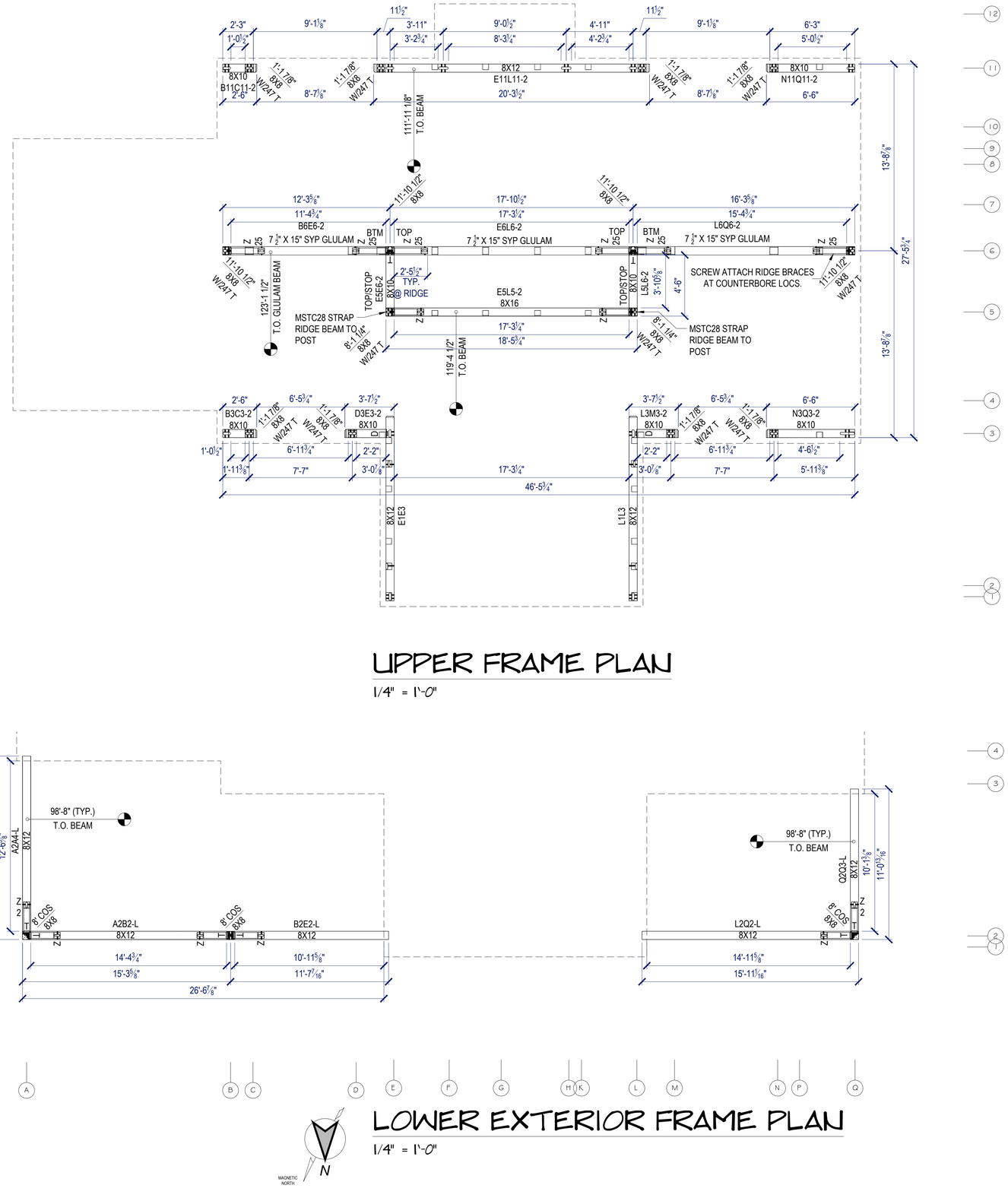
FIRST FLOOR FRAME PLAN



UPPER FRAME PLAN

1/4" = 1'-0"

LOWER EXTERIOR FRAME PLAN

1/4" = 1'-0"

MAGNETIC NORTH

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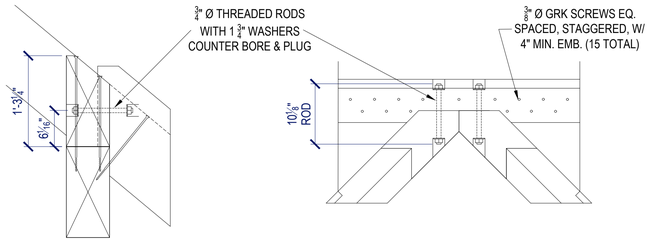
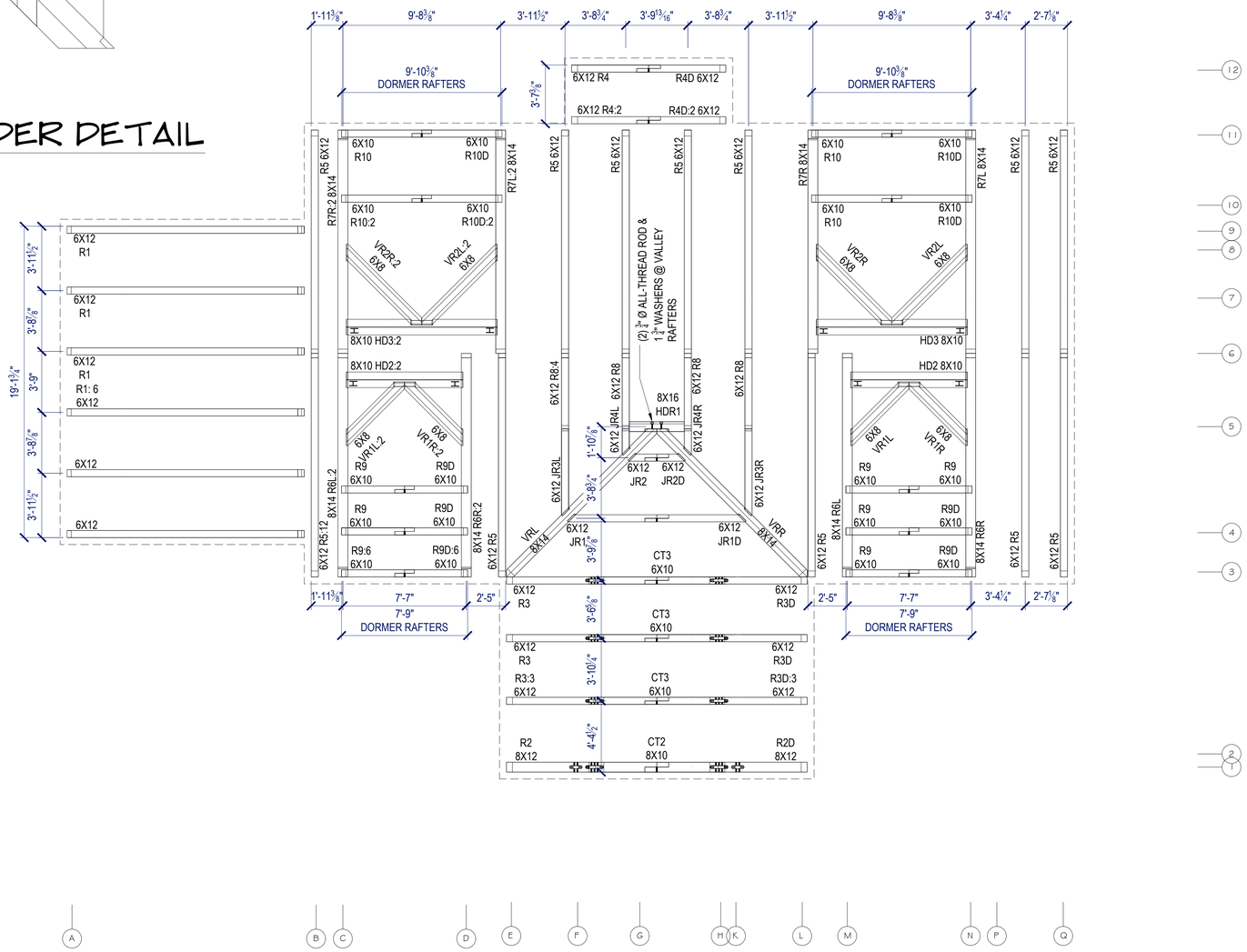
LOWER & UPPER FRAME PLANS



VALLEY RAFTER HEADER DETAIL

1" = 1'-0"



RAFTER PLAN

1/4" = 1'-0"

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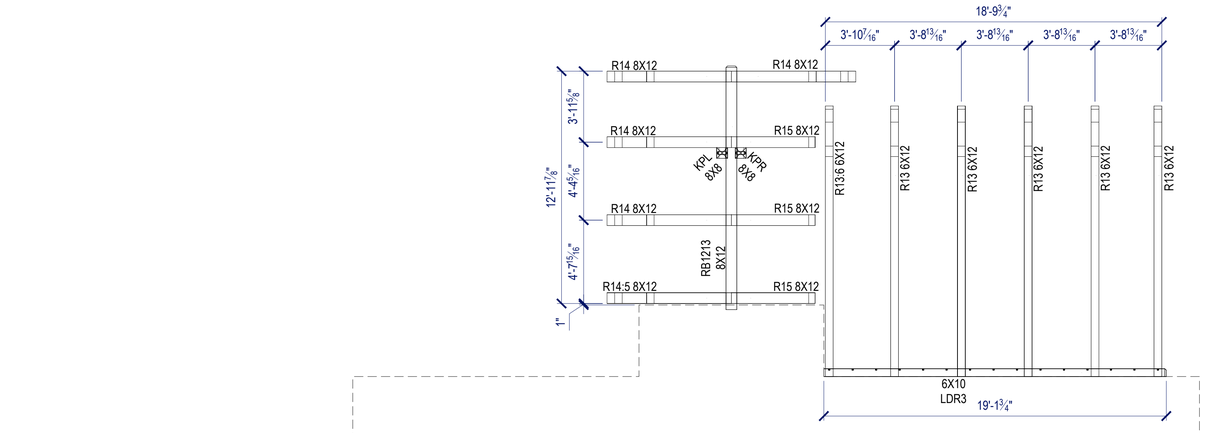
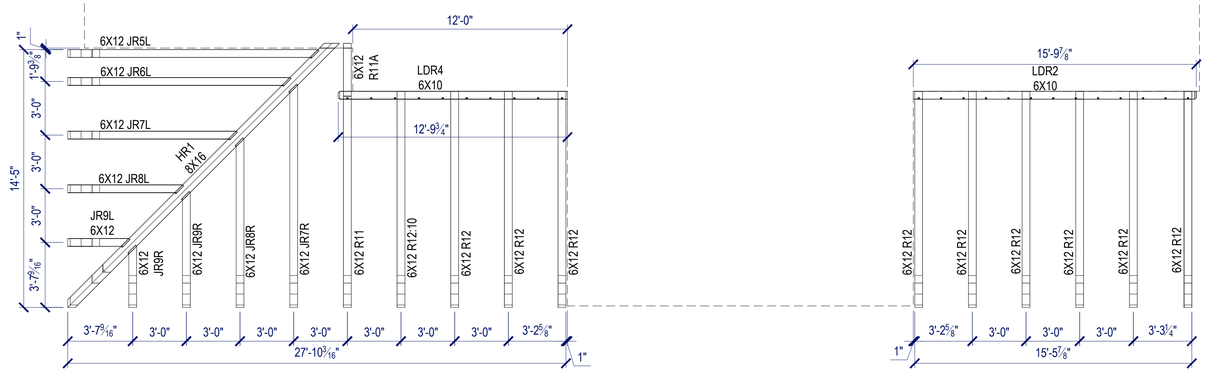
RAFTER PLAN





A B C D E F G H K L M N P Q

13 12 11 10 9 8 7 6 5 4 3 2 1

EXTERIOR RAFTER PLAN

1/4" = 1'-0"

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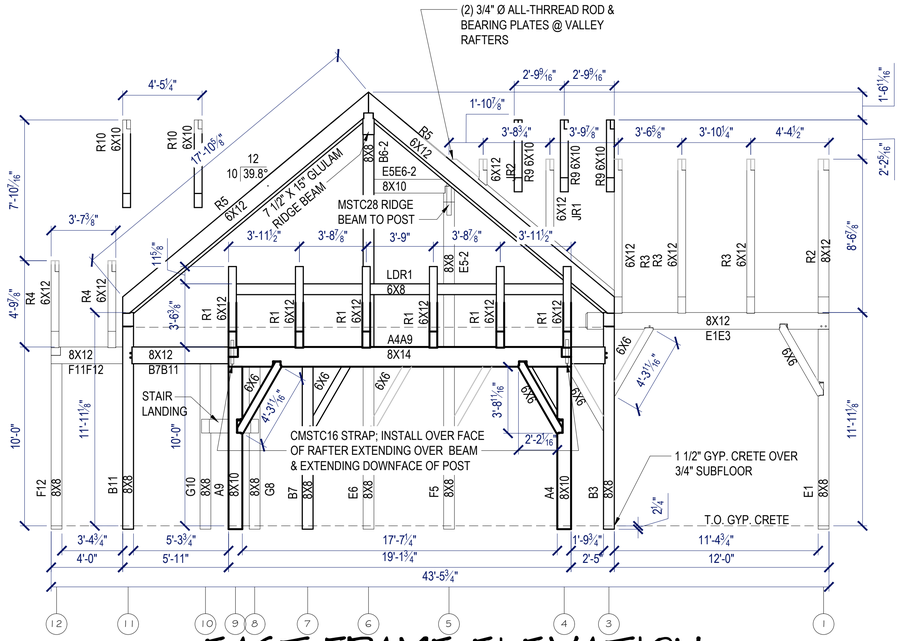
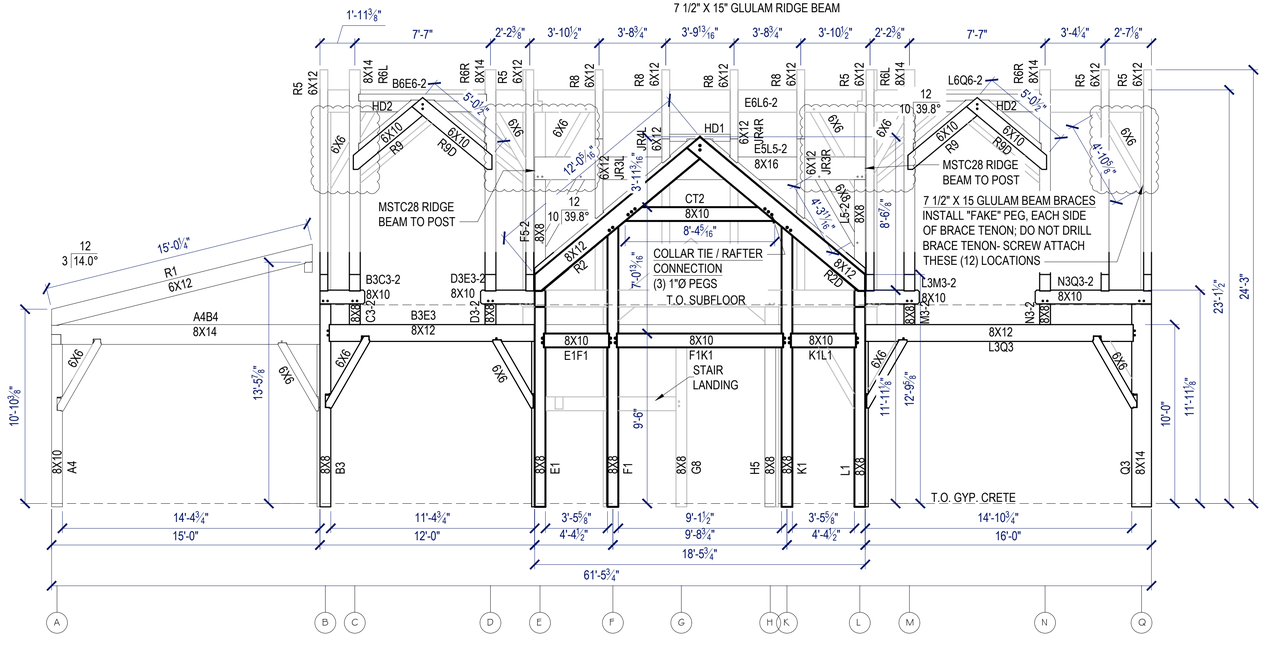
EXTERIOR RAFTER PLAN



EAST FRAME ELEVATION

1/4" = 1'-0"



NORTH FRAME ELEVATION

1/4" = 1'-0"

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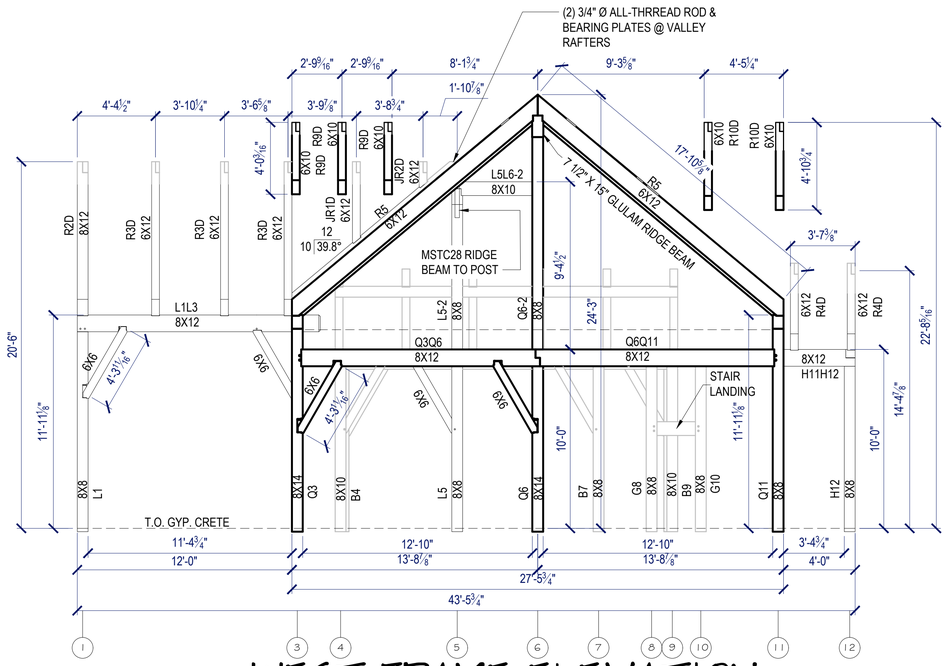
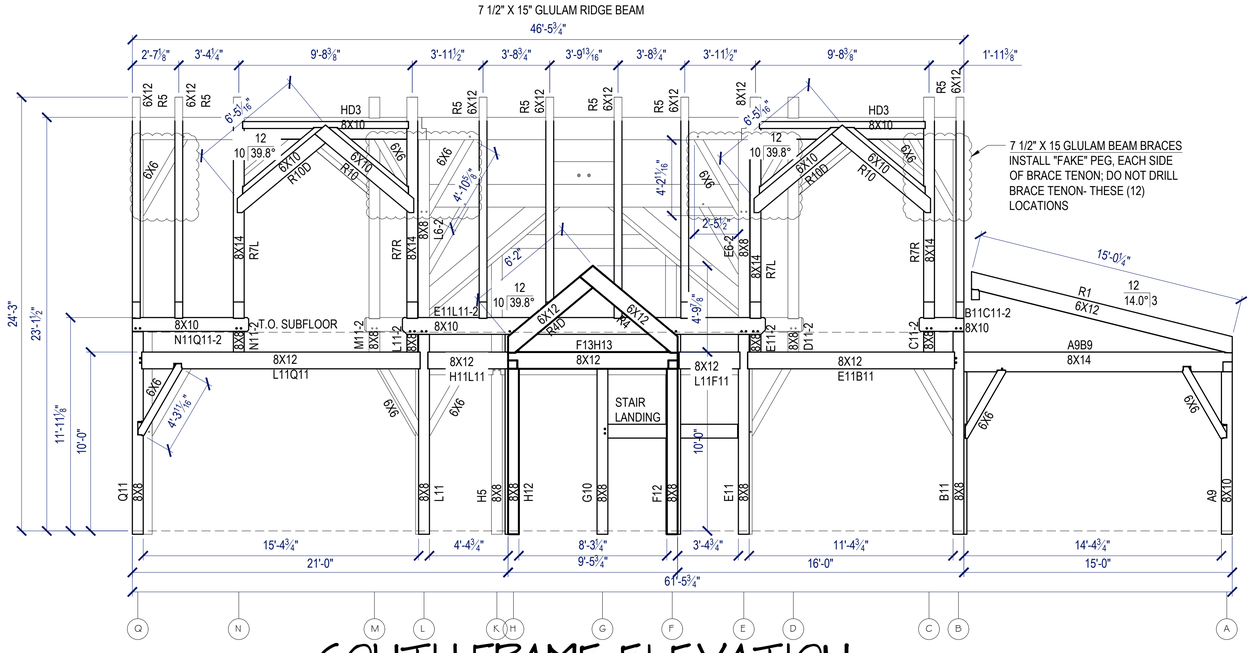
FRAME ELEVATIONS



WEST FRAME ELEVATION

1/4" = 1'-0"



SOUTH FRAME ELEVATION

1/4" = 1'-0"

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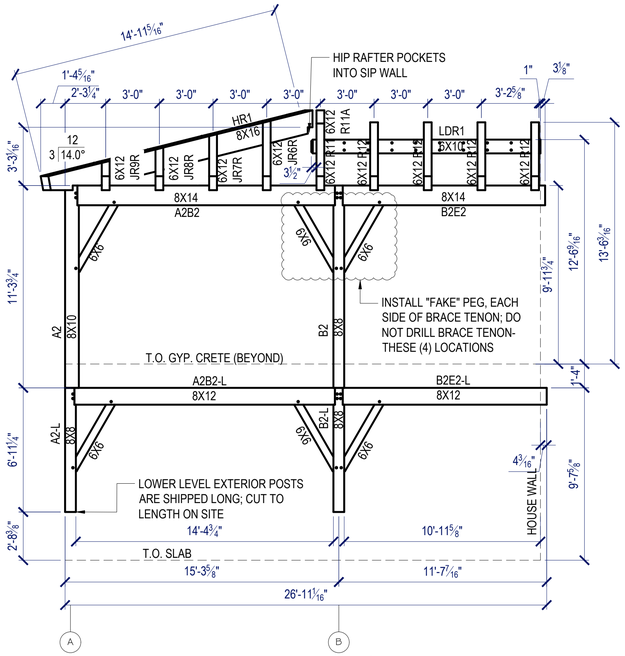
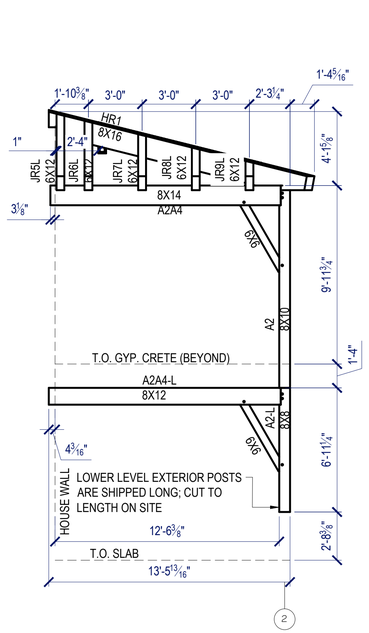
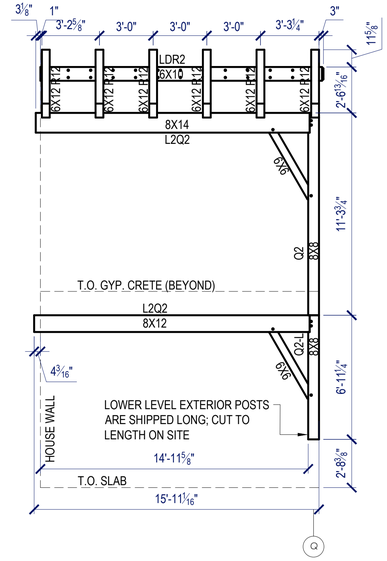
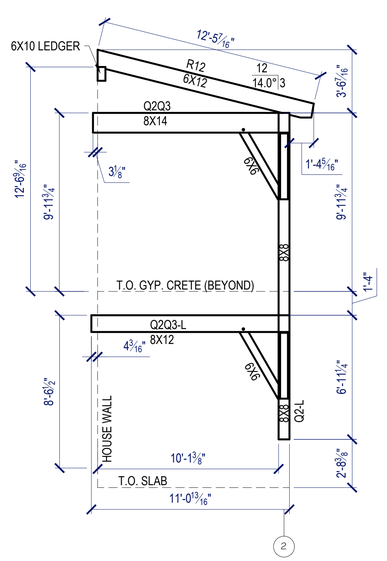


NORTH-EAST PORCH FRAME ELEVATION

1/4" = 1'-0"

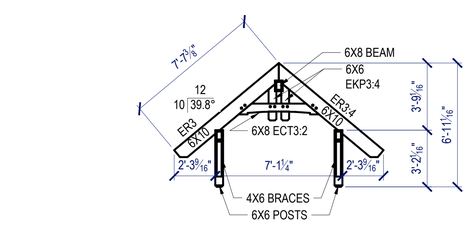






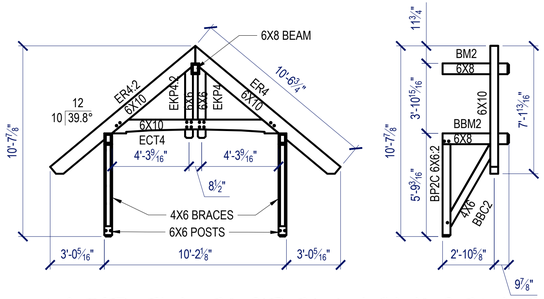
NORTH-WEST PORCH FRAME ELEVATION

1/4" = 1'-0"



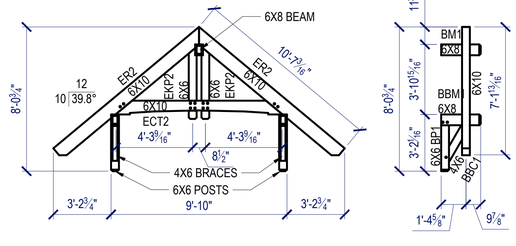
NORTH DORMER EMBELLISHMENT (QTY. 2)

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



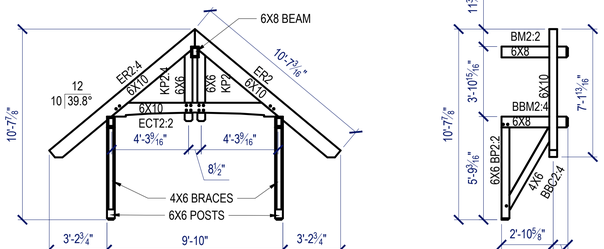
NORTH EMBELLISHMENT

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



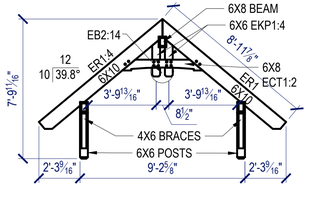
EAST EMBELLISHMENT

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



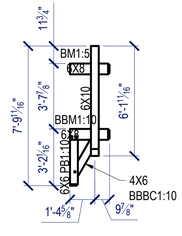
WEST EMBELLISHMENT

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



SOUTH DORMER EMBELLISHMENT (QTY. 2)

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



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TAMARACK GROVE ENGINEERING

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Suite 200
Meridian, ID 83642
PHONE 208.345.8941

WEB WWW.TAMARACKGROVE.COM
FIRM # 20151163829
PROJECT # 23-22846

COLORADO LICENSED BRIAN JAMES SHELEY PE.0041126 PROFESSIONAL ENGINEER

04/22/2025

REVISION	DATE
REV. #1 - UPDATED STRUCTURAL CALCS, SPECIFICATIONS, & DRAWINGS TO COMPLY WITH 2021 IRC	4-17-2025
REV. #1 - UPDATED PLANS TO COMPLY WITH 2023 COLORADO SOLAR & ELECTRIC READY & EV CHARGER IN GARAGE	4-17-2025

CONSTRUCTION DRAWINGS

THE SHANLEY HOME

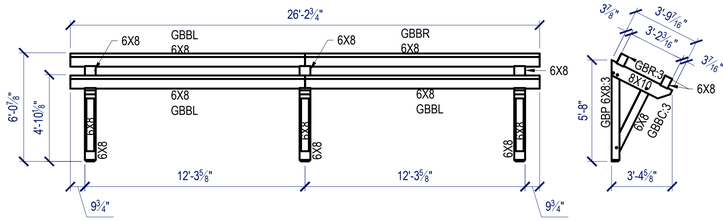
OAK CREEK, CO

PROJECT NO. 23-018

DRAWN BY: JK

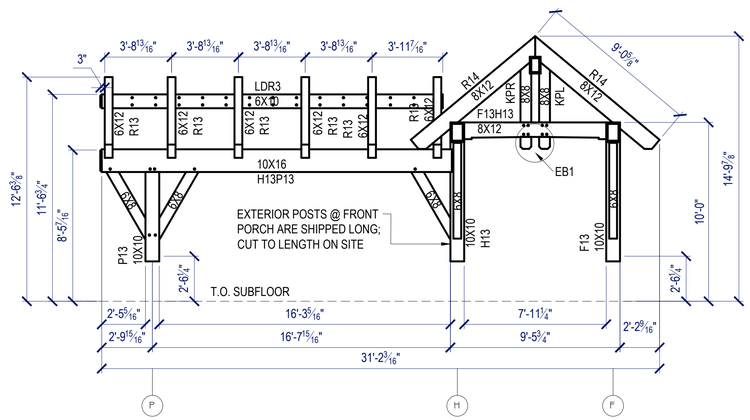
608

FRAME ELEVATIONS



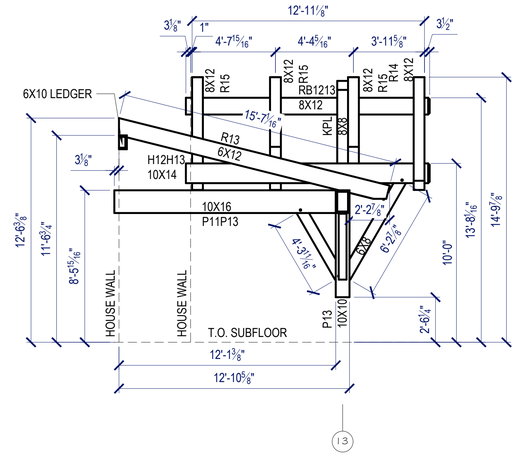
GARAGE BRACKET EMBELLISHMENT

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



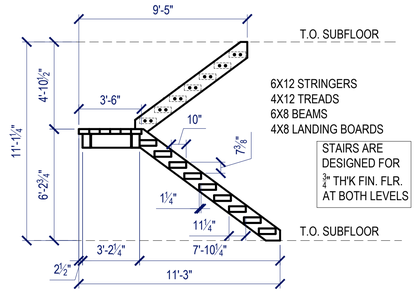
SOUTH PORCH FRAME ELEVATIONS

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



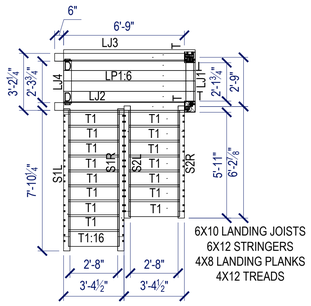
TIMBER STAIR NOTES:

1. TIMBER LANDING PLANKS WILL SHRINK WITH AGE WHICH WILL INTRODUCE GAPS BETWEEN THE LANDING PLANKS.
2. TIMBER LANDING PLANKS ARE SHIPPED ¼" WIDER THAN DRAWN TO ALLOW FOR SHRINKAGE. BUILDER MAY NEED TO SURFACE EDGES FOR EXACT FIT AT THE TIME OF INSTALLATION.
3. STORE PLANKS WITH STICKERS AND SEPARATED FROM EACH OTHER AND PROTECTED FROM WEATHER AND SUNLIGHT.
4. PLANKS WILL NEED TO BE CUT ON SITE AROUND STRINGERS AND POSTS.



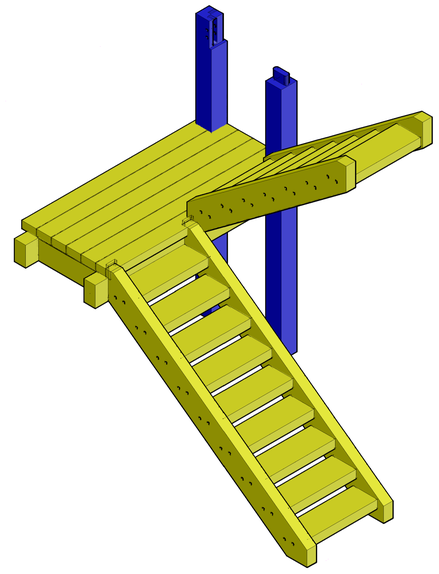
TIMBER STAIR ELEVATION

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



TIMBER STAIR PLAN

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



TIMBER STAIR ISOMETRIC

SCALE: N.T.S.

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CONSTRUCTION DRAWINGS

THE SHANLEY HOME

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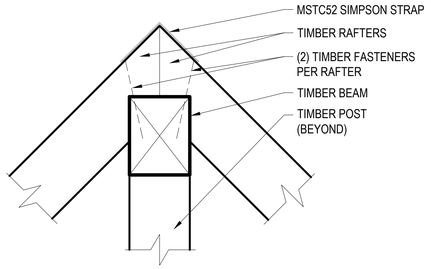
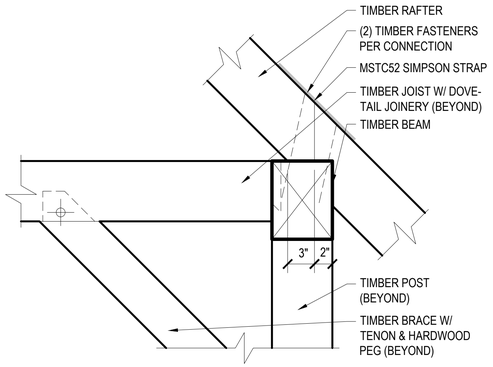
DRAWN BY: JK

609

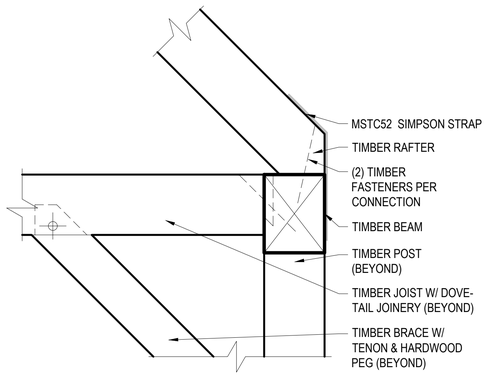
FRAME ELEVATIONS



1 RIDGE BEAM
N.T.S.

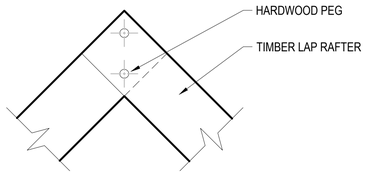


2 MID-RAFTER BEAM
N.T.S.

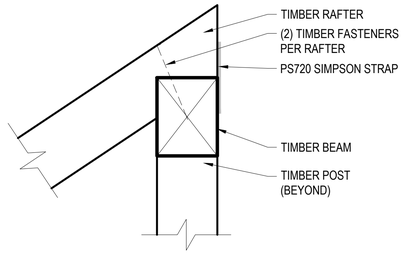


3 RAFTER SEAT
N.T.S.

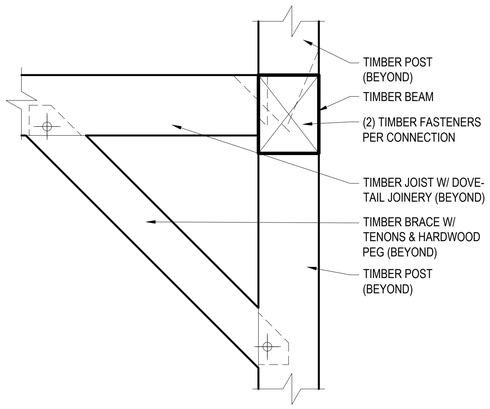
GENERAL NOTES:
1.) TIMBER FRAME DETAILS SHOWN TO INDICATE MORTISED, PEGGED, SCREWED, AND STRAPPED STRUCTURAL CONNECTIONS. DETAILS DO NOT SHOW HOUSED CONNECTIONS. HOUSINGS ARE PRIMARILY FOR AESTHETICS AND ARE UNIQUE TO EACH PROJECT. HOUSING DETAILS CAN BE PROVIDED IF REQUESTED.
2.) REFER TO SHEET 601 - FRAME ISOMETRIC FOR FASTENER SCHEDULE



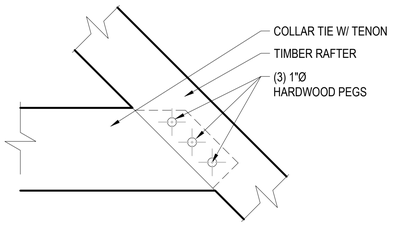
4 RAFTER LAP
N.T.S.



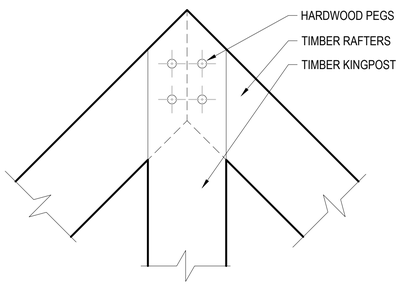
5 TOP OF SHED RAFTER
N.T.S.



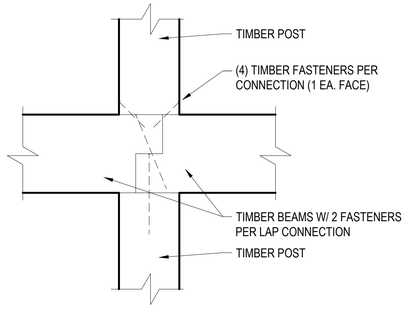
6 MID-WALL BEAM
N.T.S.



7 COLLAR TIE TENON
N.T.S.



8 TOP OF KINGPOST
N.T.S.



9 BEAM LAP
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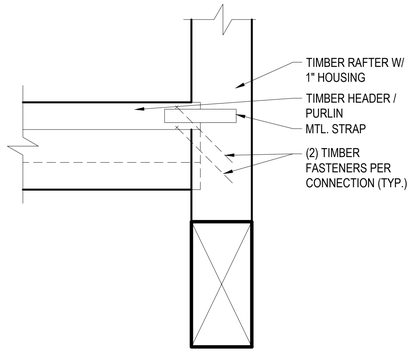
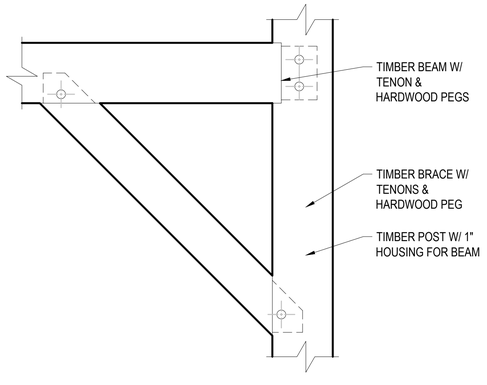


10 RAFTER WITH HEADER
N.T.S.



11 BEAM FRAMING INTO CONTINUOUS POST
N.T.S.

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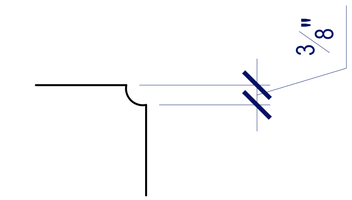
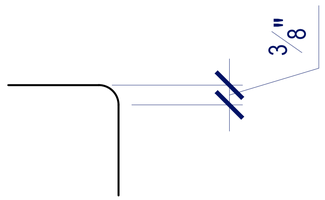
DRAWN BY: JK

610

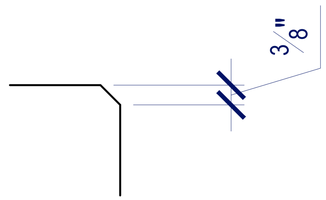
STANDARD TIMBER DETAILS



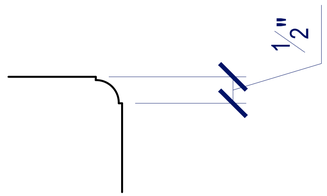
CONCAVE



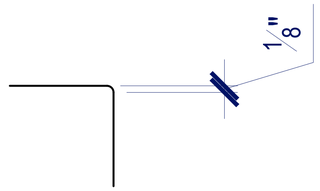
ROUND OVER



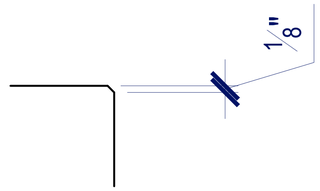
BEVELED



BEADED



MICRO ROUND OVER



MICRO BEVELED

CHAMFERING STANDARDS:
- POST BOTTOMS=8" ABOVE SUB-FLR / SLAB
- KITCHEN / BATH POSTS AT COUNTERS=42" ABOVE SUB-FLR / SLAB
- EXTERIOR POSTS=12" ABOVE T.O. DECK / T.O. PIER
- POST TOPS / BEAMS / JOISTS / COLLAR TIES=4" FROM TOP OR ENDS
- RAFTER BOTTOMS=8" FROM FLR OR BEAM TOP
- RAFTER TOPS=4" FROM BEAM
- BRACES=6" FROM EACH END
- Z=BOTH EDGES; X,Y, & ZO 1 EDGE
- TIMBERS EDGES ARE NOT CHAMFERED WHEN AGAINST EXTERIOR WALL SURFACES
- CHAMFERING IS EXCLUDED ON STAIR FRAMING - LEADING TREAD EDGE HAS A MICRO ROUNDOVER

WOODHOUSE USES THE MOST CURRENT PLANS AT THE TIME OF PRODUCTION AND WILL NOT BE RESPONSIBLE FOR PLAN CHANGES THAT EFFECT THE CHAMFER. WOODHOUSE USES THE "WHEN IN DOUBT" POLICY TO EXCLUDE CHAMFERING OR MODIFY THE STOPS ON SPECIFIC TIMBERS. IT IS THE OWNER / CONTRACTORS DISCRETION TO CHAMFER THESE AREAS ON SITE.

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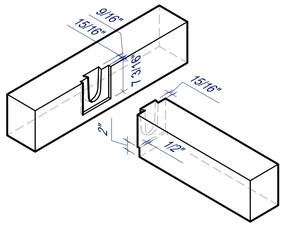
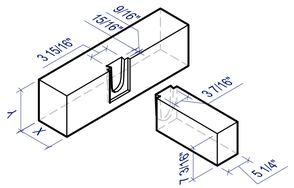
DRAWN BY: JK

611

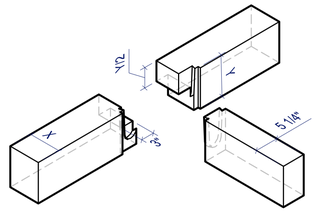
CHAMFER PROFILES



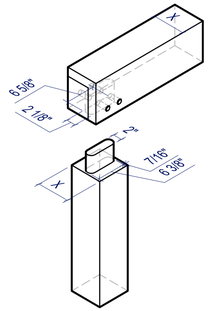
SHOULDERED DOVETAIL



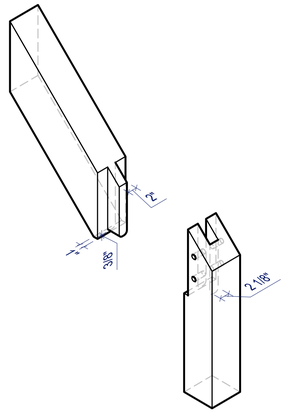
HOUSED DOVETAIL



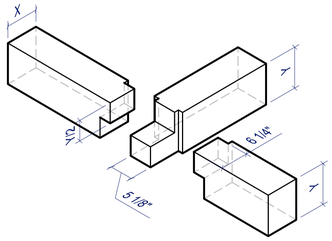
BEAM LAP W/ DOVETAIL



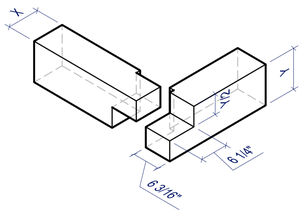
COMMON POST TENON



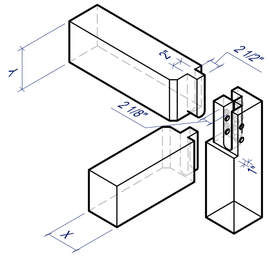
RAFTER TENON



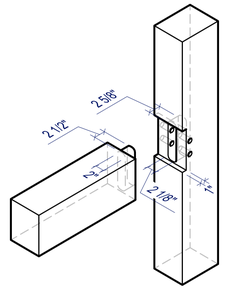
TRIPLE BEAM LAP



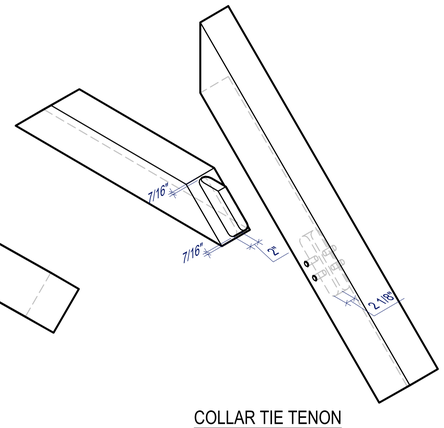
CORNER BEAM LAP



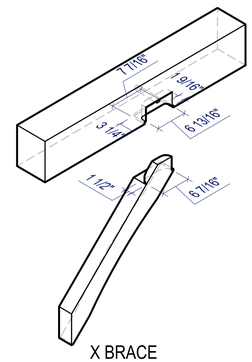
INSIDE CORNER "STAIR" POST



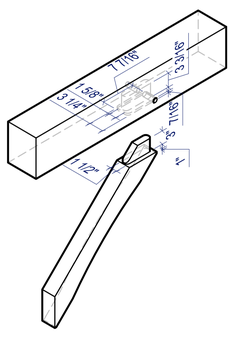
HOUSED BEAM TENON



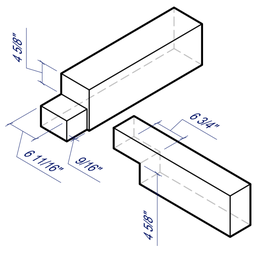
COLLAR TIE TENON



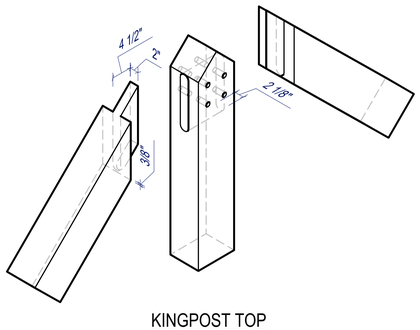
X BRACE



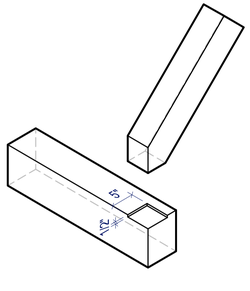
Z BRACE



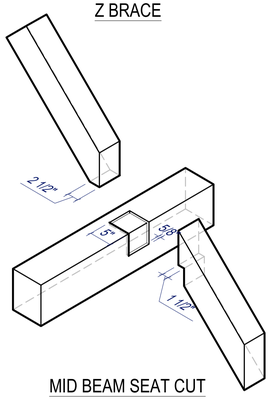
JOIST LAP



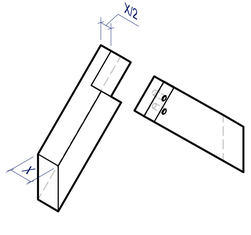
KINGPOST TOP



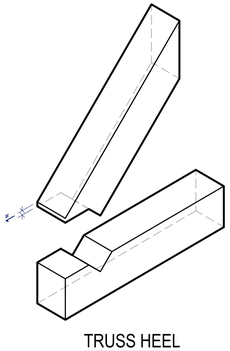
EAVE BEAM SEAT CUT



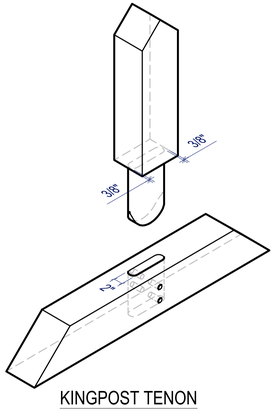
MID BEAM SEAT CUT



LAP RAFTERS



TRUSS HEEL



KINGPOST TENON

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