BUILDING COVERAGE CALCULATIONS:

ZONE:	R2.5
LOT AREA:	5510 SQ FT
TOTAL ALLOWABLE BUILDING COVERAGE (2250 SQ FT + (0.15 X (5510-5000)):	2326 SQ FT
PROPOSED 4PLEX:	2057 SQ FT
TOTAL PROPOSED BUILDING COVERAGE:	2057 SQ FT (< 2326 SQ FT)

FLOOR AREA RATIO CALCULATIONS:

ZONE:	R2.5
LOT AREA:	5510 SQ FT
TOTAL ALLOWABLE FLOOR AREA RATIO (F.A.R.) 5510 SQ FT X 1.0:	5510 SQ FT
PROPOSED 4PLEX 914 SQ FT PER UNIT X 4 UNITS:	3656 SQ FT
TOTAL PROPOSED F.A.R.	3656 SQ FT (< 5510 SQ FT)

NEW PROPOSED IMPERVIOUS AREA CALCULATIONS:

ROOF AREA :	2367 SQ FT
UNDERCOVERED PATIOS:	371 SQ FT

PROPOSED ON SITE TREE PLANTING (TREE DENSITY):

LOT AREA:	5510 SQ FT
REQUIRED TREE DENSITY (40% OF LOT AREA):	2204 SQ FT
EXISTING TREES PROPOSED TO REMAIN:	0
NEW TREES PROPOSED TO BE PLANTED PER TITLE 11:	4 MEDIUM X 500 SQ FT = 2000 SQ FT 1 SMALL X 300 SQ FT = 300 SQ FT 2300 SQ FT (> 2204 SQ FT)

KEYNOTES:

1. QUAKING ASPEN OR OTHER SMALL CANOPY SIZE TREE PER "PORTLAND TREE & LANDSCAPE MANUAL", MIN. 1 1/2" CALIPER. MIN. 3' X 3' PLANTING AREA.
2. OREGON ASH OR OTHER MEDIUM CANOPY SIZE TREE PER "PORTLAND TREE & LANDSCAPE MANUAL". MIN. 1 1/2" CALIPER. MIN. 5' X 5' PLANTING AREA.
3. AUSTRIAN PINE OR OTHER LARGE CANOPY SIZE TREE PER "PORTLAND TREE & LANDSCAPE MANUAL". MIN. 1 1/2" CALIPER. MIN. 10' X 10' PLANTING AREA.
4. PINK CHIMES SNOWBELL OR OTHER STREET TREE PER "PORTLAND APPROVED STREET TREE LIST". MIN. 2" CALIPER.
5. ALL DOWNSPOUTS TO TERMINATE @ 48" Ø X 5' DEEP DRYWELL PER SW-180 OF THE PORTLAND STORMWATER MANAGEMENT MANUAL.CONNECT DOWNSPOUTS TO DRYWELL W/ UNDERGROUND 3" A.B.S. PIPE
6. NEW 2" WATER SERVICE & 4 NEW WATER METERS. SEE WATER SERVICE SEPERATION NOTES BELOW. ALL WATER SERVICE LINES FROM METERS TO UNITS TO BE 1" PVC. CLEARLY LABEL ADDRESSES AS SHOWN ON DETAIL 1/ST1
7. ALL SANITARY SEWER SERVICE LINES TO BE 4" PVC. CONNECT TO LATERAL ON SITE.
8. 36" X 24" CONCRETE WALKWAY PADS W/ 2" GAPS BTWN. FILL GAPS W/ GRAVEL TO TOP SURFACE OF PADS. MAXIMUM WALKWAY SLOPE = 1:8
9. EXISTING GAS SERVICE TO BE ABANDONED
10. AIR SOURCE HEAT PUMP OUTDOOR CONDENSING UNIT. NOT IN SIDE OR REAR SETBACK
11. CONFIRM EXISTING SANITARY SEWER LATERAL IN PUBLIC R.O.W. FROM EXISTING COMBO SEWER BRANCH TO PROPERTY LINE IS MIN. 6" DIA. IF LESS THAN 6" DIA. REPLACE WITH NEW UPSIZED LATERAL TO ENB 4.17 STANDARDS

New water service line separation requirements in public right of way:

- Separation between sanitary sewer and water service should be 5ft minimum skin to skin.
- All above & underground utilities, such as gas and electrical, need to have 5ft minimum separation from the water service.
- Separation between multiple water services on one tax lot should be 1.5ft minimum.
- A new water service cannot be installed in the same location as an existing service
- Separation between water service and property lines should be 1.5ft minimum.
- New water meters should not be placed in driveway wings
- Street trees must be a minimum of 5' from the nearest edge of ANY water pipe, valve or meter box and a minimum of 10' from a fire hydrant. Reference standard drawing P-845 for more information

BES PRIVATE STORMWATER FACILITY INSPECTION REQUIRED
Note: BES Approval Required Prior to Occupancy
TO SCHEDULE, DIAL IVR at 503-823-7000
REQUEST #487 BES ON-SITE STORMWATER FACILITY EVAL
NEED ASSISTANCE? CONTACT BES at 503-823-7761 Option 2
DRYWELL
Note: Required Inspections Prior to Cover
Inspection #1: Location, Size, Depth, Rock

SEPARATE BDS INSPECTION REQUIRED FOR DOWNSPOUTS AND PRIVATE STORM SEWER PIPING OUTSIDE OF STORM FACILITY

CONNECT TO EXISTING SANITARY DISPOSAL POINT ON PROPERTY WITH BDS INSPECTOR APPROVAL

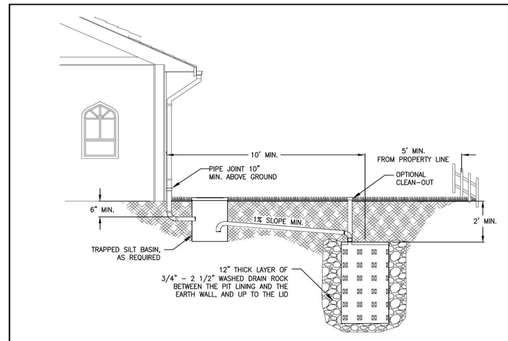
CONSTRUCTION DEWATERING NOT AUTHORIZED. IF REQUIRED:

Batch Discharge Authorization permit is required for temporary discharges of groundwater or construction related stormwater (channelized, collected and/or pumpea) to the City's public sanitary or storm sewer system. If de-watering to a City sanitary or storm sewer system is necessary, pre-authorization must be obtained from the Bureau of Environmental Services at batchdischarge@portlandoregon.gov (or call 503-823-7026).

SITE PLAN GENERAL NOTES:

- CONFIRM ALL UTILITY LOCATIONS.
- CONFIRM GRADING (NEW & EXISTING) WITH ON SITE CONDITIONS.
- INSTALL SITE EROSION CONTROL MEASURES PER JURISDICATION REQUIREMENTS.
- AT THE TIME OF THE SETBACK INSPECTION, PROVIDE EXPOSED PROPERTY CORNER PINS READILY VIEWABLE AT LEAST ONE SIDE OF THE PROPERTY WITH A STRING LINE SET FOR REFERENCE. OR PROVIDE A SURVEY THAT IDENTIFIES THE PROPERTY LINES, FOR PURPOSE OF MEASURING THE REQUIRED BUILDING SETBACKS.

ASSIGNED ADDRESS:
UNIT 4 - 4441 N VANCOUVER AVE
UNIT 3 - 4447 N VANCOUVER AVE
UNIT 1 - 4445 N VANCOUVER AVE
UNIT 2 - 4443 N VANCOUVER AVE



1. Sizing: See adjacent table to size the drywell(s) based on impervious area.
2. Siting Criteria: The base of the drywell must be at least 5' above seasonal high groundwater.
3. Setbacks: Measured from the center, the drywell must be 10' from foundations and 5' from property lines except next to the right-of-way where no setback is required between the edge of the drywell drain rock and the property line. The foundation setback is 8' for plastic mini-drywells.
4. Piping: Conform with Oregon Plumbing Specialty Code (OPSC) requirements.
5. Access: In residential settings, an access cleanout is optional but highly recommended.
6. Pre-Treatment: A trapped silt basin such as a sumped catch basin is required except for drywells managing roof runoff and runoff from pedestrian-only areas.
7. The top of the perforated drywell sections must be lower than neighboring foundations.
8. Inspections: Call BDS MR inspection line, (503) 823-7000. Request 487.3 inspections required.

Drywell Depth	Maximum Catchment Area Managed by One Drywell	
	28" diameter	48" diameter
5'	1000 sf	2500 sf
10'	2500 sf	4500 sf
15'	3500 sf	5000 sf
2x2 plastic mini-drywell (maximum of 2 drywells per catchment)	500 sf	

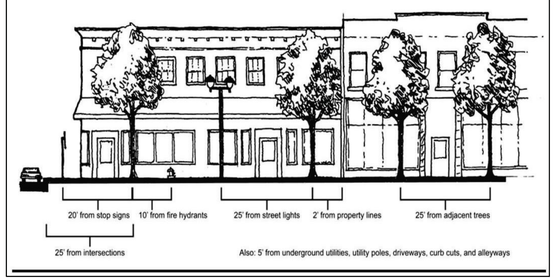
CONSTRUCTION REQUIREMENTS

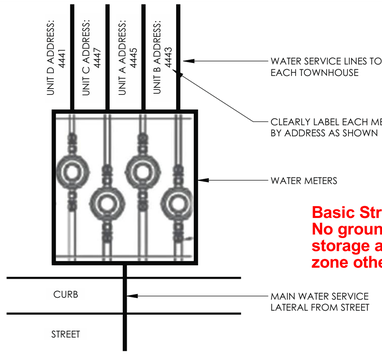
Smearing the soil surface during excavation can limit infiltration rates. If smooth excavation tools are used, roughen the sides and bottom of the excavation with a sharp pointed tool. Remove loose material from the bottom of the excavation.

– DRAWING NOT TO SCALE –

Bureau of Environmental Services | STORMWATER MANAGEMENT TYPICAL DETAILS FOR PRIVATE PROPERTY | DRYWELL | SW–180 | 9–2–20

Street tree minimum spacing distances:





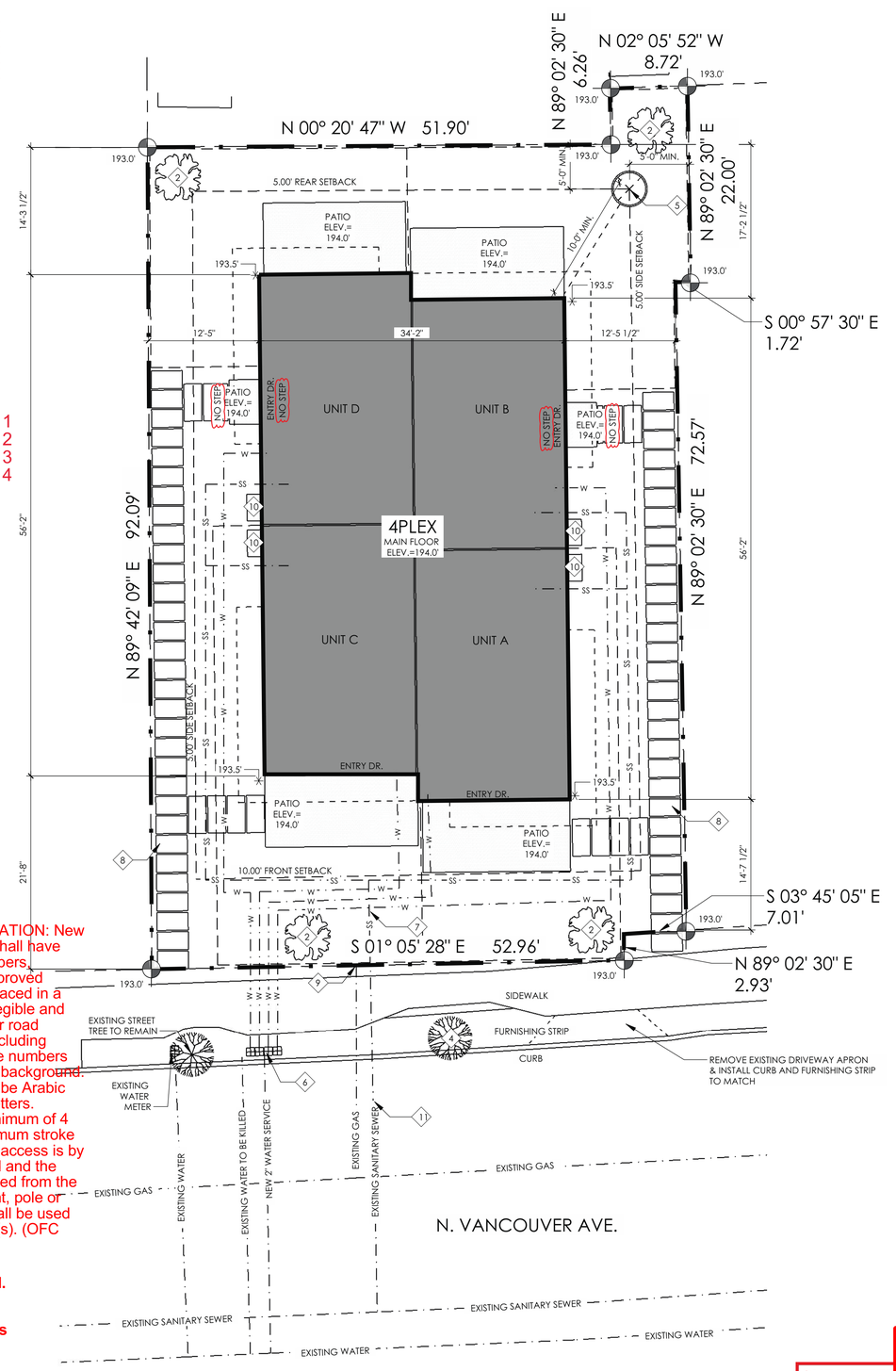
DETAIL 1: WATER METER LABELING

N.T.S.

22-163680-RS - UNIT 1
22-163684-RS - UNIT 2
22-163687-RS - UNIT 3
22-163689-RS - UNIT 4
22-163692-RS

PREMISES IDENTIFICATION: New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property, including monument signs. These numbers shall contrast with their background. Address numbers shall be Arabic numerals or alphabet letters. Numbers shall be a minimum of 4 inches high with a minimum stroke width of ½ inch. Where access is by means of a private road and the building cannot be viewed from the public way, a monument, pole or other sign or means shall be used to identify the structure(s). (OFC 505.1)

Basic Street tree protection required. No ground disturbance or material storage allowed with the furnishing zone other than noted on these plans



SITE PLAN

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

SUBMITTED 12/13/2023

City Of Portland
REVIEWED FOR CODE COMPLIANCE

Date: 01/03/24
Permit #: 22-163680-000-00-RS

m.o.d aby design llc
3948 SE 26th Ave
Portland, OR 97202
www.modabydesign.net
phone: 503.475.6151
mattd@modabydesign.net

'JITTERBUG' TOWNHOUSES FOR:

NIMBLE HOMES

4429 N VANCOUVER AVE.
PORTLAND, OR

22-163680/84/87/89-RS & 22-163692-SD

ISSUED FOR:

PERMIT REVIEW	07.09.22
REVISION 1 (1)	10.12.22
REVISION 2 (2)	10.25.22
REVISION 3 (3)	09.25.23
REVISION 4	11.22.23

SHEET NO.

ST1

SITE PLAN

FOLLOW THESE MINIMU PRESCRIPTIVE ENVELOPE REQUIREMENTS & ALL OTHER REQUIREMENTS OF THE O.R.S.C CHAPTER 11,UNLESS OTHERWISE SPECIFIED ON THESE DRAWINGS :

TABLE N1101.1(1) PRESCRIPTIVE ENVELOPE REQUIREMENTS[a]

BUILDING COMPONENT	STANDARD BASE CASE		LOG HOMES ONLY	
	Required Performance	Equiv. Value[b]	Required Performance	Equiv. Value[b]
Wall insulation—above grade	U-0.059[c]	R-21 Intermediate[c]	Note d	Note d
Wall insulation—below grade[e]	C-0.063	R-15 c.i. / R-21	C-0.063	R-15/R-21
Flat ceilings[f]	U-0.021	R-49	U-0.020	R-49 A[h]
Vaulted ceilings[g]	U-0.033	R-30 Rafter or R-30A[g, h] Scissor Truss	U-0.027	R-38A[h]
Underfloors	U-0.033	R-30	U-0.033	R-30
Slab-edge perimeter[m]	F-0.520	R-15	F-0.520	R-15
Heated slab interior[i]	n/a	R-10	n/a	R-10
Windows[j]	U-0.27	U-0.27	U-0.27	U-0.27
Skylights	U-0.50	U-0.50	U-0.50	U-0.50
Exterior doors[k]	U-0.20	U-0.20	U-0.54	U-0.54
Exterior doors with > 2.5 ft^2 glazing[j]	U-0.40	U-0.40	U-0.40	U-0.40

For SI: 1 inch = 25.4 mm, 1 square foot = 0.0929 m^2, 1 degree = 0.0175 rad, n/a = not applicable.

a. As allowed in Section N1104.1, thermal performance of a component may be adjusted provided that overall heat loss does not exceed the total resulting from conformance to the required U-factor standards. Calculations to document equivalent heat loss shall be performed using the procedure and approved *U*-factors contained in Table N1104.1(1).
b. *R*-values used in this table are nominal for the insulation only in standard wood-framed construction and not for the entire assembly.
c. Wall insulation requirements apply to all exterior wood-framed, concrete or masonry walls that are above grade. This includes cripple walls and rim joist areas. Nominal compliance with R-21 insulation and Intermediate Framing (N1104.5.2) with insulated headers.
d. The wall component shall be a minimum solid log or timber wall thickness of 3.5 inches.
e. Below-grade wood, concrete or masonry walls include all walls that are below grade and do not include those portions of such wall that extend more than 24 inches above grade. R-21 for insulation in framed cavity; R-15 continuous insulation.
f. Insulation levels for ceilings that have limited attic/rafter depth such as dormers, bay windows or similar architectural features totaling not more than 150 square feet in area may be reduced to not less than R-21. When reduced, the cavity shall be filled (except for required ventilation spaces). R-49 insulation installed to minimum 6-inches depth at top plate at exterior of structure to achieve U-factor.
g. Vaulted ceiling surface area exceeding 50 percent of the total heated space floor area shall have a U-factor no greater than U-0.026 (equivalent to R-38 rafter or scissor truss with R-38 advanced framing).
h. A = Advanced frame construction. See Section N1104.6.
i. Heated slab interior applies to concrete slab floors (both on and below grade) that incorporate a radiant heating system within the slab. Insulation shall be installed underneath the entire slab.
j. Sliding glass doors shall comply with window performance requirements. Windows exempt from testing in accordance with Section NF1111.2, Item 3 shall comply with window performance requirements if constructed with thermal break aluminum or wood, or vinyl, or fiberglass frames and double-pane glazing with low-emissivity coatings of 0.10 or less. Buildings designed to incorporate passive solar elements may include glazing with a *U*-factor greater than 0.35 by using Table N1104.1(1) to demonstrate equivalence to building envelope requirements.
k. A maximum of 28 square feet of exterior door area per dwelling unit can have a *U*-factor of 0.54 or less.
l. Glazing that is either double pane with low-e coating on one surface, or triple pane shall be deemed to comply with this requirement.
m. Minimum 24-inch horizontal or vertical below grade.

FOLLOW THESE MINIMU AIR SEALING REQUIREMENTS & ALL OTHER REQUIREMENTS OF THE O.R.S.C CHAPTER 11, UNLESS OTHERWISE SPECIFIED ON THESE DRAWINGS:

TABLE N1104.8 AIR BARRIER INSTALLATION AND AIR SEALING REQUIREMENTS

COMPONENT	AIR BARRIER CRITERIA
General requirements	A continuous air barrier shall be installed in alignment with the building thermal envelope.
	Breaks or joints in the air barrier shall be sealed.
Ceiling/attic	The air barrier in any dropped ceiling or soffit shall be aligned with the insulation and any gaps in the air barrier shall be sealed.
	Access openings, drop-down stairs, or knee wall doors to unconditioned attic spaces shall be gasketed and sealed.
Walls	The junction of the foundation and sill plate shall be sealed.
	Between wall cavities and windows or door frames.
	The junction of the top plate and the top of walls shall be sealed in accordance with Section N1104.8.2.1.
	All penetrations or utility services through the top and bottom plates shall be sealed.
	Knee walls shall be sealed.
Windows, skylights and doors	The space between framing and skylights, and the jambs of windows and doors shall be sealed.
Rim/band joists	Rim/band joists shall be a part of the thermal envelope and have a continuous air barrier.
Floors Including cantilevered floors and floors above garages	The air barrier shall be installed at any exposed edge of insulation.
Crawl space walls	Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.
Shafts, penetrations	Duct shafts, utility penetrations and flue shafts opening to exterior or unconditioned space shall be sealed.
Garage separation	Air sealing shall be provided between the garage and conditioned spaces.
Recessed lighting	Recessed light fixtures installed in the building thermal envelope shall be sealed to the finished surface.
Shower/tub on exterior walls	The air barrier installed at exterior walls adjacent to showers and tubs shall separate the wall from the shower or tub.
Electrical/phone box on exterior walls	The air barrier shall be installed behind electrical and communication boxes. Alternatively, air-sealed boxes shall be installed.
HVAC register boots	HVAC supply and return register boots that penetrate building thermal envelope shall be sealed to the subfloor, wall covering or ceiling penetrated by the boot.

EACH TOWNHOUSE SHALL HAVE A DEDICATED WHOLE HOUSE VENTILATION SYSTE INSTALLED THAT PROVIDES BALANCED VENTILATION. OUTDOOR AIR AT A CONTINUOUS RATE IN ACCORDANCE WITH THE TABLE BELOW AND/OR ALL OTHER REQUIREMENTS OF THE O.R.S.C M1505.4:

TABLE M1505.4.3(1) CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS

DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 – 1	2 – 3	4 – 5	6 – 7	> 7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 – 3,000	45	60	75	90	105
3,001 – 4,500	60	75	90	105	120
4,501 – 6,000	75	90	105	120	135
6,001 – 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

45 CFM FOR EACH DWELLING

For SI: 1 square foot = 0.0929 m^2, 1 cubic foot per minute = 0.0004719 m^3/s.

22-163680-RS - UNIT 1
22-163684-RS - UNIT 2
22-163687-RS - UNIT 3
22-163689-RS - UNIT 4
22-163692-RS

PERSPECTIVE

N.T.S.

GENERAL NOTES:

- THESE DOCUMENTS HAVE BEEN ISSUED TO THE CLIENT AS INSTRUMENTS OF SERVICE FOR CONSTRUCTION OF ONE DWELLING ON A SPECIFIC LOT, ONE TIME USE ONLY. UNLESS OTHERWISE STATED IN A WRITTEN AGREEMENT, THE DOCUMENTS SHALL NOT BE USED BY ANY OTHER PARTY OTHER THAN THE CLIENT, EXCEPT ON LOAN FROM THE CLIENT TO THIRD PARTIES FOR THE PURPOSE OF CONSTRUCTION OF THIS SPECIFIC DWELLING. ALL INFORMATION CONTAINING IN THESE DRAWINGS ARE COPYRIGHT. ALL RIGHTS ARE RESERVED BY M.O.DABY DESIGN LLC.
- THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY ALL EXISTING CONDITIONS, DIMENSIONS, AND ELEVATIONS. IN ADDITION, THE CONTRACTOR SHALL CAREFULLY INSPECT ALL DIMENSIONS, AND DETAILS IN THE CONSTRUCTION DOCUMENTS, AND VERIFY ACCURACY AND COMPATIBILITY WITH EXISTING CONDITIONS.
- IF THE CONTRACTOR DISCOVERS ANY ERRORS, OMISSIONS, OR DISCREPANCIES IN THE CONSTRUCTION DOCUMENTS, HE SHALL NOTIFY THE DESIGNER AND/OR ENGINEER OF RECORD IN WRITING PRIOR TO THE START OF CONSTRUCTION, AND ALLOW THE DESIGNER/ENGINEER REASONABLE TIME TO CORRECT THE CONSTRUCTION DOCUMENTS. IF THE CONTRACTOR FAILS TO DO SO, HE SHALL BE RESPONSIBLE FOR ALL COSTS CAUSED BY THE ERROR.
- WRITTEN DIMENSIONS TAKE PRECEDANT OVER ALL OTHERS. DO NOT SCALE DRAWINGS FOR DIMENSIONAL INFORMATION.
- THE DESIGNER SHALL NOT BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, OR SAFETY PRECAUTIONS IN ASSOCIATION WITH CONSTRUCTION.
- CHANGES IN THE FIELD WITHOUT WRITTEN NOTICE TO THE DESIGNER AND/OR ENGINEER OF RECORD VOID ALL LIABILITY OF THE DESIGNER FOR INFORMATION CONTAINED IN THE CONSTRUCTION DOCUMENTS.
- UNLESS DOCUMENTED ON THE "AS-BUILT" DRAWINGS OR IN WRITING, M.O.DABY DESIGN LLC ASSUMES NO ADVERSE CONDITIONS ARE PRESENT AT THE SITE OR SITE'S EXISTING STRUCTURES. ADVERSE CONDITIONS INCLUDE, BUT ARE NOT LIMITED TO, EXISTING INADEQUATE OR COMPROMISED STRUCTURES DUE TO PREVIOUS CONSTRUCTION METHODS, MATERIALS, ENVIRONMENTAL INFLUENCE, OR OTHER CONDITION DEEMED UNSUITABLE FOR ANY OTHER REASON.
- ALL CONSTRUCTION TO CONFORM WITH THE LATEST ADOPTED VERSION OF THE OREGON RESIDENTIAL SPECIALTY CODE (O.R.S.C.) AND/OR THE INTERNATIONAL RESIDENTIAL CODE (I.R.C.) AND ANY APPLICABLE STATE, COUNTY, OR LOCAL JURISDICTION AND ACI, AISC, ASTM STANDARDS.
- THE TYPE OF EXTERIOR FINISH, INSTALLATION, AND WEATHERPROOFING DETAILS ARE ALL TO BE THE FULL RESPONSIBILITY OF THE GENERAL CONTRACTOR, AND/OR SUBCONTRACTOR. THIS DESIGNER ASSUMES NO RESPONSIBILITY FOR THE INTEGRITY OF THE BUILDING ENVELOPE.
- RECOMMEND TO FOLLOW A JOB SITE WASTE MANAGEMENT & RECYCLING PLAN TO DIVERT THE MAXIMUM AMOUNT OF CONSTRUCTION WASTE FROM LANDFILLS AND INCINERATORS.
- PRIOR TO OCCUPANCY, FLUSH THE HOME WITH FRESH AIR FOR 48 HOURS (NON-CONSECUTIVE IF NECESSARY) WITH ALL INTERIOR DOORS KEPT OPEN AND ALL HVAC AND EXHAUST FANS OPERATING CONTINUOUSLY ON THE HIGHEST FLOW RATE SETTINGS. USE ADDITIONAL FANS AND OPEN WINDOWS IF NECESSARY. REPLACE OR CLEAN ALL HVAC FILTERS AFTERWARDS AS NEEDED.
- RECOMMEND TO PERFORM A BLOWER DOOR TEST PRIOR TO INSULATION INSTALLATION TO IDENTIFY AND REMEDY AIR INFILTRATION AREAS IN SEALED AIR BARRIER.
- APPLY,PLACE, ERECT, OR INSTALL ALL PRODUCTS AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS.

- INSTALL WEATHERPROOF FLASHING AT ALL DOORS AND WINDOWS PER MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
- UNLESS PROTECTED BY A WATERPROOF MEMBRANE AND CEMENTITIOUS BACKER BOARD, INSTALL WATERPROOF GYPSUM BOARD AT ALL WATER SPLASH AREAS AT LEAST 70" ABOVE SHOWER DRAIN OR 72" ABOVE FINISH FLOOR, WHICHEVER IS GREATER.
- PROVIDE TEMPERED GLAZING AT ALL REQUIRED LOCATIONS AS SPECIFIED IN CHAPTER 3 - SECTION R308 OF THE O.R.S.C.
- EVERY SLEEPING ROOM TO HAVE AT LEAST ONE OPERABLE WINDOW WITH A CLEAR OPENING AREA OF MINIMUM 5.7 SQUARE FEET, MINIMUM CLEAR OPENING WIDTH OF 20", AND MAXIMUM SILL HEIGHT OF 44" ABOVE FINISHED FLOOR.
- ALL OPENINGS IN THE EXTERIOR BUILDING ENVELOPE SHALL BE SEALED/INSULATED FROM AIR INFILTRATION, FULLY SEAL ALL CAVITIES AT DOOR AND WINDOW ROUGH OPENINGS, CORNER STUD CAVITIES, FLOOR AND PLATE LINES, OPENINGS IN PLATES, JOINTS BETWEEN WALL PANELS, AND AT UTILITY PENETRATIONS THROUGH WALLS, FLOORS, AND ROOFS.
- INSULATE ALL ACCESS OPENINGS TO ATTICS AND CRAWLSPACES TO THE EQUIVALENT RATING OF THE WALL, FLOOR, OR CEILING THROUGH WHICH THEY PENETRATE.
- ALL PREFABRICATED JOISTS, RAFTERS, BEAMS, & COLUMNS TO BE INSTALLED AND CONFORM WITH THE LATEST ADOPTED VERSION OF THE ORSC, IRC, AND/OR THE STRUCTURAL ENGINEER'S NOTES AND SPECIFICATIONS.
- ALL PRE-MANUFACTURED WOOD TRUSSES TO BE INSTALLED AND CONFORM WITH THE LATEST ADOPTED VERSION OF THE ORSC, IRC, AND/OR THE STRUCTURAL ENGINEER'S NOTES AND SPECIFICATIONS.

FINISHES:

- USE NON-PAPER FACED BACKER BOARD ON WALLS OF ALL TUB, SHOWER, & SPA AREAS.
- ALL INTERIOR PAINTS, COATINGS AND PRIMERS APPLIED TO INTERIOR WALLS, CEILINGS AND MILLWORK SHALL HAVE A VOC CONTENT EQUAL TO OR LESS THAN 50g/L (FLATS) OR 150 g/L (NON FLATS).
- ALL CLEAR WOOD FINISHES SHALL HAVE A VOC CONTENT EQUAL TO OR LESS THAN 350 g/L (VARNISHES) OR 550 g/L (LACQUERS).
- ALL FLOOR COATINGS SHALL HAVE A VOC CONTENT EQUAL TO OR LESS THAN 100 g/L.
- ALL SEALERS SHALL HAVE A VOC CONTENT EQUAL TO OR LESS THAN 250 g/L (WATERPROOFING) OR 250 g/L (SANDING) OR 200 g/L (ALL OTHERS).
- ALL SHELLAC SHALL HAVE A VOC CONTENT EQUAL TO OR LESS THAN 730 g/L (CLEAR) OR 550 g/L (PIGMENTED).
- ALL STAINS SHALL HAVE A VOC CONTENT EQUAL TO OR LESS THAN 250 g/L.
- CARPET AND PAD SHALL COMPLY WITH CARPET AND RUG INSTITUTE'S GREEN LABEL PLUS PROGRAM.

PLUMBING/MECHANICAL/ELECTRICAL:

- INSTALL SMOKE/CO2 ALARMS IN EVERY SLEEPING ROOM, OUTSIDE THE IMMEDIATE VICINITY OF EACH SLEEPING ROOM, AND ON EACH STORY OF THE DWELLING. INTERCONNECT ALARMS FOR SIMULTANEOUS OPERATION. WIRE SMOKE ALARMS TO DWELLING'S 120 VOLT SYSTEM WITH BATTERY BACK UP.
- INSTALL ARTIFICIAL LIGHT SOURCE AT INTERIOR AND EXTERIOR STAIRS.
- ALL RECESSED LIGHTING FIXTURES IN INSULATED CEILINGS TO HAVE I.C. LABEL.
- ALL PERMANENTLY INSTALLED LIGHTING FIXTURES SHALL BE HIGH EFFICIENCY LIGHT SOURCES AS DEFINED BY THE O.R.S.C. CHAPTER 11.
- PROVIDE COMBUSTION AIR VENTS WITH SCREEN AND BACK DAMPER FOR ALL FIREPLACES, WOOD STOVES, AND APPLIANCES WITH AN OPEN FLAME.
- INSULATE WASTE LINES FOR SOUND CONTROL.
- ALL APPLIANCES, INTAKE AND EXHUAST FANS TO BE ENERGY STAR CERTIFIED.
- AT BATHROOMS, INSTALL MIN. 80 CFM EXHAUST FAN W/ OCCUPANCY SENSOR OR AUTOMATIC TIMER SWITCH.
- AT ATTACHED GARAGES, INSTALL MIN. 80 CFM EXHAUST FAN W/ AUTOMATIC TIMER SWITCH LINKED TO OCCUPANCY SENSOR, LIGHT SWITCH, GARAGE DOOR OPENER/CLOSER, OR CARBON MONOXIDE SENSOR THAT TURNS ON FAN WHEN AMBIENT CO2 LEVELS REACH 35 PPM. MINIMUM 3 AIR CHANGES EACH TIME FAN IS TURNED ON.
- ALL FANS TO VENT TO OUTSIDE USING METAL DUCTS. LOCATIONS NOTED BY THIS SYMBOL ON PLANS:
- CONTRACTOR/SUBCONTRACTOR IS RESPONSIBLE FOR DESIGN, INSTALLATION, AND PROPER FUNCTION OF ALL HVAC, PLUMBING AND ELECTRICAL SYSTEMS.
- ALL DUCT SYSTEMS AND AIR HANDLING EQUIPMENT AND APPLANCES SHALL BE LOCATED WITHIN THE BUILDING THERMAL ENVELOPE, WITH THE EXCEPTION OF VENTILATION INTAKE AND EXHAUST DUCTWORK.
- SOLAR READY: INSTALL A MIN. 4" X 4" SQUARE METAL JUNCTION BOX & COVER WITHIN 24" OF THE MAIN ELECTRICAL PANEL. A MIN. 3/4" NON-FLEXIBLE RACEWAY (OR NO. 10 COPPER 3 WIRE MC CABLE WITH 6" ADDITIONAL WIRE) SHALL BE INSTALLED FROM THE JUNCTION BOX TO A CAPPED ROOF PENETRATION OR TO AN ACCESSIBLE LOCATION IN THE ATTIC WITH A MIN. 36" VERTICAL CLEARANCE & MIN. 6" ABOVE INSULATION. MARK END OF RACEWAY AS: RESERVED FOR SOLAR.

ENERGY EFFICIENCY ADDITIONAL MEASURE - TABLE N1101.1 (2):

#5 - DUCTLESS HEAT PUMP:

- AIR SOURCE HEAT PUMP MIN. HSPF 10.0 / 14.0 SEER COOLING

ABBREVIATIONS KEY:

H.B.	HOSE BIBB
D.S.	DOWNSPOUT
TYP.	TYPICAL
S.C.	SOLID CORE
W.S.	WEATHER STRIPPED
U.N.O.	UNLESS NOTED OTHERWISE
A.F.F.	ABOVE FINISHED FLOOR
A.S.F.	ABOVE SUBFLOOR
T.O.	TOP OF
W/	WITH
+/-	DIMENSION IS APPROXIMATE. CONFIRM.
W.H.	WATER HEATER
O.R.S.C	OREGON RESIDENTIAL SPECIALTY CODE
I.R.C.	INTERNATIONAL RESIDENTIAL CODE

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phone: 503.475.6151
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'JITTERBUG' TOWNHOUSES FOR:

NIMBLE HOMES

4429 N. VANCOUVER AVE.
PORTLAND, OR

EACH UNIT FLOOR AREA:

MAIN LEVEL:	476 FT²
UPPER LEVEL:	428 FT²
TOTAL LIVING:	904 FT²

ISSUED FOR:

PERMIT REVIE	07.03.22
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A1

City Of Portland
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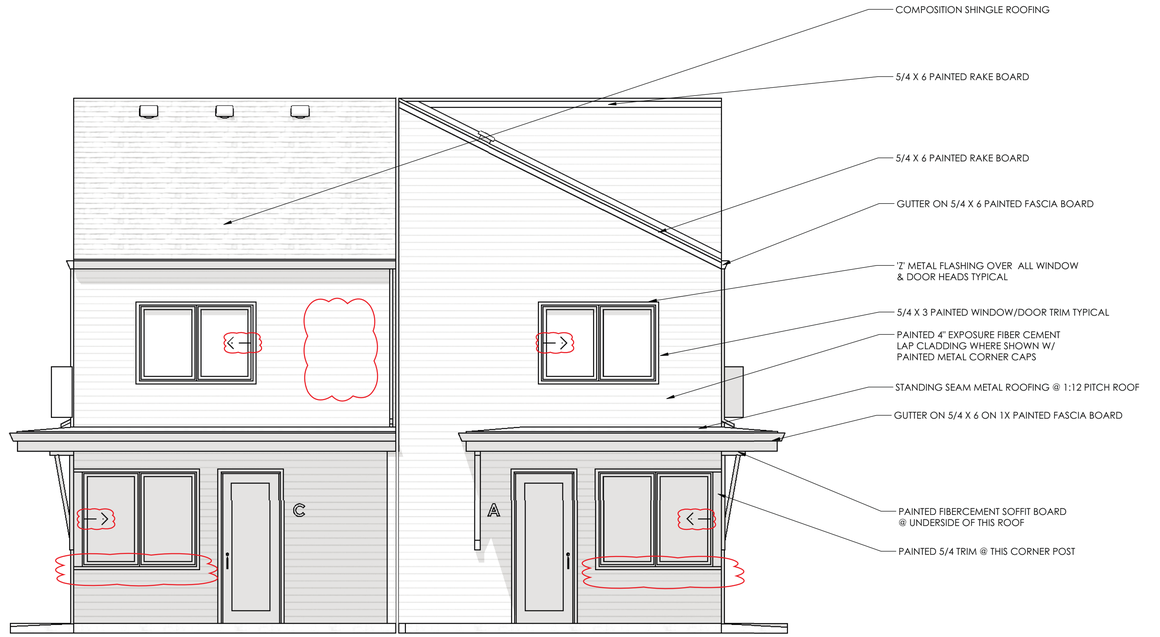

21.6% GLAZING RATIO @ THIS FACADE

EAST (FRONT) ELEVATION

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

18.6% GLAZING RATIO @ THIS FACADE

SOUTH ELEVATION

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

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A2

ELEVATIONS

27.1% GLAZING RATIO @ THIS FACADE

WEST ELEVATION

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

18.6% GLAZING RATIO @ THIS FACADE

NORTH ELEVATION

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

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A3

ELEVATIONS

City Of Portland
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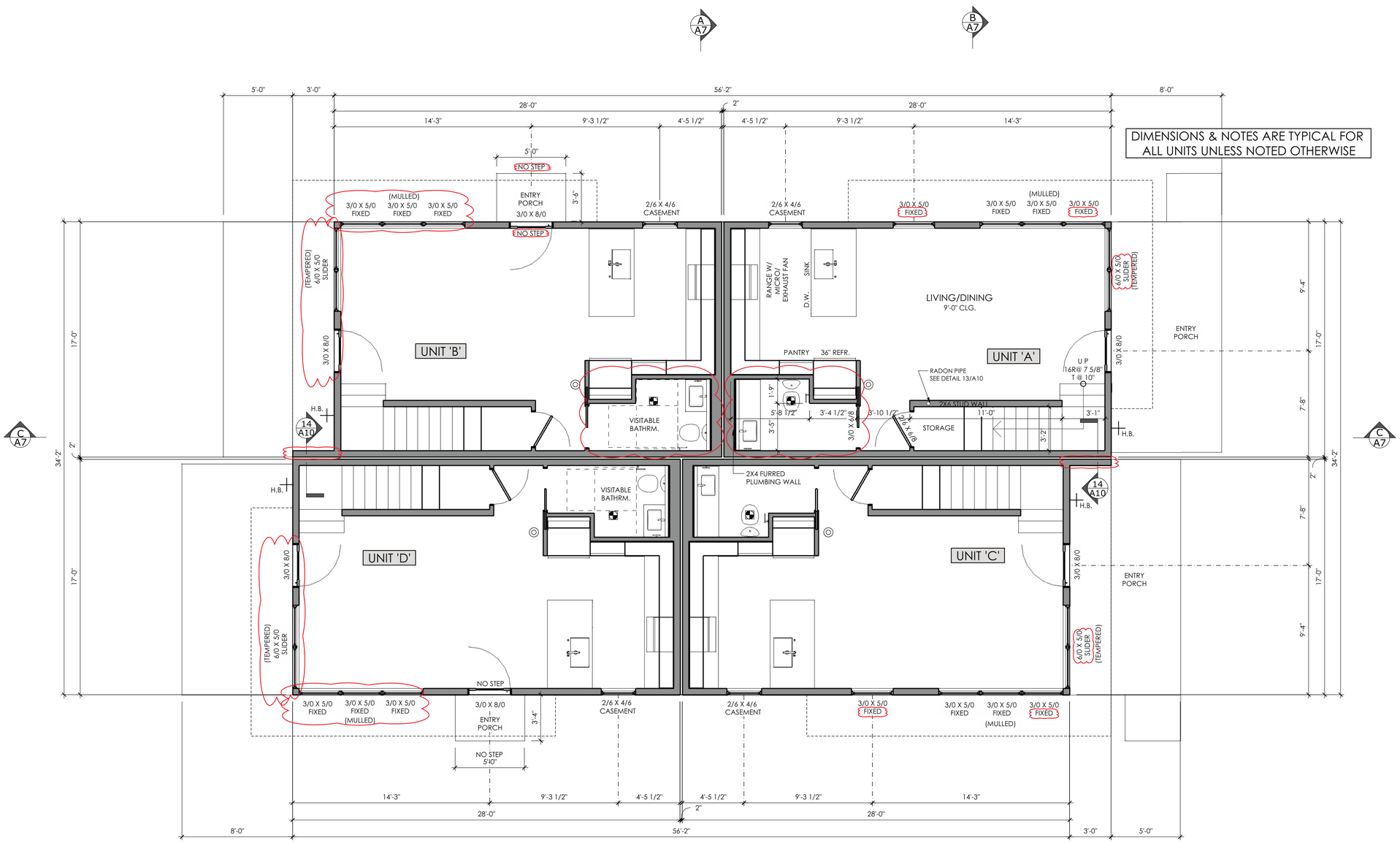

KEY:

◎ SMOKE/CO² ALARM

MAIN LEVEL PLAN

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

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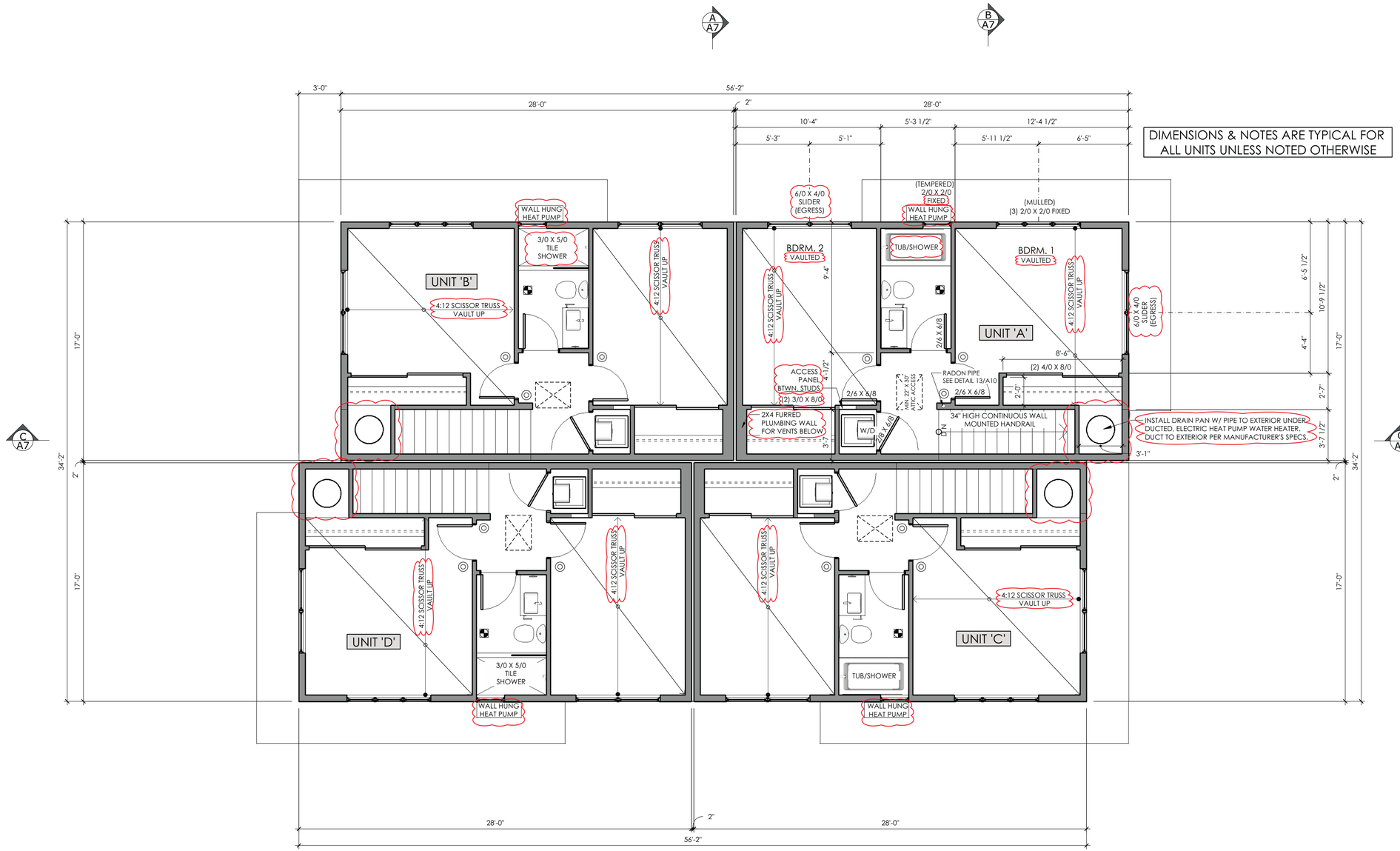
MAIN LEVEL PLAN



KEY:

◎ SMOKE/CO² ALARM

UPPER LEVEL PLAN

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

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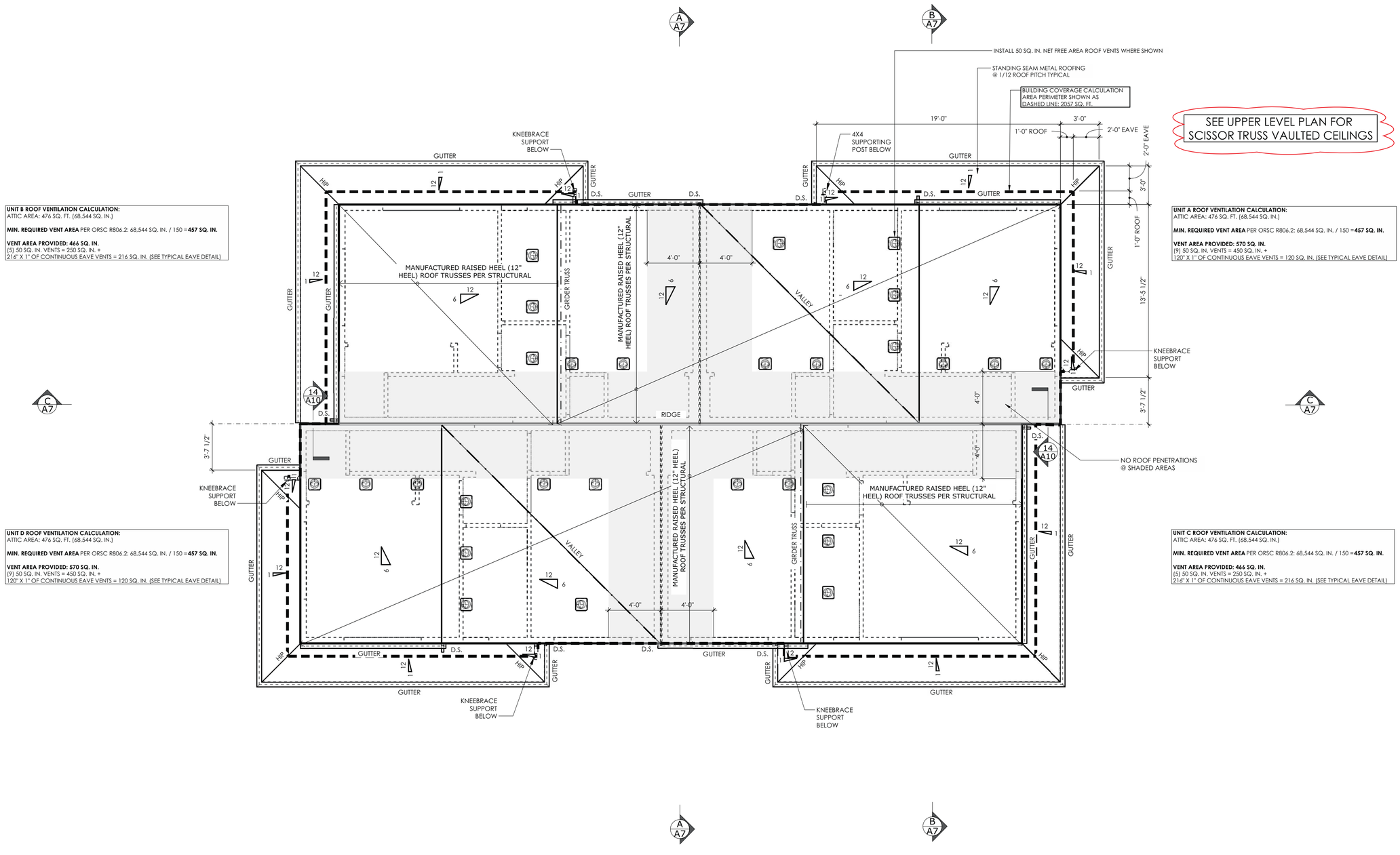
UPPER LEVEL PLAN



ROOF PLAN

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

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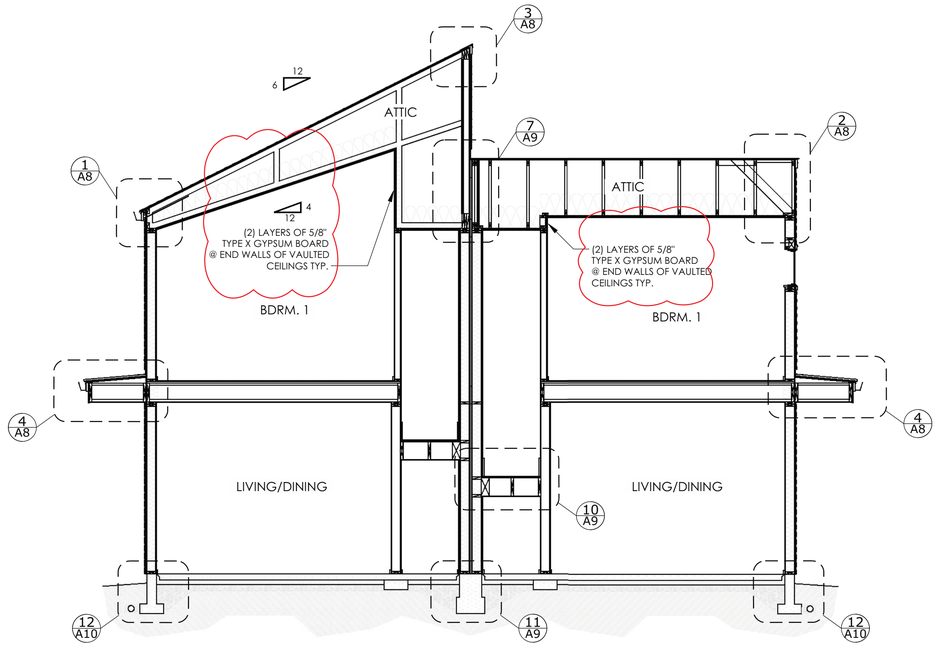
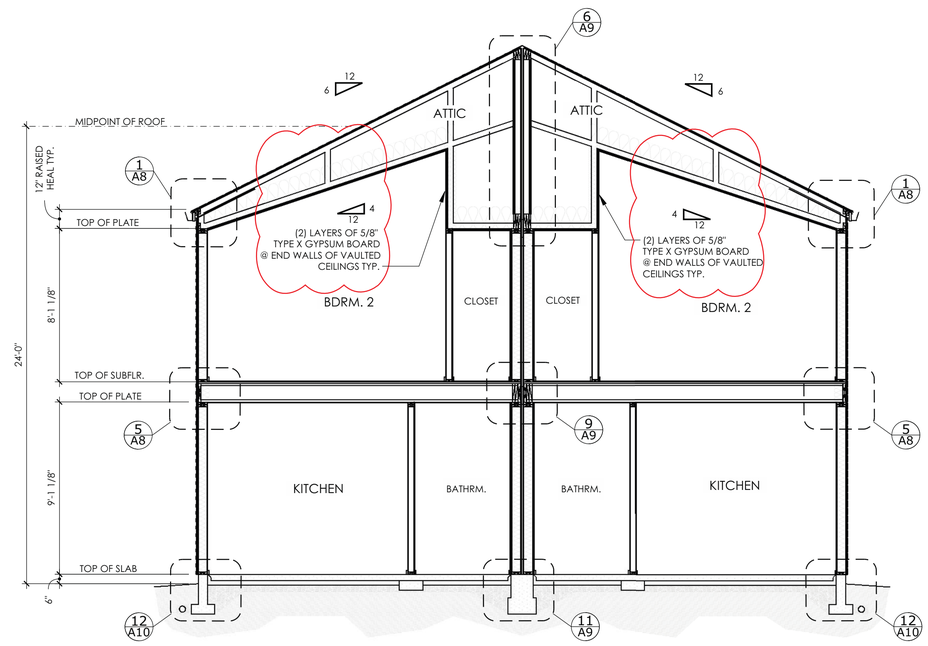
ROOF PLAN



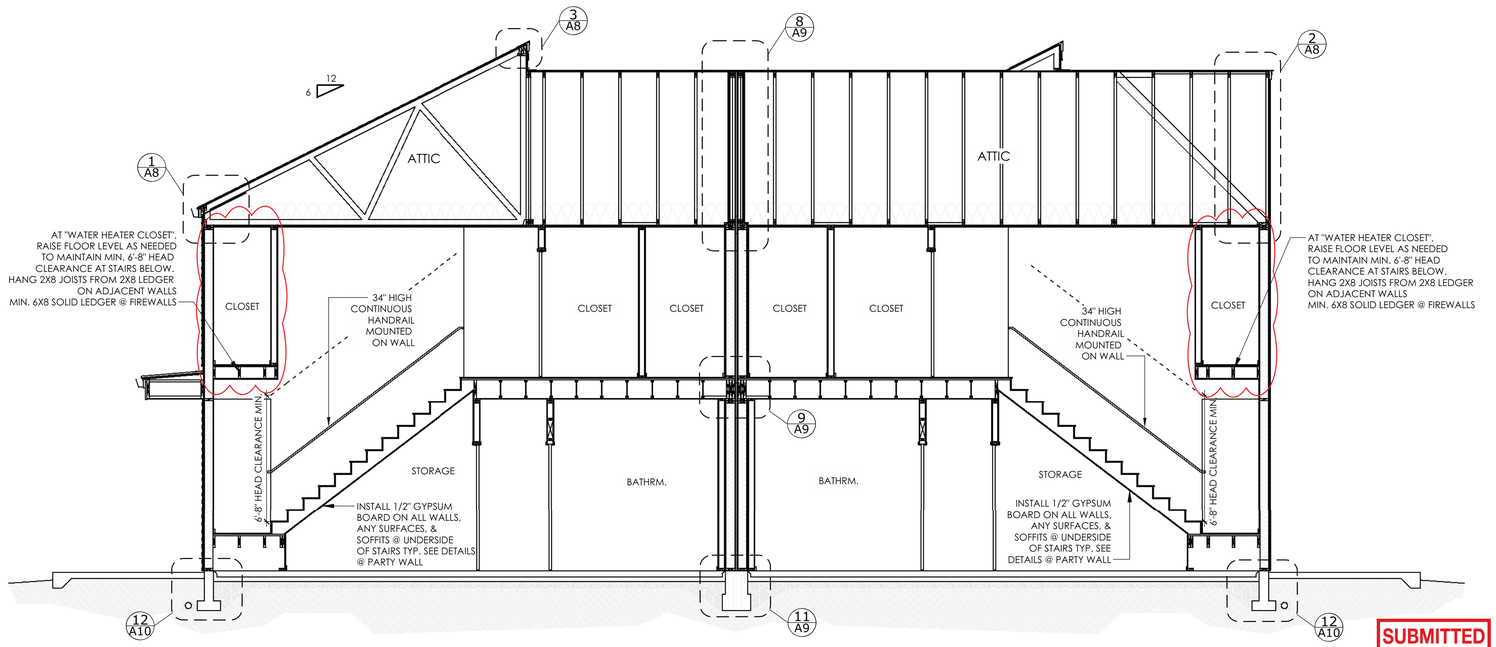
SECTION B/A7

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



SECTION A/A7

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



SECTION C/A7

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

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A7

SECTIONS

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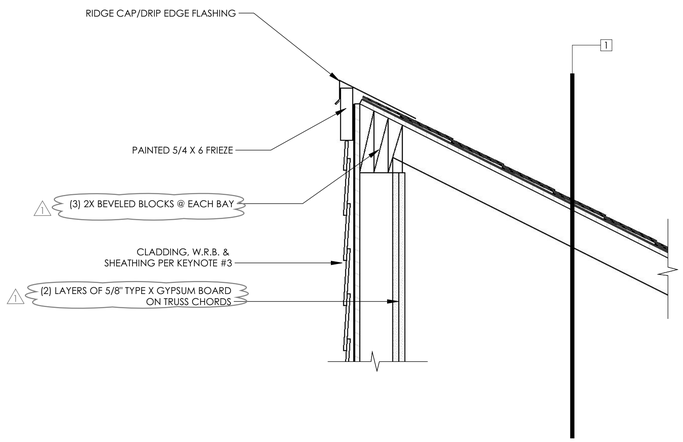
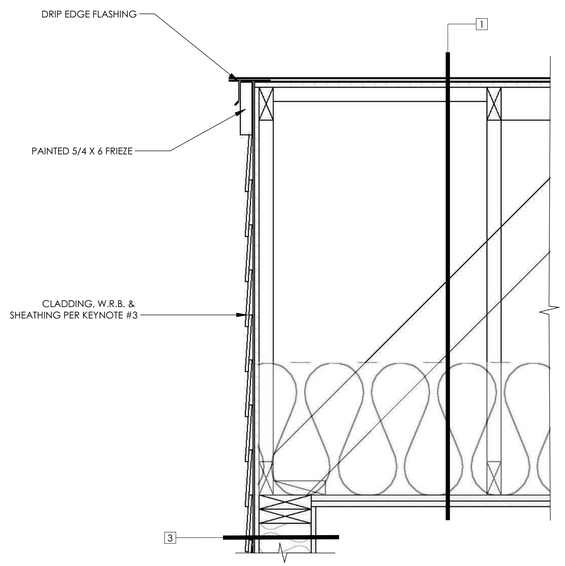


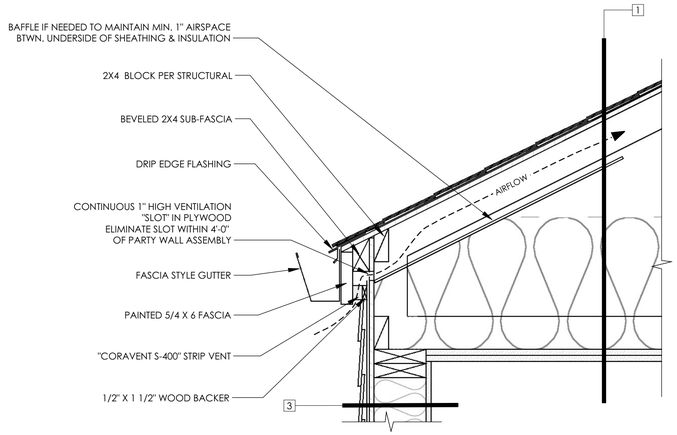
3: ROOF RIDGE

SCALE: 1 1/2" = 1 0"



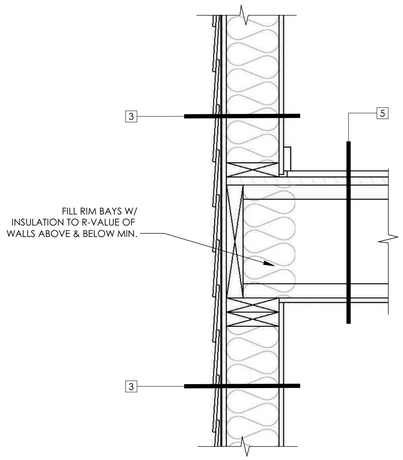
2: ROOF RAKE

SCALE: 1 1/2" = 1 0"



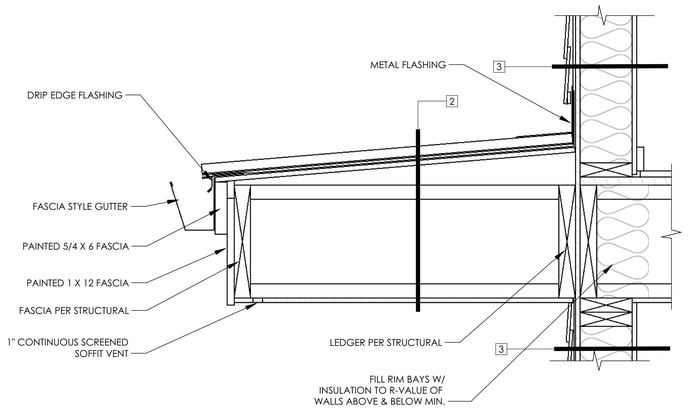
1: ROOF EAVE

SCALE: 1 1/2" = 1 0"



5: UPPER FLOOR @ EXTERIOR WALL

SCALE: 1 1/2" = 1 0"



4: "EYEBROW" ROOF

SCALE: 1 1/2" = 1 0"

KEYNOTES:

1 **TYPICAL ROOF ASSEMBLY U.N.O.:**
- COMPOSITION SHINGLE ROOFING ON
- W.R.B. (WEATHER RESISTANT BARRIER) UNDERLAYMENT ON
- PLYWOOD SHEATHING PER STRUCTURAL ON
- MANUFACTURED ROOF TRUSSES PER STRUCTURAL
- BLOWN IN BLANKET FIBERGLASS INSULATION **(R-49 MIN.)**
- (2) LAYERS OF 5/8" PAINTED TYPE X GYPSUM CEILING BOARD

2 **ROOF ASSEMBLY @ 1:12 PITCH:**
- STANDING SEAM METAL ROOFING ON
- W.R.B. (WEATHER RESISTANT BARRIER) UNDERLAYMENT ON
- PLYWOOD SHEATHING PER STRUCTURAL ON
- SLOPE CUT 2X FURRING TO INDUCE 1:12 PITCH ON
- RAFTERS PER STRUCTURAL
- PAINTED FIBERCEMENT BOARD SOFFIT

3 **TYPICAL EXTERIOR WALL ASSEMBLY:**
- EXTERIOR CLADDING PER PLAN ON
- W.R.B. (WEATHER RESISTANT BARRIER) "DRAINWRAP HOUSEWRAP" OR SIMILIAR ON
- PLYWOOD SHEATHING PER STRUCTURAL ON
- 2X6 WOOD STUDS PER STRUCTURAL
- FILL CAVITIES WITH FIBERGLASS INSULATION **(R-21 MIN.)**
- 1/2" PAINTED GYPSUM WALL BOARD

4 **TYPICAL INTERIOR WALL ASSEMBLY U.N.O.:**
- 1/2" PAINTED GYPSUM BOARD ON
- 2X4 WOOD STUDS PER STRUCTURAL
-1/2" PAINTED GYPSUM BOARD

5 **TYPICAL UPPER FLOOR ASSEMBLY OVER CONDITIONED SPACE:**
- FINISH FLOORING PER PLAN ON
- PLYWOOD SHEATHING PER STRUCTURAL ON
- MANUFACTURED I-JOISTS PER STRUCTURAL
- 1/2" PAINTED GYPSUM CEILING BOARD

6 **TYPICAL CONCRETE SLAB FLOOR ASSEMBLY @ MAIN FLOOR:**
- 4" POLISHED CONCRETE SLAB SEE STRUCTURAL FOR REINFORCING. ON
- MIN. 15 MIL POLYETHYLENE SHEETING VAPOR BARRIER & SOIL GAS RETARDER (LAP SEAMS MIN. 12") ON
- 3" X.P.S. RIGID BOARD INSULATION **(R-15)**
- MIN. 4" COMPACTED GRANULAR FILL ON
-UNDISTURBED GRADE

SEE STRUCTURAL DRAWINGS & DETAILS FOR ADDITIONAL INFORMATION NOT SHOWN ON THESE DRAWINGS

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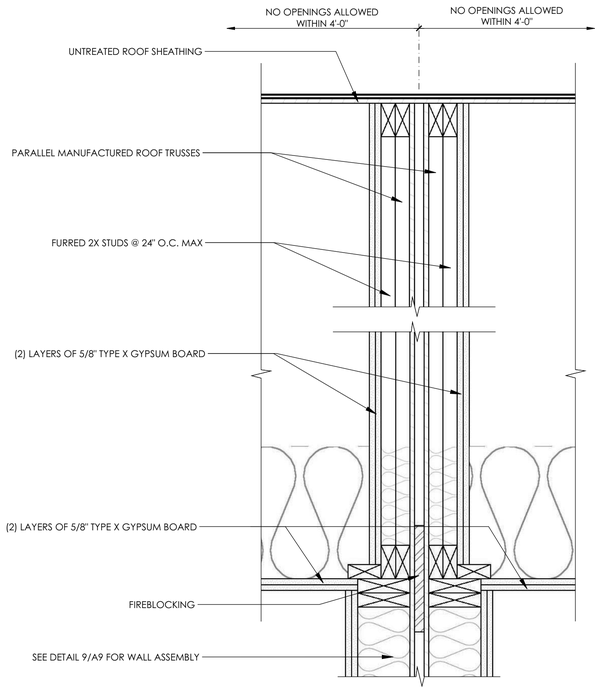
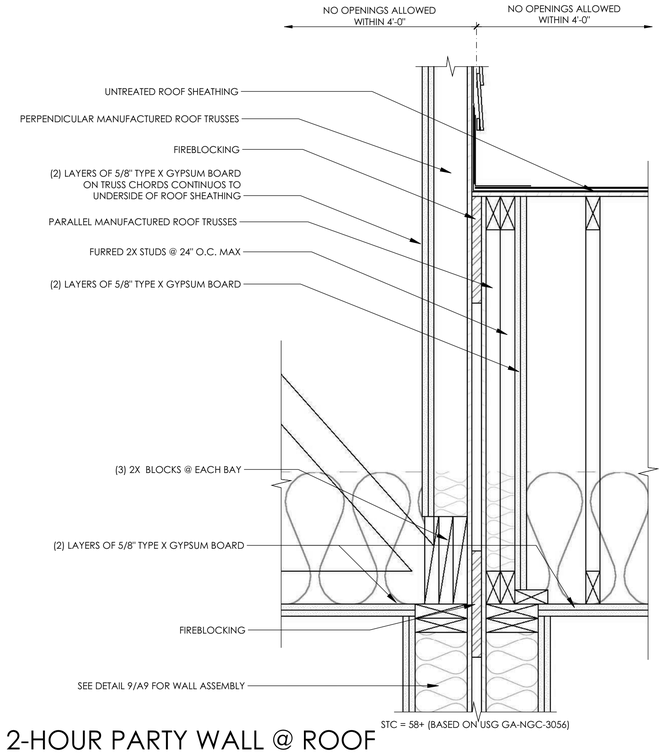


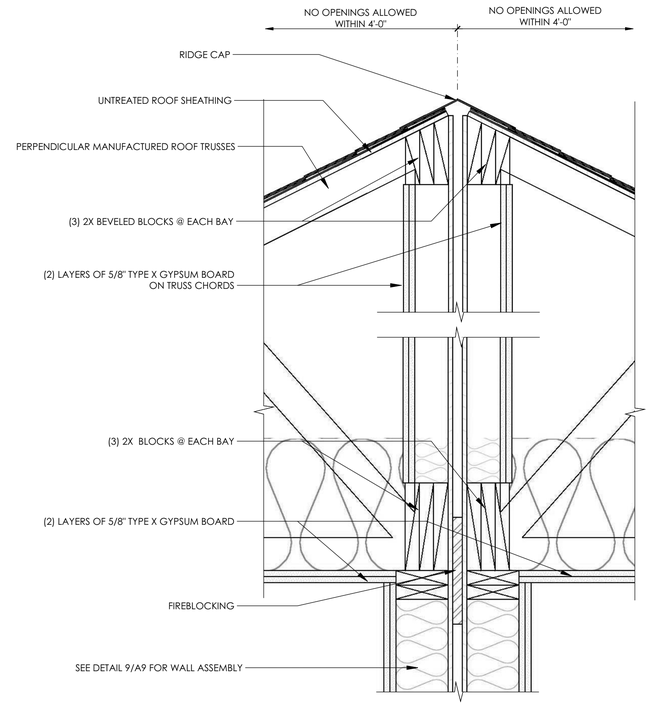
8: 2-HOUR PARTY WALL @ ROOF

SCALE: 1 1/2" = 1 0"



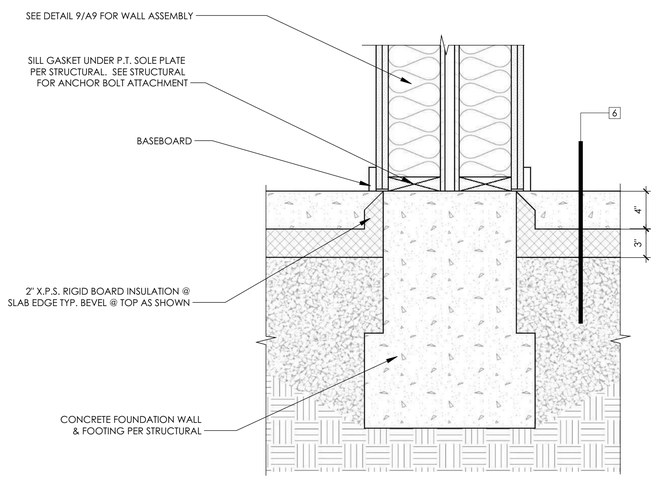
7: 2-HOUR PARTY WALL @ ROOF

SCALE: 1 1/2" = 1 0"



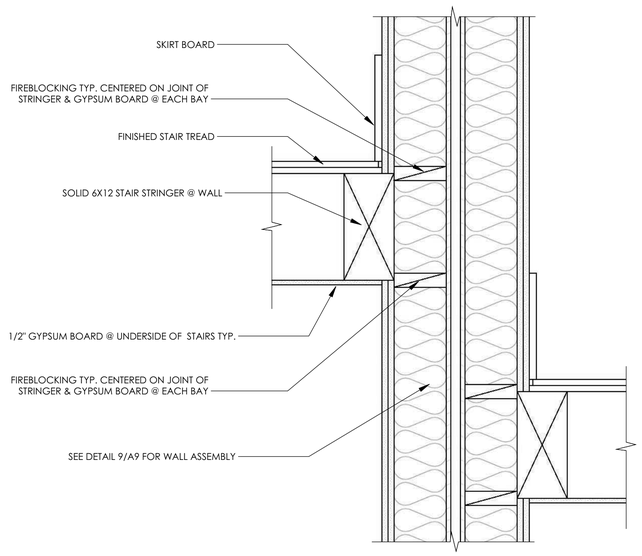
6: 2-HOUR PARTY WALL @ ROOF

SCALE: 1 1/2" = 1 0"



11: 2-HOUR PARTY WALL @ MAIN FLOOR

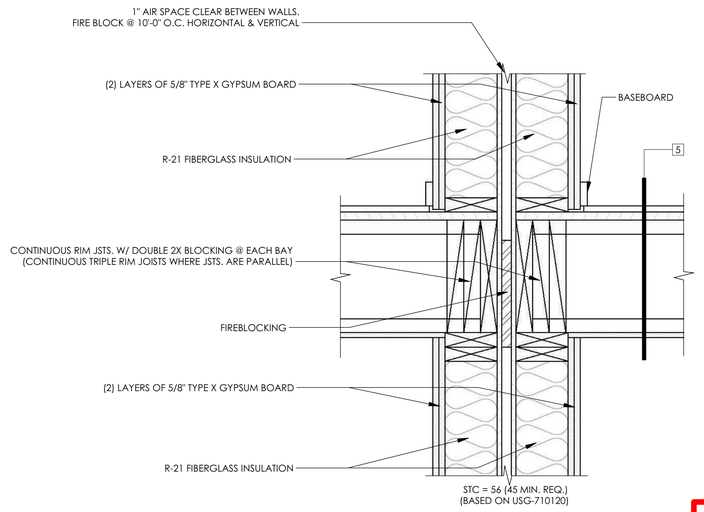
SCALE: 1 1/2" = 1 0"



10: 2-HOUR PARTY WALL @ STAIRS

SCALE: 1 1/2" = 1 0"

NOTE: PLUMBING & MECHANICAL EQUIPMENT DUCTS OR VENTS ARE NOT PERMITTED IN THE CAVITY OF THE 2-HOUR PARTY WALL, EXCEPT AS NOTED IN THE BUILDING CODE. ELECTRICAL INSTALLATIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE BUILDING CODE AND ELECTRICAL CODE. PENETRATIONS OF ELECTRICAL OUTLET BOXES SHALL BE IN ACCORDANCE WITH THE BUILDING CODE



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9: 2-HOUR PARTY WALL @ UPPER FLOOR

SCALE: 1 1/2" = 1 0"

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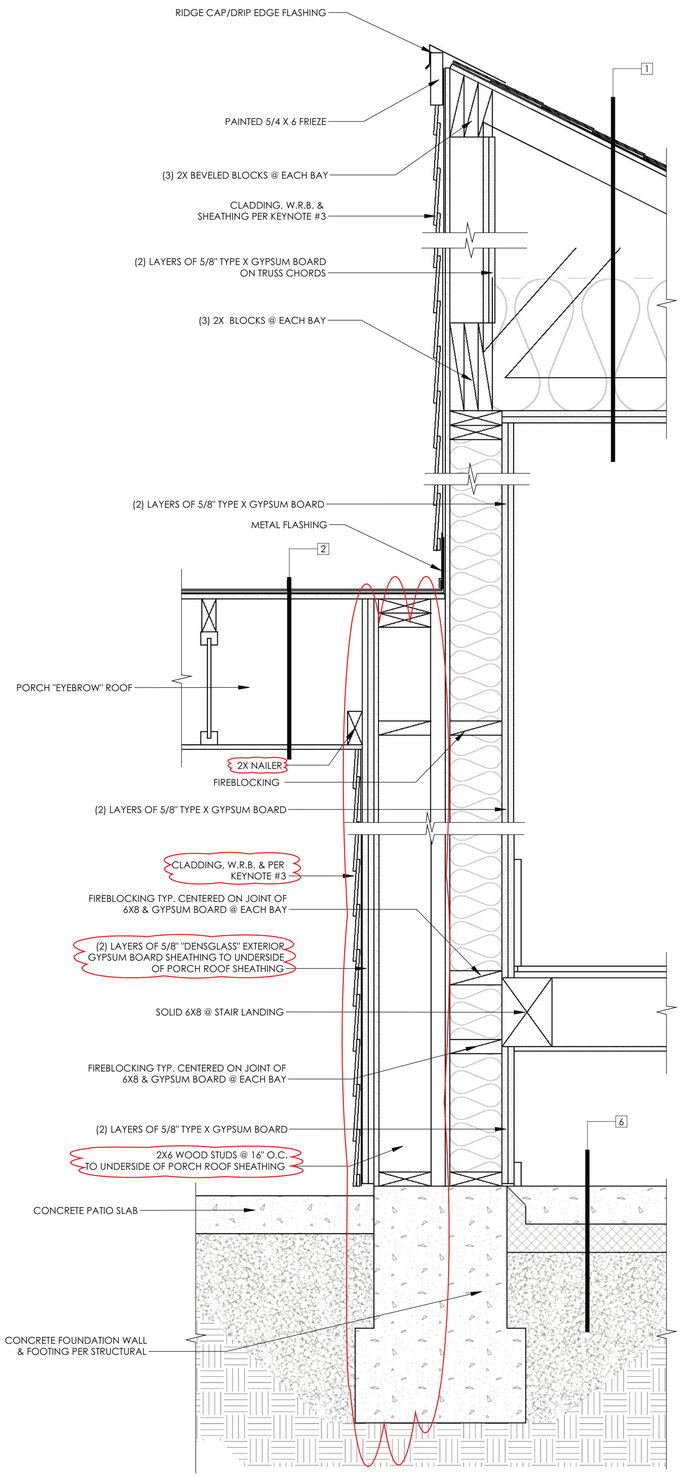
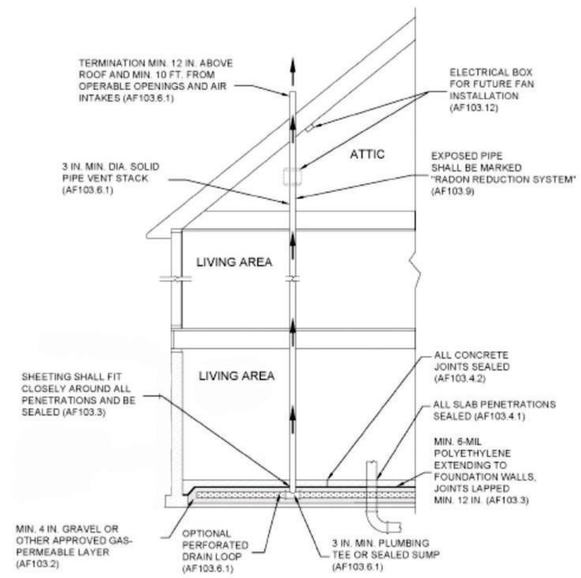


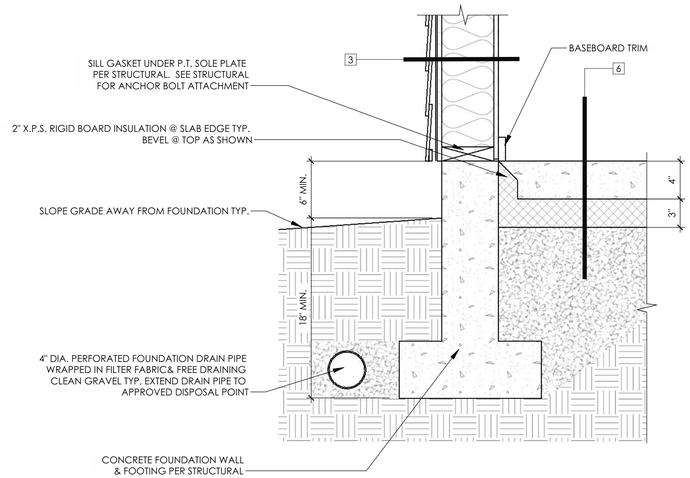
14: 2-HOUR WALL @ PORCH ROOF

SCALE: 1 1/2" = 1' 0"



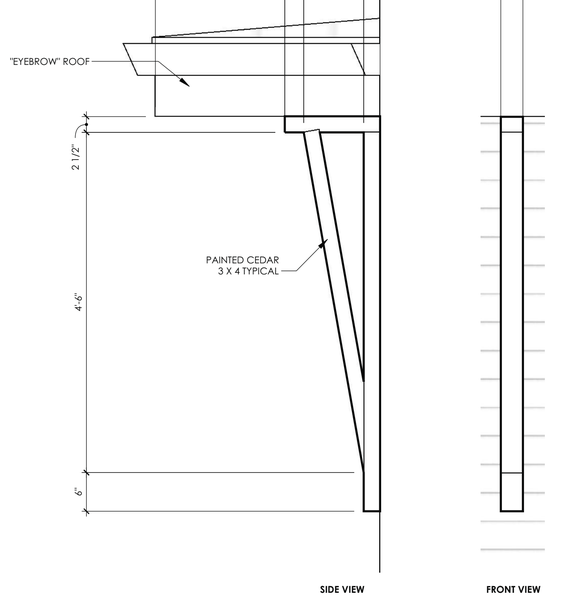
13: CONCRETE SLAB FLOOR RADON MITIGATION

N.T.S.



12: EXTERIOR WALL @ MAIN FLOOR

SCALE: 1 1/2" = 1' 0"



15: KNEE BRACE

SCALE: 1" = 1' 0"

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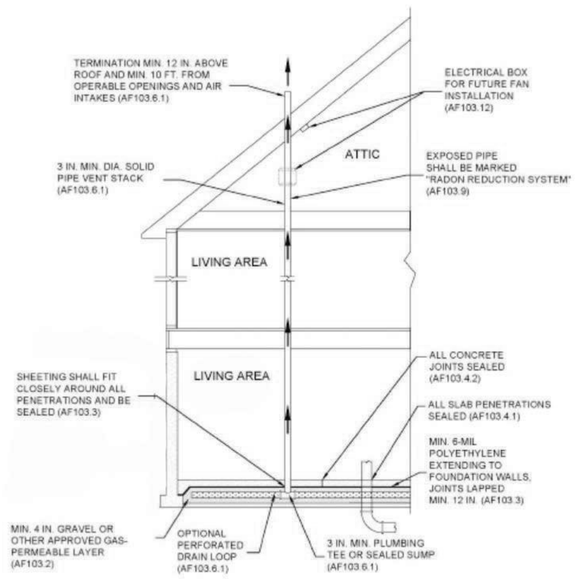

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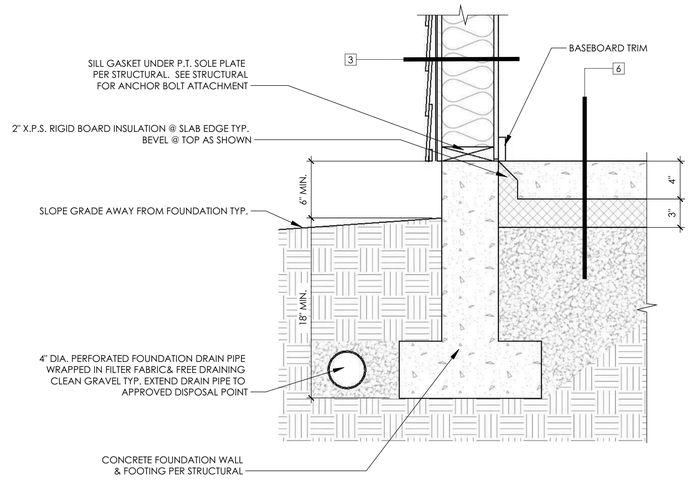
N.T.S.



12: EXTERIOR WALL @ MAIN FLOOR

SCALE: 1 1/2" = 1 0"

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GENERAL STRUCTURAL NOTES

DESIGN CRITERIA Oregon Homeworks 4429 N Vancouver Ave 4-plex (Portland) 690722

1. Building code: Oregon Code, ORS455
   - 1.1 Model building code: 2018 IRC
   - 1.2 Use and occupancy classification: R (Residential - townhouses)
   - 1.3 Risk Category: II (Not occupancy categories I, III, IV)
2. Dead loads
   - 2.1 Roof = 17 psf (7 psf top chord, 10 psf bottom chord)
   - 2.2 Floor = 12 psf
   - 2.3 Walls = 10 psf (interior walls), 12 psf (exterior walls)
3. Live loads
   - -- Roofs (ordinary construction) = 20 psf (or 300 lb point load)
   - -- Residential (1-2 unit dwelling) = 40 psf
   - -- Stairs and exits (residential 1-2 unit dwelling) = 40 psf (or 300 lb point load)
4. Rain load
   - 4.1 Median 15-minute duration rainfall intensity = in/hr
   - 4.2 Median 60-minute duration rainfall intensity = in/hr
5. Snow load
   - 5.1 Ground snow load, Pg = 30 psf (elevation 200 ft)
   - 5.2 Exposure factor, Ce = 1
   - 5.3 Thermal factor, Ct = 1
   - 5.4 Snow importance factor, Is = 1
   - 5.5 Flat roof snow load, Pf = 25 psf
   - 5.6 Roof slope factor, Cs = 1
6. Earthquake design data
   - 6.1 Mapped acceleration parameters
     - 6.1.1 Latitude, Longitude: 45.556, -122.668
     - 6.1.2 MCE short period Ss = 0.87 SDS = 0.7
     - 6.1.3 MCE 1.0 sec. period S1 = 0.39 SD1 = 0.5
   - 6.2 Seismic design category: D1
   - 6.3 Seismic importance factor, Ie = 1
   - 6.4 Basic structural system: Bearing wall systems
   - 6.5 Seismic force-resisting system: Light-frame wood walls (wood sheathing)
     - 6.5.1 Response modification factor R = 6.5
     - 6.5.2 System overstrength factor Omega = 3
     - 6.5.3 Deflection amplification factor Cd = 4
   - 6.6 Equivalent Lateral Force Procedure
     - 6.6.1 Seismic response coefficient Cs = 0.11
     - 6.6.2 Seismic base shear (LRFD) V = 12710 lb
7. Wind design data
   - 7.1 Exposure category: B
   - 7.2 Basic design wind speed, V = 98 mph
   - 7.3 Components and cladding pressure = 19 psf (end), 16 psf (interior)
   - 7.4 Internal pressure coeff., Gcpi = 0.18
8. Geotechnical design basis:
   - Presumptive values, 2018 IBC Table 1806.2
   - 8.2 Site class = D-Default
   - 8.3 Soil notes: None
   - 8.4 Lateral earth pressure
     - 8.4.1 Active = 40 psf/ft
     - 8.4.2 At-rest = 60 psf/ft
   - 8.5 Allowable foundation parameters
     - 8.5.1 Allowable soil bearing, Qa = 1500 psf
     - 8.5.2 Allowable lateral bearing = 150 psf/ft
     - 8.5.3 Coefficient of friction = 0.25
   - 8.6 Minimum frost cover = 18 in.

DEFERRED SUBMITTALS

1. The following items are to submitted subsequent to the time of application (deferred submittals):
   - -- Prefabricated metal plate wood trusses - floor (truss manufacturer)
2. Deferred submittals shall have the prior approval of the building official (2018 IBC 107.3.4.1).
3. Deferred submittal documents shall be submitted to the registered design professional in responsible charge who shall review and forward them to the building official with a notation indicating that the documents have been reviewed and found to be in general conformance to the design of the building (2018 IBC 107.3.4.1).
4. Deferred submittal items shall not be installed until the design and submittal documents have been approved by the building official (2018 IBC 107.3.4.1).

GENERAL

1. Construction documents are valid for a single use at the project location and shall not be reused, copied, or reproduced without written approval of the registered design professional in responsible charge.
2. General notes and typical details are provided as a supplement to the construction documents and apply where specific notes and details are not available. Specific notes and structural details shall take precedence over general notes and typical details. Structural requirements shown in the framing plans and in structural details shall take precedence over structural notes indicated in architectural sections.
3. Printed dimensions shall take precedence over scales shown on construction documents. The registered design professional in responsible charge does not warrant the accuracy of scaled dimensions.
4. Approval by the inspector does not imply approval by the registered design professional in responsible charge. Structural specifications that are unclear or ambiguous shall be referred to the registered design professional in responsible charge for interpretation or clarification.
5. The registered design professional in responsible charge assumes no liability for the accuracy, completeness, or code compliance of architectural, electrical, mechanical, drainage, or other non-structural specifications.
6. Omissions in and conflicts between the various elements of the construction documents shall be brought to the immediate attention of the registered design professional in responsible charge and shall be resolved by the same before proceeding with any work involved.
7. Requests for substitutions shall be submitted in writing to the registered design professional in responsible charge and shall include the reasons for the request and any cost differentials. Substitutions are not allowed unless approved in writing by the registered design professional in responsible charge.
8. The contractor shall become familiar with all portions of the construction documents and shall ensure that all subcontractors are familiar with those portions pertaining to their area of work. The contractor shall verify all site conditions, dimensions, elevations, coordinate all doors, windows, non-bearing interior and exterior walls, elevations, slopes, stairs, curbs, drains, recesses, depressions, railings, waterproofing, finishes, chamfer, kerfs, and so forth, and immediately notify the registered design professional in responsible charge regarding actual conditions which are not in agreement with the construction documents.
9. The contractor is responsible for the method, means, and sequence of all structural erection except when specifically noted otherwise in the construction documents. The contractor shall provide temporary shoring and bracing, providing adequate vertical and lateral support during erection. Shoring and bracing shall remain in place until all permanent members are placed and all final connections are completed.
10. The contractor is responsible for standard connections, unless noted otherwise. The contractor shall obtain additional assistance from the registered design professional in responsible charge for non-standard connections.

SOIL AND FOUNDATIONS

1. Geotechnical investigations shall conform to 2018 IBC 1803. Excavation, grading and fill shall conform to 2018 IBC 1804. Footings and foundations shall be constructed in accordance with 2018 IBC 1807 through 1810.
2. Where required, the owner shall submit a geotechnical investigation report to the building official in accordance with 2018 IBC 1803. The contractor shall inform the registered design professional in responsible charge if the soil conditions are not consistent with the investigation report and the foundation design data.
3. Excavations for any purpose shall not remove lateral support from any footing or foundation without first underpinning or protecting the footing or foundation against settlement or lateral translation (2018 IBC 1804.1).
4. Excavation outside the foundation shall be backfilled with soil that is free of organic material, construction debris, cobbles and boulders or with a controlled low-strength material (CLSM). The backfill shall be placed in lifts and compacted, in a manner that does not damage the foundation or the waterproofing or dampproofing material (2018 IBC 1804.3).
5. The ground immediately adjacent to the foundation shall have a 5-percent slope away from the building for a minimum distance of 10 feet measured perpendicular to the face of the foundation wall. If physical obstructions or lot lines prohibit 10 feet of horizontal distance, a 5-percent slope shall be provided to an approved alternative method of diverting water away from the foundation. Impervious surfaces within 10 feet of the building foundation shall have a minimum 2-percent slope (2018 IBC 1804.4).
6. Footings and foundations shall be built on undisturbed soil, compacted fill material or CLSM. Compacted fill material and CLSM shall conform to 2018 IBC 1804.6 and 2018 IBC 1804.7, respectively (2018 IBC 1809.2).
7. The top surface of the footings shall be level. The bottom surface of footings is permitted to have a maximum 10-percent slope. Footings shall be stepped where it is necessary to change the elevation of the top surface of the footing or where the surface of the ground has more than a 10-percent slope (2018 IBC 1809.3).
8. The minimum depth of footings below the undisturbed ground surface shall be 12 inches (2018 IBC 1809.4). Foundation walls, piers and other permanent supports shall be extended below the frost line, except where otherwise protected from frost (2018 IBC 1809.5).
9. The placement of footings on or adjacent to 33-percent slopes and steeper shall conform to 2018 IBC 1808.7.
10. Floors of basements shall be placed over base course not less than 4 inches in thickness and a drain shall be installed around the foundation perimeter that consists of gravel or crushed stone containing not more than 10-percent material that passes through a No. 4 sieve (2018 IBC 1805.4.1, 1805.4.2).
11. Backfill shall not be placed against a foundation wall until the wall has sufficient strength and is anchored to the floor above, or is sufficiently braced to prevent damage by the backfill, except bracing is not required for walls supporting less than 4 feet of unbalanced backfill (R404.1.7).

CONCRETE

1. Concrete materials, quality control, and construction shall comply with 2018 IBC Chapter 19 and ACI 318-14.
2. Compressive strength (minimum specified at 28 days)
   - 2.1. Footings: 3,000 psi (2018 IBC 1808.8.1) (2,500 psi used in design)
   - 2.2. Interior floor slabs on grade: 4,000 psi
   - 2.3. Exterior floor slabs on grade: 4,000 psi
   - 2.4. Suspended slabs: 4,000 psi
   - 2.5. Walls: 3,000 psi (2018 IBC 1904.1) for R-2, R-3 occupancies and appurtenances
     4,000 psi for other occupancies
3. Materials
   - 3.1. Cements (ASTM C 150). Concrete exposed to freezing and thawing or deicing chemicals shall conform to the maximum water-cementitious material ratios and minimum compressive strength requirements of ACI 318-14 table 19.3.1.1 & 19.3.2.1
   - 3.2. Aggregates (ASTM C 33): nominal maximum size of coarse aggregate shall not be larger than 1/5 the narrowest dimension between forms, nor 1/3 the depth of slabs, nor 3/4 the minimum clear spacing between reinforcing bars or wires, tendons, or ducts (ACI 318-14 26.4.2.1).
   - 3.3. Water used in mixing concrete shall be potable, clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials, or other substances deleterious to concrete or reinforcement (ACI 318-14 26.4.1.3.1.b).
   - 3.4. Admixtures shall be subject to prior approval by the registered design professional in responsible charge (ACI 318-14 26.4.1.4.1.b).
   - 3.5. Concrete exposed to freezing and thawing or deicing chemicals shall be air-entrained with air content indicated in ACI 318-14 Table 19.3.3.1. Tolerance on air content as delivered shall be plus/minus 1.5 percent (ACI 318-14 R26.4.2.1(a)(5)).
4. Steel Reinforcement
   - 4.1. Deformed bars: fy = 60 ksi (ASTM A615)
   - 4.2. Welded plain wire: fy = 60 ksi (ASTM A1064)
   - 4.3. Deformed Bar Anchors (DBA) (ASTM A1064)
   - 4.4. Headed Stud Anchors (HSA) (ASTM A108)
   - 4.5. At the time concrete is placed, reinforcement shall be free from ice, mud, oil, or other nonmetallic coatings that decrease bond (ACI 318-14 26.6.1.2).
   - 4.6. Reinforcement shall be accurately placed and adequately supported before concrete is placed, and shall be secured against displacement (ACI 318-14 26.6.2.2).
   - 4.7. Details of reinforcement shall conform to ACI 318-14 Chapter 25.
5. Minimum concrete cover (ACI 318-14 Table 20.6.1.3.1)
   - 5.1. Concrete cast against and exposed to earth: 3 inches
   - 5.2. Concrete exposed to earth or weather:
     - 5.2.1. No. 6 through No. 18 bars: 2 inches
     - 5.2.2. No. 5 bar, W31 wire, and smaller: 1.5 inches
   - 5.3. Concrete not exposed to earth or weather:
     - 5.3.1. Slabs, walls, joists No. 11 bar and smaller: 0.75 inches
     - 5.3.2. Beams, columns primary reinf., ties, stirrups: 1.5 inches
6. Formwork shall conform to ACI 318-14 Sections 26.11 and 26.12 and ACI 347. Forms shall be removed in a manner as not to impair safety and serviceability of the structure. Concrete exposed by form removal shall have sufficient strength not to be damaged by removal operation (ACI 318-14 26.11.2).
7. Conduits, pipes, and sleeves of any material not harmful to concrete and within the limitations of ACI 318-14 20.7 shall be approved by the registered design professional in responsible charge (ACI 318-14 20.7).
8. Construction joints shall be so made and located as not to impair the strength of the structure (ACI 318-14 18.10.9).
9. The thickness of concrete floor slabs on grade shall not be less than 3.5 inches. A 6-mil polyethylene vapor retarder with joints lapped not less than 6 inches (or an equivalent material) shall be placed between the base course or subgrade and the concrete floor slab, except a vapor retarder is not required in detached utility buildings or other unheated facilities (2018 IBC 1907).

MASONRY

1. Masonry materials, construction, and quality shall conform to 2018 IBC 2103-2105, TMS 402/602-16
   - 1.1. Compressive strength: f'c = 2,000 psi (TMS 602-16 1.4B.2 TABLE 2)
2. Concrete masonry units (CMU) (ASTM C 90)
   - 2.1. Grade N
   - 2.2. Compressive strength: f'm = 2,000 psi (TMS 602-16 1.4B.2 TABLE 2)
3. Mortar (ASTM C 270)
   - 3.1. Type S Portland cement (TMS 402-16 7.4.4.2.2)
   - 3.2. Compressive strength: f'c = 2,000 psi (TMS 602-16 1.4B.2 TABLE 2)
4. Grout (ASTM C 476)
   - 4.1. Type: fine or coarse (2018 IBC 2103.3)
   - 4.2. Compressive strength (minimum specified at 28 days): f'c = 2,000 psi (ASTM C 1019)
5. Steel reinforcement
   - 5.1. Deformed bars: fy = 60 ksi (ASTM A 615 Gr. 60)
   - 5.2. Deformed Bar Anchors (DBA) (ASTM A1064)
   - 5.3. Headed Stud Anchors (HSA) (ASTM A108)
6. Bed joint thickness shall be 5/8 inch maximum (TMS 602-16 1.4B.2)
7. Grout shall have an 8"-11" slump using a 3/8" maximum aggregate. Grout lifts shall not exceed 5 feet in height unless noted otherwise. Consolidate by mechanical vibration pours that exceed 12 inches in height.
8. The clear distance between parallel bars shall not be less than the nominal diameter of the bars, nor less than 1 inch (TMS 402-16 6.1.3). Joint reinforcement shall have cover not less than 5/8". (TMS 402-16 6.1.4.2)
9. The diameter of bend measured on the inside of reinforcing bars, other than for stirrups and ties, shall not be less than specified in table 6.1.8 (TMS 402-16 6.1.8.2)
10. All masonry below grade shall be solid grouted.
11. Control joint spacing not to exceed 30'-0". See Architectural for locations.

MASONRY AND STONE VENEER

1. Masonry veneer materials, construction, and quality shall conform to 2018 IBC 2103-2105 and TMS 402-16 Chap. 6.
2. Lintels
   - 2.1. Veneer shall not support any vertical load other than the dead load of the veneer above. Veneer above openings shall be supported on lintels of noncombustible materials. Lintels shall have 1 inch of bearing for each 1 foot of span, but not less than 4 inches of bearing.
3. Anchorage
   - 3.1. Veneer shall be anchored to the supporting wall framing with hot-dipped galvanized metal ties. (Strand wire or corrugated sheet metal)
   - 3.2. Engage all anchor ties with a No. 9 gage wire in the center of the veneer and embedded in the mortar joint. (R703.8.4.1)
   - 3.3. Each tie shall be spaced not more than 16 inches on center horizontally and vertically and shall support not more than 2 square feet of wall area. Additional metal ties shall be provided around all wall openings greater than 16 inches in either dimension. (R703.8.4.1)

WOOD

1. Wood materials, quality, and construction shall conform to 2018 IBC Chapter 23 and Table 2304.10.
2. Structural lumber (2018 IBC 2303.1.1-9, 2018 NDS)
   - 2.1. Bearing walls: Douglas-Fir Larch (DF) Stud (ASTM D 1990, DOC PS 20)
   - 2.2. Posts: Douglas-Fir Larch (DF) Stud (ASTM D 1990, DOC PS 20)
   - 2.3. Beams and headers: Douglas-Fir Larch (DF) No. 2 (ASTM D 1990, DOC PS 20)
   - 2.4. Heavy timber: Douglas-Fir Larch (DF) No. 1 (ASTM D 1990, DOC PS 20)
   - 2.5. Sill plates: Preservative-treated wood, redwood (AWPA U1 M4)
   - 2.6. Naturally durable or preservative-treated wood shall be used where structural lumber is 18 inches or closer to exposed ground; where structural lumber is in contact with exterior masonry or concrete walls below grade; where sleepers, sills, posts, and columns are on a concrete or masonry slab or footing that is in direct contact with earth; and where structural lumber is attached directly to exterior masonry or concrete walls, unless a 0.5 inch air space on top, sides, and end is provided (2018 IBC 2304.12).
3. Structural logs (ASTM D 3957) - ICC - 400 standard for the design and construction of log structures
4. Structural glued-laminated timber (2018 IBC 2303.1.3, 2018 NDS 5.1.1)
   - 4.1. Single span: 24F-1.8E (24F-V4) (ASTM D 3737, ANSI/AITC A190.1)
   - 4.2. Multiple span: 24F-1.8E Balanced layup (24F-V8) (ASTM D 3737, ANSI/AITC A190.1)
   - 4.3. Cantilever span: 24F-1.8E Balanced layup (24F-V8) (ASTM D 3737, ANSI/AITC A190.1)
5. Structural composite lumber and engineered wood (2018 IBC 2303.1.10, 2018 NDS 8.1.1)
   - 5.1. Laminated strand lumber (LSL)
     - 5.1.1. Ex = 1.3E (ASTM D 5456)
     - 5.1.2. Ex = 1.5E (ASTM D 5456)
     - 5.1.3. Ex = 1.55E (ASTM D 5456)
     - 5.1.4. 1.125 inch APA Performance-Rated (or equivalent) rim board - (2018 IBC 2303.1.13, ASTM 7672, ANSI/APA PRR410)
   - 5.2. Laminated veneer lumber (LVL)
     - 5.2.1. Ex = 2.0E (ASTM D 5456)
   - 5.3. Parallel strand lumber (PSL)
     - 5.3.1. Ex = 2.0E (beams) (ASTM D 5456)
     - 5.3.2. Ex = 1.8E (columns) (ASTM D 5456)
   - 5.4. Prefabricated wood I-joist (2018 IBC 2303.1.2, 2018 NDS 7.1.1) (ASTM D 5055)
6. Wood structural panels (2018 IBC 2304.8, 2018 NDS 9.1.3)
   - 6.1. Roof, floor, and wall sheathing: oriented strand board (OSB) (DOC PS 1,2).
   - 6.2. Sheathing shall be manufactured with exterior glue and not less than 4X8 feet, except at boundaries and at changes in framing (2018 IBC 2305.1, AWC SDPWS-2015).
   - 6.3. Wall sheathing
     - 6.3.1. Oriented strand board (OSB) (DOC PS 1,2)
     - 6.3.2. All panel joints in walls shall occur over studs or blocking using a minimum of 8d common nails spaced a maximum of 6 inches at panel edges and 12 inches at intermediate framing (2018 IBC 2306.3).
   - 6.4. Roof and floor sheathing shall be placed perpendicular to supporting framing. Stagger sheathing joints.
7. Fasteners
   - 7.1. Nails (2018 IBC 2303.6, 2018 NDS Table L4) (ASTM F 1667)

Pennyweight	Common	Box	Sinker
7.1.1. 8d =	0.131" X 2.5"	0.113" X 2.5"	0.113" X 2.375"
7.1.2. 10d =	0.148" X 3.0"	0.128" X 3.0"	0.120" X 2.875"
7.1.3. 16d =	0.162" X 3.5"	0.135" X 3.5"	0.148" X 3.250"
7.1.4. 20d =	0.192" X 4.0"	0.148" X 4.0"	0.177" X 3.750"
7.1.5. 30d =	0.207" X 4.5"	0.148" X 4.5"	0.192" X 4.250"

   - 7.2. Staples (2018 IBC 2303.6)
     - 7.2.1. 16 gage = 1.5X0.4375 inch crown (ASTM F 1667)
   - 7.3. Bolts (2018 NDS 12.1.3, Table L1)
     - 7.3.1. Connector bolts (A307)
     - 7.3.2. Anchor bolts (A307) with a 3X3X0.229 inch washer (2018 IBC 2308.3.1) and 7" min embedment.
     - 7.3.3. Bolt holes shall be drilled with a bit 1/32 inch to 1/16 inch larger than the nominal bolt diameter.
   - 7.4. Lag Screws (2018 NDS 12.1.4, Table L2) (A307)
     - 7.4.1. Lag screws shall be inserted in a drilled pilot hole that is 60%-75% of the shank diameter by turning with a wrench. Do not drive screws with a hammer. Lag screws shall be provided with an oversized washer .
   - 7.5. Fasteners in preservative-treated and fire-retardant-treated wood shall be of hot dipped zinc-coated galvanized steel, silicon bronze or copper (2018 IBC 2304.10.5).
   - 7.6. Sheathing fasteners shall be driven so the head or crown is flush with the sheathing surface (2018 IBC 2304.10.2).
8. Joist hangers and connectors (2018 IBC 2303.5)
   - 8.1. Hanger hardware and other wood connections shall be designed to carry the capacity of the supporting members.
9. Floor framing (2018 IBC 2308.4.2)
   - 9.1. Joists shall not have less than 1.5 inches of bearing on wood or metal, or less than 3 inches on masonry (2018 IBC 2308.4.2.2). Pre-fabricated wood I-joists shall have minimum bearing according to the manufacturer's recommendations and specifications.
   - 9.2. Joists shall be supported laterally at the ends and at each support by full-depth solid blocking, except where nailed to a header or band or rim joist. Solid blocking shall not be less than 2 inches thick (2018 IBC 2308.4.2.3).
   - 9.3. Where the nominal depth-to-thickness ratio of the framing member exceeds 6:1, there shall be one line of bridging for each 8 feet of span. Bridging shall consist of not less than 1X3 inch lumber, metal bracing, or full-depth solid blocking (2018 IBC 2308.4.6).
   - 9.4. Notches on the ends of joists shall not exceed one-fourth the joist depth. Holes bored in joists shall not be within 2 inches of the top or bottom of the joist. Notches in the top or bottom of joists shall not exceed one-sixth the depth and shall not be located in the middle third of the span (2018 IBC 2308.4.2.4).
   - 9.5. The diameter of holes bored or cut into structural floor members shall not exceed one-third the depth of the member. Holes shall not be closer than 2 inches to the top or bottom of the member, or to any other hole located in the member. Where the member is also notched, the hole shall not be closer than 2 inches to the notch (R502.8.1).
10. Wall construction (2018 IBC 2308.5)
    - 10.1. Studs shall be placed with their wide dimension perpendicular to the wall. Not less than three studs shall be installed at each corner of an exterior wall (2018 IBC 2308.5.2).
    - 10.2. Bearing and exterior wall studs shall be capped with 2-inch thick nominal double top plates, have a width at least equal to the width of the studs, and shall be installed to provide overlapping at corners and intersections with other partitions. End joints in partitions shall be offset at least 48 inches, and shall be nailed with not less than eight 16d common face nails on each side of the joint. (2018 IBC 2308.5.3.2).
    - 10.3. In nonbearing walls and partitions studs shall be capped with no less than a single top plate installed to provide overlapping at corners and at intersections with other walls and partitions. The plate shall be continuously tied at joints by solid blocking at least 16 inches in length and equal in size to the plate or metal ties with spliced sections fastened on each side of the joint (2018 IBC 2308.5.4).
    - 10.4. Studs shall have full bearing on a 2-inch thick nominal (or larger) bottom plate or sill having a width at least equal to the width of the stud (2018 IBC 2308.5.3.1).
    - 10.5. Bearing partitions parallel to joists shall be supported on beams, girders, doubled joists, walls or other bearing partitions. Bearing partitions perpendicular to joists shall not be offset from supporting girders, walls or partitions more than the joist depth unless noted otherwise (2018 IBC 2308.4.5).
    - 10.6. In exterior walls and bearing partitions, any wood stud is permitted to be cut or notched to a depth not exceeding 25 percent of its width. In nonbearing partitions, cutting or notching of studs to a depth of not greater than 40 percent of the width is permitted (2018 IBC 2308.5.9).
    - 10.7. A hole with a diameter not greater than 40 percent of the stud width is permitted to be bored in any wood stud. In no case shall the edge of the bored hole be nearer than 0.625 inches to the edge of the stud. Bored holes shall not be located at the same section of stud as a cut or notch (2018 IBC 2308.5.10).
    - 10.8. Bearing walls without wood sheathing or gypsum wall board on either side shall have blocking between wall studs at mid-height.
    - 10.9. Studs shall be spaced at 16 inches on center for exterior walls, interior bearing walls, and shear walls, unless noted otherwise on the plans.
11. Posts and columns
    - 11.1. Columns shall be as wide as the member they support, laterally supported at all floor levels, and extend down through the structure to the foundation. Provide squash blocking at rim joist below all columns, trimmers, and posts.
    - 11.2. Wood columns and posts shall be framed to provide full end bearing (2018 IBC 2304.10.7).
    - 11.3. Posts and columns shall be supported by concrete piers or metal pedestals projecting above concrete or masonry floors or decks exposed to weather or water splash, or in basements, and which support permanent structures, unless naturally durable or preservative-treated wood is used. The pedestal shall project at least 6 inches above exposed earth and at least 1 inch above floors.
12. Roof and ceiling framing (2018 IBC 2308.7).
    - 12.1. Roof rafters and ceiling joists shall be supported laterally to prevent rotation and lateral displacement in accordance with 2018 IBC 2308.7.8.
    - 12.2. Rafters and joists over three feet long shall be supported using hanger hardware if not supported by bearing.

PREFABRICATED METAL PLATE WOOD TRUSSES

1. Prefabricated metal plate wood trusses shall be designed in accordance with 2018 IBC 2303.4 and shall conform to the structural specifications and design criteria.
2. The truss designer shall provide a truss package that includes the following items:
   - 2.1. Design drawings of each individual truss (2018 IBC 2303.4.3).
   - 2.2. Truss placement diagram for the project (2018 IBC 2303.4.2).
   - 2.3. Truss member permanent bracing specification (2018 IBC 2303.4.1.2).
3. Transfer of loads and anchorage of each truss to the supporting structure shall be approved by the registered design professional in responsible charge (2018 IBC 2303.4.4).
4. Truss members and components shall not be cut, notched, drilled, spliced or otherwise altered in any way without written concurrence and approval of the registered design professional in responsible charge. Alterations resulting in the addition of loads to any member (e.g. HVAC equipment) shall not be permitted without verification that the truss is capable of supporting such additional loading (2018 IBC 2303.4.5).

STEEL

1. Structural steel work shall conform to 2018 IBC 2205, AISC 341-16, AISC 358-16, and AISC 360-16.
2. Structural shapes
   - 2.1. W: fy = 50 ksi (ASTM A992)
   - 2.2. M,S,C,MC, and L: fy = 36 ksi (ASTM A36)
   - 2.3. HP: fy = 50 ksi (ASTM A572 Gr. 50)
   - 2.4. HSS Rectangular: fy = 46 ksi (ASTM A500 Gr.B)
   - 2.5. HSS Round: fy = 42 ksi (ASTM A500 Gr.B)
   - 2.6. Pipe: fy = 35 ksi (ASTM A53 Gr.B)
   - 2.7. All structural steel shall be properly primed and painted.
3. Plates and bars: fy = 36 ksi (ASTM A36)
4. Structural fasteners
   - 4.1. High-strength bolts: fu = 120-150 ksi (ASTM F3125)
   - 4.2. Common bolts: fu = 60 ksi (ASTM A307 Gr. A)
     - 4.2.1. Nuts (ASTM A563)
     - 4.2.2. Washers (ASTM F436)
     - 4.2.3. Steel to steel bolted connections shall be made with high strength-bolts, unless noted otherwise. Bolts shall carry the identifying mark of three radial lines. All other bolted connections shall be made with bolts and nuts conforming to ASTM A307 unless note otherwise. Bolted connections shall be tightened and shall have washers as required by AISC unless noted otherwise. Enlarging holes shall be accomplished by means of reaming. Do not use a torch on any bolt holes.
   - 4.3. Shear studs: fu = 65 ksi (ASTM A108)
   - 4.4. Threaded rods: fy = 36 ksi (ASTM A36)
   - 4.5. Anchor rods: fy = 36 ksi (ASTM F1554 Gr. 36)
5. Steel deck fy = 36 ksi (ASTM A1008)
6. Welding fu = 70 ksi.
   - 6.1. Welding work shall comply with the American Welding Society (AWS) "Structural Welding Code," excluding items conflicting with AISC requirements.

POST-INSTALLED ANCHORS

1. Epoxy adhesive anchoring systems:
   - 1.1. Concrete: Hilti HIT-RE 500 V3 (ICC ES ESR-3814) or Simpson SET-XP (ICC ES ESR-2508) or USP/Mitek CIA-GEL 7000-C (IAMPO ER-473)
   - 1.2. Masonry (grouted): Hilti HIT RE100 (ICC ES ESR-3829) or Simpson SET (ICC ES ESR-1772) or USP/Mitek CIA-GEL 7000 (ICC ES ESR-1702)
   - 1.3. The calculated strength of anchorage assumes the following conditions for installation: 21 day minimum age of concrete, maximum short term concrete temperature= 150° F, maximum long term concrete temperature= 110° F, dry concrete surface, and normal weight concrete. See adhesive manufacturer notes for minimum temperature requirements. If conditions are otherwise, contact engineer for anchor specifications.
   - 1.4. Steel reinforcement and rods shall be embedded 10 bar diameters unless noted otherwise in the structural drawings and details. Where 10 bar diameters exceeds the member thickness minus minimum cover, steel reinforcement shall be embedded the member thickness minus minimum cover with a standard hook.
   - 1.5. Embedded portions of steel reinforcement and rods shall be clean, straight, and free of mill scale, rust and other coatings that impair the bond with the adhesive. Reinforcement must not be bent after installation (ICC ES ESR-3829).
   - 1.6. Installation of adhesive anchors shall be performed by personnel trained to install adhesive anchors.
2. Mechanical expansion anchors:
   - 2.1. Concrete: Hilti KWIK BOLT TZ (ICC ES ESR-1917)
   - 2.2. Masonry: Hilti KWIK BOLT 3 (ICC ES ESR-1385)
   - 2.3. Expansion anchors shall not be used in tensile load applications (e.g. hold-downs, moment frames).
3. Post-installed anchoring systems shall be installed according to the Manufacturer's Printed Installation Instructions (MPII). Hole cleaning method shall be based on drilling method and borehole conditions and shall conform to the manufacturer's instructions.

STRUCTURAL OBSERVATIONS

1. Where required by the Provisions of Section 1704.6.1 or 1704.6.2, the owner shall employ a registered design professional to perform structural observations as defined in 2018 IBC 202. Prior to the commencement of observations, the structural observer shall submit to the building official a written statement identifying the frequency and extent of the structural observations. At the conclusion of the work, the structural observer shall submit to the building official a written statement that the site visits have been made and identify any reported deficiencies which have not been resolved (2018 IBC 1704.6).

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ORIGINAL PROJECT #
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HF
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NCC
SCALE:
NTS
DATE:
06 JUL 2022

OREGON HOMEWORKS 4429 N VANCOUVER AVE
4-PLEX (PORTLAND)

GENERAL STRUCTURAL NOTES

REGISTERED PROFESSIONAL ENGINEER
92835PD
OREGON
NOV. 14, 2017
BRANDON LANE DECKER
07/08/2022
EXP: 12/31/2023

ISSUES / REVISIONS

SN1

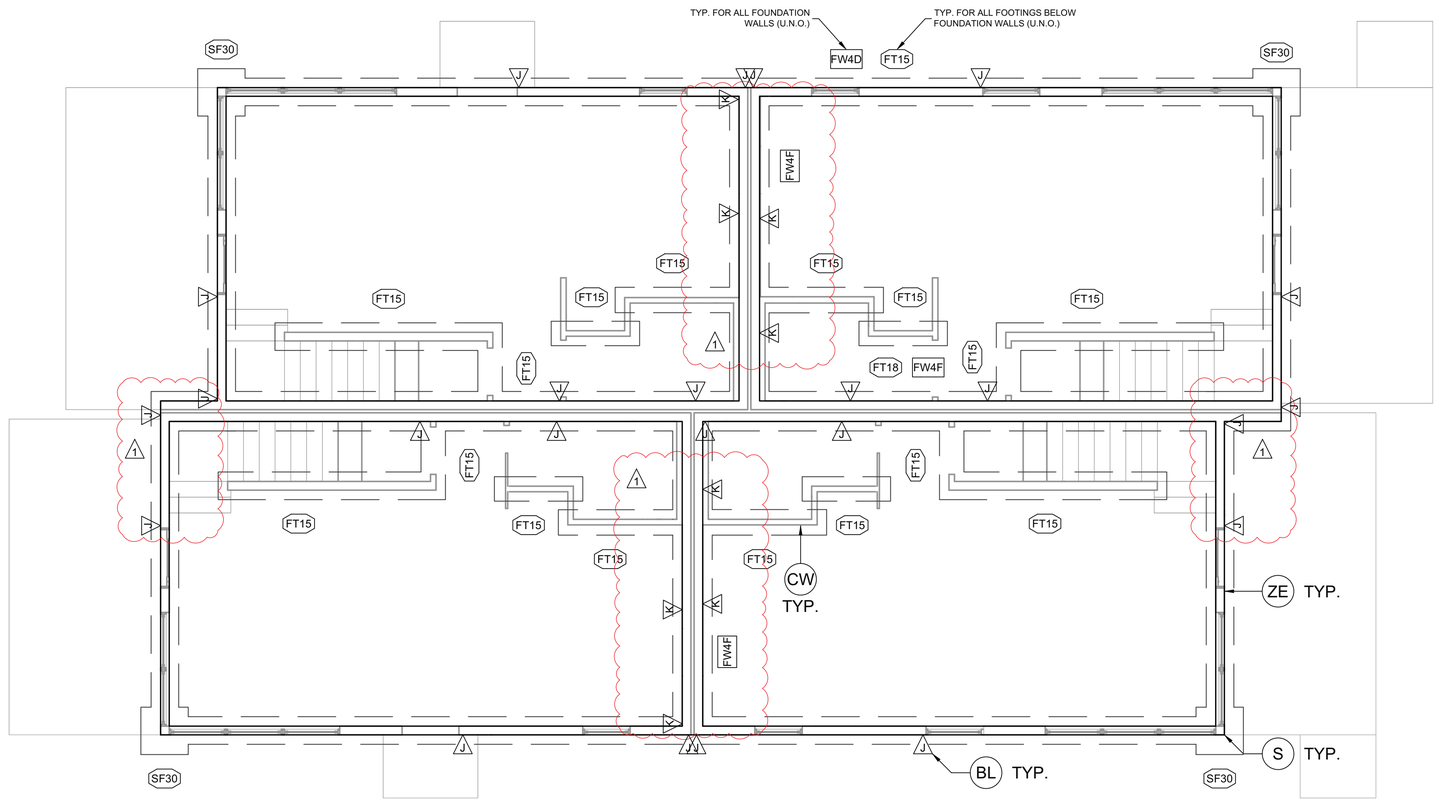
City Of Portland
REVIEWED FOR CODE COMPLIANCE
Date: 01/03/24
Permit #: 22-163680-000-00-RS

HOLD-DOWN SCHEDULE				
MARK	HOLD-DOWN	MINIMUM FASTENERS	ANCHOR	POST
D	CS16 (11" END LENGTHS)	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
J	HDU2-SDS2.5	SDS1/4" X 2-1/2" (SDS25212)	SSTB20	(2) 2X POST
K	HDU4-SDS2.5	SDS1/4" X 2-1/2" (SDS25212)	SBS/8X24	(2) 2X POST
1. HOLD-DOWNS SHALL BE SIMPSON STRONG-TIE OR EQUIVALENT.				
2. SHEAR WALL EDGE NAILING SHALL BE TO HOLD-DOWN POST.				
3. STHD STRAPS SHALL BE "RJ" TYPE AT RIM JOIST LOCATIONS.				

FOOTING SCHEDULE					
				REINFORCEMENT	
MARK	WIDTH	LENGTH	THICKNESS	TRANSVERSE	LENGTHWISE
FT15	15 "	CONT.	6 "	-	(1) #4
FT18	18 "	CONT.	10 "	-	(2) #4
SF30	30 "	30 "	10 "	(3) #4	(3) #4
1. CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER WALLS AND SPOT FOOTINGS SHALL BE CENTERED UNDER COLUMNS UNLESS NOTED OTHERWISE.					
2. FOOTINGS AND FOUNDATIONS, EXCAVATIONS, GRADING, AND FILL SHALL COMPLY WITH THE PROVISIONS OF THE GEOTECHNICAL REPORT (SEE GSN)					

FOUNDATION WALL SCHEDULE					
			REINFORCEMENT		
MARK	MAX HEIGHT	WIDTH	VERTICAL	HORIZONTAL	PLACEMENT
FW4D	4'	6"	#4 @ 48"	(1) #4	CENTER
FW4F	4'	14"	INTERIOR FACE: #4 @ 48" EXTERIOR FACE: #4 @ 48"	(1) #4 EACH FACE	EACH FACE
1. DOWEL VERTICAL BARS INTO FOOTING.					
2. PLACE REINFORCEMENT IN CENTER OF WALL OR NEAR EACH FACE, AS NOTED.					

FOUNDATION NOTES FOR WALLS 48" OR LESS IN HEIGHT:
1. (1) HORIZONTAL BAR WITHIN TOP 12" OF FOUNDATION.
2. (1) HORIZONTAL BAR 3" TO 4" FROM BOTTOM OF FOOTING.
3. VERTICAL BARS NEED ONLY EXTEND 14" INTO WALL.



FOOTING AND FOUNDATION PLAN

1/4" = 1'-0"

Date: 01/03/24

Permit #: 22-163680-000-00-RS

SUBMITTED 12/13/2023

City Of Portland

REVIEWED FOR CODE COMPLIANCE

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THESE STRUCTURAL DRAWINGS ARE BASED ON ARCHITECTURAL DRAWINGS. SEE CURRENT ISSUE OR REVISION DATE.

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OREGON HOMEWORKS 4429 N VANCOUVER AVE
4-PLEX (PORTLAND)

FOOTING AND FOUNDATION PLAN

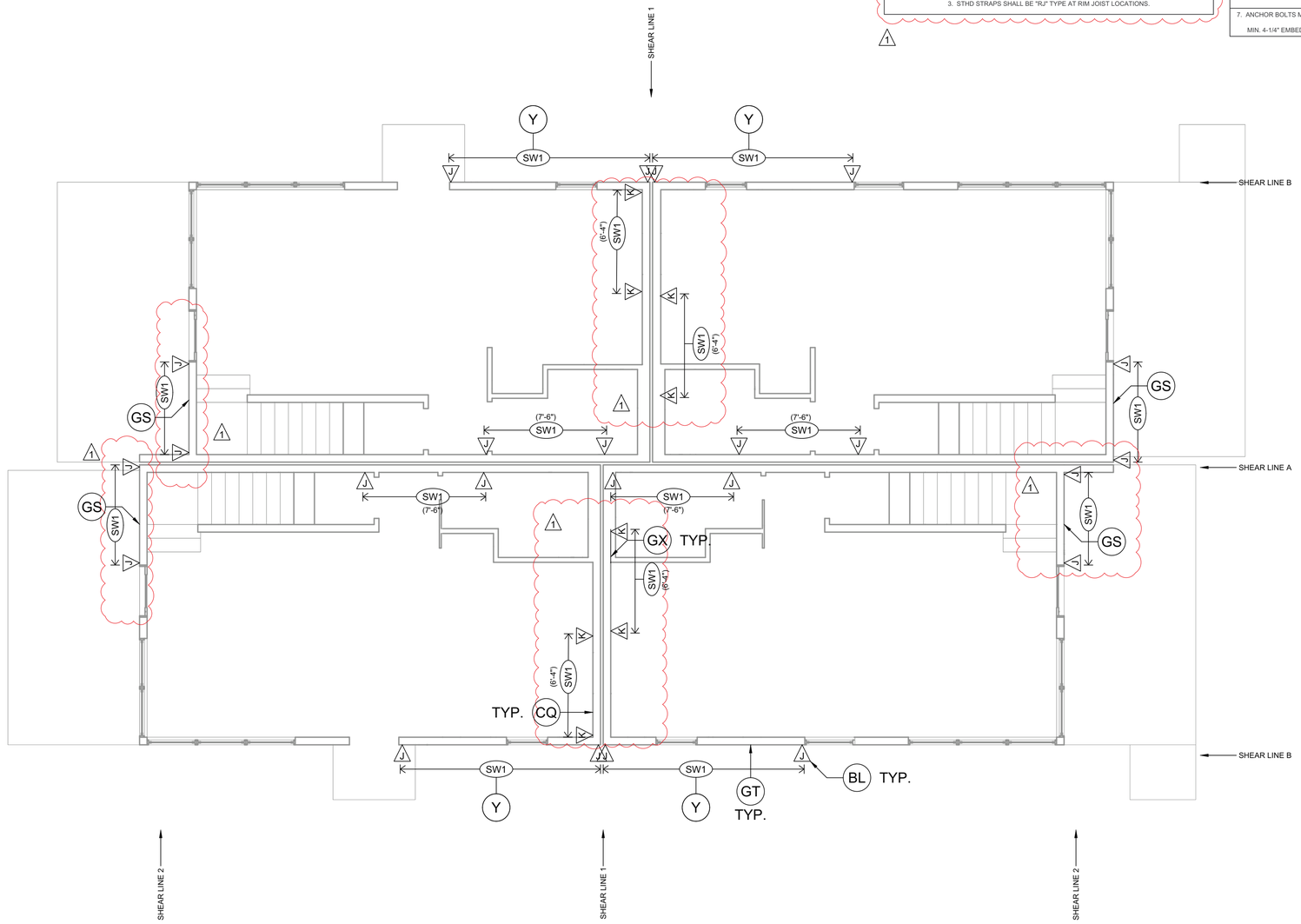
ISSUES / REVISIONS
1 01 DEC 2023 6921123
ROOF AND PLAN CHANGES

REGISTERED PROFESSIONAL ENGINEER
92835PE
OREGON
NOV. 14, 2017
BRANDON TODD DECKER
12/05/2023
EXP: 12/31/2025

S0-0

HOLD-DOWN SCHEDULE				
MARK	HOLD-DOWN	MINIMUM FASTENERS	ANCHOR	POST
D	CS16 (11" END LENGTHS)	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
J	HDU2-SDS2.5	SDS1/4" X 2-1/2" (SDS25212)	SSTB20	(2) 2X POST
K	HDU4-SDS2.5	SDS1/4" X 2-1/2" (SDS25212)	SB5/8X24	(2) 2X POST
1. HOLD-DOWNS SHALL BE SIMPSON STRONG-TIE OR EQUIVALENT.				
2. SHEAR WALL EDGE NAILING SHALL BE TO HOLD-DOWN POST.				
3. STHD STRAPS SHALL BE "RJ" TYPE AT RIM JOIST LOCATIONS.				

SHEAR WALL SCHEDULE					
MARK	SHEATHING	EDGE NAILING	ABUTTING PANEL EDGE FRAMING	ANCHORAGE	
				SOLE PLATE	SILL PLATE
SW1	7/16"	8d @ 6"	2X	10d @ 4"	1/2" A.B. @ 32"
1. SHEATHING SHALL CONSIST OF WOOD STRUCTURAL PANELS (SEE GSN).					
2. UNLESS NOTED ON DRAWINGS, EXTERIOR STUDS SHALL BE SPACED AT 16" O.C.					
3. SHEATHING NAILS SHALL BE COMMON OR GALVANIZED BOX NAILS. - FIELD NAIL SPACING SHALL BE 12" FOR STUDS SPACED 16" O.C. OR LESS AND 6" O.C. FOR STUDS SPACED AT 24" O.C.					
4. FOR SW1 ONLY, EDGE NAILS MAY BE SUBSTITUTED WITH 1-1/2" 16 GAGE STAPLES SPACED AT 3" O.C. AND FIELD NAILS MAY BE SUBSTITUTED WITH 16 GAGE STAPLES AT 12" O.C.					
5. ANCHORAGE NAILS SHALL BE COMMON NAILS.					
6. ANCHOR BOLTS SHALL HAVE A 3X3X0.229" WASHER AND 7" MIN EMBEDMENT. THE WASHER SHALL EXTEND TO WITHIN 1/2" FROM THE SHEATHING.					
7. ANCHOR BOLTS MAY BE SUBSTITUTED WITH TITEN HD BOLTS AT SAME DIAMETER AND SPACING. PROVIDE MIN. 4-1/4" EMBEDMENT FOR 1/2-DIA. BOLTS AND MIN. 4-3/4" EMBEDMENT FOR 5/8-DIA. BOLTS.					



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OREGON HOMEWORKS 4429 N VANCOUVER AVE
4-PLEX (PORTLAND)

MAIN FLOOR SHEAR WALL PLAN

ISSUES / REVISIONS

1	01 DEC 2023 6921123 ROOF AND PLAN CHANGES

REGISTERED PROFESSIONAL ENGINEER
92835PE
OREGON
NOV. 14, 2017
BRANDON TODD DECKER
12/05/2023

SUBMITTED
12/13/2023

City Of Portland
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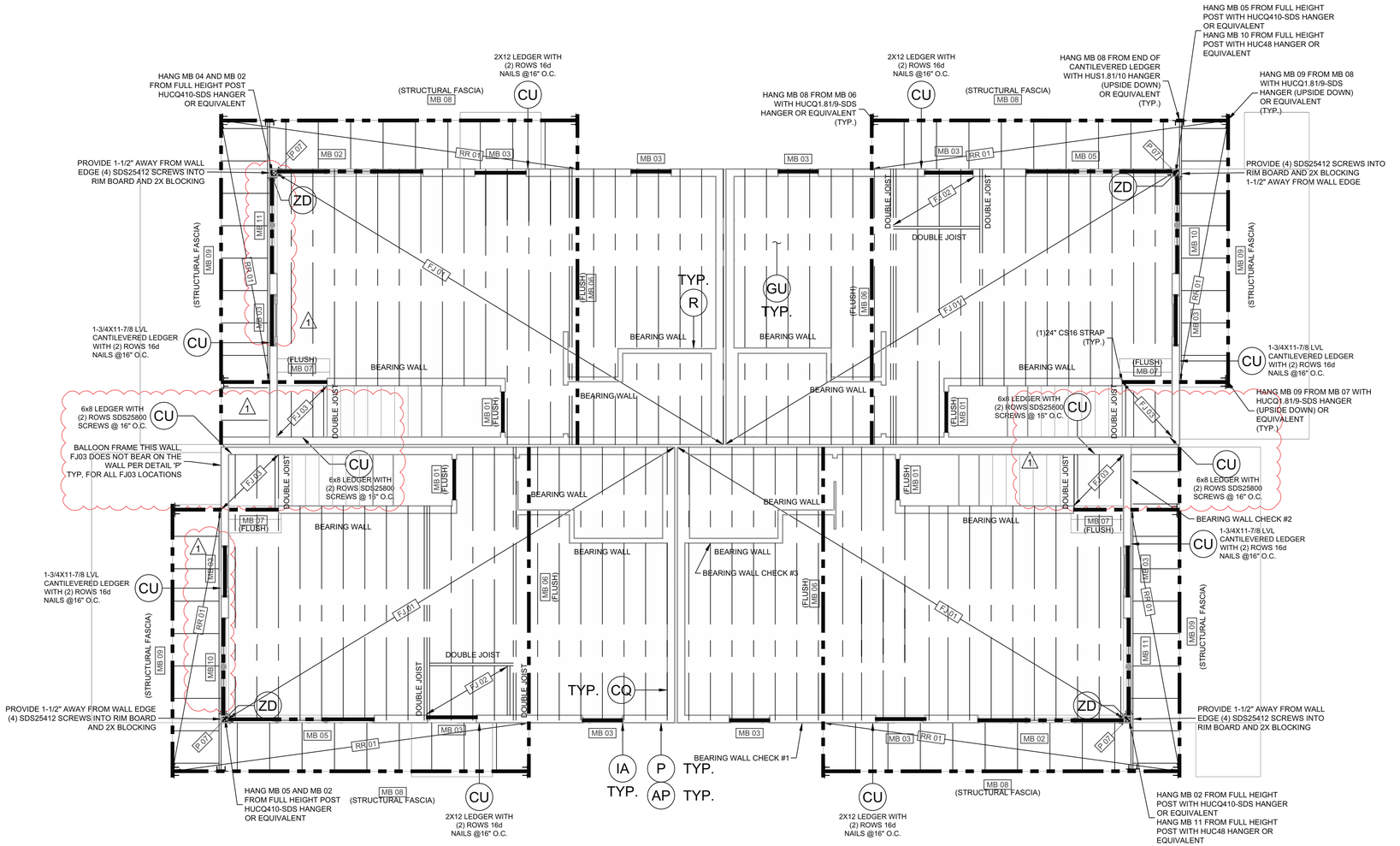
MAIN FLOOR SHEAR WALL PLAN

S1-0



UPPER FLOOR AND LOWER ROOF FRAMING PLAN

1/4" = 1'-0"

Date: 01/03/24

Permit #: 22-163680-000-00-RS

BEAM SCHEDULE

MARK	TYPE
MB 01	4 X 6 DF #2
MB 02	4 X 12 DF #2
MB 03	4 X 6 DF #2
MB 05	3-1/2 X 9 GLB
MB 06	1-3/4 X 11-7/8 LVL
MB 07	(2) 1-3/4 X 11-7/8 LVL
MB 08	1-3/4 X 11-7/8 LVL
MB 09	1-3/4 X 11-7/8 LVL
MB 10	4 X 10 DF #2
MB 11	4 X 10 DF #2
1. DIMENSIONAL LUMBER DF #2 U.N.O.	
2. LAMINATED VENEER LUMBER (LVL) 2.0E	
3. GLUED-LAMINATED TIMBER (GLB) 24F-1.8E	
4. STEEL W-SHAPES A992-50	
5. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED BEAM	
6. ALL HEADERS IN BEARING WALLS TO HAVE MIN. (1) TRIMMER & (1) KING STUD U.N.O. ALL OTHER BEAMS AND GIRDER TRUSSES TO HAVE MIN. (2) 2X SUPPORTS U.N.O.	

POST SCHEDULE

MARK	TYPE
P 07	6 X 6 POST
1. PARALLEL STRAND LUMBER (PSL) 1.8E	
2. STEEL PIPE (PIPE STD) A53	
3. STEEL HOLLOW SECTION (HSS) A500	
4. STEEL COLUMNS REQUIRE BEARING PLATES	
5. CONTINUE POSTS TO FDN / STRUCT MEMBER	

FLOOR JOIST SCHEDULE

MARK	TYPE
FJ 01	11-7/8" TJI 110 @ 16" O.C.
FJ 02	9-1/2" TJI 110 @ 16" O.C.
FJ 03	2 X 8 @ 16" O.C.
1. DIMENSIONAL LUMBER DF #2 U.N.O.	
2. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED JOIST	

SHEATHING SCHEDULE

TYPE	THICKNESS
UPPER FLOOR	3/4" OSB (48/24 SPAN RATING)
ROOF	7/16" OSB (24/16 SPAN RATING)
1. SHEATHING PERPENDICULAR TO SUPPORTS.	
2. FLOOR SHEATHING NAILED & GLUED TO SUPPORT	
3. 8d COMMON NAILS 6" O.C. (EDGES) 12" O.C. (FIELD)	
4. NAILING NO CLOSER THAN 3/8" FROM PANEL EDGE	

ROOF RAFTER SCHEDULE

MARK	TYPE
RR 01	11-7/8" TJI 110 @ 24" O.C.
1. DIMENSIONAL LUMBER DF #2 U.N.O.	
2. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED RAFTER	

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OREGON HOMEWORKS 4429 N VANCOUVER AVE
4-PLEX (PORTLAND)

UPPER FLOOR AND LOWER ROOF FRAMING PLAN

ISSUES / REVISIONS
1 01 DEC 2023 6921123 ROOF AND PLAN CHANGES

REGISTERED PROFESSIONAL ENGINEER
92835PE
OREGON
NOV. 14, 2017
BRANDON TODD DECKER
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S2-0

HOLD-DOWN SCHEDULE				
MARK	HOLD-DOWN	MINIMUM FASTENERS	ANCHOR	POST
D	CS16 (11" END LENGTHS)	10d X 2-1/2" (.148 X 2-1/2")	(FLOOR STRAP)	(2) 2X POST
J	HDU2-SDS2.5	SDS1/4" X 2-1/2" (SDS25212)	SSTB20	(2) 2X POST
K	HDU4-SDS2.5	SDS1/4" X 2-1/2" (SDS25212)	SB5/8X24	(2) 2X POST
1. HOLD-DOWNS SHALL BE SIMPSON STRONG-TIE OR EQUIVALENT.				
2. SHEAR WALL EDGE NAILING SHALL BE TO HOLD-DOWN POST.				
3. STHD STRAPS SHALL BE "RJ" TYPE AT RIM JOIST LOCATIONS.				

SHEAR WALL SCHEDULE					
MARK	SHEATHING	EDGE NAILING	ABUTTING PANEL EDGE FRAMING	ANCHORAGE	
				SOLE PLATE	SILL PLATE
SW1	7/16"	8d @ 6"	2X	10d @ 4"	1/2" A.B. @ 32"
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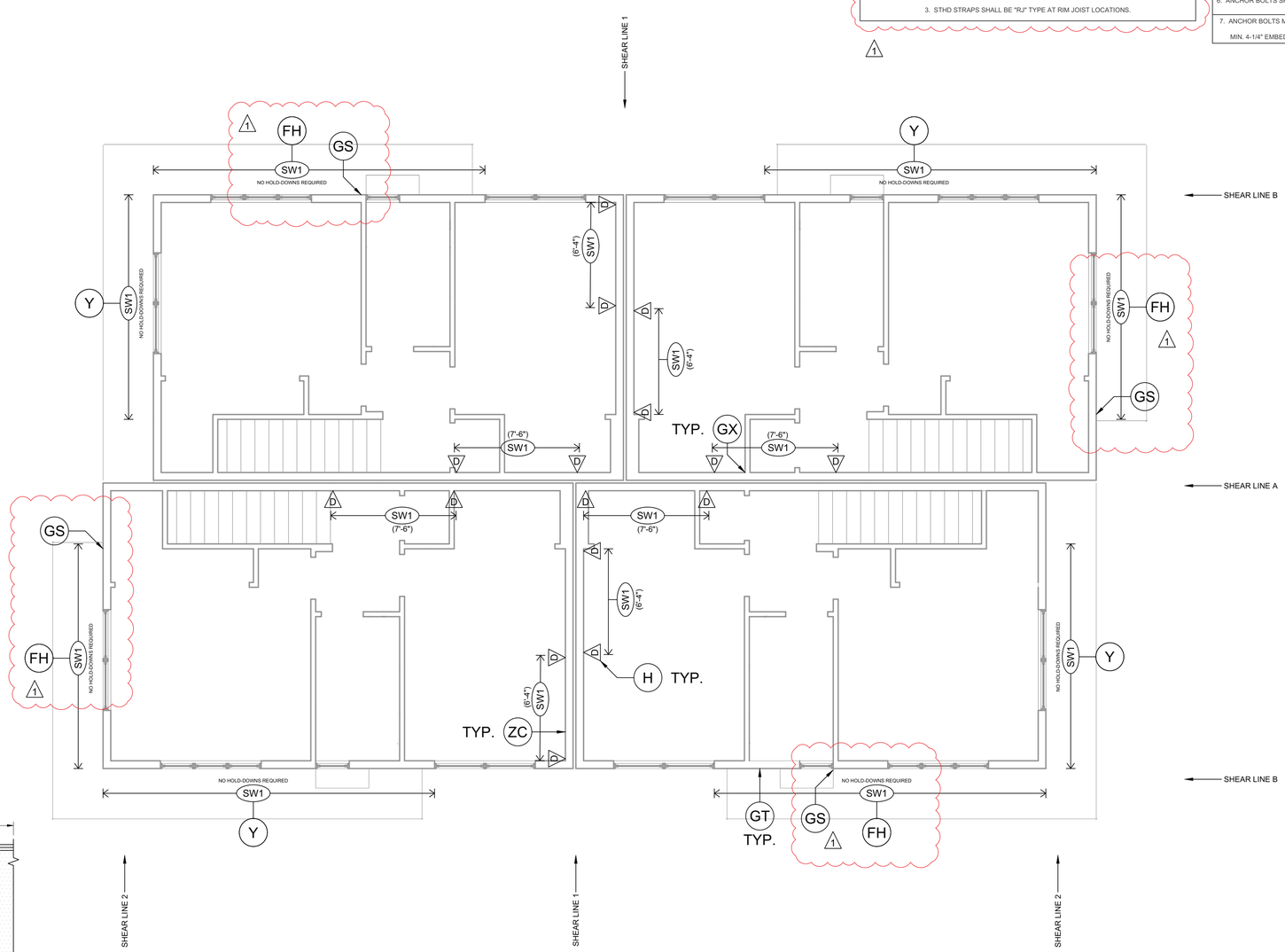
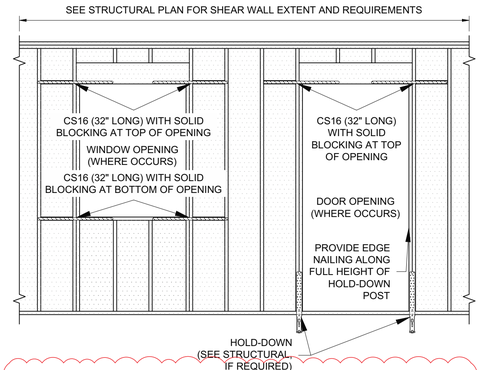
6. ANCHOR BOLTS SHALL HAVE A 3X3X0.229" WASHER AND 7" MIN EMBEDMENT. THE WASHER SHALL EXTEND TO WITHIN 1/2" FROM THE SHEATHING.					
7. ANCHOR BOLTS MAY BE SUBSTITUTED WITH TITEN HD BOLTS AT SAME DIAMETER AND SPACING. PROVIDE MIN. 4-1/4" EMBEDMENT FOR 1/2-DIA. BOLTS AND MIN. 4-3/4" EMBEDMENT FOR 5/8-DIA. BOLTS.					





FH SHEAR WALL - FORCE TRANSFER AROUND OPENINGS 1
NO SCALE

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OREGON HOMEWORKS 4429 N VANCOUVER AVE
4-PLEX (PORTLAND)

UPPER FLOOR SHEAR WALL PLAN

ISSUES / REVISIONS
1 01 DEC 2023 6921123 ROOF AND PLAN CHANGES

REGISTERED PROFESSIONAL ENGINEER
92835PE
OREGON
NOV. 14, 2017
BRANDON TODD DECKER
12/05/2023

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UPPER FLOOR SHEAR WALL PLAN
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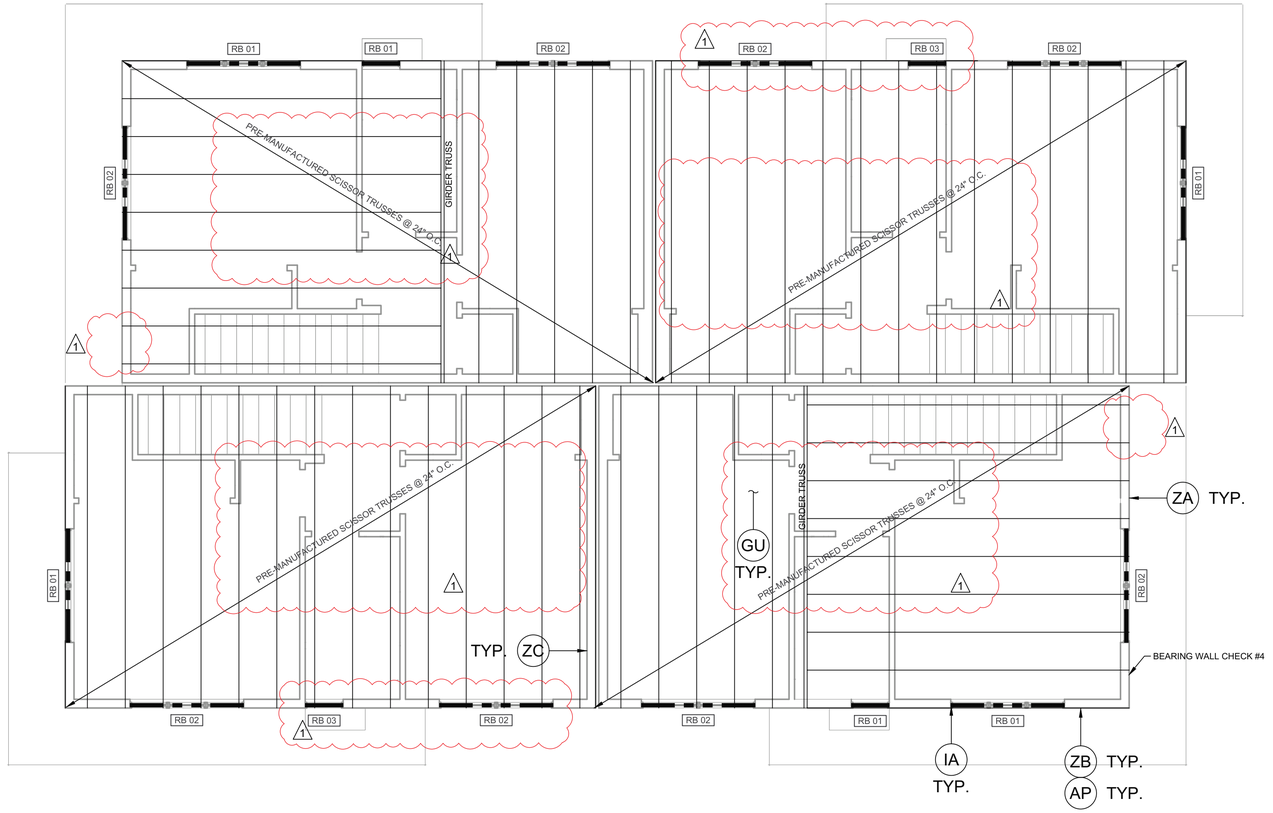
S2-1



BEAM SCHEDULE	
MARK	TYPE
RB 01	4 X 6 DF #2
RB 02	4 X 8 DF #2
RB 03	4 X 6 DF #2
1. DIMENSIONAL LUMBER DF #2 U.N.O.	
2. LAMINATED VENEER LUMBER (LVL) 2.0E	
3. GLUED-LAMINATED TIMBER (GLB) 24F-1.8E	
4. STEEL W-SHAPES A992-50	
5. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED BEAM	
6. ALL HEADERS IN BEARING WALLS TO HAVE MIN. (1) TRIMMER & (1) KING STUD U.N.O. ALL OTHER BEAMS AND GIRDER TRUSSES TO HAVE MIN. (2) 2X SUPPORTS U.N.O.	

POST SCHEDULE	
MARK	TYPE
P 07	6 X 6 POST
1. PARALLEL STRAND LUMBER (PSL) 1.8E	
2. STEEL PIPE (PIPE STD) A53	
3. STEEL HOLLOW SECTION (HSS) A500	
4. STEEL COLUMNS REQUIRE BEARING PLATES	
5. CONTINUE POSTS TO FDN / STRUCT MEMBER	

ROOF RAFTER SCHEDULE	
MARK	TYPE
RR 01	11-7/8" TJI 110 @ 24" O.C.
1. DIMENSIONAL LUMBER DF #2 U.N.O.	
2. SUFFIXES (A, B, ETC.) DENOTE ALTERNATIVES FOR THE SPECIFIED RAFTER	

SHEATHING SCHEDULE	
TYPE	THICKNESS
UPPER FLOOR	3/4" OSB (48/24 SPAN RATING)
ROOF	7/16" OSB (24/16 SPAN RATING)
1. SHEATHING PERPENDICULAR TO SUPPORTS.	
2. FLOOR SHEATHING NAILED & GLUED TO SUPPORT	
3. 8d COMMON NAILS 6" O.C. (EDGES) 12" O.C. (FIELD)	
4. NAILING NO CLOSER THAN 3/8" FROM PANEL EDGE	

WOOD TRUSS LOADS
GROUND SNOW LOAD, Pg = 30 PSF
FLAT ROOF SNOW LOAD = 25 PSF
TOP CHORD DEAD LOAD = 7 PSF
BOTTOM CHORD DEAD LOAD = 10 PSF
1. DESIGN SNOW LOADS SHALL BE IN ACCORDANCE WITH ASCE 7-16 CHAP.7 (2018 IBC 1608.1)

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4-PLEX (PORTLAND)

ROOF FRAMING PLAN

ISSUES / REVISIONS
1 01 DEC 2023 6921123
ROOF AND PLAN CHANGES

REGISTERED PROFESSIONAL ENGINEER
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ROOF FRAMING PLAN
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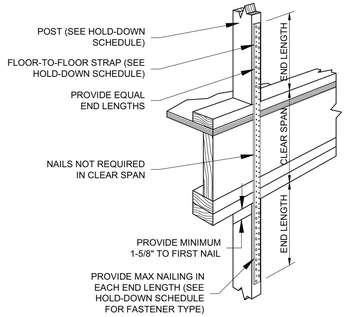
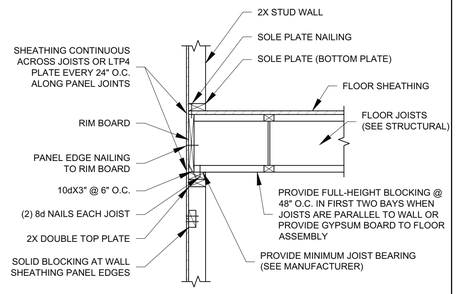
S3-0



H HOLD-DOWN - FLOOR STRAP
NO SCALE



P BEARING WALL - EXTERIOR TO FLOOR (150 PLF UNIT SHEAR)
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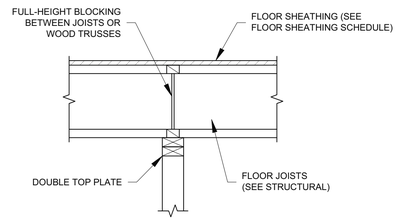

R BEARING WALL - INTERIOR TO FLOOR
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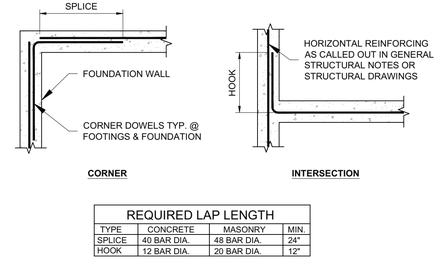
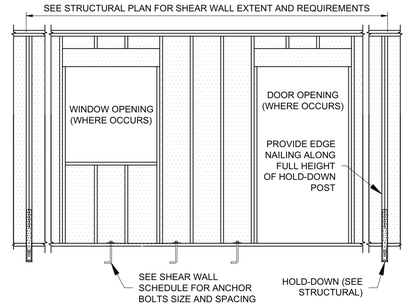


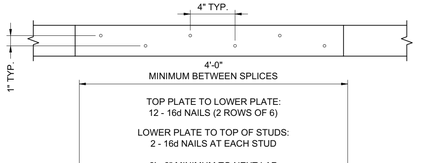
REQUIRED LAP LENGTH			
TYPE	CONCRETE	MASONRY	MIN.
SPLICE	40 BAR DIA.	48 BAR DIA.	24"
HOOK	12 BAR DIA.	20 BAR DIA.	12"

S FOUNDATION WALL - CORNER & INTERSECTION REINFORCING
NO SCALE

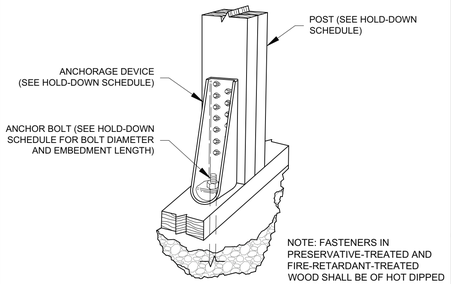
ADDITIONAL STRAPPING AND BLOCKING AROUND OPENINGS ARE NOT REQUIRED.



Y SHEAR WALL - PERFORATED
NO SCALE



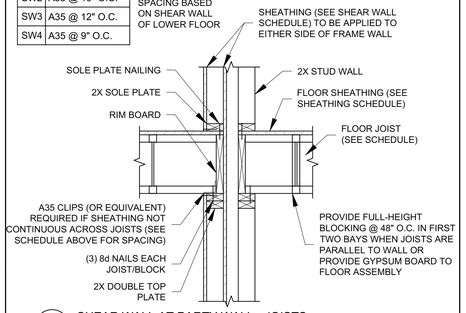
AP DIAPHRAGM - TOP PLATE SPLICE
NO SCALE



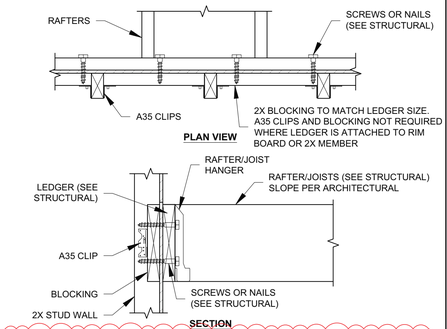
BL HOLD-DOWN
NO SCALE

SW1	A35 @ 24" O.C.
SW2	A35 @ 16" O.C.
SW3	A35 @ 12" O.C.
SW4	A35 @ 9" O.C.

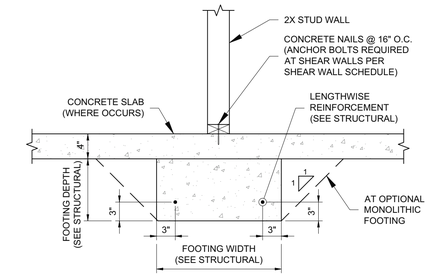
NOTE: SELECT SPACING BASED ON SHEAR WALL OF LOWER FLOOR



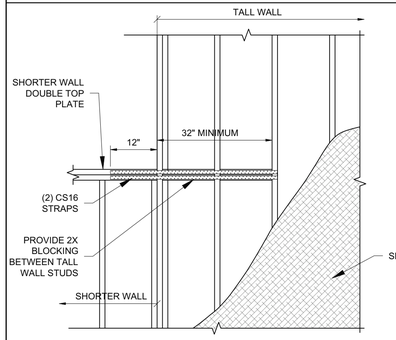
CQ SHEAR WALL AT PARTY WALL - JOISTS
NO SCALE



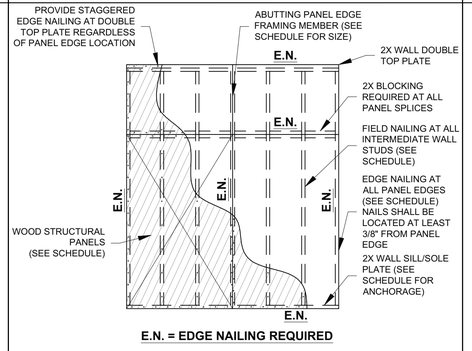
(MODIFIED) CU LEDGER - RAFTER/JOISTS TO FRAMED WALL 1
NO SCALE



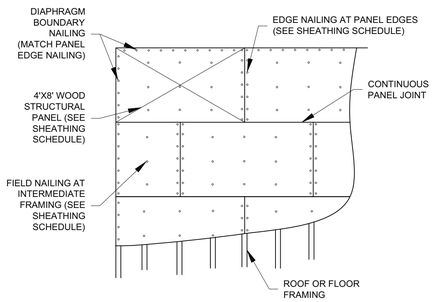
CW BEARING WALL - INTERIOR FOOTING
NO SCALE



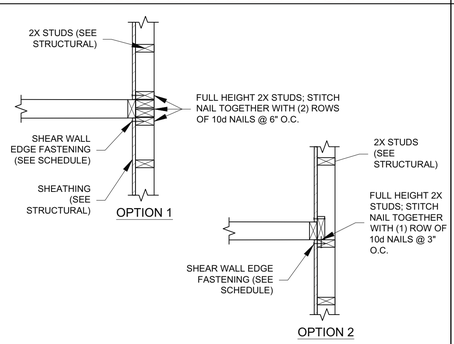
GS TALL WALL SHEAR TRANSFER
NO SCALE



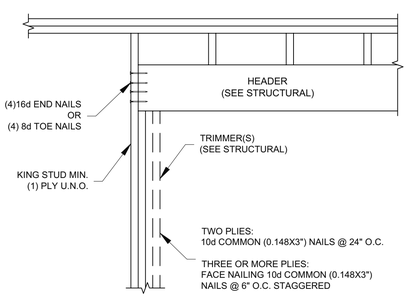
GT WOOD STRUCTURAL PANEL SHEAR WALL
NO SCALE



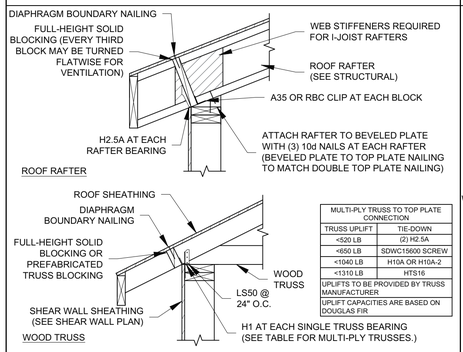
GU WOOD STRUCTURAL PANEL DIAPHRAGM - UNBLOCKED
NO SCALE



GX SHEAR WALL TRANSFER - WALL INTERSECTION
NO SCALE

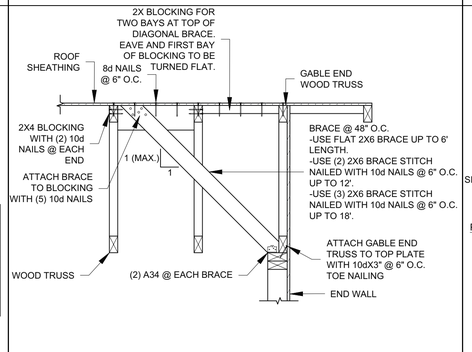


IA WOOD BEAM - WALL HEADER FRAMING
NO SCALE

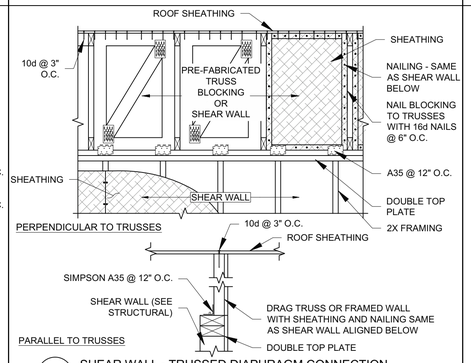


MULTI-PLY TRUSS TO TOP PLATE CONNECTION	
TRUSS UPLIFT	TIE-DOWN
<520 LB	(2) H2.5A
<650 LB	SDWC15600 SCREW
<1040 LB	H10A OR H10A-2
<1310 LB	HTS16
UPLIFTS TO BE PROVIDED BY TRUSS MANUFACTURER	
UPLIFT CAPACITIES ARE BASED ON DOUGLAS FIR	

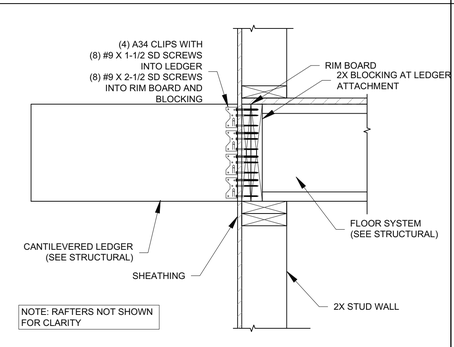
ZA ROOF FRAMING - BLOCKING (150 PLF UNIT SHEAR)
NO SCALE



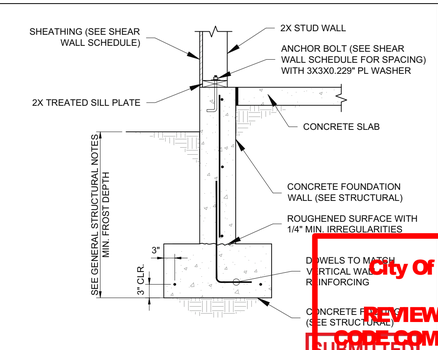
ZB WOOD TRUSS - WOOD WALL GABLE END BRACING
NO SCALE



ZC SHEAR WALL - TRUSSED DIAPHRAGM CONNECTION
NO SCALE



ZD CANTILEVER LEDGER CONNECTION
NO SCALE



ZE FOUNDATION WALL - SLAB ON GRADE
NO SCALE

ACUTE ENGINEERING, INC.
744 S 400 E
Orem, UT 84097
Phone 801.229.9020
Fax 801.224.0050
info@acuteengineering.com

THESE STRUCTURAL DRAWINGS ARE BASED ON ARCHITECTURAL DRAWINGS. SEE CURRENT ISSUE OR REVISION DATE.

DIMENSIONS AND ELEVATIONS ARE SUPPLIED BY THE ARCHITECT. THEY MAY BE PROVIDED ON THE STRUCTURAL PLANS AND DETAILS FOR THE CONVENIENCE OF THE CONTRACTOR. VERIFY DIMENSIONS AND ELEVATIONS WITH ARCHITECTURAL DRAWINGS.

ORIGINAL PROJECT #
690722
DRAWN BY:
HF
CHECKED BY:
NCC
SCALE:
NTS
DATE:
06 JUL 2022

OREGON HOMEWORKS 4429 N VANCOUVER AVE 4-PLEX (PORTLAND)

STRUCTURAL DETAILS

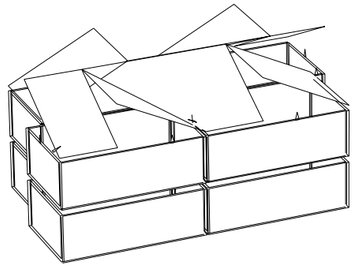
ISSUES / REVISIONS
1 01 DEC 2023 6921123 ROOF AND PLAN CHANGES

REGISTERED PROFESSIONAL ENGINEER
92835PD
OREGON
NOV. 14, 2017
BRANDON TODD DECKER
12/05/2023

City Of Portland
REVIEWED FOR CODE COMPLIANCE
SUBMITTED
12/13/2023
Date: 01/03/24
Permit #: 22-163680-000-00-RS

SD1

TRIANGLE SHAPE ▲ INDICATES LEFT END ON LAYOUT AND TRUSS DRAWING ON STAMPED ENGINEERING PAGE



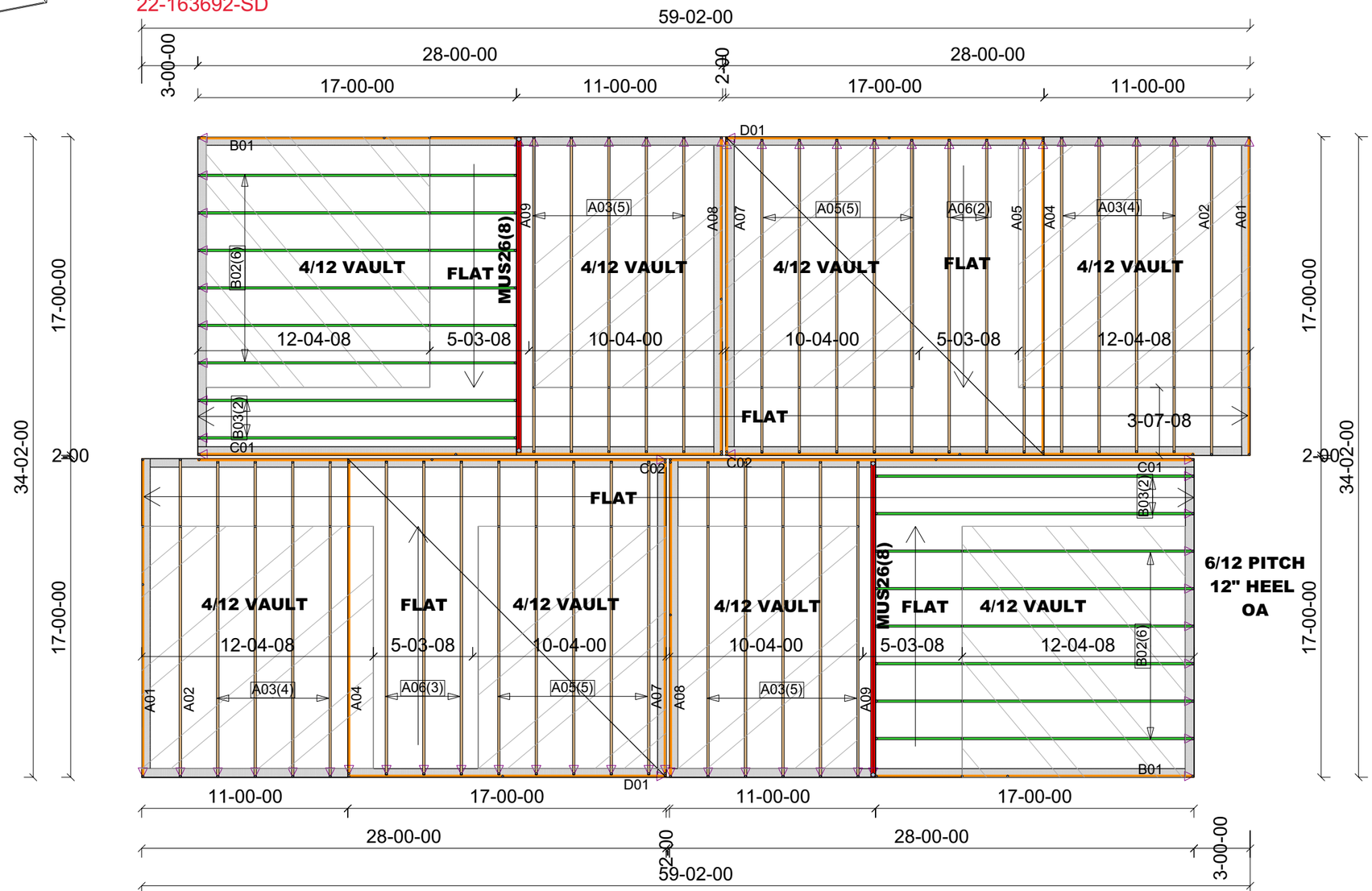
22-163680-RS - UNIT 1
22-163684-RS - UNIT 2
22-163687-RS - UNIT 3
22-163689-RS - UNIT 4
22-163692-SD

Use LUS24 Hangers UNO

MUS26

H2.5A

2X4 STD BLOCKS



TC LL = 25
TC DL = 7
BC LL = 0
BC DL = 10
Total Load = 42
Wind Speed = 140
Exposure = B
Roof pitch = 6/12
Overhang = 0

SUBMITTED
09/29/2023

THIS IS A TRUSS PLACEMENT DIAGRAM ONLY. These trusses are designed as individual building components to be incorporated into the building design at the specification of the building designer. See the individual design sheets for each truss design identified on the placement drawing. The building designer is responsible for temporary and permanent bracing of the roof and floor system and for the overall structure. The design of the truss support structure including headers, beams, walls, and columns is the responsibility of the building designer. For general guidance regarding bracing, consult "Bracing of wood trusses" available from the Truss Plate Institute, 583 D'Onifrio Drive; Madison, WI 53179

Jurisdiction Stamp

City of Portland

Reviewed for Code Compliance

Date: 01/03/24

Permit #:
22-163680-000-00-RS

DO NOT CUT, DRILL, NOTCH OR MODIFY TRUSS MEMBERS WITHOUT PRIOR APPROVAL FROM BUILDERS FIRSTSOURCE TRUSS

Builders FirstSource
SW Washington and Oregon Components
Woodland Office: 360-841-5900
Beaverton Office: 971-371-5971

BUILDER : OREGON HOMEWORKS, LLC
PROJECT : JITTERBURG 4-PLEX
ADDRESS : 4429 N VANCOUVER AVE PORTLAND OR

DESIGNER : BROOKLYNE VANBRUNT
SALESMAN : VINCE ROGERS
DATE : 9/22/2023
SCALE: NTS
PROJECT #: 3688515

MiTek®

22-163680-RS - UNIT 1
22-163684-RS - UNIT 2
22-163687-RS - UNIT 3
22-163689-RS - UNIT 4
22-163692-SD

MiTek, Inc.
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916.755.3571

Re: 3688515
3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE

The truss drawing(s) referenced below have been prepared by MiTek USA, Inc. under my direct supervision based on the parameters provided by Builders FirstSource (Beaverton, OR).

Pages or sheets covered by this seal: R78539296 thru R78539310

My license renewal date for the state of Oregon is December 31, 2024.

September 25,2023

Reinmuth, Dustin

IMPORTANT NOTE: The seal on these truss component designs is a certification that the engineer named is licensed in the jurisdiction(s) identified and that the designs comply with ANSI/TPI 1. These designs are based upon parameters shown (e.g., loads, supports, dimensions, shapes and design codes), which were given to MiTek or TRENCO. Any project specific information included is for MiTek's or TRENCO's customers file reference purpose only, and was not taken into account in the preparation of these designs. MiTek or TRENCO has not independently verified the applicability of the design parameters or the designs for any particular building. Before use, the building designer should verify applicability of design parameters and properly incorporate these designs into the overall building design per ANSI/TPI 1, Chapter 2.

SUBMITTED
09/29/2023

City of Portland
Reviewed for code compliance
Date: 01/03/24
Project #: 22-163680-000-00-RS

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539296
3688515	A01	GABLE	2	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:18 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

Scale = 1:57.3

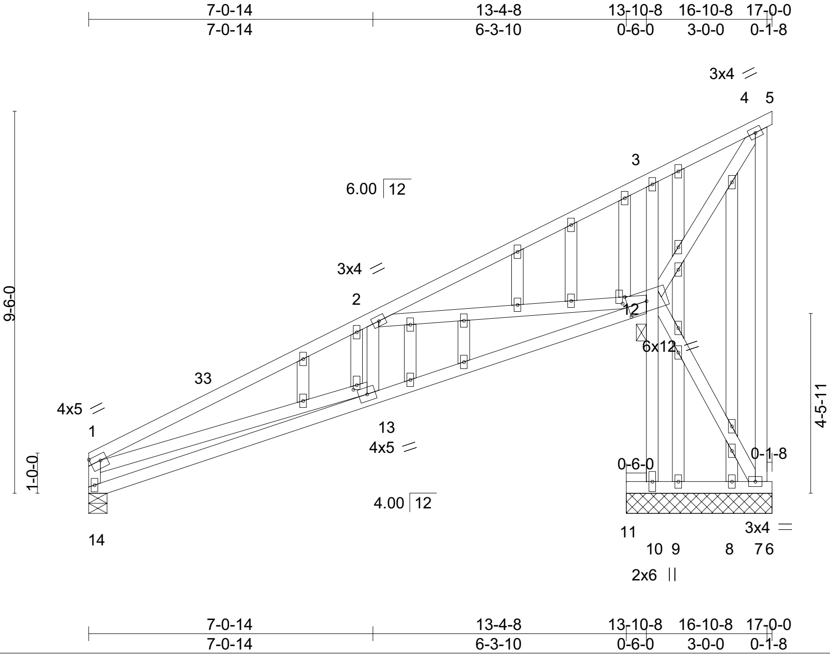


Plate Offsets (X,Y)-- [1:Edge,0-1-12], [12:0-5-12,0-3-0], [12:0-2-0,0-0-10], [17:0-1-6,0-1-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.06	12-13	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.33	Vert(CT)	-0.13	12-13	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.88	Horz(CT)	0.03	11	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 144 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.1&Btr
WEBS 2x4 DF No.2
OTHERS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 5-8-1 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 3-10

REACTIONS. All bearings 3-7-8 except (jt=length) 14=0-5-8.
(lb) - Max Horz 14=243(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 5 except 7=-188(LC 1), 10=-192(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 11, 6, 7, 9, 8 except 14=515(LC 1), 10=1087(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1152/253, 2-3=-181/335, 1-14=-521/209
BOT CHORD 13-14=-495/325, 12-13=-558/1016
WEBS 2-13=0/261, 2-12=-1167/525, 4-12=-372/0, 1-13=-76/754, 10-12=-1077/414, 3-12=-375/280

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable studs spaced at 1-4-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 5 except (jt=lb) 7=188, 10=192.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

REGISTERED PROFESSIONAL ENGINEER
97587PE
OREGON
SEPTEMBER 14, 2021
DUSTIN REINMUTH
EXPIRES: 12/31/2024
September 25,2023

MiTek
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916.755.3571 / MiTek-US.com

City of Portland
Reviewed for code compliance
Date: 01/23/24
Project #: 22-163680-000-00-RS

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539297
3688515	A02	Monopitch	2	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:19 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

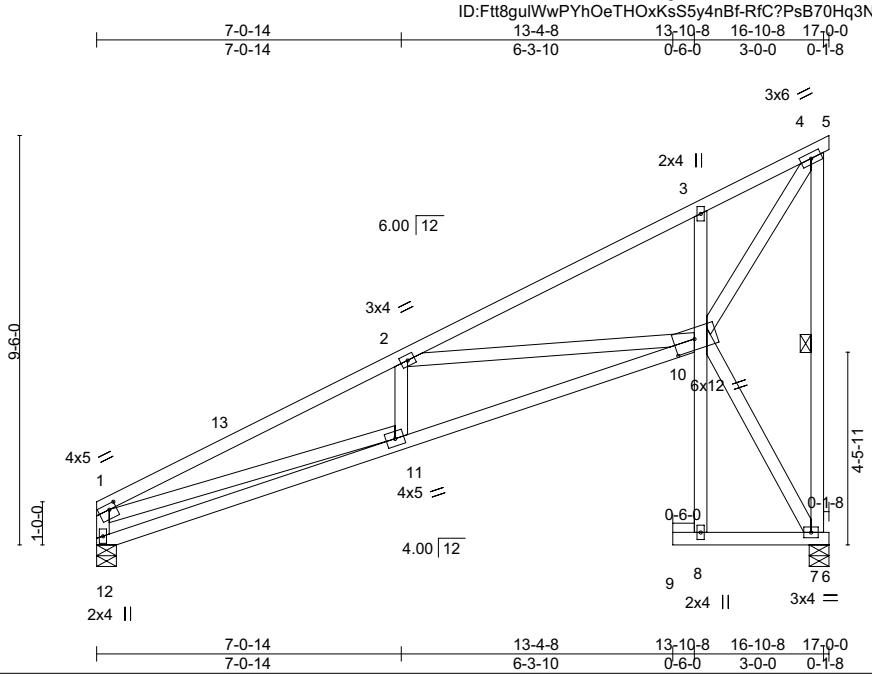


Plate Offsets (X,Y)-- [1:0-2-0,0-1-8], [10:0-5-12,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.08	10-11	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.17	10-11	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.12	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 108 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.1&Btr
WEBS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-4-8 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-6-12 oc bracing.
WEBS 1 Row at midpt 4-7

REACTIONS. (size) 12=0-5-8, 7=0-5-8
Max Horz 12=242(LC 12)
Max Uplift 7=-148(LC 12)
Max Grav 12=698(LC 1), 7=714(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1846/493, 2-3=-754/157, 3-4=-730/291, 1-12=-709/274
BOT CHORD 11-12=-503/339, 10-11=-781/1669
WEBS 2-10=-991/465, 4-10=-518/1117, 1-11=-287/1361, 3-10=-371/271, 4-7=-674/337

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=148.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

REGISTERED PROFESSIONAL ENGINEER
97587PE
OREGON
SEPTEMBER 14, 2021
DUSTIN REINMUTH

EXPIRES: 12/31/2024
September 25,2023

MiTek
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916/783-3571 / MiTek-US.com

City of Portland
Reviewed for code compliance
Date: 10/15/24
Project #: 22-163680-000-00-RS

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539298
3688515	A03	Monopitch	18	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:20 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

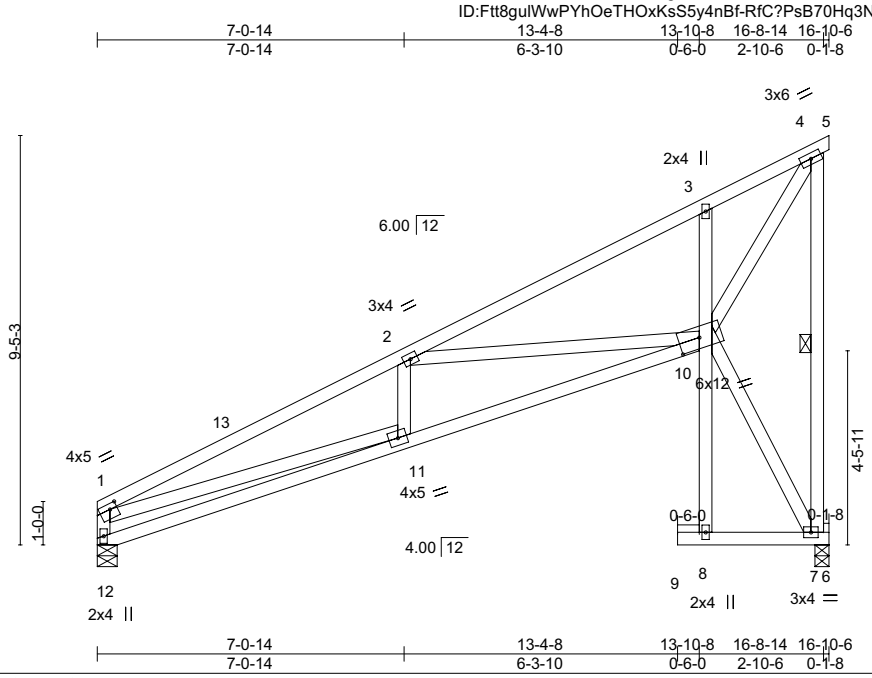


Plate Offsets (X,Y)-- [1:0-2-0,0-1-8], [10:0-5-12,0-3-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.08	10-11	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.37	Vert(CT)	-0.16	10-11	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.75	Horz(CT)	0.12	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 108 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.1&Btr
WEBS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-4-14 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-7-1 oc bracing.
WEBS 1 Row at midpt 4-7

REACTIONS. (size) 12=0-5-8, 7=0-3-14
Max Horz 12=240(LC 12)
Max Uplift 7=-147(LC 12)
Max Grav 12=693(LC 1), 7=708(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1824/489, 2-3=-726/150, 3-4=-702/284, 1-12=-703/274
BOT CHORD 11-12=-501/338, 10-11=-775/1649
WEBS 2-10=-996/469, 4-10=-512/1097, 1-11=-283/1342, 4-7=-670/335, 3-10=-370/271

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 16-10-6 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=147.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

EXPIRES: 12/31/2024
September 25,2023

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539299
3688515	A04	GABLE	2	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:22 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

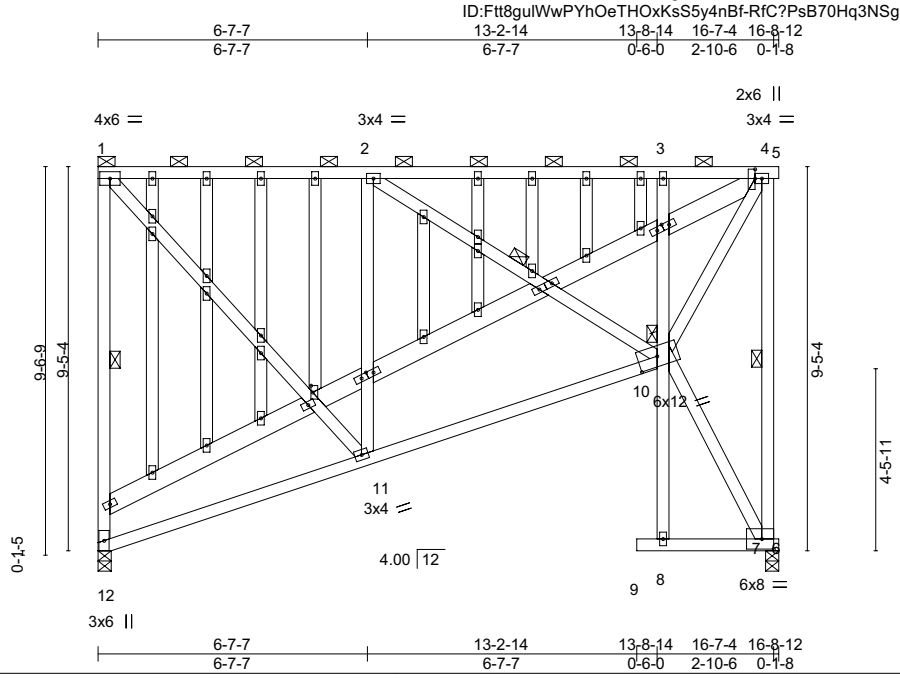


Plate Offsets (X,Y)-- [4:0-2-12,0-0-0], [7:0-3-8,0-3-0], [10:0-5-12,0-3-0], [13:0-1-15,0-1-0], [15:0-1-15,0-1-0], [16:0-2-0,0-0-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.62	Vert(LL)	-0.07	10-11	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.31	Vert(CT)	-0.14	10-11	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.68	Horz(CT)	0.05	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 216 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.1&Btr
WEBS 2x4 DF No.2 *Except*
4-13,13-14,14-15,15-16,16-17: 2x6 DF No.2
OTHERS 2x4 DF No.2

BRACING-
TOP CHORD 2-0-0 oc purlins (6-0-0 max.): 1-5, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-4-1 oc bracing.
WEBS 1 Row at midpt 1-12, 2-10, 4-7, 3-8

REACTIONS. (size) 12=0-3-14, 7=0-3-14
Max Horz 12=-232(LC 10)
Max Uplift 12=-108(LC 8), 7=-120(LC 9)
Max Grav 12=687(LC 1), 7=703(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-12=-638/526, 1-2=-441/456, 2-3=-374/339, 3-4=-384/350
BOT CHORD 10-11=-496/478
WEBS 1-11=-485/642, 2-11=-453/588, 4-10=-696/763, 4-7=-667/598, 3-10=-378/435

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable studs spaced at 1-4-0 oc.
6) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
7) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
8) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 12=108, 7=120.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
11) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

EXPIRES: 12/31/2024
September 25,2023

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539300
3688515	A05	Monopitch	11	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:23 2023 Page 1

ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

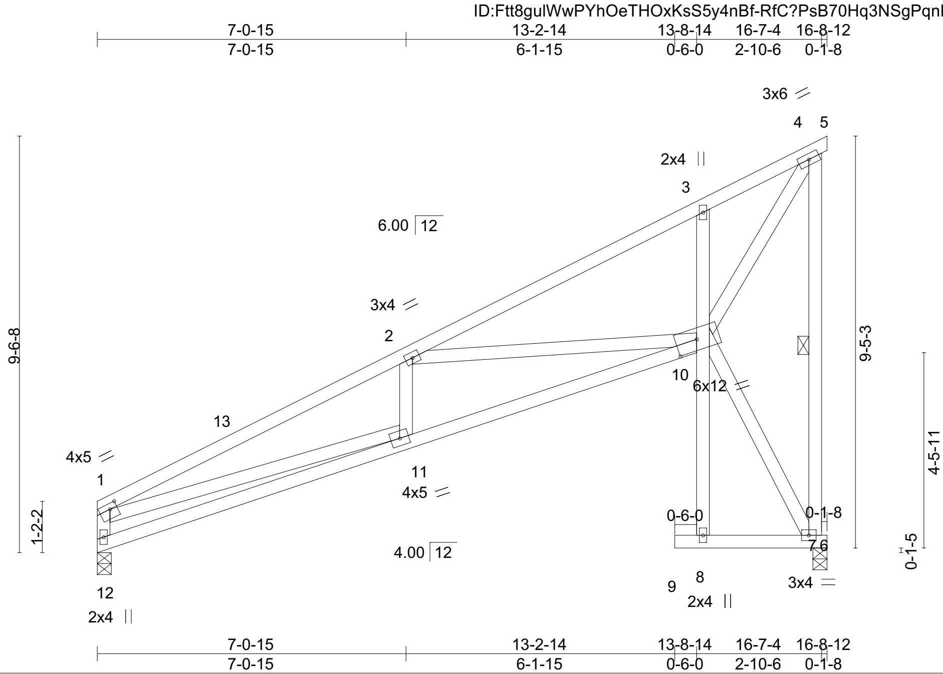


Plate Offsets (X,Y)-- [1:0-2-0,0-1-8], [10:0-5-12,0-3-0]

LOADING (psf)		SPACING-		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.38	Vert(LL)	-0.07	10-11	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.15	10-11	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.70	Horz(CT)	0.12	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 107 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.1&Btr
WEBS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-5-7 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 7-7-13 oc bracing.
WEBS 1 Row at midpt 4-7

REACTIONS. (size) 12=0-3-14, 7=0-3-14
Max Horz 12=238(LC 12)
Max Uplift 7=-146(LC 12)
Max Grav 12=687(LC 1), 7=703(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-1781/478, 2-3=-715/148, 3-4=-691/279, 1-12=-695/273
BOT CHORD 11-12=-498/335, 10-11=-762/1607
WEBS 2-10=-965/459, 4-10=-506/1080, 1-11=-273/1308, 3-10=-360/265, 4-7=-664/335

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 16-8-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=146.
5) Beveled plate or shim required to provide full bearing surface with truss chord at joint(s) 12.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

EXPIRES: 12/31/2024
September 25,2023

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539301
3688515	A06	Monopitch	5	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:24 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

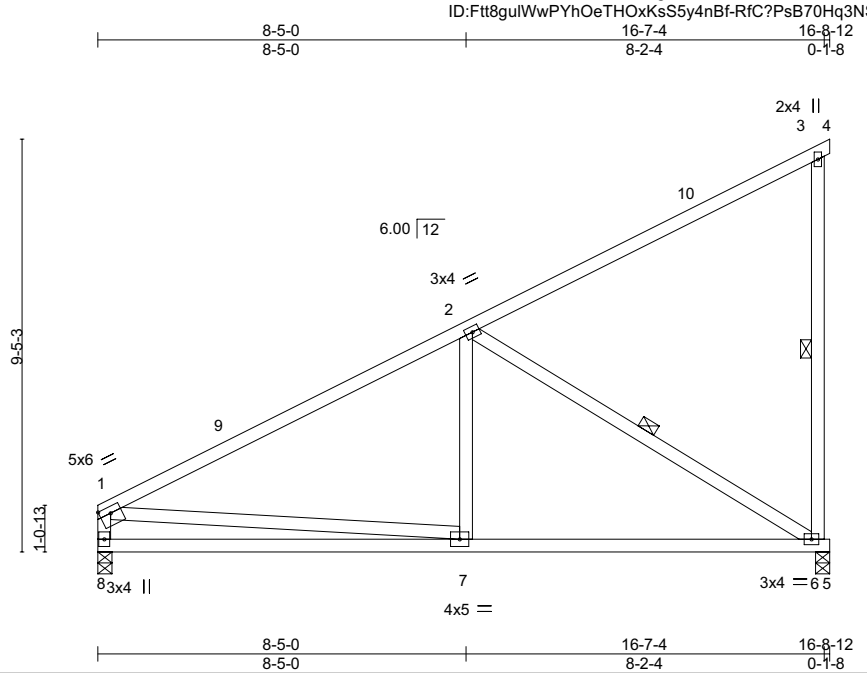


Plate Offsets (X,Y)-- [1:Edge,0-1-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.65	Vert(LL)	-0.09	6-7	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.19	6-7	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.30	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 90 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.1&Btr
WEBS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 9-8-5 oc bracing.
WEBS 1 Row at midpt 2-6, 3-6

REACTIONS. (size) 8=0-3-14, 6=0-3-14
Max Horz 8=238(LC 12)
Max Uplift 8=-1(LC 12), 6=-150(LC 12)
Max Grav 8=685(LC 1), 6=694(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-871/55, 1-8=-613/139
BOT CHORD 7-8=-469/316, 6-7=-317/689
WEBS 2-7=0/360, 2-6=-810/373, 1-7=0/427

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 16-8-12 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8 except (jt=lb) 6=150.
5) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

EXPIRES: 12/31/2024
September 25,2023

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539302
3688515	A07	Monopitch Structural Gable	2	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:25 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

16-8-12
16-8-12

Scale = 1:51.4

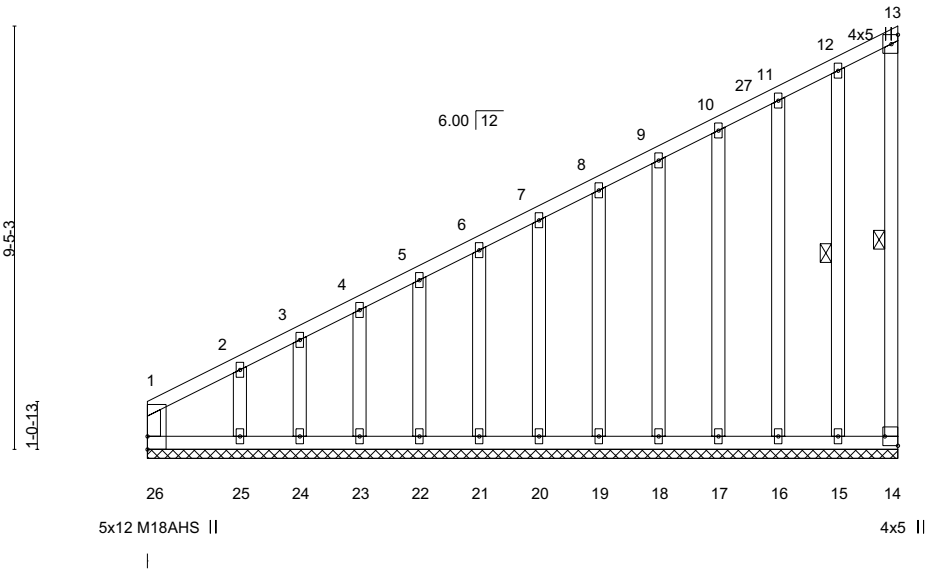


Plate Offsets (X,Y)-- [14:Edge,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	n/a	-	n/a	999	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	n/a	-	n/a	999	M18AHS	169/162
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 134 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 DF No.1&Btr
BOT CHORD	2x4 DF No.1&Btr
WEBS	2x4 DF No.2
OTHERS	2x4 DF No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 13-14, 12-15

REACTIONS. All bearings 16-8-12.
(lb) - Max Horz 26=308(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 26, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 except 25=-202(LC 9)
Max Grav All reactions 250 lb or less at joint(s) 26, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-26=-400/205, 1-2=-698/372, 2-3=-542/299, 3-4=-537/306, 4-5=-490/290, 5-6=-450/278, 6-7=-410/265, 7-8=-369/253, 8-9=-328/240, 9-10=-287/228
WEBS 2-25=-182/333

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner(3E) 0-1-12 to 3-4-12, Exterior(2N) 3-4-12 to 16-7-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are MT20 plates unless otherwise indicated.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 26, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 except (jt=lb) 25=202.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

EXPIRES: 12/31/2024
September 25,2023

MiTek
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916/788-3571 / MiTek-US.com

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539303
3688515	A08	Monopitch Supported Gable	2	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:27 2023 Page 1
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16-10-6
16-10-6

Scale = 1:51.4

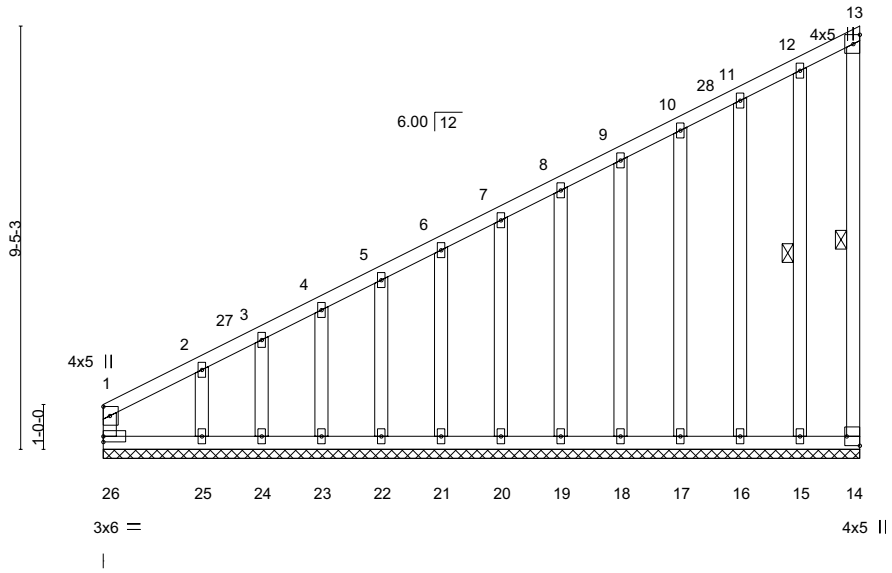

Plate Offsets (X,Y)-- [14:Edge,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.58	Vert(LL)	n/a	-	n/a	999	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.25	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 134 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 DF No.1&Btr
BOT CHORD	2x4 DF No.1&Btr
WEBS	2x4 DF No.2
OTHERS	2x4 DF No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 13-14, 12-15

REACTIONS. All bearings 16-10-6.
(lb) - Max Horz 26=308(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 26, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 except 25=-182(LC 9)
Max Grav All reactions 250 lb or less at joint(s) 26, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-26=-376/192, 1-2=-689/367, 2-3=-541/298, 3-4=-536/305, 4-5=-489/289, 5-6=-450/277, 6-7=-409/265, 7-8=-368/253, 8-9=-328/240, 9-10=-287/228
WEBS 2-25=-173/314

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner(3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 16-8-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 26, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 except (jt=lb) 25=182.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

EXPIRES: 12/31/2024
September 25,2023

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539304
3688515	A09	Monopitch Girder	2	2	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:29 2023 Page 1
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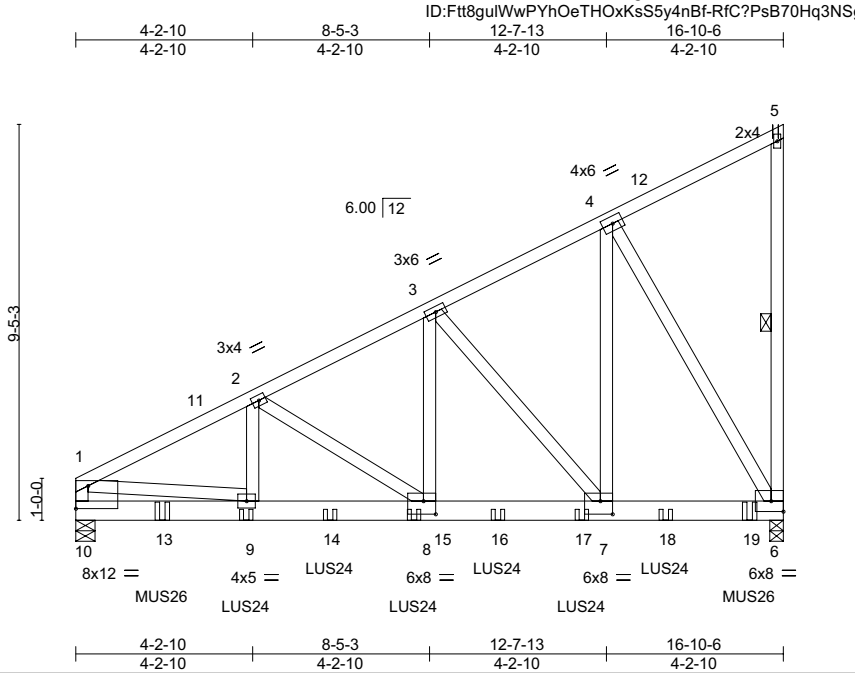

Plate Offsets (X,Y)-- [7:0-3-8,0-3-12], [8:0-3-8,0-3-12], [10:Edge,0-6-8]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.33	Vert(LL)	-0.05	8-9	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.57	Vert(CT)	-0.09	8-9	>999	180		
BCLL	0.0 *	Rep Stress Incr	NO	WB	0.70	Horz(CT)	0.02	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 244 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x6 DF No.2
WEBS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 5-6

REACTIONS. (size) 6=0-3-14, 10=0-5-8
Max Horz 10=306(LC 11)
Max Uplift 6=-804(LC 12), 10=-636(LC 12)
Max Grav 6=3677(LC 1), 10=3250(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-2=-4723/1142, 2-3=-3618/922, 3-4=-1932/572, 1-10=-2823/721
BOT CHORD 9-10=-718/681, 8-9=-1323/4164, 7-8=-997/3186, 6-7=-575/1677
WEBS 2-9=-233/884, 2-8=-1164/388, 3-8=-516/2209, 3-7=-2293/642, 4-7=-843/3383, 4-6=-3293/900, 1-9=-815/3586

NOTES-
1) 2-ply truss to be connected together with 10d (0.131"x3") nails as follows:
Top chords connected as follows: 2x4 - 1 row at 0-9-0 oc.
Bottom chords connected as follows: 2x6 - 2 rows staggered at 0-9-0 oc.
Webs connected as follows: 2x4 - 1 row at 0-9-0 oc.
2) All loads are considered equally applied to all plies, except if noted as front (F) or back (B) face in the LOAD CASE(S) section. Ply to ply connections have been provided to distribute only loads noted as (F) or (B), unless otherwise indicated.
3) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 16-8-10 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
4) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
5) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 6=804, 10=636.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
8) Use Simpson Strong-Tie MUS26 (6-10d Girder, 4-10d Truss, Single Ply Girder) or equivalent spaced at 14-0-0 oc max. starting at 2-0-12 from the left end to 16-0-12 to connect truss(es) to front face of bottom chord.
9) Use Simpson Strong-Tie LUS24 (4-10d Girder, 2-10d Truss) or equivalent spaced at 2-0-0 oc max. starting at 4-0-12 from the left end to 14-0-12 to connect truss(es) to front face of bottom chord.
10) Fill all nail holes where hanger is in contact with lumber.

LOAD CASE(S) Standard

REGISTERED PROFESSIONAL ENGINEER 97587PE OREGON SEPTEMBER 14, 2021 DUSTIN REINMUTH

EXPIRES: 12/31/2024
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Continued on page 2

MiTek
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916/783-3571 / MiTek-US.com

City of Portland
Reviewed for code compliance
Date: 10/05/24
Project #: 22-163680-000-00-RS

LOAD CASE(S) Standard

1) Dead + Roof Live (balanced): Lumber Increase=1.15, Plate Increase=1.15
   Uniform Loads (plf)
   Vert: 1-5=-64, 6-10=-20
   Concentrated Loads (lb)
   Vert: 9=-693(F) 13=-693(F) 14=-693(F) 15=-693(F) 16=-693(F) 17=-693(F) 18=-686(F) 19=-689(F)

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539305
3688515	B01	GABLE	2	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:31 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

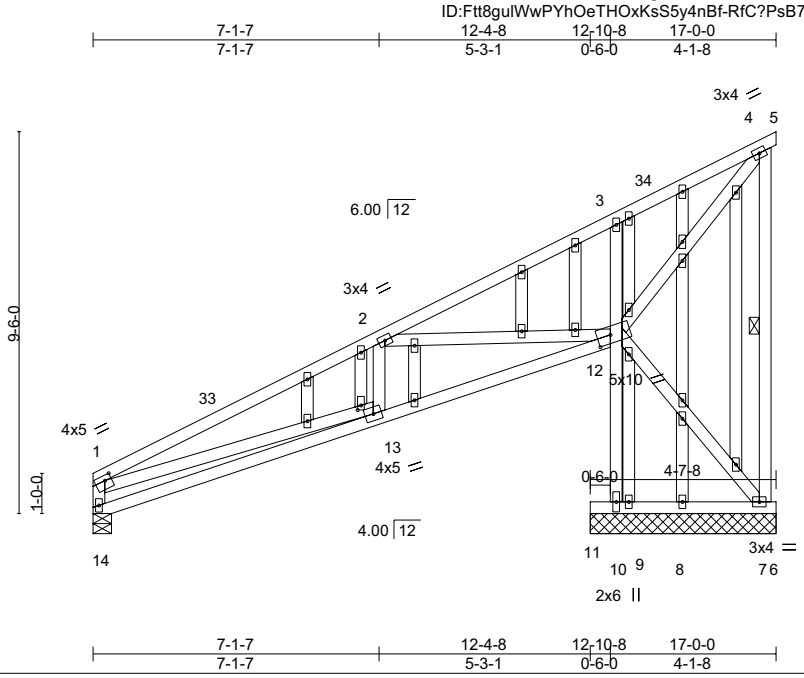

Plate Offsets (X,Y)-- [1:0-2-0,0-1-8], [12:0-4-0,0-2-8], [17:0-1-6,0-1-0]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.36	Vert(LL)	-0.05	13-14	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.36	Vert(CT)	-0.11	13-14	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.77	Horz(CT)	0.02	10	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 147 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.2
WEBS 2x4 DF No.2
OTHERS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 oc bracing.
WEBS 1 Row at midpt 4-7

REACTIONS. All bearings 4-7-8 except (jt=length) 14=0-5-8.
(lb) - Max Horz 14=243(LC 12)
Max Uplift All uplift 100 lb or less at joint(s) 6, 7 except 5=-128(LC 1), 10=-182(LC 12)
Max Grav All reactions 250 lb or less at joint(s) 5, 7, 9, 8 except 14=462(LC 1), 10=1025(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-14=-469/191, 1-2=-926/166, 2-3=-210/379, 3-4=-71/326
BOT CHORD 13-14=-496/330, 12-13=-472/796
WEBS 1-13=0/537, 2-13=0/254, 2-12=-1017/464, 4-12=-413/31, 10-12=-999/400, 3-12=-324/238

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable studs spaced at 1-4-0 oc.
5) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
6) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
7) Bearing at joint(s) 14 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
8) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 6, 7 except (jt=lb) 5=128, 10=182.
9) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

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Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539306
3688515	B02	Jack-Closed	12	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:32 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

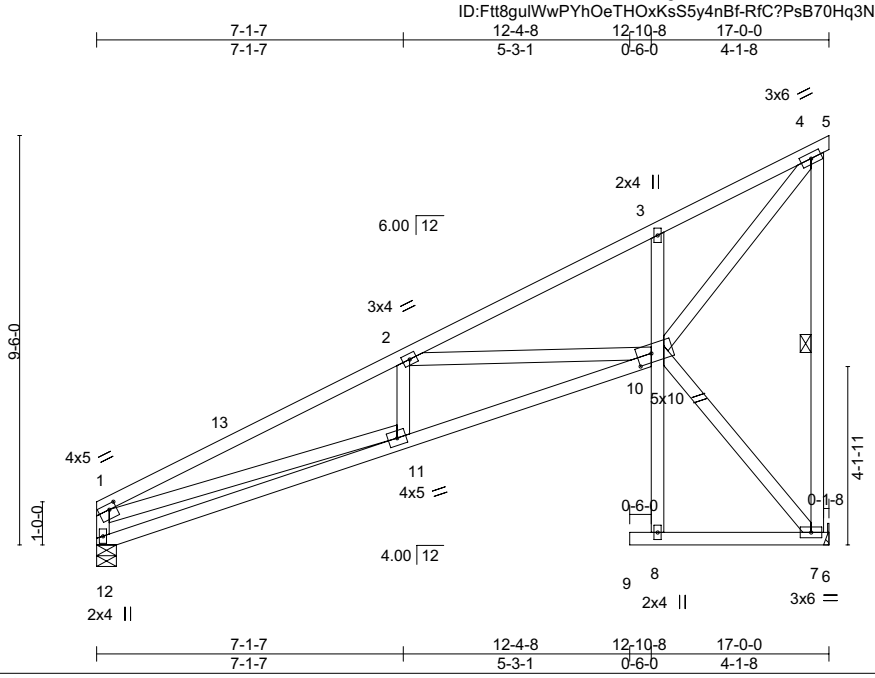

Plate Offsets (X,Y)-- [1:0-2-0,0-1-8], [10:0-4-0,0-2-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.44	Vert(LL)	-0.08	10-11	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.43	Vert(CT)	-0.14	11-12	>999	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.44	Horz(CT)	0.12	7	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 108 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.2
WEBS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 4-3-4 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 8-6-0 oc bracing.
WEBS 1 Row at midpt 4-7

REACTIONS. (size) 12=0-5-8, 7=Mechanical
Max Horz 12=242(LC 12)
Max Uplift 7=-148(LC 12)
Max Grav 12=699(LC 1), 7=713(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-12=-712/221, 1-2=-1822/310, 2-3=-915/133, 3-4=-901/245
BOT CHORD 11-12=-411/348, 10-11=-540/1641
WEBS 1-11=-134/1322, 2-10=-810/280, 4-10=-415/1206, 3-10=-327/211, 4-7=-664/287

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Bearing at joint(s) 12 considers parallel to grain value using ANSI/TPI 1 angle to grain formula. Building designer should verify capacity of bearing surface.
6) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) except (jt=lb) 7=148.
7) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

EXPIRES: 12/31/2024
September 25,2023

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539307
3688515	B03	Jack-Closed	4	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:33 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

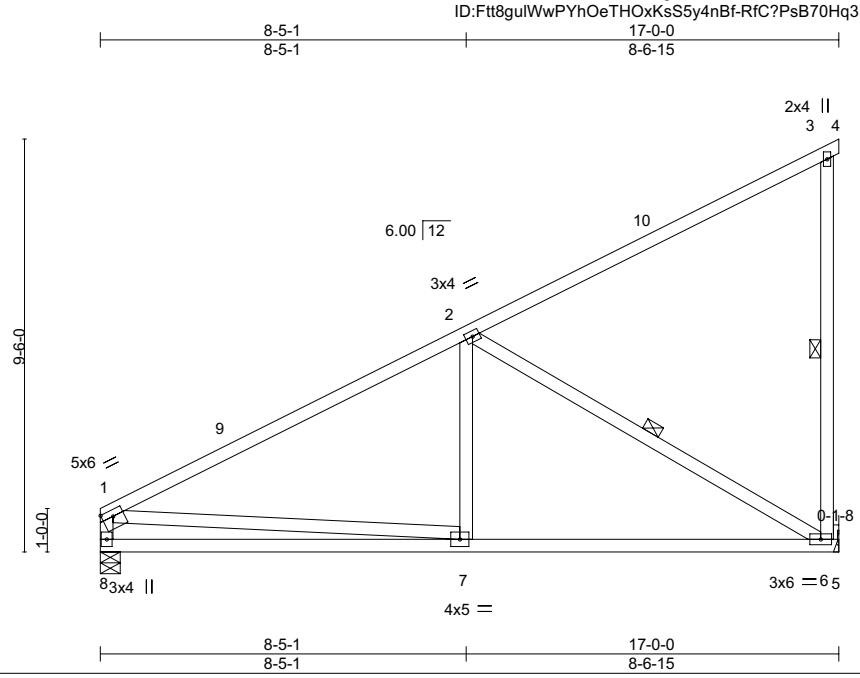

Plate Offsets (X,Y)-- [1:Edge,0-1-12]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.68	Vert(LL)	-0.11	6-7	>999	240	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.46	Vert(CT)	-0.22	6-7	>919	180		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.32	Horz(CT)	0.01	6	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 91 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.1&Btr
WEBS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 2-6, 3-6

REACTIONS. (size) 8=0-5-8, 6=Mechanical
Max Horz 8=243(LC 12)
Max Uplift 8=-2(LC 12), 6=-152(LC 12)
Max Grav 8=696(LC 1), 6=706(LC 1)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-8=-625/108, 1-2=-907/15
BOT CHORD 7-8=-375/325, 6-7=-236/722
WEBS 1-7=0/442, 2-7=0/369, 2-6=-839/273

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Exterior(2E) 0-1-12 to 3-1-12, Interior(1) 3-1-12 to 17-0-0 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
3) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
4) Refer to girder(s) for truss to truss connections.
5) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 8 except (jt=lb) 6=152.
6) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

EXPIRES: 12/31/2024
September 25,2023

400 Sunrise Ave., Suite 270
Roseville, CA 95661
916/783-3571 / MiTek-US.com

City of Portland
Reviewed for code compliance
Date: 10/15/24
Project #: 22-163680-000-00-RS

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539308
3688515	C01	Half Hip Supported	2	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:35 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

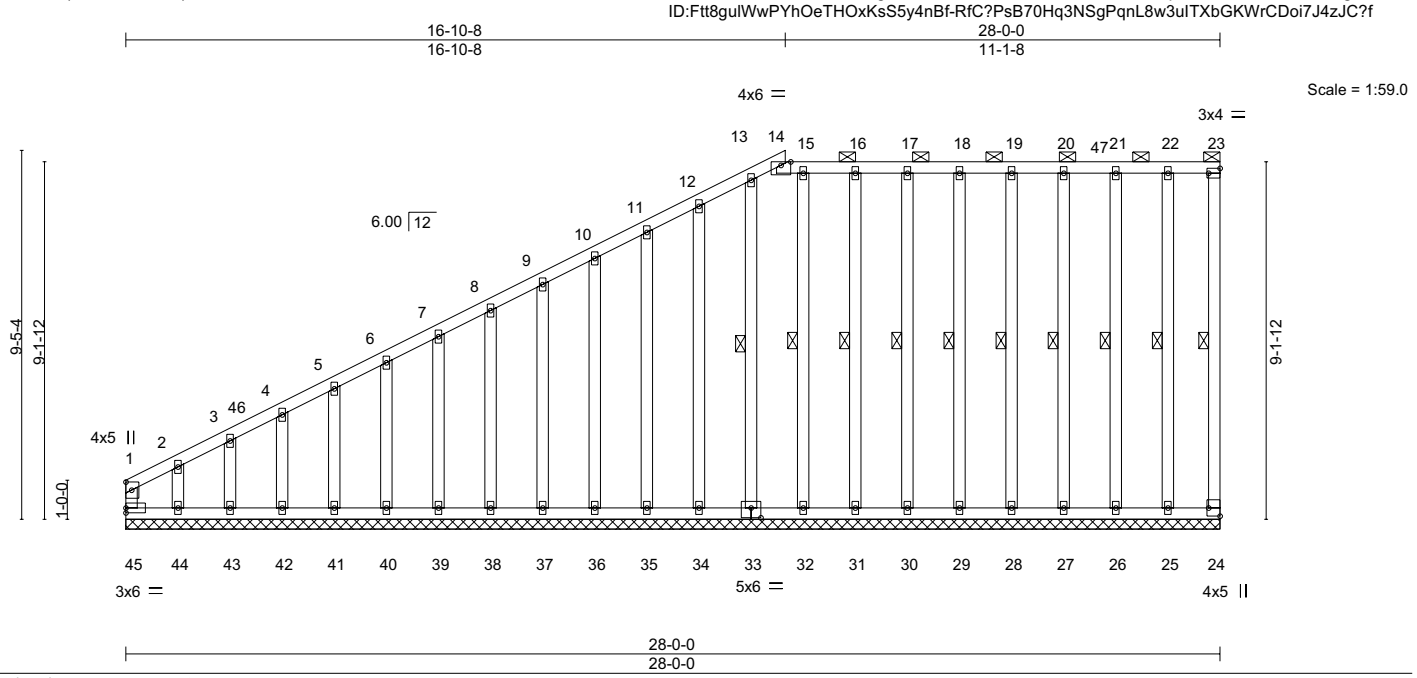

Plate Offsets (X,Y)-- [23:Edge,0-1-8], [24:Edge,0-3-8], [33:0-3-0,0-3-0]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.57	Vert(LL)	n/a	-	n/a	999	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.20	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.01	24	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 262 lb	FT = 20%

LUMBER-
TOP CHORD 2x4 DF No.1&Btr
BOT CHORD 2x4 DF No.1&Btr
WEBS 2x4 DF No.2
OTHERS 2x4 DF No.2

BRACING-
TOP CHORD Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals, and 2-0-0 oc purlins (6-0-0 max.): 14-23.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS 1 Row at midpt 23-24, 22-25, 21-26, 20-27, 19-28, 18-29, 17-30, 16-31, 15-32, 13-33

REACTIONS. All bearings 28-0-0.
(lb) - Max Horz 45=300(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 45, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42 except 44=-233(LC 9)
Max Grav All reactions 250 lb or less at joint(s) 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44 except 45=297(LC 9)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-45=-410/243, 1-2=-622/378, 2-3=-488/305, 3-4=-470/304, 4-5=-432/290, 5-6=-398/278, 6-7=-363/266, 7-8=-328/253, 8-9=-293/241, 9-10=-258/229
WEBS 2-44=-181/291

NOTES-
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner(3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 16-7-1, Corner(3R) 16-7-1 to 19-7-1, Exterior(2N) 19-7-1 to 27-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
3) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
4) Provide adequate drainage to prevent water ponding.
5) All plates are 2x4 MT20 unless otherwise indicated.
6) Gable requires continuous bottom chord bearing.
7) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
8) Gable studs spaced at 1-4-0 oc.
9) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
10) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
11) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 45, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42 except (jt=lb) 44=233.
12) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
13) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

EXPIRES: 12/31/2024
September 25,2023

MiTek
400 Sunrise Ave., Suite 270
Roseville, CA 95661
916/788-3971 / MiTek-US.com

City of Portland
Reviewed for code compliance
Date: 10/25/24
Project #: 22-163680-000-00-RS

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539309
3688515	C02	Flat Supported Gable	2	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:37 2023 Page 1
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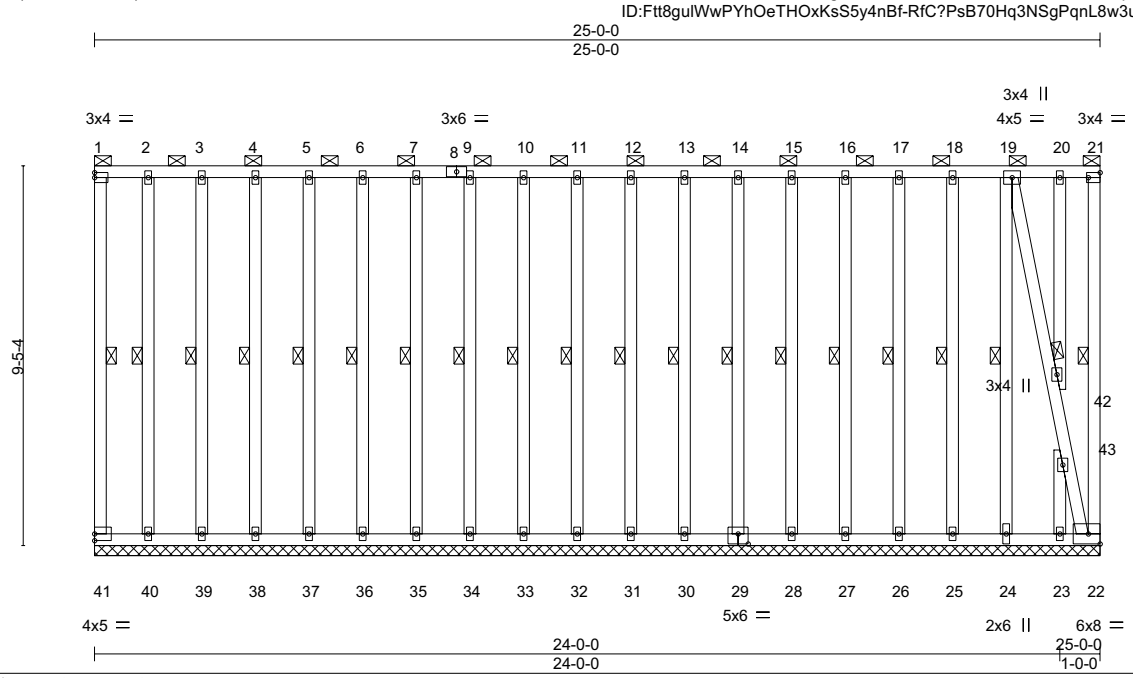

Plate Offsets (X,Y)-- [21:Edge,0-1-8], [29:0-3-0,0-3-0]

LOADING (psf)		SPACING- 2-0-0		CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.61	Vert(LL)	n/a	-	n/a	999	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.27	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.66	Horz(CT)	0.01	22	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-SH							Weight: 318 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 DF No.1&Btr
BOT CHORD	2x4 DF No.1&Btr
WEBS	2x4 DF No.2
OTHERS	2x4 DF No.2

BRACING-

TOP CHORD	2-0-0 oc purlins (6-0-0 max.): 1-21, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 8-10-14 oc bracing.
WEBS	1 Row at midpt 1-41, 21-22, 2-40, 3-39, 4-38, 5-37, 6-36, 7-35, 9-34, 10-33, 11-32, 12-31, 13-30, 14-29, 15-28, 16-27, 17-26, 18-25, 19-24
JOINTS	1 Brace at Jt(s): 1, 21, 42

REACTIONS. All bearings 25-0-0.
(lb) - Max Horz 41=289(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 23 except 22=-614(LC 11), 25=-120(LC 8), 24=-466(LC 8)
Max Grav All reactions 250 lb or less at joint(s) 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 25, 23 except 22=598(LC 8), 24=458(LC 11)

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.

BOT CHORD	40-41=-503/553, 39-40=-503/553, 38-39=-503/553, 37-38=-503/553, 36-37=-503/553, 35-36=-503/553, 34-35=-503/553, 33-34=-503/553, 32-33=-503/553, 31-32=-503/553, 30-31=-503/553, 29-30=-503/553, 28-29=-503/553, 27-28=-503/553, 26-27=-503/553, 25-26=-503/553, 24-25=-503/553, 23-24=-503/553, 22-23=-512/562
WEBS	18-25=-270/315, 19-24=-1151/1186, 19-42=-1523/1525, 42-43=-1396/1392, 22-43=-1224/1225

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner(3) zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) Provide adequate drainage to prevent water ponding.
4) All plates are 2x4 MT20 unless otherwise indicated.
5) Gable requires continuous bottom chord bearing.
6) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
7) Gable studs spaced at 1-4-0 oc.
8) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
9) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
10) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 41, 40, 39, 38, 37, 36, 35, 34, 33, 32, 31, 30, 29, 28, 27, 26, 23 except (jt=lb) 22=614, 25=120, 24=466.
11) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.
12) Graphical purlin representation does not depict the size or the orientation of the purlin along the top and/or bottom chord.

EXPIRES: 12/31/2024
September 25,2023

400 Sunrise Ave., Suite 270
Roseville, CA 95661
916/783-3571 / MiTek-US.com

City of Portland
Reviewed for code compliance
Date: 10/25/24
Project #: 22-163680-000-00-RS

Job	Truss	Truss Type	Qty	Ply	3688515-OREGON HOMEWORKS, LLC- 4429 N VANCOUVER AVE R78539310
3688515	D01	Monopitch Supported Gable	2	1	Job Reference (optional)

Builders FirstSource (Beaverton, OR), Beaverton, OR - 97005, 8.630 s Aug 30 2023 MiTek Industries, Inc. Fri Sep 22 10:15:38 2023 Page 1
ID:Ftt8gulWwPYhOeTHOxKsS5y4nBf-RfC?PsB70Hq3NSgPqnL8w3ulTXbGKWrCDoi7J4zJC?f

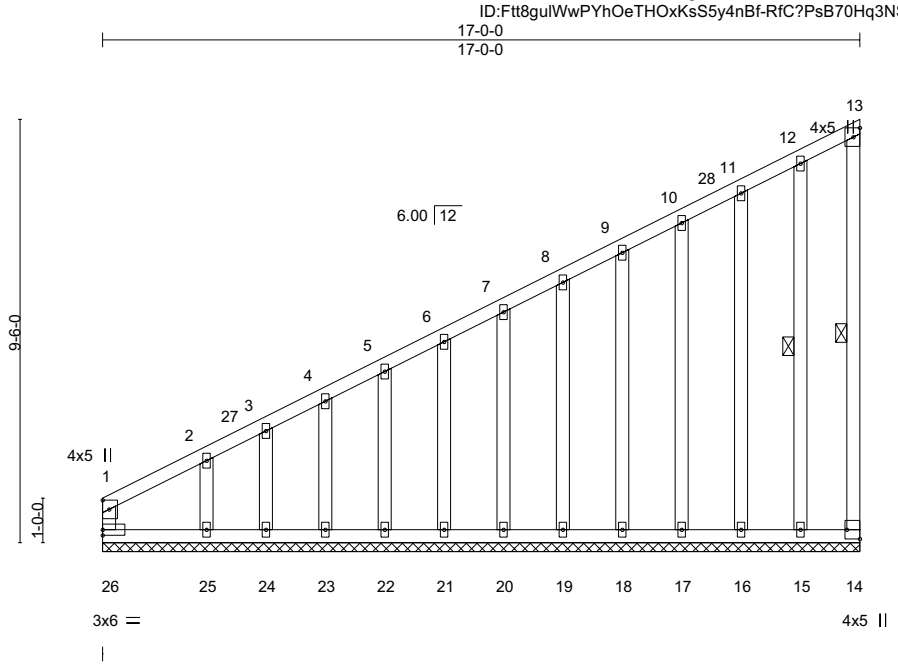

Plate Offsets (X,Y)-- [14:Edge,0-3-8]

LOADING (psf)		SPACING-	2-0-0	CSI.		DEFL.	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	25.0	Plate Grip DOL	1.15	TC	0.59	Vert(LL)	n/a	-	n/a	999	MT20	220/195
TCDL	7.0	Lumber DOL	1.15	BC	0.26	Vert(CT)	n/a	-	n/a	999		
BCLL	0.0 *	Rep Stress Incr	YES	WB	0.08	Horz(CT)	0.00	14	n/a	n/a		
BCDL	10.0	Code IRC2018/TPI2014		Matrix-R							Weight: 136 lb	FT = 20%

LUMBER-

TOP CHORD	2x4 DF No.1&Btr
BOT CHORD	2x4 DF No.1&Btr
WEBS	2x4 DF No.2
OTHERS	2x4 DF No.2

BRACING-

TOP CHORD	Structural wood sheathing directly applied or 6-0-0 oc purlins, except end verticals.
BOT CHORD	Rigid ceiling directly applied or 10-0-0 oc bracing.
WEBS	1 Row at midpt 13-14, 12-15

REACTIONS. All bearings 17-0-0.
(lb) - Max Horz 26=311(LC 9)
Max Uplift All uplift 100 lb or less at joint(s) 26, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 except 25=-179(LC 9)
Max Grav All reactions 250 lb or less at joint(s) 26, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25

FORCES. (lb) - Max. Comp./Max. Ten. - All forces 250 (lb) or less except when shown.
TOP CHORD 1-26=-367/187, 1-2=-687/367, 2-3=-538/298, 3-4=-535/306, 4-5=-489/290, 5-6=-449/278, 6-7=-409/266, 7-8=-368/253, 8-9=-328/241, 9-10=-288/228
WEBS 2-25=-174/315

NOTES-
1) Wind: ASCE 7-16; Vult=140mph (3-second gust) Vasd=111mph; TCDL=4.2psf; BCDL=6.0psf; h=25ft; Cat. II; Exp B; Enclosed; MWFRS (envelope) and C-C Corner(3E) 0-1-12 to 3-1-12, Exterior(2N) 3-1-12 to 16-10-4 zone; cantilever left and right exposed ; end vertical left and right exposed;C-C for members and forces & MWFRS for reactions shown; Lumber DOL=1.60 plate grip DOL=1.60
2) Truss designed for wind loads in the plane of the truss only. For studs exposed to wind (normal to the face), see Standard Industry Gable End Details as applicable, or consult qualified building designer as per ANSI/TPI 1.
3) All plates are 2x4 MT20 unless otherwise indicated.
4) Gable requires continuous bottom chord bearing.
5) Truss to be fully sheathed from one face or securely braced against lateral movement (i.e. diagonal web).
6) Gable studs spaced at 1-4-0 oc.
7) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
8) * This truss has been designed for a live load of 20.0psf on the bottom chord in all areas where a rectangle 3-6-0 tall by 2-0-0 wide will fit between the bottom chord and any other members.
9) Provide mechanical connection (by others) of truss to bearing plate capable of withstanding 100 lb uplift at joint(s) 26, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23 except (jt=lb) 25=179.
10) This truss is designed in accordance with the 2018 International Residential Code sections R502.11.1 and R802.10.2 and referenced standard ANSI/TPI 1.

EXPIRES: 12/31/2024
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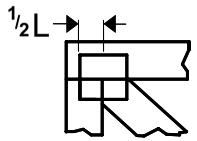
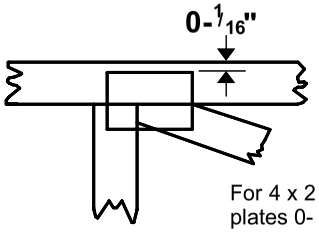
Symbols

PLATE LOCATION AND ORIENTATION



Center plate on joint unless x, y offsets are indicated. Dimensions are in ft-in-sixteenths. Apply plates to both sides of truss and fully embed teeth.



For 4 x 2 orientation, locate plates 0- 1/16" from outside edge of truss.

This symbol indicates the required direction of slots in connector plates.

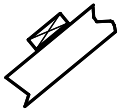
* Plate location details available in MiTek software or upon request.

PLATE SIZE

4 x 4

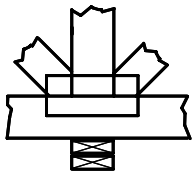
The first dimension is the plate width measured perpendicular to slots. Second dimension is the length parallel to slots.

LATERAL BRACING LOCATION



Indicated by symbol shown and/or by text in the bracing section of the output. Use T or I bracing if indicated.

BEARING

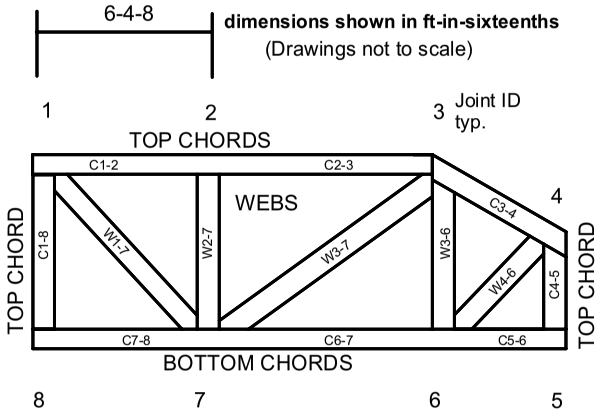


Indicates location where bearings (supports) occur. Icons vary but reaction section indicates joint number/letter where bearings occur. Min size shown is for crushing only.

Industry Standards:

ANSI/TPI1: National Design Specification for Metal Plate Connected Wood Truss Construction.
DSB-22: Design Standard for Bracing.
BCSI: Building Component Safety Information, Guide to Good Practice for Handling, Installing, Restraining & Bracing of Metal Plate Connected Wood Trusses.

Numbering System



JOINTS ARE GENERALLY NUMBERED/LETTERED CLOCKWISE AROUND THE TRUSS STARTING AT THE JOINT FARTHEST TO THE LEFT.

CHORDS AND WEBS ARE IDENTIFIED BY END JOINT NUMBERS/LETTERS.

Product Code Approvals

ICC-ES Reports:

ESR-1988, ESR-2362, ESR-2685, ESR-3282
ESR-4722, ESL-1388

Design General Notes

Trusses are designed for wind loads in the plane of the truss unless otherwise shown.

Lumber design values are in accordance with ANSI/TPI 1 section 6.3 These truss designs rely on lumber values established by others.

MiTek®

General Safety Notes

Failure to Follow Could Cause Property Damage or Personal Injury

1. Additional stability bracing for truss system, e.g. diagonal or X-bracing, is always required. See BCSI.
2. Truss bracing must be designed by an engineer. For wide truss spacing, individual lateral braces themselves may require bracing, or alternative Tor I bracing should be considered.
3. Never exceed the design loading shown and never stack materials on inadequately braced trusses.
4. Provide copies of this truss design to the building designer, erection supervisor, property owner and all other interested parties.
5. Cut members to bear tightly against each other.
6. Place plates on each face of truss at each joint and embed fully. Knots and wane at joint locations are regulated by ANSI/TPI 1.
7. Design assumes trusses will be suitably protected from the environment in accord with ANSI/TPI 1.
8. Unless otherwise noted, moisture content of lumber shall not exceed 19% at time of fabrication.
9. Unless expressly noted, this design is not applicable for use with fire retardant, preservative treated, or green lumber.
10. Camber is a non-structural consideration and is the responsibility of truss fabricator. General practice is to camber for dead load deflection.
11. Plate type, size, orientation and location dimensions indicated are minimum plating requirements.
12. Lumber used shall be of the species and size, and in all respects, equal to or better than that specified.
13. Top chords must be sheathed or purlins provided at spacing indicated on design.
14. Bottom chords require lateral bracing at 10 ft. spacing, or less, if no ceiling is installed, unless otherwise noted.
15. Connections not shown are the responsibility of others.
16. Do not cut or alter truss member or plate without prior approval of an engineer.
17. Install and load vertically unless indicated otherwise.
18. Use of green or treated lumber may pose unacceptable environmental, health or performance risks. Consult with project engineer before use.
19. Review all portions of this design (front, back, words and pictures) before use. Reviewing pictures alone is not sufficient.
20. Design assumes manufacture in accordance with ANSI/TPI 1 Quality Criteria.
21. The design does not take into account any dynamic or other loads other than those expressly stated.