Design Loads

Roof	95 PSF
Dining Room Floors	100 PSF
Wind	115 MPH, Exposure C
Seismic design category	C
Maximum soil bearing pressure	2500 PSF
Minimum soil bearing pressure	0 PSF
Equivalent Fluid Pressure	
At-Rest	55 PCF
Active	65 PCF

On-site soil conditions are assumed for foundation design purposes. An open hole investigation should be conducted by a geotechnical engineer prior to construction. Any deviations in the assumed conditions shall be reported to Yampa Valley Engineering, Inc, which may require substantial design changes. The contractor/owner is proceeding with the assumed on-site conditions at their own risk.

The design herein and all construction standards shall utilize the 2018 International Building Code.

Metals:

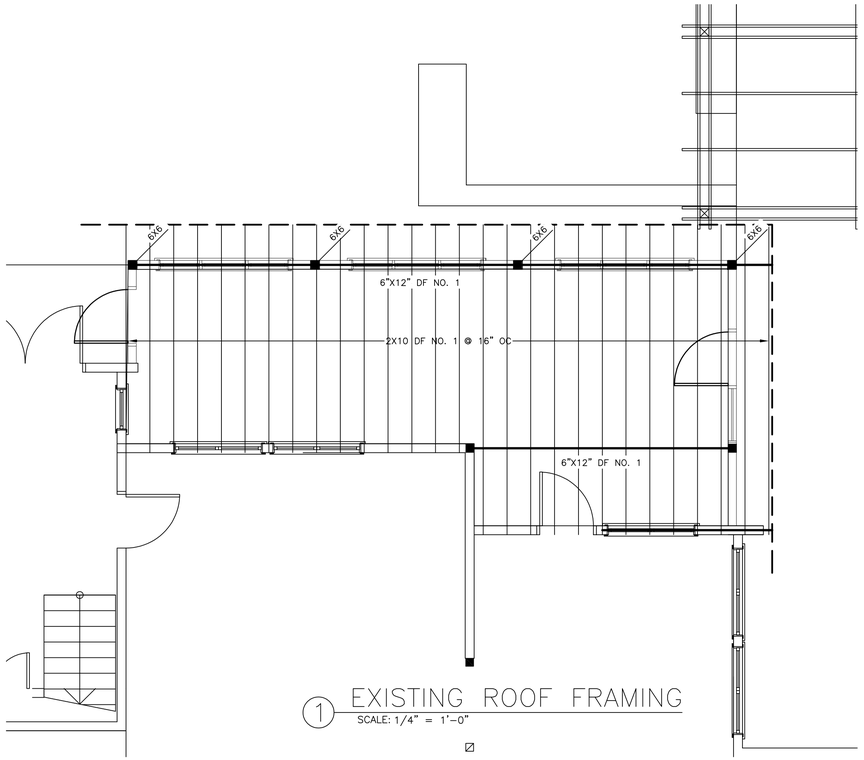
1. All steel shall conform to the following:
   Beams: A992
   Angles & miscellaneous: ASTM A36
   Bolts: ASTM 307
   Tube Columns: ASTM A500, Grade B 46ksi
2. Fitted web stiffeners shall be 3/8" plates welded continuous on each side of steel beam web under point loads above and at points of support.
3. Miscellaneous clips, anchors and connectors shall be Simpson strong tie or approved equal, unless otherwise noted. Products shall be installed in accordance with manufacturer's instructions.
4. All steel shall be fabricated and erected per AISC Steel Construction Manual.
5. Welding shall be done by a qualified welders with E70XX electrodes.
6. Anchor bolts installed in contact with pressure treated wood shall meet the manufacturers specifications for corrosion protection.
7. All steel beams shall have wood nailer plates with ½"ø carriage bolts at 36" glued, UNO. ALT: 5/32"ø drive pins at 24".

Carpentry:

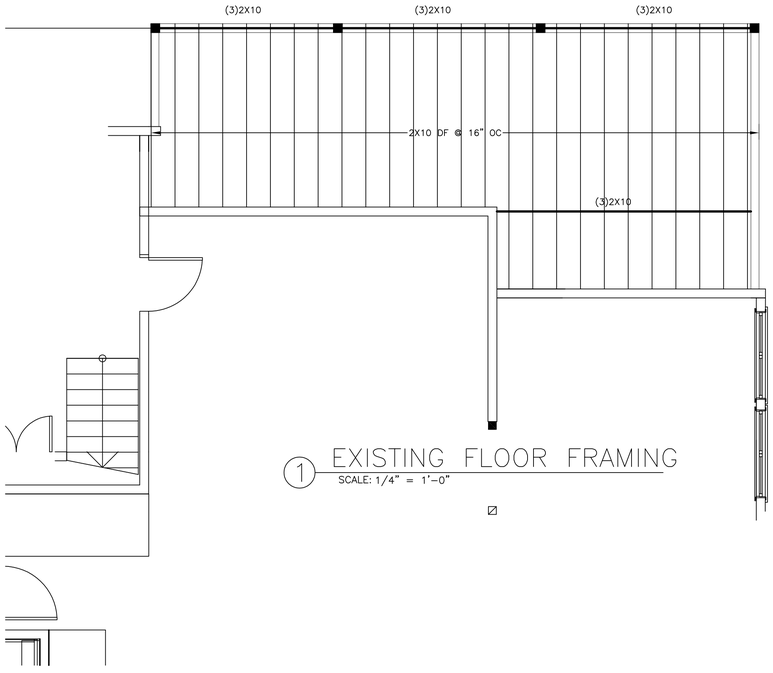
1. All framing not specifically shown, detailed, or drawn on plan shall comply with the non-engineered requirements specified in the IRC.
2. Minimum nailing and wood structural panel attachments shall be as specified in TABLE #R602.3(1) of the IRC. Additional nailing or attachment required for connections are per plan.
3. All treated lumber shall be treated in accordance with AWPA Standard U1 to the requirements of the intended use.
4. All 2"-4" thick dimensional framing lumber shall be visually graded, S-dry with the following minimum design values:
   Wall framing: SPF Stud grade or better, E=1,200,000 psi, Fb=675 psi, Ft=350 psi, Fv=135 psi, $Fc_{\perp}$=425 psi, $Fc_{\parallel}$=725 psi
   Joist or Rafter:
   SPF No.2 or better, E=1,400,000 psi, Fb=875 psi, Ft=450 psi, Fv=135 psi, $Fc_{\perp}$=425 psi, $Fc_{\parallel}$=1,150 psi
   DF-L (N) No.1/No.2 or better, E=1,600,000 psi, Fb=850 psi, Ft=500 psi, Fv=180 psi, $Fc_{\perp}$=625 psi, $Fc_{\parallel}$=1400 psi
5. All 2"-4" dimensional lumber in contact with concrete or masonry shall be treated and have the following minimum design values:
   Hem-Fir No.2 or better, E=1,300,000 psi, Fb=850 psi, Ft=525 psi, Fv=150 psi, $Fc_{\perp}$=405 psi, $Fc_{\parallel}$=1300 psi
6. All 5" thick and greater dimensional timber framing lumber shall be visually graded, S-dry with the following minimum design values:
   Beams: DF-L (N) No.1 or better, E=1,600,000 psi, Fb=1,300 psi, Ft=675 psi, Fv=170 psi, $Fc_{\perp}$=625 psi, $Fc_{\parallel}$=925 psi
   Columns: DF-L (N) No.1 or better, E=1,600,000 psi, Fb=1,200 psi, Ft=825 psi, Fv=170 psi, $Fc_{\perp}$=625 psi, $Fc_{\parallel}$=1,000 psi
7. All structural glued laminated beams shall be AITC stressed rated and have the following minimum design values:
   Single Span: (24F-V4) E=1,800,000 psi, Fbc=2,400 psi, Fbt=1,450 psi, $Fc_{\perp}$=650 psi Fv=265 psi, SG=0.50
   Multiple Span: (24F-V8) E=1,800,000 psi, Fbc=2,400 psi, Fbt=2,400 psi, $Fc_{\perp}$=650 psi Fv=265 psi, SG=0.50
   Glu-lam beams in exterior applications shall be exterior rated.
8. All engineered wood shall be Trus Joist or approved equivalent with the following minimum design values:
   LVL: E=1,900,000 psi, Fb=2,600 psi, Ft= 1,555 psi, $Fc_{\perp}$=750 psi $Fc_{\parallel}$=2,510 psi, Fv=285 psi, SG=0.50
   LSL: E=1,300,000 psi, Fb=1,700 psi, Ft= 1,075 psi, $Fc_{\perp}$=680 psi $Fc_{\parallel}$=1,400 psi, Fv=400 psi, SG=0.50
   PSL: E=2,000,000 psi, Fb=2,900 psi, Ft= 2,025 psi, $Fc_{\perp}$=750 psi $Fc_{\parallel}$=2,900 psi, Fv=290 psi, SG=0.50
9. All prefabricated wood I-joists shall be Trus Joist or approved equivalent with the following minimum design values:
   9½" TJI 210: Mr=2,860 ft-lbs, V=1,330 lbs, EI=167x10^6 sq.in.-lbs
   11⅞" TJI 210: Mr=3,620 ft-lbs, V=1,655 lbs, EI=283x10^6 sq.in.-lbs
   11⅞" TJI 360: Mr=6,180 ft-lbs, V=1,705 lbs, EI=419x10^6 sq.in.-lbs
   14" TJI 210: Mr=4,280 ft-lbs, V=1,945 lbs, EI=415x10^6 sq.in.-lbs
   14" TJI 360: Mr=7,335 ft-lbs, V=1,955 lbs, EI=612x10^6 sq.in.-lbs
   Rim Joist: Per Manufacturer
10. All Roof sheathing shall be:
    MIN. 19/32" APA Rated 40/20 Exp. 1
11. All Floor sheathing shall be:
    MIN. 23/32" APA Rated 48/24 Exp. 1 T&G, glued and nailed.
12. All Wall sheathing shall be:
    MIN. 7/16" APA Rated 24/16 Exp. 1.
13. All prefabricated I-joists, pre-engineered trusses, specified connectors shall be installed per manufacturers specifications.
14. Wood framing members, including wood sheathing, that are in contact with exterior foundation walls and are less than 8 inches from exposed earth shall be of naturally durable or preservative-treated wood.
15. ALL EXTERIOR WALLS SHALL BE SHEATHED. Exterior walls shall be a minimum 2 x 6 @ 16" OC, UNO.
16. Interior bearing walls shall be 2x6 @ 16", UNO. For bearing walls perpendicular to floor framing provide full height solid blocking between bays. For bearing walls parallel to floor framing provide additional double floor joists under bearing wall or balloon frame bearing wall below to underside of sheathing.
17. Interior partitions (non load bearing) shall be 2x4 @ 16". Support partitions with 2x blocking @ 24" between joists, top and bottom.
18. All loads, point or distributed, shall have have continuous uninterrupted path to foundation. 2x squash blocks between floor assembly to match column above.
19. Provide solid blocking between joists at all supports, beams or bearing walls. Provide 1x4 cross-bridging or 2x blocking at not over 8' on center for all wood joists.
20. Minimum header size shall be 2-2x10's, UNO.
21. All king and trimmer studs per plan. Minimum 1 king and 1 trimmer stud at wall openings. All headers consisting of two or more LVL's shall have minimum 2 trimmers and 1 king.
22. Crawl spaces shall be vented per Section 408 of the IRC. The contractor is responsible for all ventilation required.

Erection Requirements:

1. Do NOT scale construction documents, if a dimension is necessary and not shown, Yampa Valley Engineering shall be contacted for dimension needed for construction.
2. If a discrepancy exists between the architectural and structural drawings, Yampa Valley Engineering shall be contacted immediately to rectify the discrepancy.
3. All structural elements are shown in final erected position. The contractor is responsible for all sequence of construction, shoring, bracing, or temporary work associated to achieve the final structure.
4. The main level floor shall be installed prior to the backfill of any foundation wall or adequate bracing must be provided by the contractor to ensure foundation wall stability.
5. The basement slab shall be installed and cured prior to the backfill of any foundation wall or adequate bracing must be provided by the contractor to ensure foundation wall stability.
6. Expansive soils may or may not be present on-site. All concrete slabs on grade shall be separated from all building finishes to allow for slab movement. Slab movement is caused by numerous conditions, the owner/contractor should take the necessary precautions to limit slab heave. Yampa Valley Engineering shall not be held liable for damage caused by slab movement.



1 EXISTING ROOF FRAMING
SCALE: 1/4" = 1'-0"



1 EXISTING FLOOR FRAMING
SCALE: 1/4" = 1'-0"

N
PLAN NORTH
SCALE: ¼" = 1'-0"
0' 1' 2' 5' 10' 15'

YVE,
YAMPA VALLEY ENGINEERING, INC.

STRUCTURAL
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DRAFTING
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5-16-22

Reviewed for Code Compliance
05/26/2022

PLANS FOR:
VISTA VERDE DINING ADDITION
58000 COWBOY WAY
CLARK, COLORADO

JOB NO:	22-007
DRAWN:	JAS
DATE:	05-05-22

REVISIONS

NO.	DATE	DRAWN
1	05-16-22	JAS

SHEET NUMBER
S-1