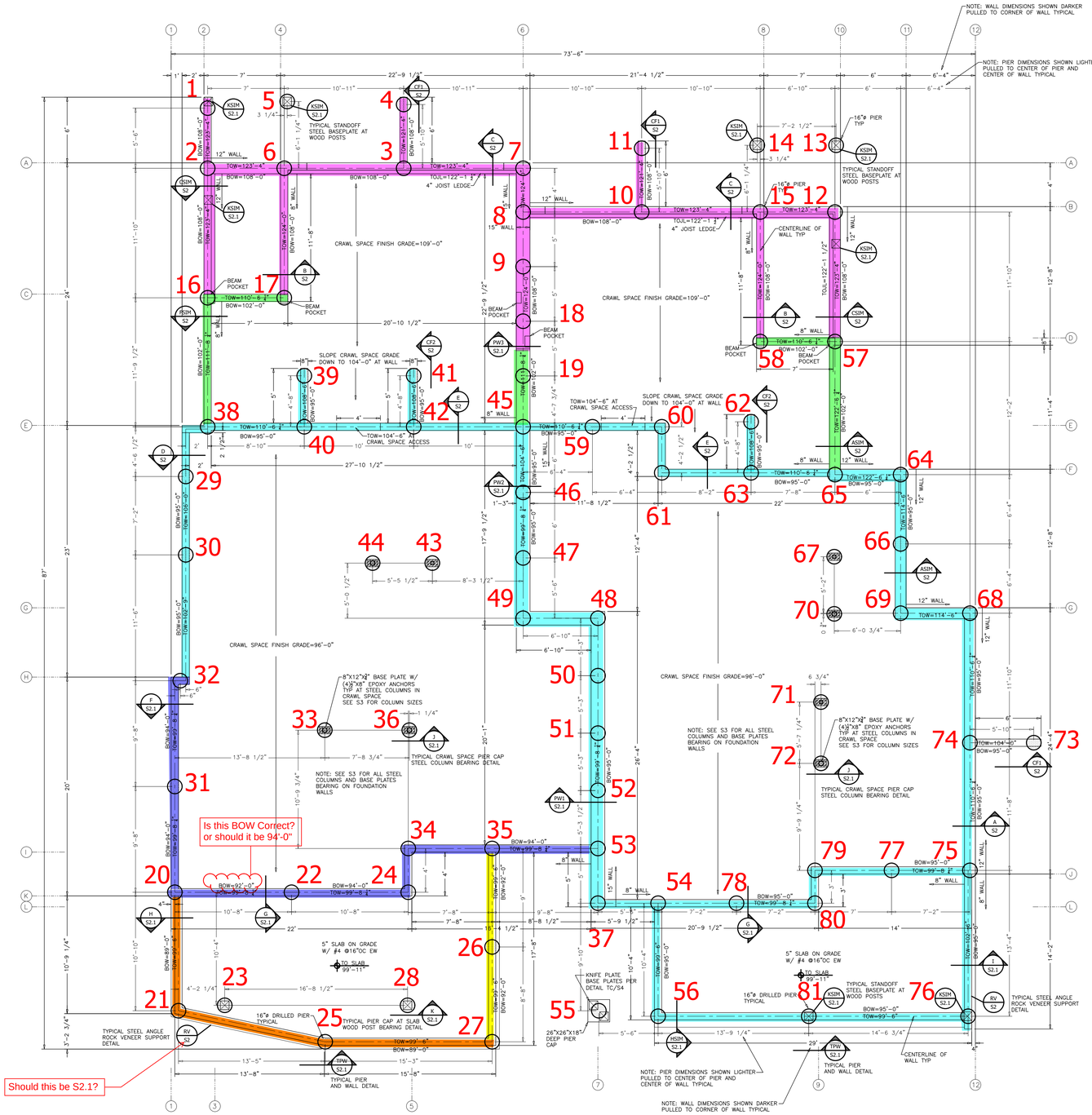

1 FOUNDATION PLAN
S1 Scale: 3/16"=1'-0"

NORTH

GENERAL
1. DESIGN LIVE LOADS: Snow=122.5 psf (Ground per RCRBD), 90psf (roof), Floor=40psf, Garage Floor=50psf+(2)5000 lb point loads, Wind, Vult=115 mph (3 Second Gust), Seismic Zone B
2. RESPONSIBILITY: The contractor is responsible for cross referencing all plans and inspecting work placement at the site to assure that no omissions or discrepancies exist that might adversely affect construction or the integrity of the finished product. Job site and construction safety are not addressed in these plans and are the responsibility of the contractor. These responsibilities are industry standard.
3. These plans are intended to be in accordance with 2021 IBC and IRC codes. All construction to be in conformance with these codes.

FOUNDATION
1. Foundation designed in accordance with N.W.C.C.'s soils report #24-13444 which is hereby made a part of these drawings. Drilled pier and grade beam wall foundation system designed with 3000 psf skin friction for portion of piers in bedrock and 40,000 psf end bearing on the bedrock.
2. Drilled piers to be 16" diameter with a minimum pier length of 20' and a minimum penetration into bedrock of 6'. NWCC must observe and approve the pier drilling and concrete and rebar placement. NWCC to provide CFE with a pier log and report detailing the operation. Reinforce the piers per plan details.
3. Remove topsoils, organic material, and any questionable material below the foundation. All walls exposed to frost must maintain the required 4' frost depth.
4. Drainage and grading details to divert surface drainage at least 10' away from the structure. Do not backfill against any foundation or retaining wall until all supporting floor and slab systems are in place and securely anchored, or other adequate wall support is provided.
5. Where exterior backfill rises above any adjacent floor, use granular free draining backfill from drain tile up. Exterior backfill may be native inorganic material where final grade is below lowest floor CFE recommends capping granular backfill with a Mirafi fabric under 12"-24" of water impermeable material (e.g. clay). Place and compact all backfill per soils report.
6. Provide 4" diameter perforated PVC draintile in a 12" by 12" gravel envelope at lowest levels of and perimeter of excavation sloped a minimum of 1/8" per foot to an adequate daylighting drain. Provide cleanouts and screen end. Mirafi or other filter barriers will help prevent drain clogging. Test draintile before and after backfilling.
7. All construction and materials to conform with ACI 318.
8. Reinforcing bar to be deformed 60 ksi steel (per ASTM A-615). Lap all rebar splices and corners 38 bar diameters minimum.
9. Minimum concrete 28 day compressive strength = 3500psi for walls, footers, and pads, and 4000psi for slabs.
10. Concrete cover minimums: Concrete cast against and permanently exposed to earth: pier cap = 3". Concrete exposed to earth or weather: walls, slabs = 1.5"
11. Consolidate concrete per ACI 309. Cast in place concrete shall be poured continuously so as to prevent cold joints.
12. Provide 1/2" diameter by 10"min anchor bolts at 32" on center with an embedment of 7" to connect framing to foundation (UNO). Anchor bolts to be located not more than 12"from foundation corner (TYP). Use galvanized anchor bolts with pressure treated plates. Finish all concrete wall tops to within 1/8" of specified elevations.
13. Foundation insulation and waterproofing to be specified and installed in accordance with the above mentioned soils report, IRC, local codes, and accepted construction practice.
14. Slabs to be 4" minimum thickness reinforced with #4 rebar mat at 16" on center.
15. Slab surfaces to be left free from trowel marks, uniform in appearance, and with a surface plane tolerance not exceeding 1/8" in 10'0" when tested with a 10' straightedge.
16. Provide 1" deep tooled (or cut) control joints at approximately 10' on center in each direction.
17. Provide 1/2" expansion joint material at all slab to wall, footing, or column interfaces. Provide a 6 mil poly barrier under all interior slabs for moisture protection and as a bond breaker. Provide an approved hardener and sealer to the surface of all slabs.

WOOD FRAMING
1. Framing plans show structural requirements only. Additional members may be required for blocking, nailers and code requirements.
2. Use Douglas Fir or Hem Fir "stud grade" (S45) 2x6 for all wall studs(UNO). Use DF#2 (S45) or better for all multi-stud posts, joists, rafters, headers, posts, beams and plates.
3. Sill plates and any other lumber in direct contact with concrete- Species Group B Pressure Treated Lumber. Use galvanized anchor bolts with pressure treated plates.
4. Maintain 6" clearance between untreated wood or siding and soils at finish grade.
5. Glulams (GL)- 24F-V8 manufactured in accordance with AITC 117-84, fb=2400psi. OK to use 24F-V4 for simple span applications only. All Glulams used in exterior applications must be sealed and protected from moisture with an appropriate preservative.
6. Laminated Veneer Lumber (LVL)- manufactured in accordance with APA criteria. fb=2600psi. Multiple LVL's glue and nail together with (2) rows 16d @12"oc (UNO).
7. Timbers- Douglas Fir (DF) #1 or better with Fb>1300psi.
8. Exterior Wall Ply- 7/16" OSB APA rated 24/16 min with 8d's @6"oc edge, 12" oc field. Manufactured in conformance with APA PS 1-83. Floor Ply- 3/4" T&G OSB APA rated 24/0 minimum, 8d's @6"oc edge, 10"oc field. Glue to joists. Roof Ply – 5/8" OSB APA rated 40/20 minimum, 8d's @6"oc edge, 12"oc field.
9. 7/16" OSB sheath 100% all exterior frame. Ply to lap floor rim, top plates and sill plate.
10. All floor and roof plywood place with 8' dimension perpendicular to framing with end joints staggered
11. Wall studs to be continuous from floor to floor, or floor to roof. Balloon frame all gable walls. Provide firestop blocking at 10' max intervals in any wall with studs over 10' height. Use LSL studs for all studs taller than 12'.
12. All load bearing headers in 2x6 wall (3)2x10; in 2x4 wall (2)2x10, (UNO). Use single trimmer and king stud each end for headers at openings 38" or less and double trimmers and king studs at openings greater than 38". UNO
13. Posts to stack over equal below (UNO). Trusses to stack over studs below (UNO). Provide end joist where studs above do not stack over studs below.
14. Solid block all bearing walls and posts for continuity to foundation.
15. Block all trusses, outlookers, rafters and joists at all bearing points.
16. Where full height foundation wall parallel to joists, block 1st joist space @24"oc.
17. Nailing, blocking, and all other construction details per IBC and IRC, such as Table R602.3(1). (UNO)
18. Connect joists to blocking with a minimum of (2)10d nails and connect joists to plate or beam below with a minimum of (3)10d toenails. Connect rim to plate below with 10d toenails @6"oc.
19. Nail exterior wall sole plate to joists below with (3)10d and to blocking, rim or end joist with 10d's @4"oc.
20. Connect all 2x or LVL rafters to blocking with (3)10d nails, and to plate or beam below with (4) 10d nails. Provide birdsmouth or seat cut bearing at all beams and wall plates UNO.
21. Roof Trusses- 90 psf snow load, 24"oc. Truss design and fabrication by others. No drop top gable truss adjacent to scissor truss without approval of Engineer. Trusses to stack over studs below. UNO
22. Connect common trusses to all bearing points with Simpson H2.5 connectors (UNO). Scissor trusses connect one end with Simpson TC26. Connect to blocking with (3)16d nails
23. Ventilate roof framing per local codes.
24. All connector callouts to be Simpson Strong-Tie or equal by Simpson Strong-Tie Company, Inc. Install per manufacturer's instructions.
25. TJI and MicroLam (ML) are products by Trus Joist MacMillan. Install per manufacturer's instructions.

STRUCTURAL STEEL
1. All structural steel shall conform to ASTM specifications A36 except pipe columns which shall conform to ASTM A53 Grade B, and steel tube columns which shall conform to ASTM A500 Grade B. Steel to steel member connection bolts shall be A325 steel and miscellaneous wood embedded items shall be A36 steel.
2. Steel column base plates shall bear evenly to concrete below via 4000 psi non shrink grout.
3. Minimum welds to be per AISC and/or AWS, but not less than 3\16" continuous fillet unless otherwise noted. Welding quality control shall be per AWS. All welders shall have evidence of current certification per the American Welding Society Standard Qualifications Test as detailed in AWS D1.1.
4. Provide 2x nailer plates on top flange of steel beams with ½" carriage bolts at 24"on center UNO. Option to use welded threaded rod studs instead of carriage bolts.
5. Provide fitted web stiffeners to match web thickness at steel beams at steel columns above (point loads), and at bearings on steel columns UNO.
6. Where steel beam bears on wood framing connect with (2)5/8"x6" lags through bottom flange UNO

TYPICAL ABBREVIATIONS

TOS = TOP OF SLAB
TOF = TOP OF FOOTER
TOW = TOP OF WALL
LVL = LAMINATED VENEER LUMBER
GL = GLULAM
HDR = HEADER
EE = EACH END
ES = EACH SIDE
EW = EACH WAY
OC = ON CENTER
OF = OVERFRAME
OH = OVERHANG
PT = PRESSURE TREATED
SOG = SLAB ON GRADE
LL = LEDGERLOK
TL = TIMBERLOK
TYP = TYPICAL
UNO = UNLESS NOTED OTHERWISE

5-1-25 revisions:
sheets S4, S5, S6,
Fireplace Bumpout, New Shed Roof
Gridlines J9-10

COLORADO REGISTERED PROFESSIONAL ENGINEER 34241 CRAIG BRANFORD FRITHSEN
May 1, 2025
Craig Branford Frithsen

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DATE: 2-5-25
JOB #: 24 BCD
DRAWN: CBF
ENG: CBF
REVISED: 5-1-25
REVISED: ----

ISSUE: PERMIT SET

FOUNDATION PLAN for the proposed:
BEAR CLAW DUPLEX
TBD SKI TRAIL LANE
STEAMBOAT SPRINGS, CO

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S1
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