1333 STILT HOUSE KIT

16 x 20 ft plate on stilts · two floors + half loft · carport under · rooftop rain deck · gravity water tower

Open-source concept plans for off-grid and sustainable living. A basis to learn from and build on, not a finished design.

DISCLAIMER · READ BEFORE USING THESE PLANS

Experimental design, published for educational purposes as a starting point for off-grid and sustainable living. These plans are not engineered, stamped, or approved for construction in any jurisdiction, and have not been reviewed by a licensed architect or engineer. Before building, have a licensed engineer design the foundations, posts, beams, connections and roof for your site's soil, frost depth, flood, wind, snow, seismic and fire conditions, and obtain every permit your jurisdiction requires. Anyone who builds, modifies or occupies a structure based on these plans does so entirely at their own risk. The plans are provided as-is, without warranty of any kind, and the authors and 13 <33 Covenant accept no liability for injury, death, property damage or any other loss arising from their use.

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KEY SPECS (FROM THE PUBLISHED KIT)

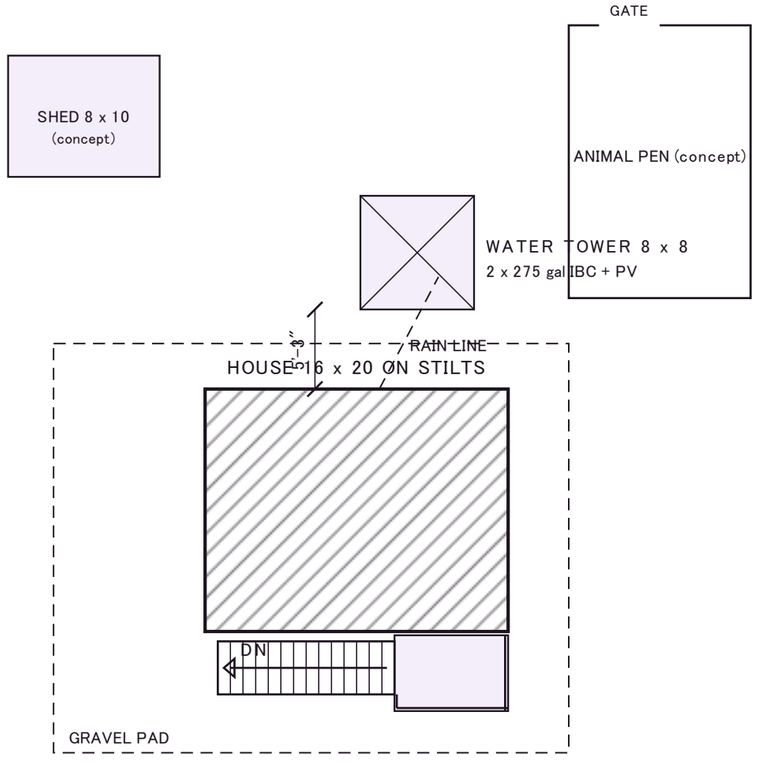
Footprint	16 x 20 ft (two 8 x 20 crates, or wood / foam)
Floors 1 + 2	320 sf each, two ~8 ft stories, 16 ft wall
Loft	16 x 10 ft (160 sf) under a 45° metal roof
Rain deck	16 x 10 ft metal, own gutters
Living total	about 800 sf
Carport	16 x 20, 9 ft clear (8 ft min)
Posts	8x8 or larger, 6-post grid, 45° braces
Stairs	detached, to a small porch, unhook for security
Water tower	8 x 8, ~16 ft, two 275 gal IBC totes
Heat / power	floor-1 wood stove; PV on roof + tower

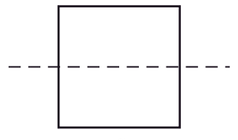
Generated from dims.js. Change a dimension there and regenerate: the 3D model, these sheets and the materials estimate all follow.

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SITE PLAN

Scale 1″ = 10′–0″. Concept layout; adapt to your land, setbacks and utilities.





NOTES

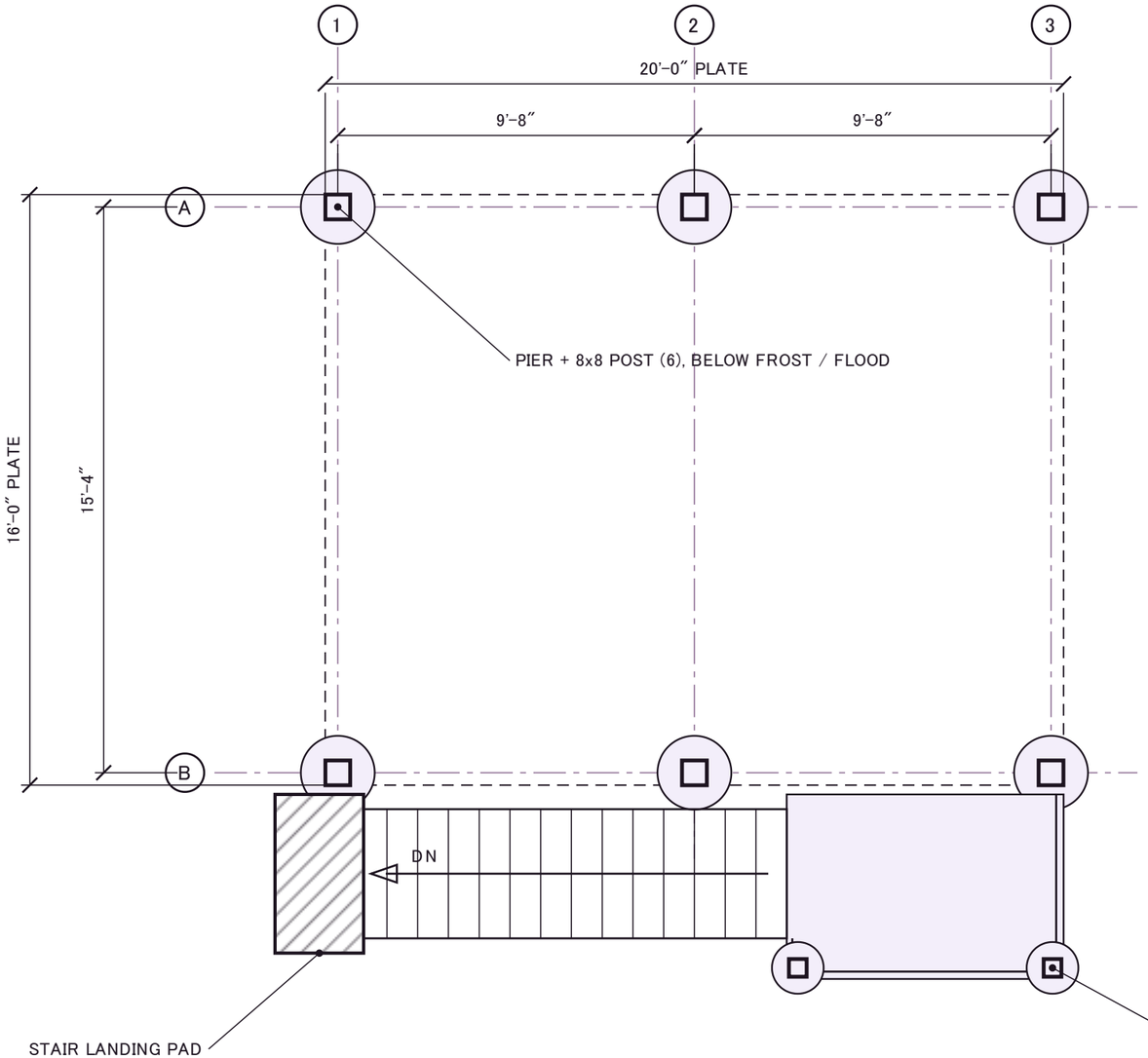
1. South (+x) faces the porch and roof solar. Rotate the whole plan to suit your sun path; keep solar on the sunny side.
2. Keep the tower close so the rain line stays short and falls toward the upper tote.
3. Turbine, shed and pen are concept extras, not in the kit spec.
4. Check setbacks, easements, flood zone and septic / well locations with your local authority.

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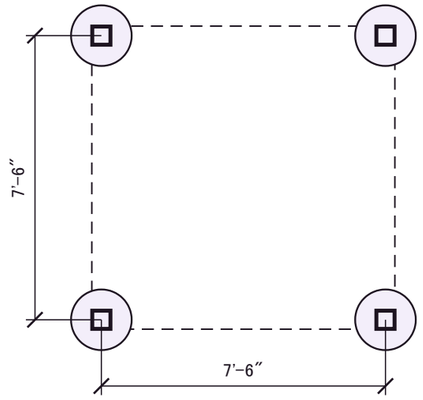
FOUNDATION + POST PLAN

Scale 1/4″ = 1′–0″. Pier size and depth by engineer for your soil, frost and flood line.



WATER TOWER FOUNDATION

4 piers on an 8 ft square. Centre 9′–0″ north of the house wall.



NOTES

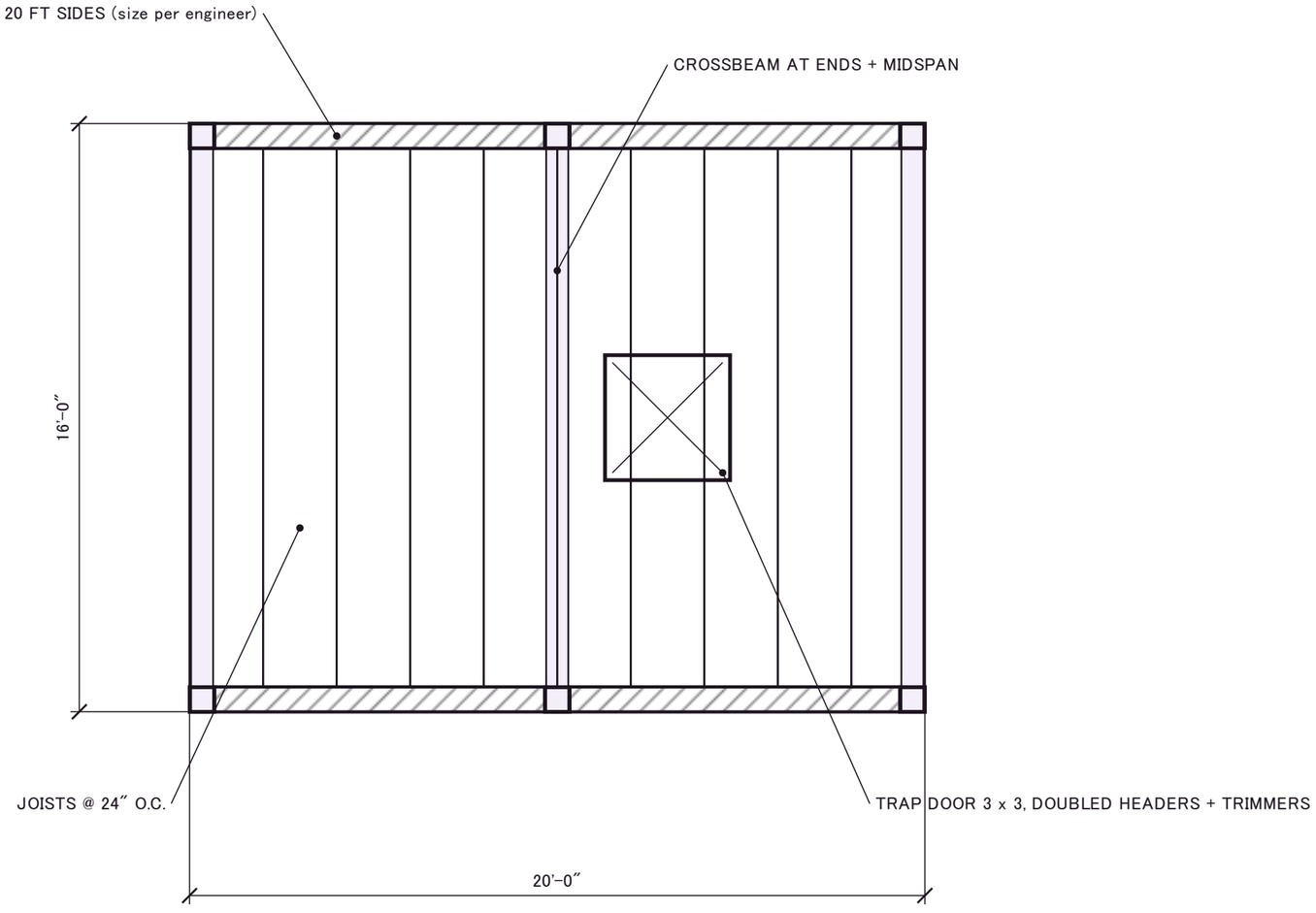
1. Posts: 8x8 or larger (spec). Grade, species, treatment and connections by engineer.
2. Piers: concrete, below frost depth and flood line. Diameter, depth and reinforcing by engineer for your soil.
3. Post bases must resist uplift and lateral load (wind / flood).
4. Keep the carport footprint clear: 16 x 20, 9 ft clear height.

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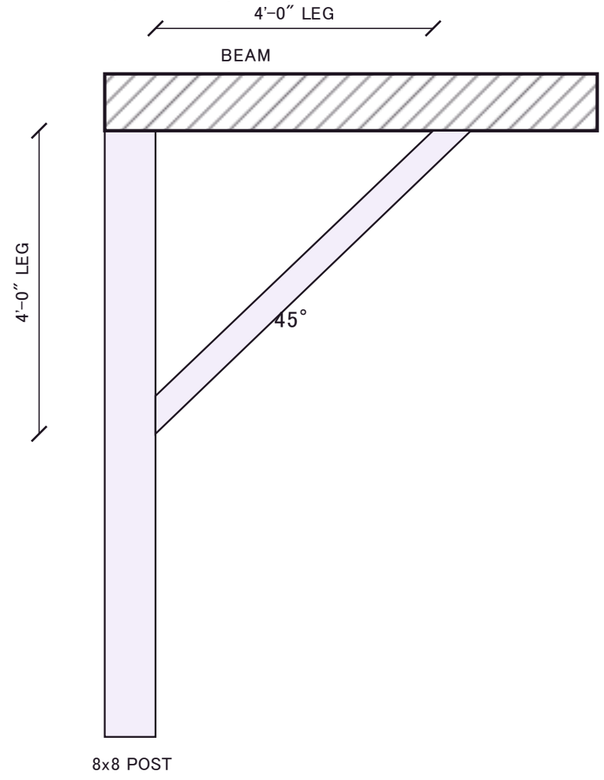
FLOOR 1 FRAMING PLAN

Scale 1/4″ = 1′–0″. Member sizes by engineer / local span tables.



KNEE BRACE DETAIL

Scale 1/2″ = 1′–0″. Typical at posts, both directions.



Through-bolt brace to post and beam. Bolt size, count and edge distances per engineer.
Braces resist racking: do not omit any.

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FLOOR FRAMING PLAN AND BRACE DETAIL

Scale: 1/4″ = 1′–0″, detail 1/2″ = 1′–0″

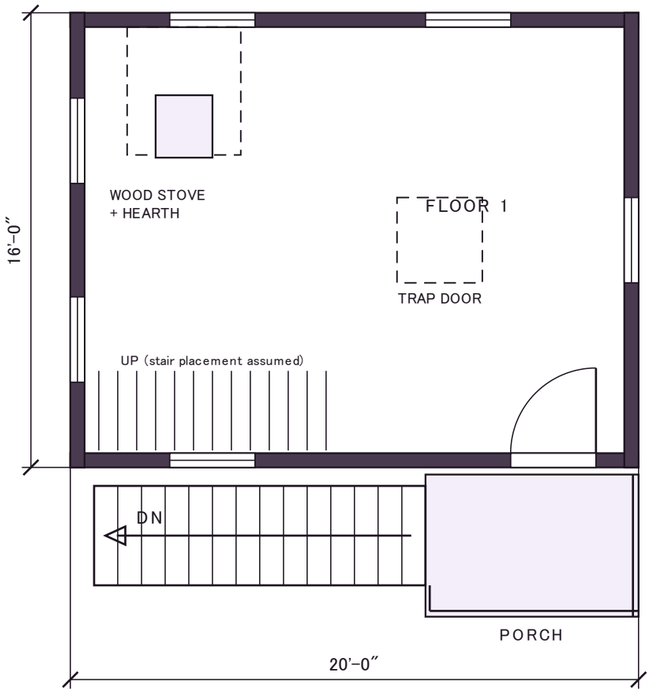
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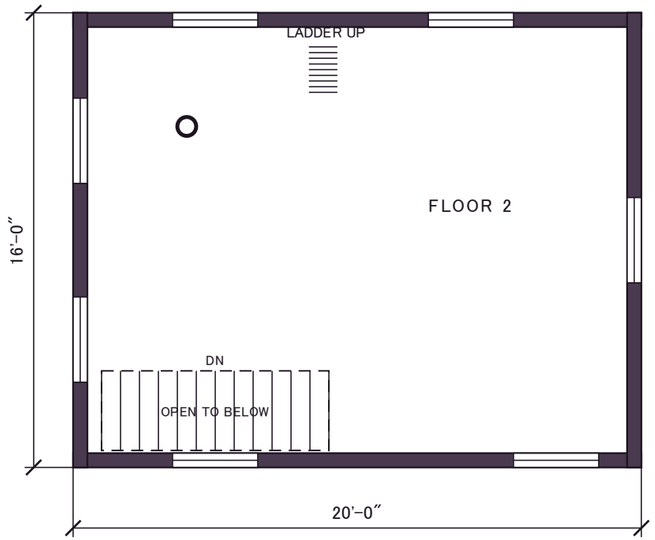
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S-102

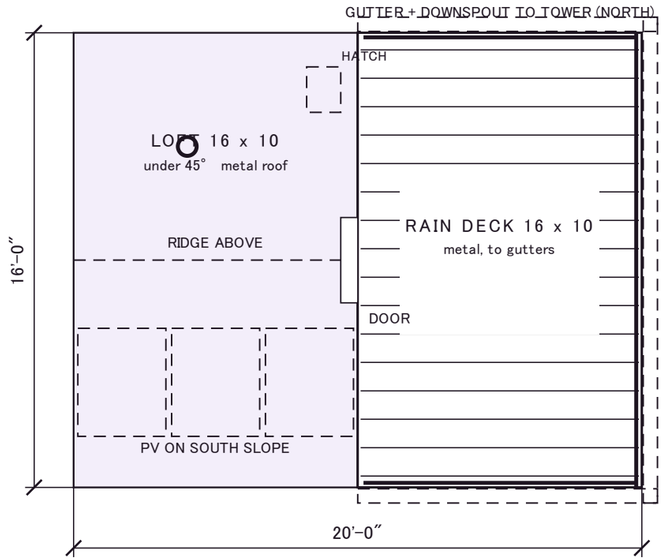
FLOOR 1 · 320 SF



FLOOR 2 · 320 SF



LOFT + RAIN DECK



NOTES

1. Windows 3′–0″ x 4′–0″ rough, sills 3′–0″ above each floor (count + sizes in dims.js).
2. Inner stair and loft ladder positions are a model assumption, not fixed by the kit spec. Place them to suit, keeping code headroom.
3. Wood stove clearances, hearth size and chimney: follow the stove maker's listing and NFPA 211 / local code.
4. Trap door sits over the carport, above a parked vehicle's sunroof.

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FLOOR PLANS

Scale: 3/16″ = 1′–0″

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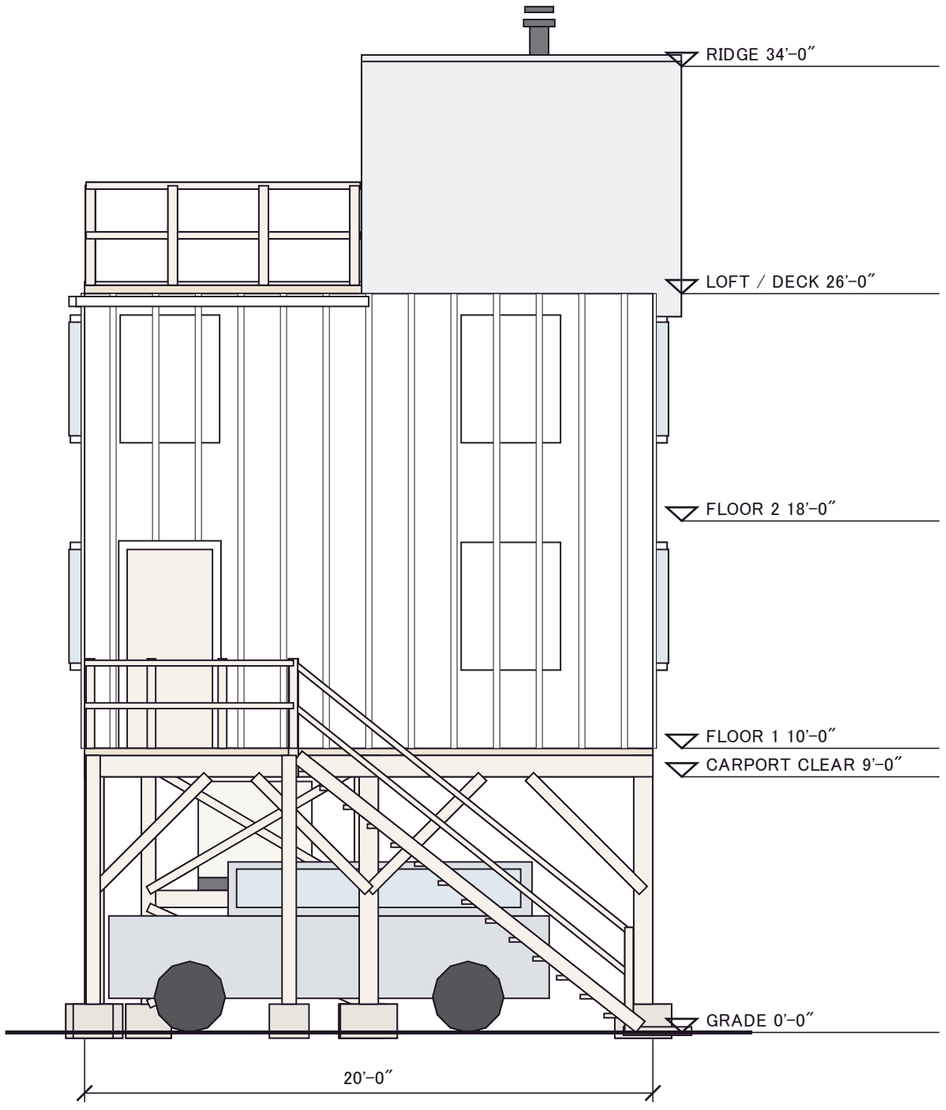
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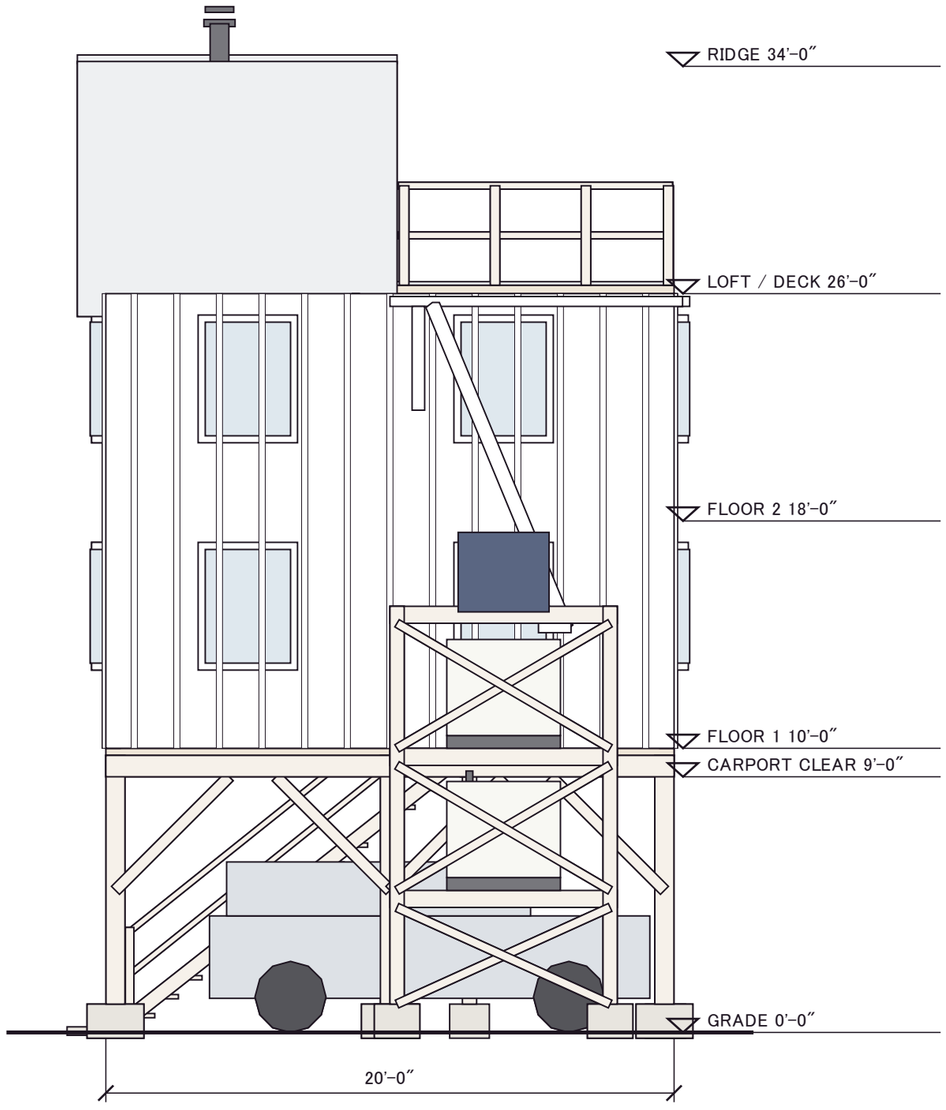
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A–101

SOUTH ELEVATION (PORCH SIDE)



NORTH ELEVATION (TOWER SIDE)



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ELEVATIONS: SOUTH + NORTH

Scale: 3/16" = 1'-0"

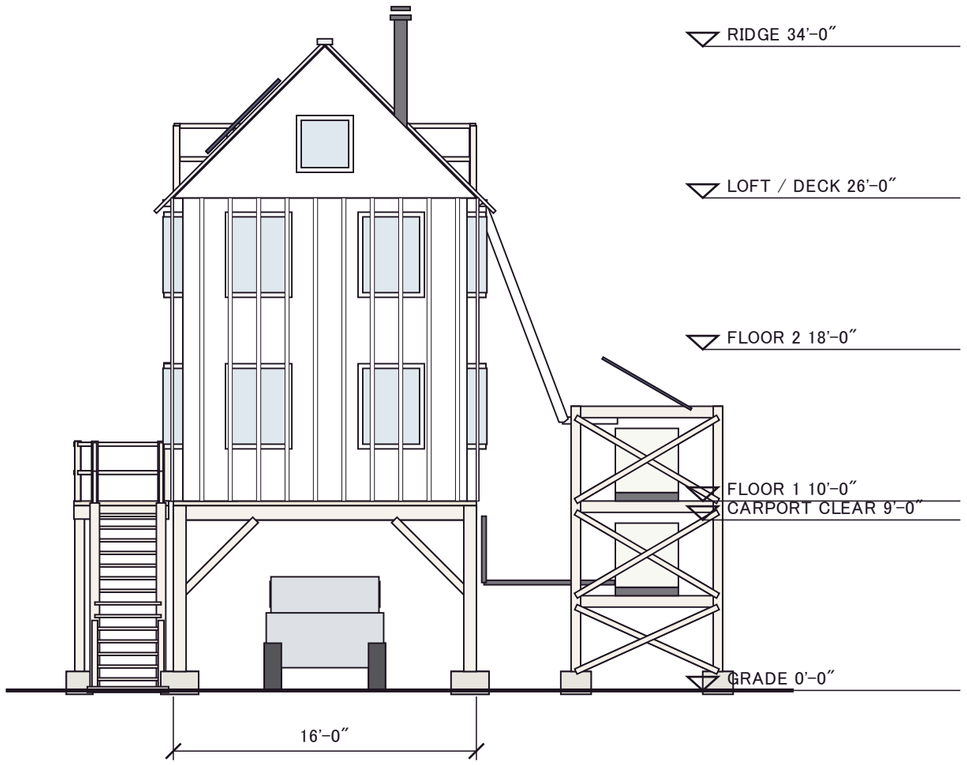
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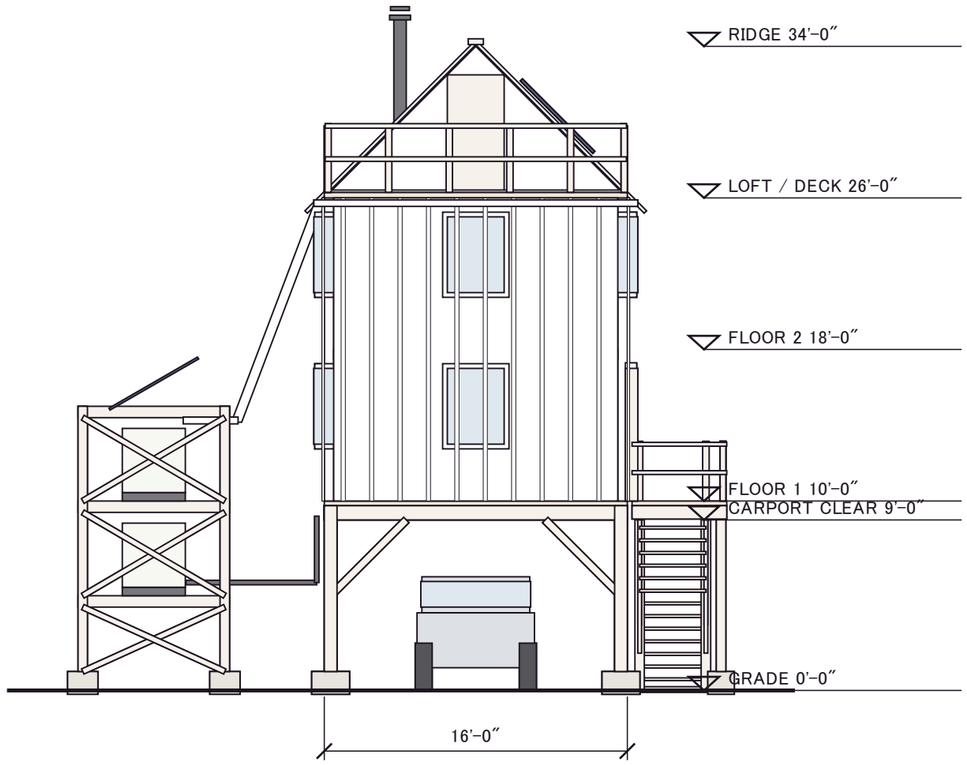
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A-201

WEST ELEVATION (LOFT GABLE)



EAST ELEVATION (DECK END)



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ELEVATIONS: WEST + EAST

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

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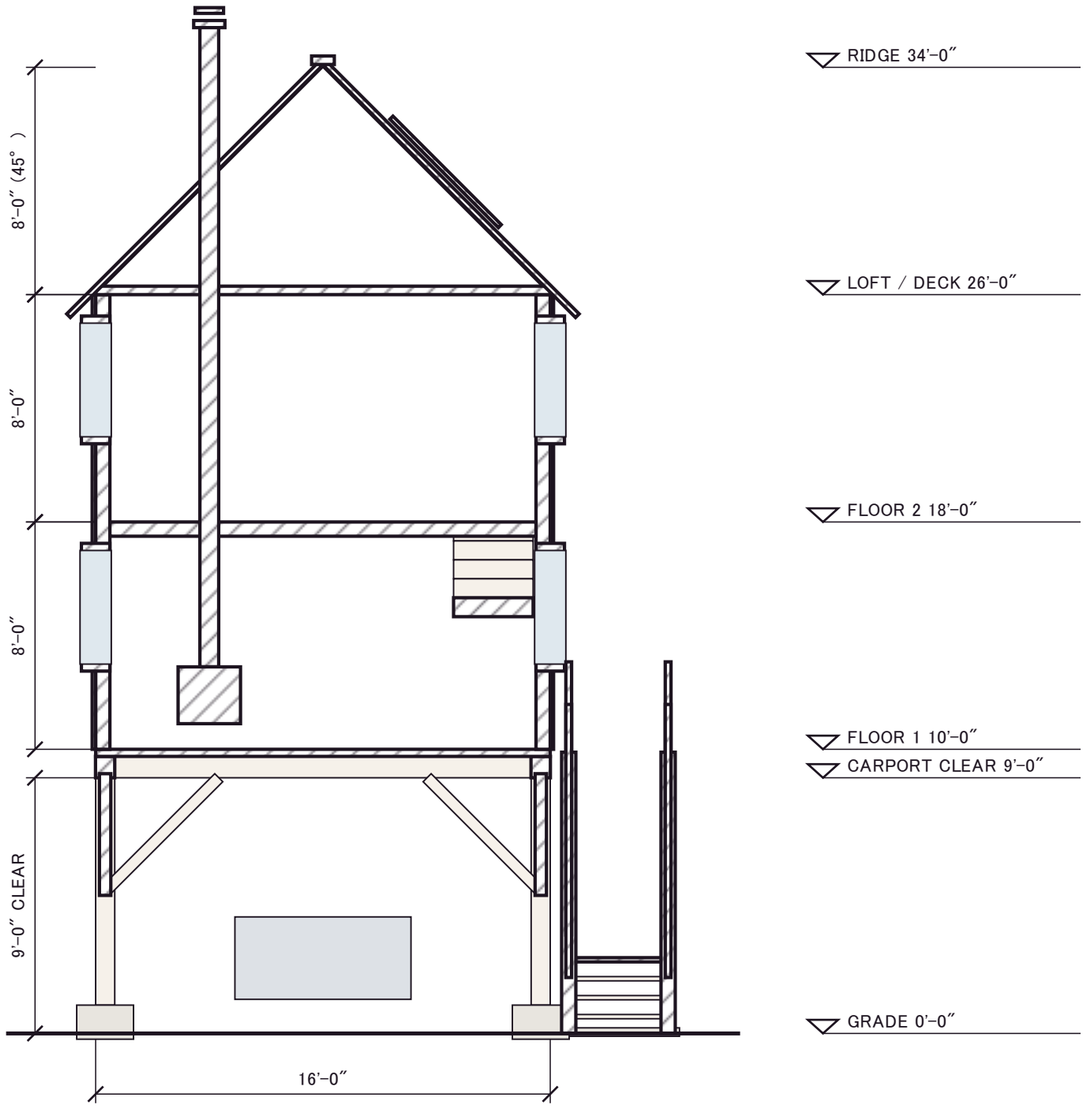
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A-202

SECTION A–A

Cut through the stove + chimney, 4′–0″ from the west wall, looking west.



SECTION NOTES

1. Hatched = cut by the section plane.
2. Roof: 45° metal over the loft half. Rafters, ties and uplift connections by engineer for your wind and snow.
3. Loft: 16 x 10 ft under the roof. The other half of the top is the metal rain deck with 3′–6″ guards.
4. Envelope (pick one, same outside size): stucco foam walls, wood frame + drywall, or a 20 ft crate pair.
5. Floor 2 and loft framing by engineer / span tables.
6. Chimney: listed class–A pipe through every level, clearances + height above the roof per the maker and NFPA 211 / local code. Smoke + CO alarms every level.
7. Carport: 9 ft clear (8 ft minimum). Keep vehicles and fuel away from the stair and piers.
8. Inner stair shown is a model assumption.

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BUILDING SECTION A–A

Scale: 3/16″ = 1′–0″

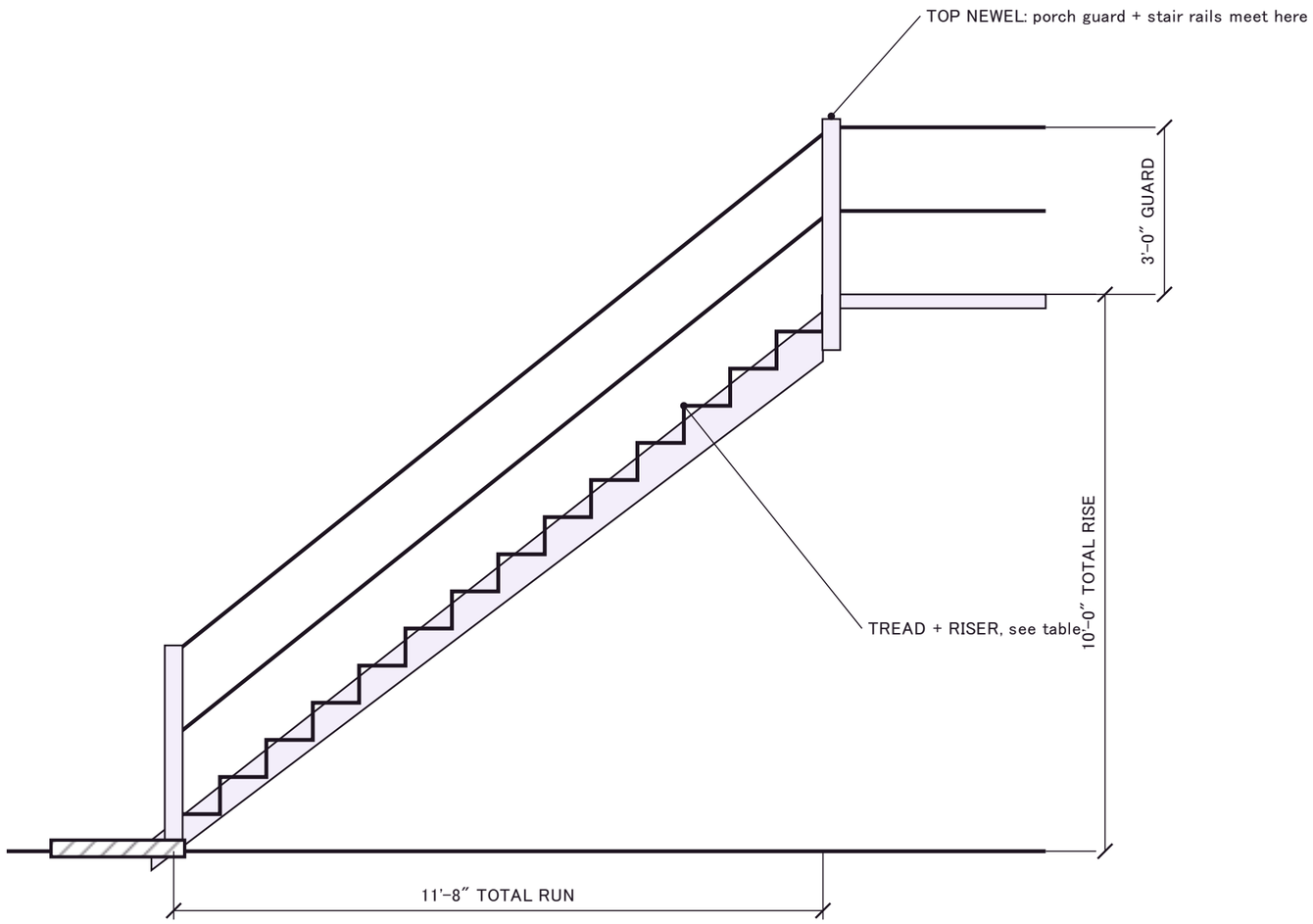
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A–301

STAIR + PORCH: SIDE VIEW

Scale 3/8″ = 1′–0″. Porch on the right, stair running down to the left.



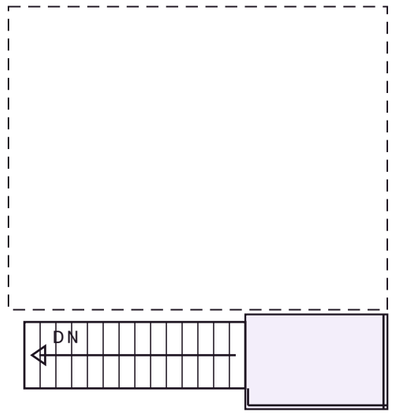
STAIR TABLE

Risers	15 @ 8″
Treads	14 @ 10″ run
Width	3′–6″
Total rise	10′–0″
Total run	11′–8″
Porch guard	3′–0″ (36″)
Stair rails	top + mid, parallel to the nosing line
Structure	detached: own posts, piers + landing pad
Porch	5′–0″ x 7′–6″

NOTES

1. Riser, tread, guard and handrail limits vary by code.
Check yours before cutting stringers.
2. Stair can be unhooked from the porch for security (spec).
Design that connection with your engineer.
3. Handrails must be graspable and continuous.

PLAN (1/8″ = 1′-0″)



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STAIR AND PORCH DETAIL

Scale: 3/8″ = 1′–0″, plan 1/8″ = 1′–0″

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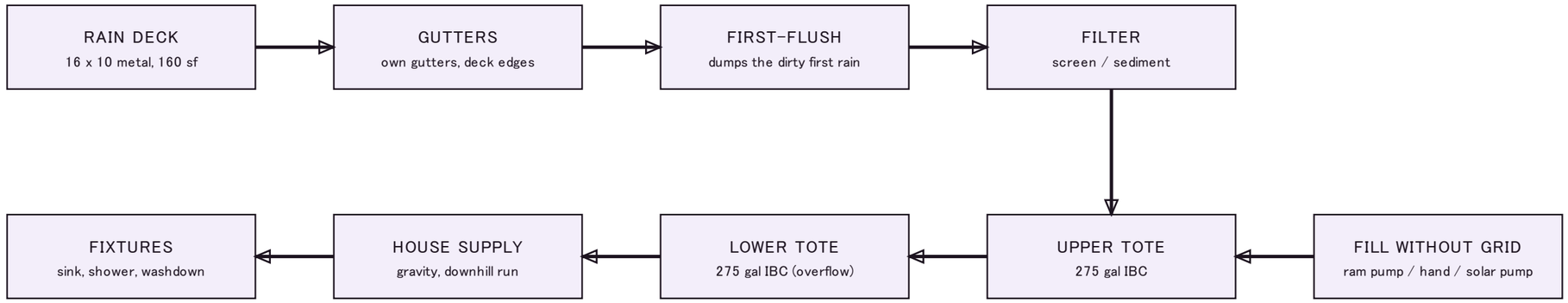
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A–401

WATER SYSTEM (SCHEMATIC, NOT TO SCALE)

Rain and well water stored high, gravity down into the house.



RAIN MATH (from the spec)

Whole roof 16 x 20 = 320 sf. One inch of rain is about 200 gallons on the whole roof.

The deck half (160 sf) yields about 100 gallons per inch after first-flush.

Storage: 2 x 275 gal = 550 gal in the tower.

A closed rain loop does not run a free perpetual pump. Lift water with a ram pump (stream with fall), a hand pump, or a small solar pump, then let gravity do the daily work.

Treat all stored water before drinking: filter + disinfect (see the Emergency section on /irl/).

POWER + HEAT

PV: 3 panels on the south roof slope + 1 on the tower.
Charge controller + battery bank sized to your loads.
All wiring, disconnects and grounding per NEC / local code and a licensed electrician.

Heat: floor-1 wood stove, chimney through all levels.
Cook and heat water on it. Radiant on all three levels.
Finish the envelope and the stove before buying more panels (spec).

Smoke + CO alarms on every level and the loft.
Generators outside only, away from doors and windows.

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