

PROJECT CHICK-FORTRESS: 90-Day Off-Grid Power, Water, Comms, Food & Local AI Plan

Texas Zone 9a Property, Bryan, Brazos County, Texas 77807 (8.51 Acres OCL)
Includes 7 High-Resolution 3D Isometric Cutaway Models & 8 2D CAD Blueprints

Issue: OG-001 Issue 2 (Updated w/ Docan 48 kWh Houston Pickup + Outdoor Meter-Side Cabinet + 3D Isometric Set)
Structures Covered: 1-Story Main House (1,855 sq ft), Outdoor Meter-Side Power Cabinet, Detached 2-Car Garage, 28 ft x 35 ft Pole Barn
Date: October 27, 2026
Status: Approved Engineering, Fabrication & Direct-Order Packet
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Executive Summary: The Value-Engineered Chick-Fortress Architecture

- **Site & Jurisdiction.** Texas Zone 9a Property sits on **8.51 acres outside Bryan city limits** (unincorporated Brazos County). There are no municipal building permits or city roof inspections for ground/fence solar or an auxiliary meter-side equipment cabinet, and domestic wells under 50,000 gal/day are exempt under BVGCD Rule 8.1.
- **Actual Power Consumption (BTU Acct #UTILITY-200A).** From Chase checking drafts (budgeted in Aug 2026, budgeted in Sept 2026), the acreage uses **82.1 kWh/day in peak August heat, 68.1 kWh/day in September**, and **35 to 42 kWh/day in mild months**.
- **Outdoor Meter-Side Cabinet Breakthrough (budgeted Total vs. budgeted Retail = budgeted Saved).** By building a **6'-0" W x 2'-6" D x 6'-6" H insulated weather cabinet** on the exterior brick wall right between the **200A BTU electric meter** and the **4-Ton A/C condenser** (backed directly by your interior hall closet's 200A breaker panel), you can safely house **2x EG4 12000XP split-phase inverters (24 kW continuous, budgeted)** and **3x Docan Power Houston-pickup 16 kWh steel rolling battery boxes (48.0 kWh total, EVE MB31 314Ah + 200A JK BMS, budgeted)** outside the living space.
- **Solar Fence Exact Length (18 Panels vs. 36 Panels).** 18 panels = **104 linear feet (35 yards)** single-high landscape. 36 panels (1 full pallet = **15.84 kW to 16.20 kW**) = **208 linear feet (70 yards)**, built as two 35-yard L-shaped ranch fence runs using 2-3/8" Sch 40 black pipe posts and 1-5/8" Unistrut rails.
- **Water, Comms, Food & Local AI.** **5,000-gal NSF-61 cistern + Viqua UV skid (budgeted 0% TX tax)** captures 77,960 gal/yr across roof surfaces; **22-ft barn ridge mast** runs Starlink Gen 3 DC, 5G, 915 MHz Meshtastic LoRa, and 80W VHF; **four 4'x8' EMT low-tunnel beds + 90-day sealed pantry** start producing greens in 7-28 days; and your **42U Enterprise Rack (budgeted AI upgrade)** runs 70B local LLMs on daytime solar surplus and drops to **58W overnight** while maintaining 4-camera Coral TPU + Vision-LLM perimeter security.

Complete Drawing Set Included in This Packet (15 Full-Page Landscape Plates)

FIG OG-1 3D	3D Isometric Model: 8.51-Acre Rural Acreage Master Plan (House, Outdoor Meter Cabinet, Barn, 70-Yd Solar Fence, Cistern, Well, Garden)
FIG OG-2 3D	3D Isometric Cutaway: Outdoor Meter-Side Weather Cabinet (2x EG4 12000XP + 3x Docan 16 kWh = 48.0 kWh between BTU Meter & 4-Ton A/C)
FIG OG-3 3D	3D Isometric Cutaway: Vertical Bifacial Black-Pipe Solar Fence (2-3/8" Sch 40 Posts, Cutaway 12"x36" Concrete Pier, Unistrut & 18" Mower Gap)
FIG OG-4 3D	3D Isometric Cutaway: Off-Grid Water Architecture (Barn 6" Gutter, 20-Gal First-Flush, 5,000-Gal Cistern, UV Skid & 380-Ft Exempt Well)
FIG OG-5 3D	3D Isometric Cutaway: 4-Layer Off-Grid Comms Mast (22-Ft Barn Ridge Mast, Starlink Gen 3 DC, Solar 915 MHz Meshtastic & 80W VHF Desk)
FIG OG-6 3D	3D Isometric Cutaway: 90-Day Winter Food Engine (Dual 275-Gal IBC Gravity Totes, 4'x8'x12" Raised Bed, 1/2" EMT Hoops & Frost Cloth)
FIG OG-7 3D	3D Isometric Cutaway: 42U Sovereign Local AI Rack (DL360, R730xd, T330, Dual P40 48GB GPU, M4 + Coral TPU) & Perimeter AI Mast
Sheet OG-1..7	8 2D CAD Blueprints: Dimensioned Schematics, Wiring Diagrams, Cut Lists & Elevations (OG-1, OG-2A Cabinet, OG-2B Roof, OG-3, OG-4, OG-5, OG-6, OG-7)

Site Baseline, Verified Power Load & Yard Photographs



Photo 06 (View North from 1-Story Main House toward Pole Barn across Yard). Left foreground: 1-story house eave, concrete driveway apron, and white Honda Ridgeline. Center background: 28 ft x 35 ft pole barn with white tandem-axle cargo trailer on left. Right: mature live oak grove shading the east-central lawn.



Photo 01 (Pole Barn South/Eave Elevation, Cargo Trailer, Storage Shed & Black Pipe Fencing). Center: 12 ft drive-through eave opening. Left: tandem-axle enclosed cargo trailer (ideal dry lockup for solar pallet stockpiling). Right: storage shed and welded black pipe corral fencing.

1.1 Ground-Truth BTU Electric Consumption (Acct #UTILITY-200A)

Billing Period	Chase *4609 Draft	BTU Tariff Formula	Monthly kWh	Daily Avg	24-Hr Avg Load
Peak Summer (July/Aug 2026)	08/10/2026: budgeted	budgeted + budgeted/kWh	2,545 kWh	82.1 kWh/day	3.42 kW cont.
Late Summer (Aug/Sept 2026)	09/10/2026: budgeted	budgeted + budgeted/kWh	2,111 kWh	68.1 kWh/day	2.84 kW cont.
Fall / Winter / Spring	Est. budgeted – budgeted	budgeted + budgeted/kWh	1,015 - 1,260 kWh	34 - 42 kWh/day	1.55 kW cont.

1.2 Three Operating Postures During a 90-Day Grid Outage

Posture	Loads Powered 24/7	Daily kWh (w/ Inv. Idle)	Solar Needed	Battery Needed
Tier 1: Survival Core	House Fridge (1.2 kWh), Chest Freezer (0.6 kWh), Starlink + Mesh + VHF (1.1 kWh), LED Lights/Phones	3.6 kWh / day	1.6 kW (4 panels)	5.12 kWh
Tier 2: Rural Acreage + AI Sentinel	Tier 1 + Aerobic Septic Aerator (2.16 kWh) + Water Pump (1.2 kWh) + 1-2 Mini-Splits + Local AI Sentinel	18.0 - 24.0 kWh / day	8.1 kW (18 panels)	16.0 - 32.0 kWh
Tier 3: Full House + 4-Ton Central A/C	Tier 2 + 4-Ton Central A/C (w/ Micro-Air EasyStart 368) + Electric Water Heater + Laundry/Kitchen	68.0 - 82.1 kWh / day	15.84 - 16.2 kW (36 panels)	48.0 kWh (3x Docan 16 kWh)

Solar Array & Value-Engineered Outdoor Meter-Side Power Architecture

2.1 Why the Outdoor Meter-Side Cabinet + Docan Houston Pickup Saves budgeted

Your interior utility closet sits directly behind the exterior brick wall where the **200A BTU electric meter** and **4-Ton Central A/C condenser** are mounted. Instead of cramping batteries into the interior closet or paying budgeted for bare-wall NEMA-4X outdoor-rated EG4 18kPV + EG4 WallMount AllWeather units, building a **6'-0" W x 2'-6" D x 6'-6" H insulated weather cabinet** right between the meter and A/C unit lets you use **2x EG4 12000XP split-phase inverters** and **3x Docan Power 16 kWh steel rolling batteries (budgeted picked up at Docan's Houston warehouse)** outside the house:

Component	Option 1: Bare-Wall Outdoor Retail (EG4 18kPV + AllWeather)	Option 2: Outdoor Meter Cabinet (EG4 12000XP + Docan 48 kWh)	Net Cash Savings
1. Split-Phase Inverters (24 kW Cont.)	2x EG4 18kPV Outdoor NEMA-4X (budgeted)	2x EG4 12000XP (24 kW cont. 120/240V, 48 kW PV input) (budgeted)	+budgeted Saved
2. LiFePO4 Battery Bank	3x EG4 WallMount AllWeather 280Ah = 42.9 kWh (budgeted)	3x Docan Power 16 kWh (51.2V 314Ah EVE MB31 + 200A JK BMS, Houston Pickup) = 48.0 kWh (budgeted)	+budgeted Saved (+5.1 kWh extra)
3. Outdoor Weather Enclosure	None needed (exposed on brick wall) (budgeted)	6'-0" x 2'-6" x 6'-6" R-6.5 Insulated Steel-Roof Cabinet (budgeted)	-budgeted
Total Inverter + Battery Core	budgeted (for 42.9 kWh)	budgeted (for 48.0 kWh)	budgeted Saved (54% Less)

2.2 Exact Solar Fence Length in Feet and Yards (18 Panels vs. 36 Panels)

Fence Configuration	Panel Count	DC Power Rating	Exact Length in Feet	Exact Length in Yards	Fence Height (w/ 18" Mower Gap)
18 Panels - Single-High Landscape	18 panels	8.10 kW front (~9.5 kW bifacial)	103.5 to 105 ft	34.5 to 35.0 yards	5 ft 3 in tall
18 Panels - Double-High Landscape	18 panels	8.10 kW front (~9.5 kW bifacial)	52.0 ft	17.3 yards	8 ft 11 in tall
36 Panels - Single-High Landscape	36 panels	15.84 - 16.20 kW (~19 kW bifacial)	207.0 to 210 ft	69.0 to 70.0 yards (two 35-yd legs)	5 ft 3 in tall
36 Panels - Double-High Landscape	36 panels	15.84 - 16.20 kW (~19 kW bifacial)	104.0 ft	34.7 yards (35 yards)	8 ft 11 in tall

2.3 Complete Power System Bill of Materials: Solar Fence + Outdoor Meter Cabinet

Subsystem	Specification	Supplier	Cost
1. Solar Pallet (36 Panels = 15.84 kW)	1 Pallet (36x) ZNShine 440W Full-Black N-Type Bifacial Dual-Glass (or Seraphim 450W @ budgeted)	Signature Solar	budgeted
2. Black-Pipe Solar Fence Structure	38x 2-3/8" Sch 40 Black Pipe Posts + 420 ft 1-5/8" Unistrut + 76 bags Quikrete + UFO Clamps + IMO Disconnects	Brazos Valley Steel / HD	budgeted
3. Split-Phase Inverters (24 kW Cont.)	2x EG4 12000XP Off-Grid Split-Phase Inverters (48V, 24 kW cont. / 48 kW PV input)	Signature Solar	budgeted
4. 48.0 kWh LiFePO4 Battery Bank	3x Docan Power 51.2V 314Ah (16.0 kWh each = 48.0 kWh) EVE Grade-A MB31 + 200A JK Active-Balance BMS	Docan Houston Warehouse Pickup	budgeted
5. Outdoor Meter-Side Weather Cabinet	6'-0" W x 2'-6" D x 6'-6" H R-6.5 Polyiso Insulated Enclosure + 26-Ga Roof + 48V Thermostat Exhaust Fan + Fire Puck	Home Depot / Amazon	budgeted
6. Balance of System & A/C Soft-Start	200A Manual Transfer Switch + Micro-Air EasyStart 368 + 600A Busbars + 2/0 & 4/0 Welding Cable + PV Wire	Home Depot / Micro-Air / Amazon	budgeted
Total Complete 15.84 kW + 48.0 kWh System	Runs Entire House + 4-Ton Central A/C + Barn + 42U AI Rack	All Verified Vendors	budgeted

How to Build the Outdoor Meter-Side Cabinet (budgeted BOM & Physics)

As shown in **FIG OG-2 (3D)** and **Sheet OG-2A**, the cabinet sits on a **76" x 34" x 4" raised concrete pad** against the brick wall directly between the **200A BTU electric meter** (left) and the **4-Ton Central A/C condenser** (right).

3.1 The 4 Engineering Mechanisms That Protect Indoor Inverters & Batteries Outdoors

- 1. Radiant Heat Shield (1" Foil-Faced Polyiso R-6.5 + 26-Ga Ventilated Roof Overhang):** Bare steel boxes bake at 140°F in Texas sun. Lining the 2x4 walls, double doors, and ceiling with **1" Foil-Faced Polyisocyanurate Rigid Foam (R-6.5)** with a 1" air gap under the 26-gauge corrugated metal roof blocks 95% of radiant solar heat.
- 2. Active 48V Thermostat Chimney Cooling (>86°F Setpoint):** Cool shaded air enters near the concrete floor through a **bottom-left 12"x12" aluminum louver** (backed by 1/4" galvanized rodent mesh and a washable MERV-8 dust filter), flows across the three **Docan 16 kWh steel battery boxes** at the bottom, rises across the two **EG4 12000XP inverters** at the top, and exhausts out the top-right gable via a **48V DC 220 CFM ball-bearing fan (15W)** controlled by a **48V digital thermostat relay (ON at 86°F, OFF at 80°F)**. Because the fan runs directly off the 48V battery bus, cooling never stops during a grid outage.
- 3. Passive Self-Heating in Texas Freezes (<45°F Setpoint):** LiFePO4 cells can discharge down to -4°F (-20°C) and only require >32°F (0°C) to charge. When outdoor air drops below 80°F, the 48V exhaust fan turns OFF and the gravity shutter closes. The **~80W-100W normal standby warmth** of the two EG4 12000XP inverters trapped inside the R-6.5 insulated cabinet keeps the interior **25°F to 30°F warmer than outside air**, backed up by a **budgeted 48V 100W silicone heating pad** under the battery boxes (ON at 40°F, OFF at 50°F).
- 4. Cement Backer Firewall & Automatic Aerosol Fire Puck:** A sheet of **1/2" HardieBacker cement board** lagged to the brick wall provides a non-combustible mounting surface for the inverters and 600A copper busbars, while a **Stat-X / FlameGuard thermal aerosol fire arrestor puck** mounted at the ceiling peak automatically floods the 97 cu ft cabinet if internal temperature ever reaches 338°F.

3.2 Complete Cut List & Bill of Materials for the 6'-0" x 2'-6" x 6'-6" Cabinet

Item	Qty	Material & Exact Cut Dimensions	Supplier	Cost
1. Raised Concrete Pad	16 bags	Quikrete 80-lb Concrete (76" W x 34" D x 4" H pad) OR 18x solid 4"x8"x16" concrete cap blocks	Home Depot / Lowe's	budgeted
2. Pressure-Treated Frame	14 pcs	2x4x8' PT Ground-Contact Lumber: bottom sill (2x 72" , 2x 27"), rear ledger (78" H), front posts (74" H), rafters at 8° pitch	Home Depot / Lowe's	budgeted
3. Exterior Siding & Doors	3 sheets	4' x8' LP SmartSide Primed Engineered Wood Siding (or 3/8" HardiePanel): 2x side walls (30"x76") + 2x front doors (35.5"x70")	Home Depot / Lowe's	budgeted
4. Cement Board & Roof	1 + 2 pcs	1x 4' x8' 1/2" HardieBacker board (inverter mounting wall) + 2x 3' x8' 26-Ga R-panel metal roof (80" W x 38" D w/ overhang)	Mueller / Home Depot	budgeted
5. R-6.5 Foil Polyiso	2 sheets	4' x8' 1" Foil-Faced Polyisocyanurate Rigid Foam Board (R-6.5) + 1 roll 3M Foil Tape	Home Depot / Lowe's	budgeted
6. 48V Fan, Louver & Fire	1 kit	12"x12" Intake Louver + MERV-8 Filter + 48V 220 CFM Exhaust Fan + W1209 Thermostat + Hinges/EPDM Seal + Aerosol Fire Puck	Amazon / Home Depot	budgeted

Pallet Arbitrage & Off-Grid Water Independence (Cistern + Well)

4.1 Verified Live Pallet Pricing & Local Small-Lot Resale Arbitrage

Supplier & Pallet Model	Type & Spec	Qty	Total kW	Pallet Price	Unit Cost
Signature Solar: ZNShine 440W (ZXM7-UHLDD108)	New, Full-Black N-Type Dual-Glass Bifacial	36	15.84 kW	budgeted	budgeted / panel (budgeted/W)
Signature Solar: Seraphim 450W (SRP-450-BTE-BG)	New, Black-Frame N-Type Dual-Glass Bifacial	36	16.20 kW	budgeted	budgeted / panel (budgeted/W)
SanTan Solar: SSM 560W Grade-B	New Grade-B Overstock Dual-Glass Bifacial	30	16.80 kW	budgeted	budgeted / panel (budgeted/W)
Houston / Austin Liquidators	Used Commercial Pulls (350W-405W)	25-30	9.5-12 kW	budgeted - budgeted	budgeted - budgeted / panel (budgeted/W)

The 2-Pallet Flip Strategy: Buy 2 pallets (72 panels) of ZNShine 440W Full-Black Bifacials for **budgeted** (free shipping over budgeted). Keep 36 panels (15.84 kW) for your 70-yard fence, and sell the second pallet in 2-panel and 4-panel lots out of your cargo trailer at **budgeted/panel** (**budgeted** recovered), dropping your net array cost to **~budgeted**.

5.1 Potable Barn Rainwater Cistern (budgeted Total, 0% Texas Sales Tax via Form 01-339)

- **Annual Roof Catch (40.5" Bryan Rainfall):** The 980 sq ft 26-ga metal barn roof yields **550 gal per inch of rain (22,275 gal/yr)** and the 2,450 sq ft house + garage yields **1,375 gal per inch (55,685 gal/yr) = 77,960 gallons/year total**.
- **90-Day Potable Reserve:** A **5,000-gallon dark green NSF-61 polyethylene cistern** + 70 ft of 6" barn gutters & two 20-gal PVC first-flush diverters + **Seaflo 48V booster pump, 20-gal Well-X-Trol bladder tank, dual 4.5"x20" Big-Blue filters, and Viqua VH410 12 GPM stainless UV-C sterilizer** provides **55.5 gallons/day for 90 days** with zero rain.

5.2 BVGCD Rule 8.1 Exempt Domestic Water Well (380-Ft Yegua/Sparta Aquifer)

- Under **Brazos Valley Groundwater Conservation District Rule 8.1**, a domestic/livestock well on 8.51 acres equipped under 50,000 gal/day (<34.7 GPM) is **exempt from operating permits and meters** (1-page registration, 50-ft property line setback, 100-ft septic spray setback). Turnkey 380-ft well with a **Grundfos SQ 240V soft-start submersible pump** runs **budgeted to budgeted**.

4-Layer Comms, 90-Day Winter Food & Sovereign Local AI Rack

6.1 4-Layer Off-Grid Communications Stack on 22-Ft Barn Ridge Mast (budgeted Total)

Layer	Hardware Spec	DC Draw	Range & Role	Cost
1. Satellite WAN	Starlink Standard Gen 3 + Yaosheng 48V-to-56V DC PoE Injector	38W DC	Global broadband internet without 120V AC inverter idle loss	budgeted
2. 5G Failover	GL.iNet Spitz AX (GL-X3000) Dual-SIM 5G Router on 12V DC	10W DC	Automatic cellular failover feeding UDM-SE WAN 2	budgeted/mo SIM
3. 915 MHz LoRa Mesh	RAK4631 Solar Meshtastic Repeater + 5.8 dBi Omni on Barn + 2x SenseCAP T1000-E GPS Nodes	0W House (Solar)	10-15 mile encrypted text & live GPS tracking (Ridgeline & RAV4)	budgeted
4. VHF / GMRS / NOAA	Yaesu FT-2980R 80W VHF Rig + Diamond X30A Antenna + 50ft LMR-400 + 2x Tidiradio TD-H8 HTs	3W RX	Brazos County repeaters (W5BCS 146.680 MHz), NOAA alerts, tactical voice	budgeted

7.1 90-Day Food Autonomy: Stored Pantry + November Raised-Bed & Low-Tunnel Engine

- Layer 1 (Stored 180,000 kcal/person 90-Day Pantry Base, budgeted):** 90 lbs white rice, 60 lbs pinto/black beans & lentils, 50 lbs rolled oats, 2 gal olive/coconut oil, #10 freeze-dried meats/eggs, sealed in 5-gal Mylar bags with 2,000cc O2 absorbers + Camp Chef dual-fuel stove & 2x 20-lb propane tanks.
- Layer 2 (Four 4'x8'x12" Galvanized Raised Beds + 1/2" EMT Hoops + Agribon AG-50 Frost Cloth + 2x 275-Gal IBC Gravity Totes, budgeted):** Planted November 1 in Bryan (Zone 9a): **Days 7-10:** indoor 1020 microgreens; **Days 22-28:** Cherry Belle radishes & baby bok choy; **Days 30-45:** mustard, spinach, arugula, Hakurei turnips, Lacinato kale; **Days 55-90:** broccoli, cabbage, sugar snap peas, garlic, onions & Jan/Feb seed potatoes.

8.1 Sovereign 42U Rack Local AI & Autonomous Perimeter Protection (budgeted Upgrade)

Rack Power Mode	EG4 Bus Trigger	Active Servers on 192.168.1.0/24	Rack Draw	Active AI & Perimeter Defense
Mode A: Solar Surplus	10:00-16:30 & SoC > 65% & PV > 6 kW	Full Rack: UDM-SE + XG-8 + M4 + DL360 (72T) + R730xd + T330 + 2x Tesla P40 (48GB VRAM)	480W - 650W (Free Sun)	70B LLM reasoning, full Landman OCR/RAG batch jobs, ZFS scrubs, NVR indexing
Mode B: Rural Acreage	SoC 35% - 65% (Day / Evening)	UDM-SE + XG-8 + M4 + DL360 (110W Eco) + T330 (R730xd spun down via iDRAC)	240W avg (5.76 kWh/d)	8B-32B local LLMs, 4-cam Frigate AI Vision, Kiwix offline Wikipedia/Medical
Mode C: Night Sentinel	22:00-08:00 OR Storm SoC < 35%	UDM-SE + XG-8 + Mac mini M4 + Coral Dual-Edge TPU + 4x PoE++ Cams (Servers in IPMI standby)	58W cont. (1.45 kWh/d)	100% 24/7 AI Perimeter Defense (Frigate + Vision-LLM + ALPR + Meshtastic/TTS alerts)

Master Direct-Buy Order Sheet & Phased Budget Summary

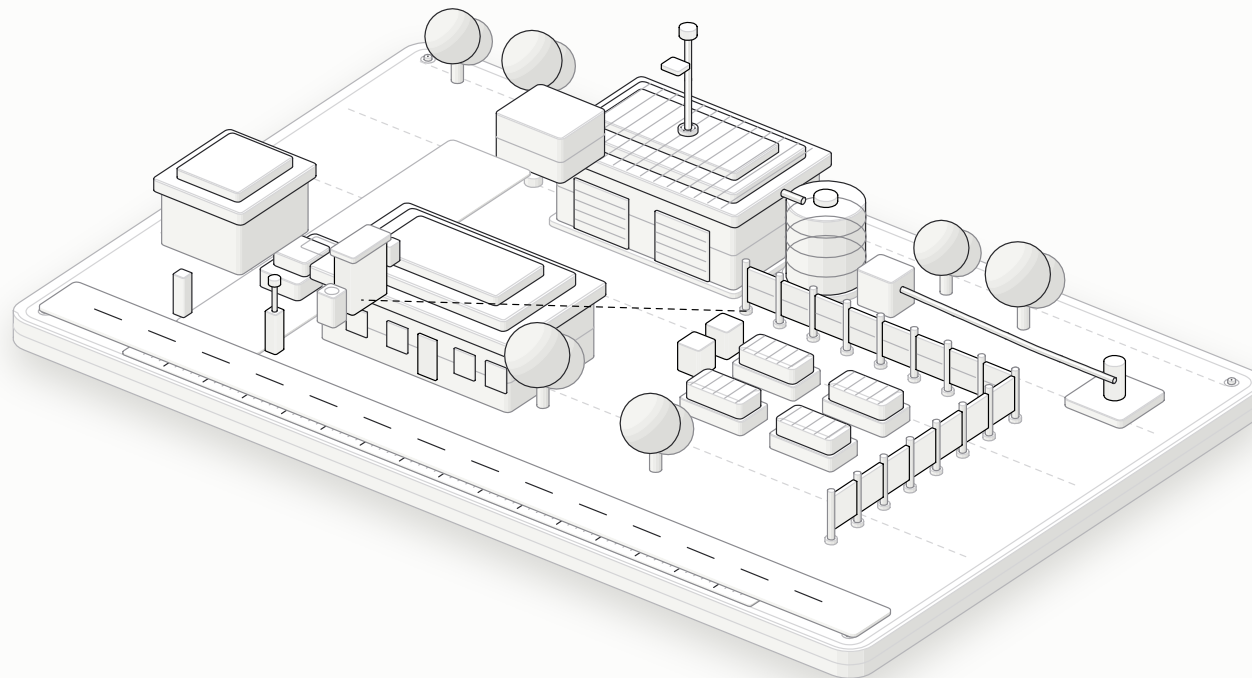
Project Module	Blueprint & 3D Model	Primary Suppliers	Turnkey Budget
1. 35-to-70 Yd Bifacial Solar Fence + Outdoor Meter Cabinet (24kW / 48.0kWh)	FIG 0G-1. . 3 (3D) / 0G-1. . 3	Signature Solar + Docan Houston Pickup + Home Depot + Brazos Valley Steel	budgeted <i>(Saved budgeted vs. retail)</i>
2. 5,000-Gal Potable Barn Cistern + 3-Stage Viqua UV-C Skid (0% TX Tax)	FIG 0G-4 (3D) / 0G-4	Tank-Depot / Rain Ranchers + SupplyHouse + Home Depot (Form 01-339)	budgeted
3. 4-Layer Off-Grid Comms Mast (Starlink DC, 5G, 915 MHz Mesh, 80W VHF)	FIG 0G-5 (3D) / 0G-5	Starlink + Rokland + DX Engineering + Amazon	budgeted
4. 90-Day Winter Raised-Bed Low-Tunnel Garden + 2x IBC Totes + Pantry	FIG 0G-6 (3D) / 0G-6	Tractor Supply + Producers Co-op Bryan + Home Depot + Sam's/HEB	budgeted
5. Sovereign Local AI GPU (48GB VRAM) + 4-Cam Coral TPU Perimeter Defense	FIG 0G-7 (3D) / 0G-7	Mouser + eBay Enterprise + B&H Photo + Amazon	budgeted
TOTAL COMPLETE 90-DAY CHICK-FORTRESS BUILD (ALL 5 SYSTEMS)	15 Full Sheets Included	All Hardware, Pipe, Concrete, 48 kWh LiFePO4, Cistern, Comms, Food & AI	budgeted <i>(~budgeted net after 2nd pallet flip)</i>

Execution Order for Maximum Speed: (1) Drive to Docan Power's Houston warehouse (10611 Harwin Dr, Suite 406, Houston, TX 77036) with the Honda Ridgeline to pick up **3x 16 kWh rolling steel batteries (budgeted zero freight)**; (2) Pour the 76"x34"x4" pad and frame the 6'x2.5'x6.5' Outdoor Meter-Side Cabinet in one weekend; (3) Order 1 or 2 pallets of **ZNShine 440W Full-Black Bifacial panels (budgeted/pallet) + 2x EG4 12000XP** from Signature Solar; (4) Set the four 4'x8' raised beds + EMT hoops and plant November winter crops immediately.

Rural Acreage Master Plan: Texas Zone 9a Property (8.51 Acres OCL)

1-Story House + Outdoor Meter Cabinet + 28x35 Barn + 70-Yd Solar
Fence

16.2 kW + 48.0 kWh + 5,000 Gal



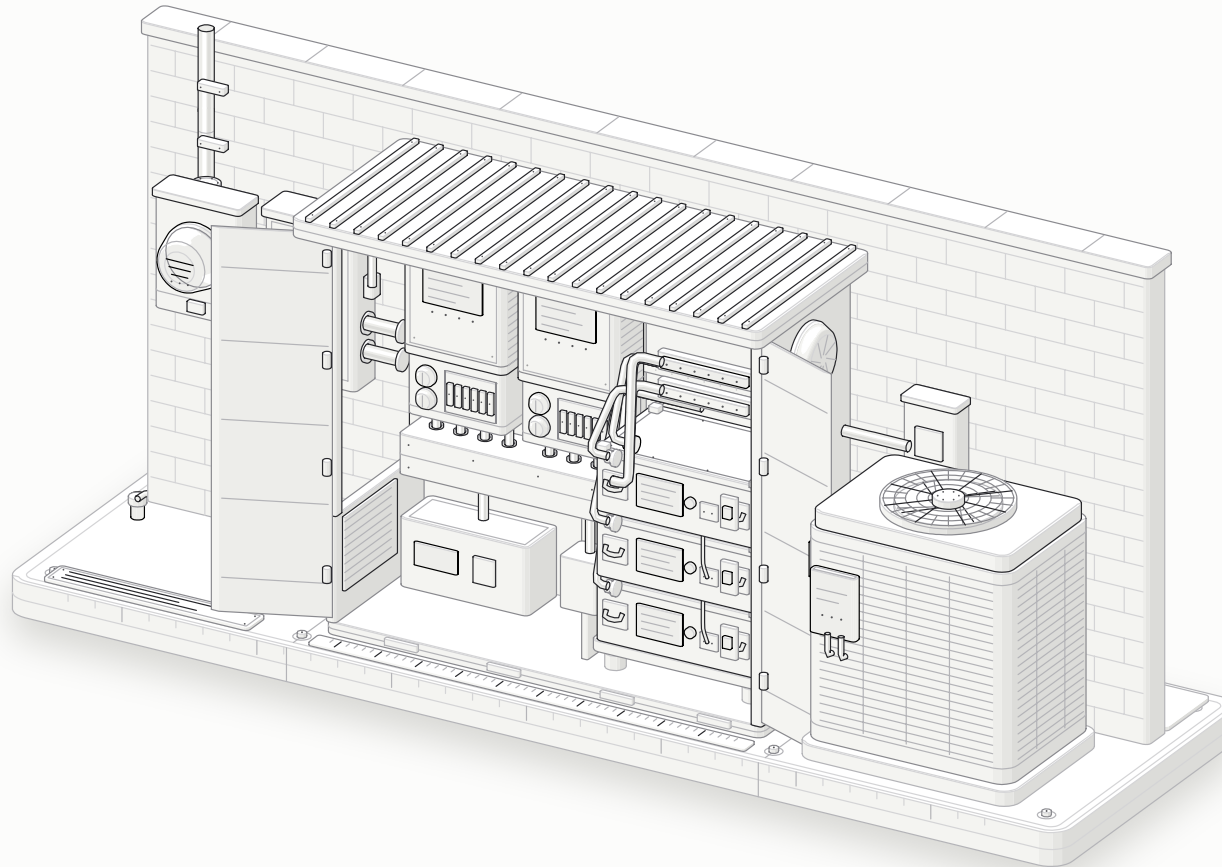
- ☐ **Lit highlights:** Outdoor Meter-Side Power Cabinet, 70-yard L-shaped Bifacial Solar Fence, 22-ft Barn Comms Mast, ALPR Gate & Exempt Well
- ☐ **Structures:** 1-story main house (front-center), detached 2-car garage (left), 28'x35' pole barn + 5,000-gal cistern (rear), 4x raised beds
- ☐ **Unincorporated Brazos County (OCL):** Zero city building permits for ground/fence solar and exempt domestic well under BVGCD Rule 8.1

True 3D isometric site model of Texas Zone 9a Rural Property. Front-left: gated gravel driveway off Chick Lane with ALPR camera post, detached 2-car garage, and 1-story main house with the 6'x2.5'x6.5' Outdoor Meter-Side Weather Cabinet mounted between the 200A BTU meter and 4-Ton A/C unit. Rear-center: 28'x35' pole barn with 22-ft ridge comms mast, tandem cargo trailer, and 5,000-gallon potable rainwater cistern. Right: L-shaped 70-yard (36-panel, 16.2 kW) vertical bifacial black-pipe solar fence sheltering four 4'x8' low-tunnel raised beds, with the 380-ft BVGCD exempt domestic well uphill at far right.

Outdoor Meter-Side Weather Cabinet: 2x EG4 12000XP + 3x Docan 16 kWh

6'-0" W x 2'-6" D x 6'-6" H Insulated Enclosure Next to 200A BTU Meter
& 4-Ton A/C

24 kW Cont. + 48.0 kWh



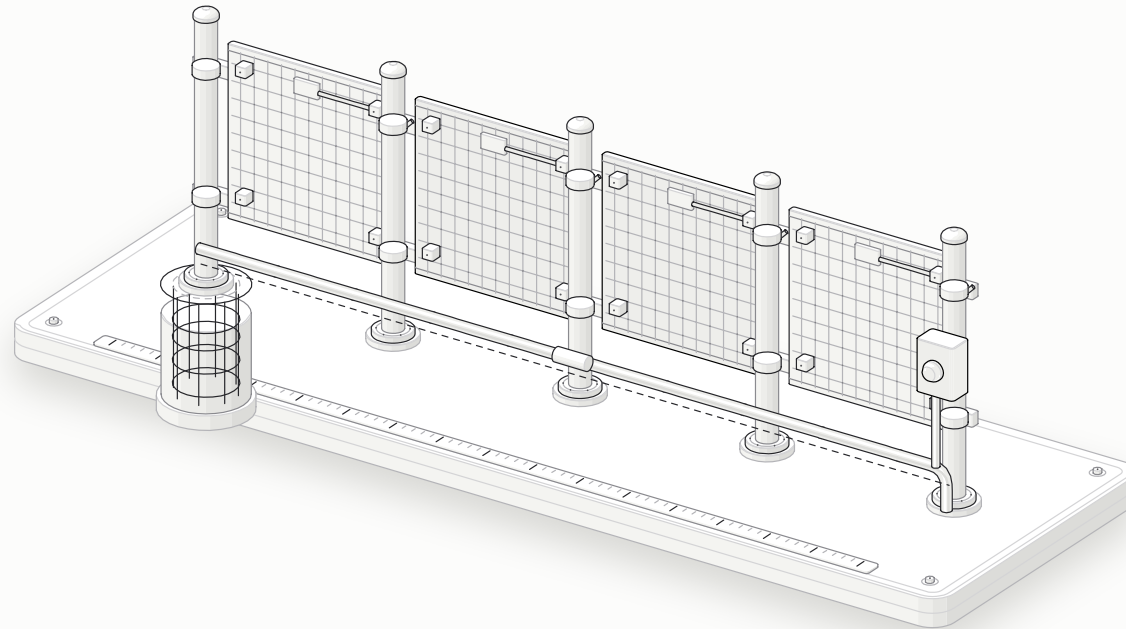
- ☐ **Lit accents:** 3x Docan 16 kWh JK BMS touchscreens, 2x EG4 12000XP displays, 200A transfer throw lever, aerosol fire puck & Micro-Air EasyStart 368
- ☐ **Center weather cabinet:** 1" Polyiso R-6.5 liner, 26-ga barn-tin overhang roof, bottom 12"x12" filtered intake louver & 48V thermostat exhaust fan
- ☐ **Through-wall 2" conduit stub:** Feeds rear interior closet 200A main breaker panel with zero noise, zero heat & zero lithium inside the house

True 3D isometric cutaway of the exterior service wall. Left: existing 200A BTU meter base and 200A NEMA 3R double-throw manual transfer switch backed by the interior closet 200A main breaker panel. Center: 6'-0" wide x 30" deep weatherproof cabinet housing two parallel EG4 12000XP split-phase inverters (24 kW continuous 120/240V output), an EG4 Chargeverter 48V generator charger below, and three stacked Docan Houston 16.0 kWh (51.2V 314Ah EVE MB31 + 200A JK BMS) rolling steel battery enclosures (48.0 kWh total). Right: existing 4-Ton Central A/C condenser equipped with a Micro-Air EasyStart 368 (~70% compressor LRA surge).

Vertical Bifacial Black-Pipe Solar Fence: Structural Pier & Clamping Cutaway

2-3/8" Sch 40 Posts + 12"x36" Concrete Pier + 1-5/8" Unistrut + 18" Mower Gap

35 Yds / 18 Panels (70 Yds / 36 Panels)



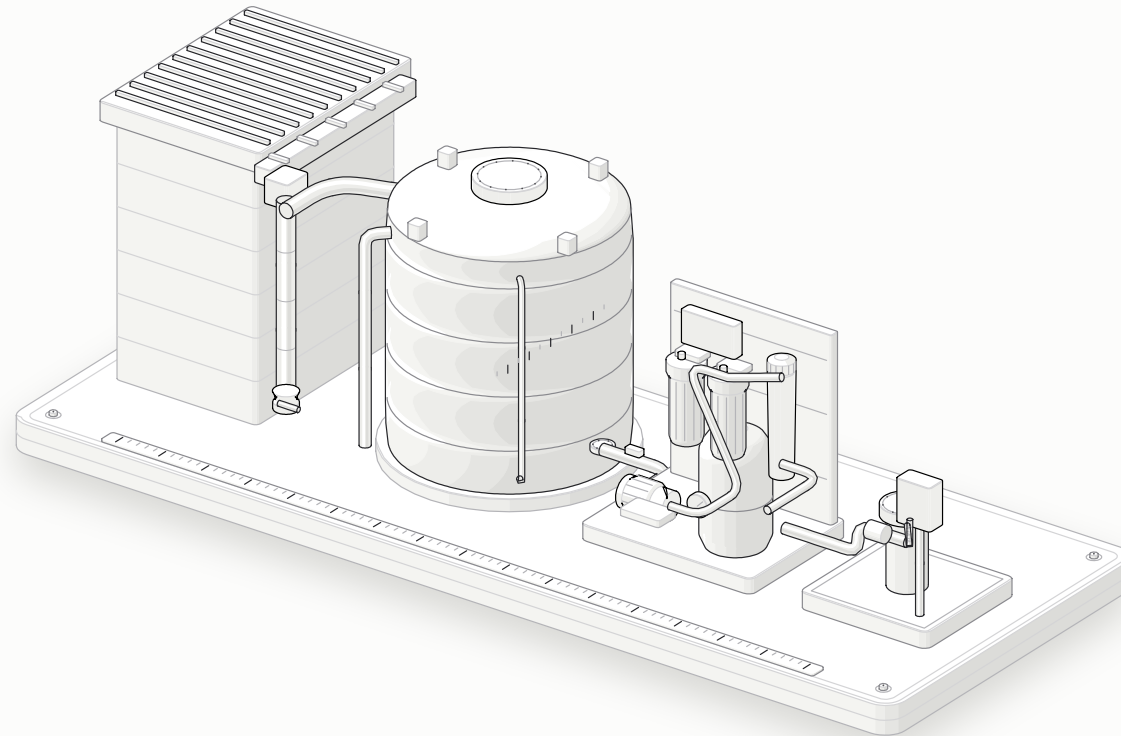
- ☐ **Lit elements:** N-Type dual-glass bifacial modules (100% East morning + 85% West afternoon sun) & IMO outdoor DC disconnect switch
- ☐ **Below-grade cutaway (left post):** 12" diameter x 36" deep poured concrete pier anchoring 2-3/8" Schedule 40 black pipe posts at 6'-0" O.C.
- ☐ **Zero roof holes & zero Tigo rapid-shutdown cost (budgeted saved):** 90-degree vertical dual glass sheds Brazos County golf-ball hail and pollen

True 3D isometric structural detail of the Chick-Fortress vertical bifacial black-pipe solar fence. Each 8-ft length of 2-3/8" OD Schedule 40 oilfield pipe is set 36" deep in a 12" concrete pier (shown in cutaway below the far-left post) with 5'-3" above grade. Two continuous horizontal 1-5/8" 12-gauge Unistrut channels support landscape 440W/450W N-Type dual-glass bifacial panels with an 18" bottom gap so Ryobi 40V mowers and string trimmers clear underneath without throwing rocks into the glass.

Off-Grid Water System: 5,000-Gal Cistern, 3-Stage UV Skid & 380-Ft Exempt Well

Barn 6" Gutter + 20-Gal First-Flush + NSF-61 Poly Tank + Viqua UV-C + BVGCD Well

77,960 Gal/Yr + 90-Day Autonomy



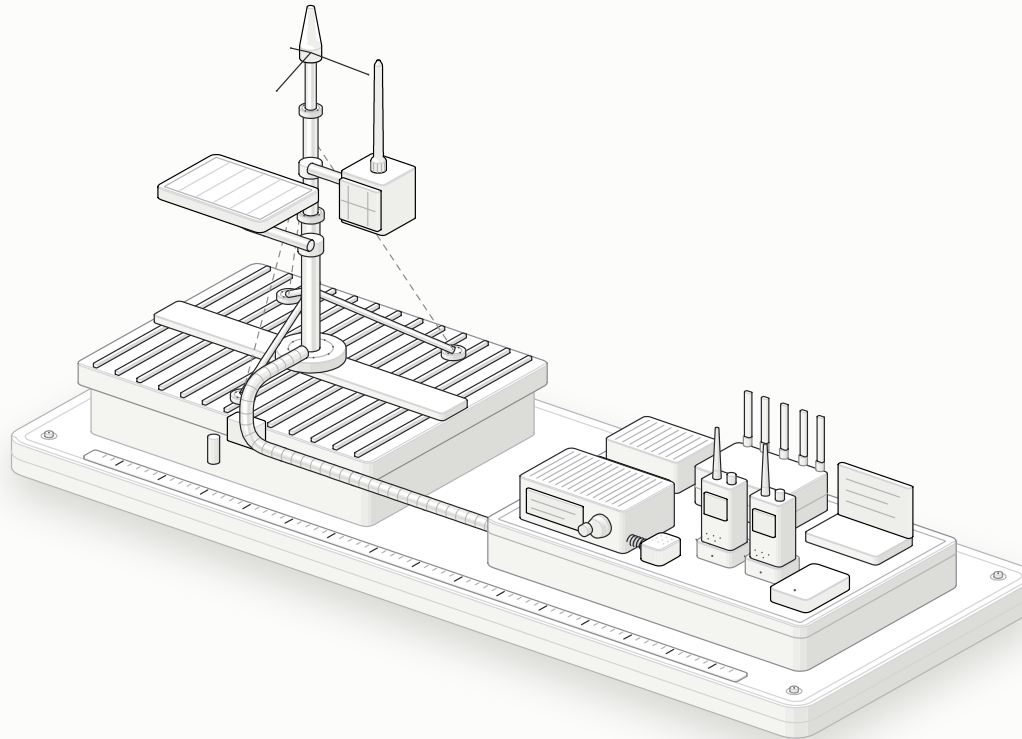
- ☐ **Lit stages:** 20-gal first-flush cleanout valve, 24" cistern hatch, Seaflo 48V booster pump, Viqua VH410 UV-C chamber & Grundfos SQ wellhead
- ☐ **Center tank:** 5,000-gallon dark green NSF-61 opaque polyethylene cistern (0% Texas sales tax via Comptroller Form 01-339)
- ☐ **Dual-source resilience:** Rainwater harvesting (550 gal/in on barn) backed by a 380-ft BVGCD Rule 8.1 exempt domestic well

True 3D isometric model of the Chick-Fortress off-grid potable water architecture. Left: 28'x35' pole barn 26-gauge metal roof eave with 6" commercial box gutter and 20-gallon 4" Schedule 40 PVC first-flush sediment standpipe. Center-left: 5,000-gallon NSF-61 dark green polyethylene cistern holding a full 90-day supply at 55 gal/day. Center-right: freeze-protected pump & purification skid with Seaflo 48V booster pump, 20-gal Well-X-Trol pressure tank, dual 4.5"x20" Big-Blue sediment/carbon filters, and Viqua VH410 12 GPM stainless UV-C sterilizer. Far right: 380-ft BVGCD Rule 8.1 exempt wellhead with Grundfos SQ soft-start submersible pump.

4-Layer Off-Grid Comms Mast & DC Radio Desk: 22-Ft Barn Ridge

Starlink Gen 3 DC + GL-X3000 5G + 915 MHz Meshtastic LoRa + 80W VHF/GMRS Base

15-Mi LoRa Mesh + 51W Total DC



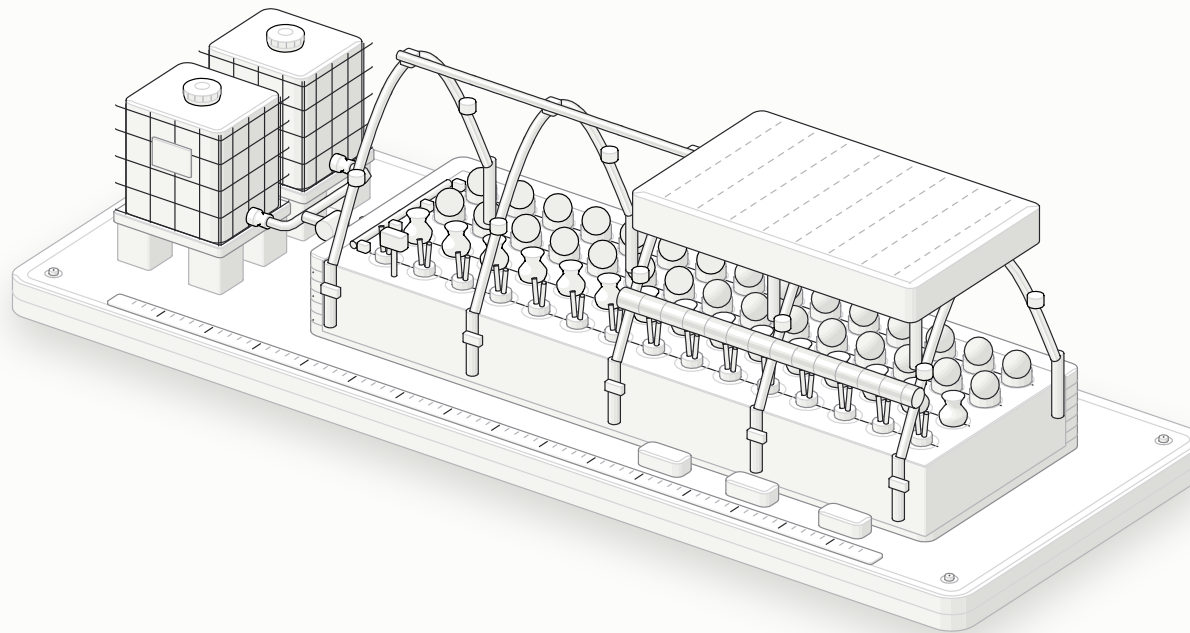
- ☐ **Lit transceivers:** Starlink Gen 3 dish, RAK4631 solar 915 MHz Meshtastic repeater, Yaesu FT-2980R 80W VHF rig, TD-H8 HTs & SenseCAP GPS
- ☐ **Left mast:** 22-ft galvanized ridge mast on pole barn with Diamond X30A VHF/UHF vertical, 5.8 dBi fiberglass LoRa omni & LMR-400 coax trunk
- ☐ **100% direct 12V/48V DC power architecture:** Yaosheng 48V-to-56V PoE injector eliminates 40W of 120V AC inverter idle losses

True 3D isometric model of the 4-layer off-grid communications architecture. Left: 22-ft galvanized steel mast mounted to the pole barn ridge carrying a Diamond X30A dual-band VHF/UHF vertical at the peak, an autonomous solar-powered RAK4631 915 MHz Meshtastic LoRa repeater with a 5.8 dBi fiberglass omni on the right cross-arm (10-15 mile radius across Brazos County with 0W draw from the house), and a Starlink Gen 3 dish on the left cross-arm. Right: indoor DC comms desk with 48V-to-56V DC PoE injector, GL-X3000 5G router, Yaesu FT-2980R 80W VHF base rig, Tadiran TD-H8 GMRS handhelds, and SenseCAP T1000-E truck GPS trackers.

90-Day Winter Raised Bed: 1/2" EMT Low-Tunnel & IBC Gravity Drip

Dual 275-Gal IBC Rainwater Totes + 4'x8'x12" Bed + Agribon AG-50 Frost Canopy

Day 7-90 Harvest + 550 Gal Gravity



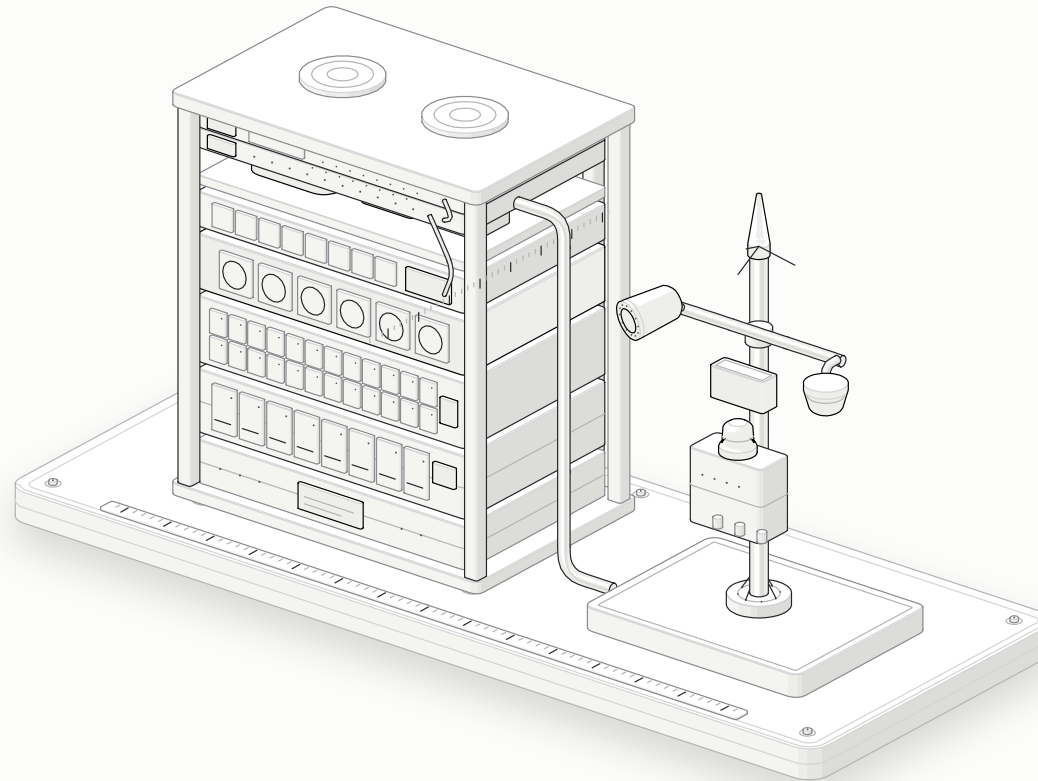
- ☐ **Lit accents:** IBC fill caps, fast-harvest brassica/radish/turnip rows & ABS snap clamps securing Agribon AG-50 frost cloth
- ☐ **Low-tunnel hoops:** Five 1/2" galvanized EMT conduit hoops slipped over 3/8" rebar stakes with a top ridge purlin (+8F to +10F freeze protection)
- ☐ **Zero-electricity irrigation:** Gravity drip manifold fed by two 275-gal caged IBC rainwater totes elevated 16" on concrete cinder blocks

True 3D isometric cutaway of the November Zone 9a winter food production engine. Left: two 275-gallon caged IBC rainwater totes elevated 16" on concrete cinder blocks to gravity-feed four 1/2" poly drip lines with zero pump electricity. Center & Right: 4'x8'x12" galvanized raised bed filled with 50/50 mushroom compost and sandy loam over sheet cardboard, spanned by five 10-ft x 1/2" EMT conduit arch hoops on 3/8" rebar stakes and a cutaway Agribon AG-50 (1.5 oz/yd²) frost blanket.

Sovereign Local AI 42U Rack & Autonomous AI Perimeter Defense Mast

DL360 + R730xd + T330 + Mac mini M4 + Dual P40 48GB GPU + Frigate
Coral TPU

58W Night Sentinel + 100% Air-Gapped

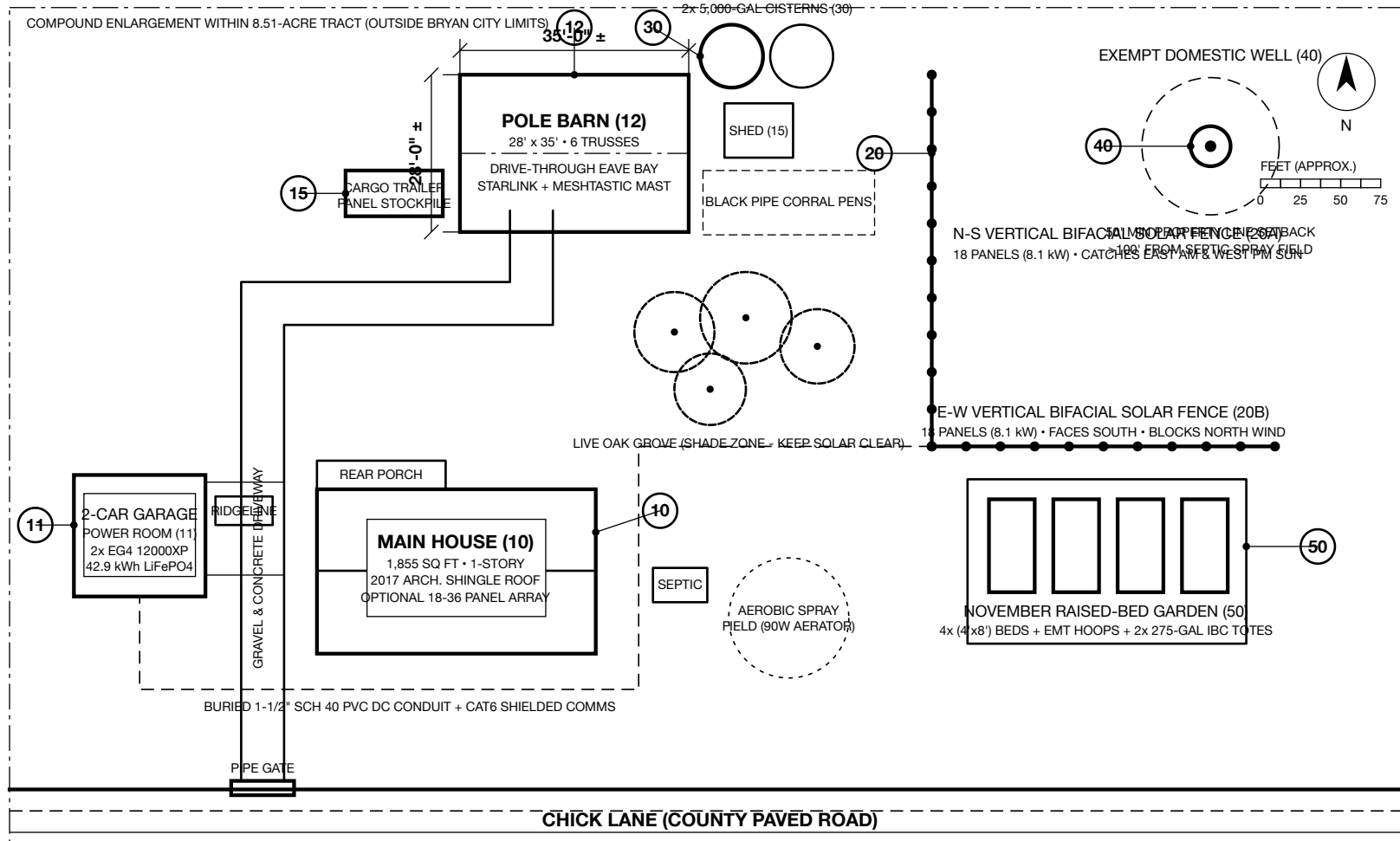


- ☐ **Lit compute & sensors:** 2U Dual Tesla P40 (48GB VRAM) GPU bay, Mac mini M4 + Coral TPU, ALPR bullet cam, turret cam & 115dB strobe
- ☐ **Left 42U rack (bottom to top):** GoldenMate LiFePO4 UPS, T330 TrueNAS 29TB, R730xd 20.4TB SAS, GPU bay, DL360 Gen10, M4 + UDM-SE/XG-8
- ☒ **Solar-Aware IPMI Power Governor:** Drops overnight rack draw from 520W to 58W while keeping 4-camera AI perimeter defense 100% active

True 3D isometric model of the consolidated 192.168.1.0/24 enterprise rack and autonomous perimeter security mast at Texas Zone 9a Property. Left: 42U rack containing the GoldenMate LiFePO4 UPS, Dell T330 TrueNAS (29TB ZFS + offline Wikipedia/Medline Kiwix ZIM archive), Dell R730xd simparray (26x SAS), 2U Dual NVIDIA Tesla P40 48GB VRAM GPU chassis for 70B local LLMs, HPE DL360 Gen10 chick-pve (72T Xeon), and Apple Silicon Mac mini M4 + Google Coral Dual-Edge TPU beneath the UDM-SE and USW-Pro-XG-8-PoE switch. Right: outdoor PoE++ AI camera mast with optical ALPR gate camera, 4K ColorVu turret camera, RTL-SDR spectrum watchdog, and Modbus deterrence relay.

6950 CHICK LANE - 90-DAY OFF-GRID MASTER SITE PLAN (8.51 ACRES OCL)

UNINCORPORATED BRAZOS COUNTY, TEXAS (TRACT 91, T.J. WOOTEN SURVEY, A-59). TAKEN FROM SITE PHOTOGRAPHS 01, 02 AND 06.



KEYED NOTES

- 10 MAIN HOUSE (1,855 SQ FT, 1-STORY BRICK/PINE, 2017 SHINGLE ROOF).
- 11 DETACHED 2-CAR GARAGE & POWER ROOM (2x EG4 12000XP + 42.9 kWh).
- 12 POLE BARN (28 FT x 35 FT, DRIVE-THROUGH EAVE DOORS, 26-GA ROOF).
- 15 WHITE TANDEM-AXLE CARGO TRAILER (LEFT EAVE) & SHED (RIGHT).
- 20 VERTICAL BIFACIAL SOLAR FENCE (205 LF, 36x 440W/450W = 16.2 kW).
- 30 5,000-GAL POTABLE RAINWATER CISTERN + UV SKID AT BARN EAVE.
- 40 EXEMPT DOMESTIC WELL SITE (380 FT ±, >100 FT FROM SEPTIC SPRAY).
- 50 NOVEMBER RAISED BED GARDEN (4x 4x8 FT BEDS + EMT LOW TUNNELS).

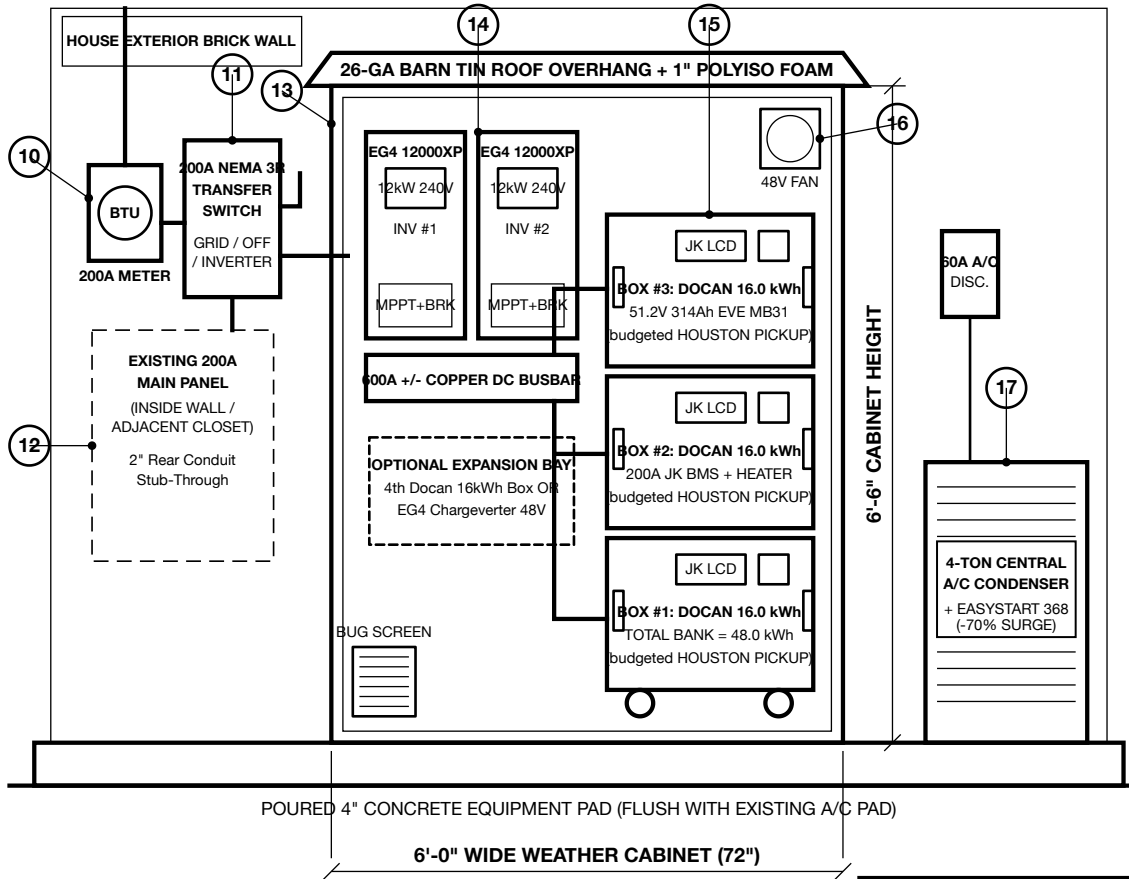
NOT FOR CONSTRUCTION - FIELD VERIFY ALL DIMENSIONS
SHEET 1 OF 7

PROJECT PROJECT CHICK-FORTRESS - 90-DAY OFF-GRID PLAN			
LOCATION 6950 CHICK LANE, BRYAN, TEXAS 77807			
SHEET TITLE MASTER SITE AND HOMESTEAD PLAN			
DWG NO. OG-1	SCALE 1" = 50'-0" ±	DATE 27 OCT 2026	REV A

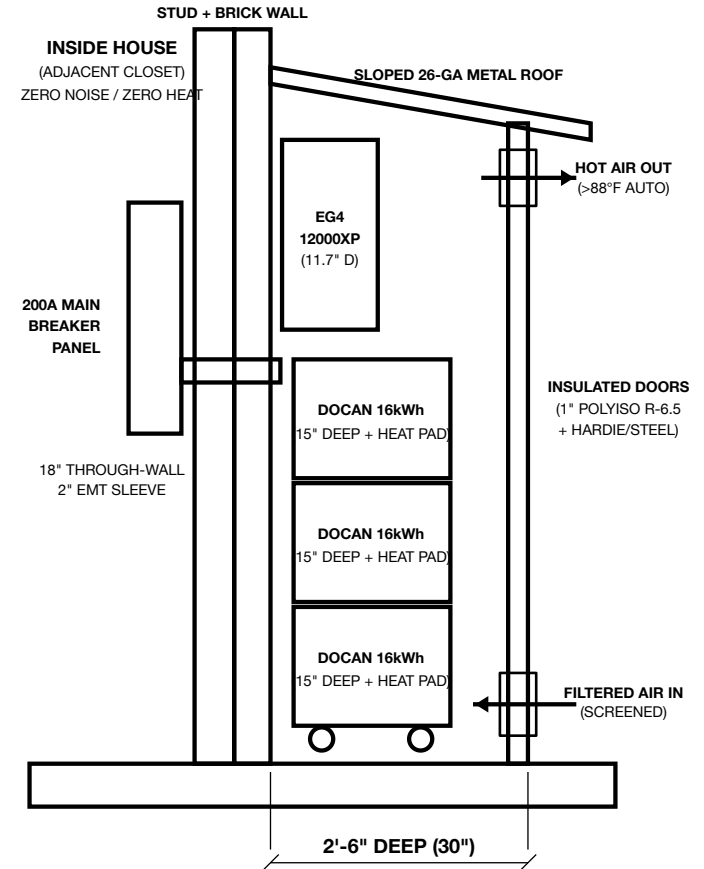
PROJECT CHICK-FORTRESS - OUTDOOR METER-SIDE POWER CABINET & A/C ELEVATION

3x DOCAN 16 kWh (48.0 kWh) EVE 314Ah BATTERIES + 2x EG4 12000XP (24 kW) IN WEATHERPROOF CABINET NEXT TO METER & 4-TON A/C (budgeted TOTAL)

1. EXTERIOR BRICK WALL ELEVATION (DOORS OPEN FOR CLARITY)



2. CROSS-SECTION A-A (SIDE VIEW THROUGH WALL)



COST COMPARISON SUMMARY

Retail Outdoor 43kWh Stack: budgeted
Docan 48kWh + Cabinet: budgeted
NET SAVINGS: budgeted (54% OFF)

KEYED NOTES

- EXISTING BTU 200A DIGITAL ELECTRIC METER BASE ON EXTERIOR BRICK WALL.
- GE / ABB 200A 240V NEMA 3R DOUBLE-THROW MANUAL SAFETY TRANSFER SWITCH.
- EXISTING 200A MAIN HOUSE BREAKER PANEL (INSIDE ADJACENT WALL / CLOSET).
- WEATHERPROOF LEAN-TO CABINET (6'-0" W x 2'-6" D x 6'-6" H, 1.5" STEEL + HARDIE).
- 2x EG4 12000XP SPLIT-PHASE INVERTERS (24 kW CONT. 120/240V AC, 48 kW MPPT PV).
- 3x DOCAN HOUSTON 16 kWh (51.2V 314Ah EVE MB31 + 200A JK BMS) = 48.0 kWh STACK.
- 1" FOIL-FACED POLYISO INSULATION (R-6.5) + 48V THERMOSTAT EXHAUST FAN.
- EXISTING 4-TON CENTRAL A/C CONDENSER + MICRO-AIR EASYSTART 368 SOFT-STARTER.

NOT FOR CONSTRUCTION - FIELD VERIFY ALL DIMENSIONS

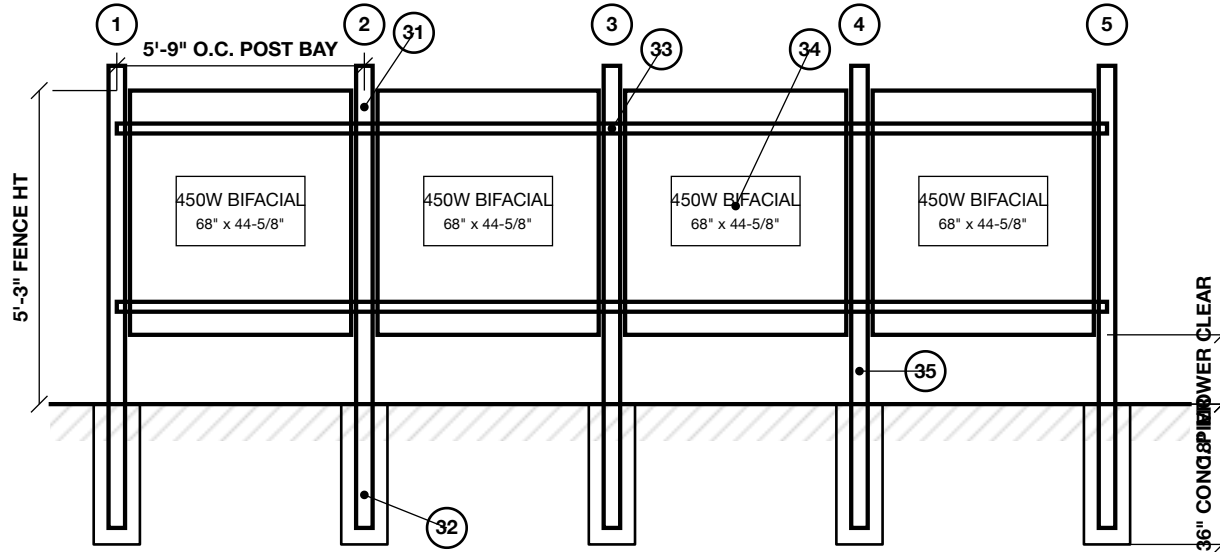
SHEET 2 OF 7

PROJECT PROJECT CHICK-FORTRESS - 90-DAY OFF-GRID PLAN			
LOCATION 6950 CHICK LANE, BRYAN, TEXAS 77807			
SHEET TITLE OUTDOOR METER CABINET, DOCAN 48kWh & A/C ELEVATION			
DWG NO. OG-2	SCALE 3/8" = 1'-0" ±	DATE 27 OCT 2026	REV B

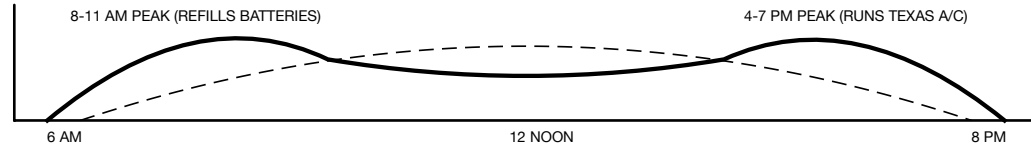
VERTICAL BIFACIAL BLACK-PIPE SOLAR FENCE - ELEVATION & SECTION

MATCHES EXISTING RANCH BLACK PIPE FENCING. ZERO ROOF HOLES, 90° HAIL GLANCE, DUAL-PEAK EAST/WEST HARVEST.

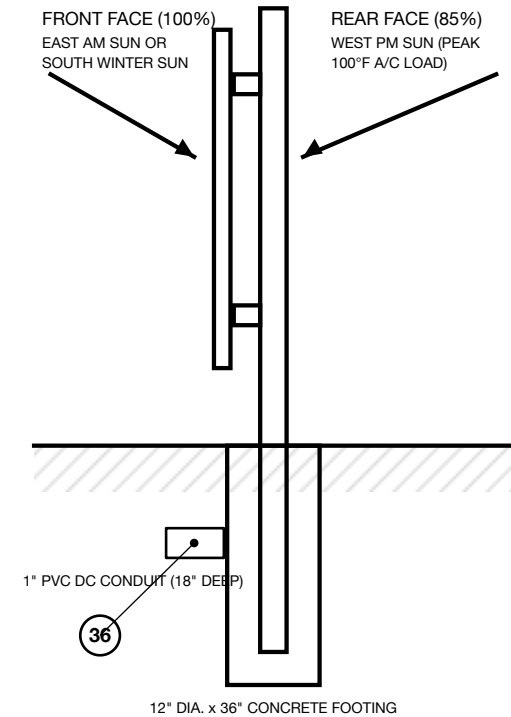
1 TYPICAL 4-PANEL FENCE ELEVATION (36 PANELS = 205 LINEAR FT)



3 DAILY POWER PROFILE: N-S VERTICAL BIFACIAL FENCE VS. FLAT ROOF



2 SECTION A-A (BI-DIRECTIONAL HARVEST)



KEYED NOTES

- 31 2-3/8" SCH 40 BLACK STEEL PIPE POST, 8'-0" O.C. MAX (5'-9" BAY).
- 32 12" DIA. x 36" DEEP CONCRETE PIER FOOTING IN COMPACTED CLAY.
- 33 1-5/8" SCH 40 HORIZONTAL PIPE OR 12-GA UNISTRUT CHANNEL RAIL.
- 34 ZNSHINE 440W / SERAPHIM 450W FULL-BLACK DUAL-GLASS BIFACIAL.
- 35 18" MOWER & WEED-TRIMMER CLEARANCE UNDER BOTTOM RAIL.
- 36 1" RIGID PVC UNDERGROUND DC STRING CONDUIT (18" BURIAL).

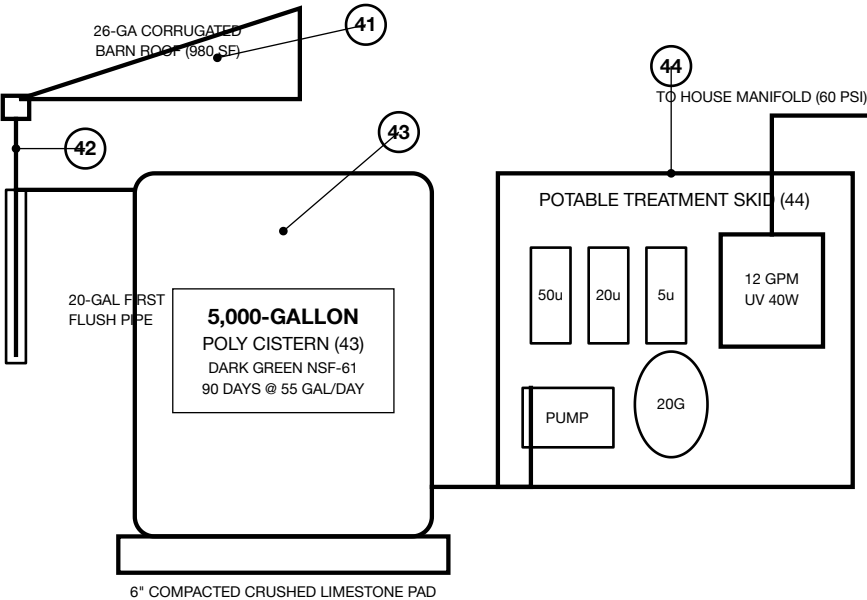
NOT FOR CONSTRUCTION - FIELD VERIFY ALL DIMENSIONS
SHEET 3 OF 7

PROJECT PROJECT CHICK-FORTRESS - 90-DAY OFF-GRID PLAN			
LOCATION 6950 CHICK LANE, BRYAN, TEXAS 77807			
SHEET TITLE BLACK-PIPE BIFACIAL SOLAR FENCE			
DWG NO. OG-3	SCALE AS NOTED	DATE 27 OCT 2026	REV A

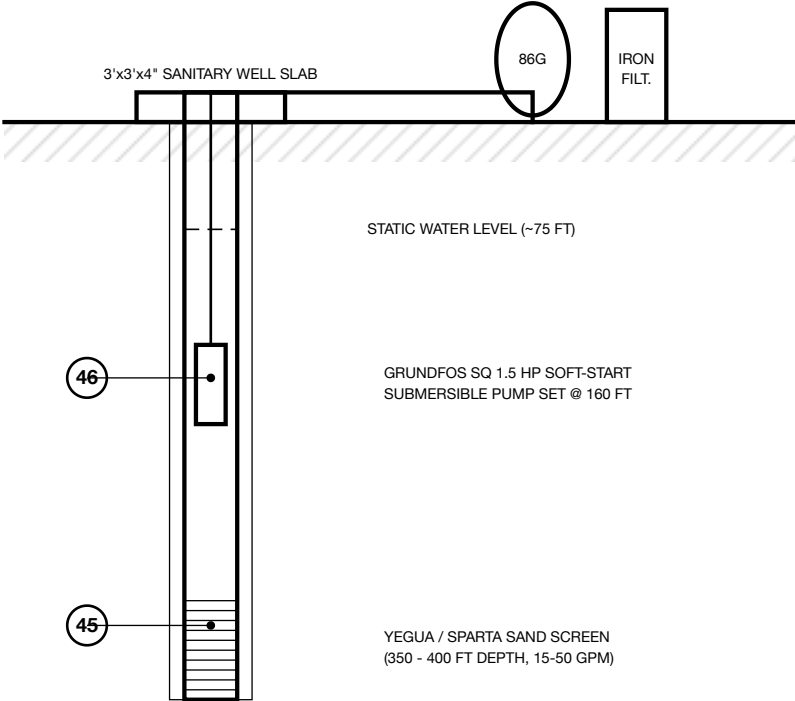
OFF-GRID WATER ARCHITECTURE - METAL BARN RAINDWATER & EXEMPT WELL

COMBINED PROPERTY ROOF CATCHMENT = 77,960 GAL/YR (40.5" AVG RAIN). BVGCD RULE 8.1 EXEMPT WELL REQUIRES NO PERMIT OR METER.

1 BARN METAL-ROOF POTABLE RAINWATER ENGINE (100W DRAW)



2 BVGCD EXEMPT DOMESTIC WELL PROFILE (380 FT ±)



KEYED NOTES

- 41 BARN 26-GA METAL ROOF (980 SQ FT = 550 GAL / 1" RAIN; 22,275 GAL/YR).
- 42 6" K-STYLE GUTTER + LEAF EATER + 20-GAL PVC FIRST-FLUSH DIVERTER.
- 43 5,000-GAL DARK GREEN NSF-61 POLY CISTERN (0% TX SALES TAX FORM 01-339).
- 44 OFF-GRID BOOSTER PUMP + 20-GAL TANK + 50/20/5u CARBON + 12 GPM UV.
- 45 BVGCD EXEMPT DOMESTIC WELL (380 FT ± YEGUA/SPARTA, <50,000 GAL/DAY).
- 46 GRUNDFOSS SQ SOFT-START 240V SUBMERSIBLE PUMP @ 160 FT (ZERO SURGE).

NOT FOR CONSTRUCTION - FIELD VERIFY ALL DIMENSIONS
SHEET 4 OF 7

PROJECT
PROJECT CHICK-FORTRESS - 90-DAY OFF-GRID PLAN

LOCATION
6950 CHICK LANE, BRYAN, TEXAS 77807

SHEET TITLE
RAINWATER & EXEMPT WELL SYSTEM

DWG NO.

OG-4

SCALE

NTS

DATE

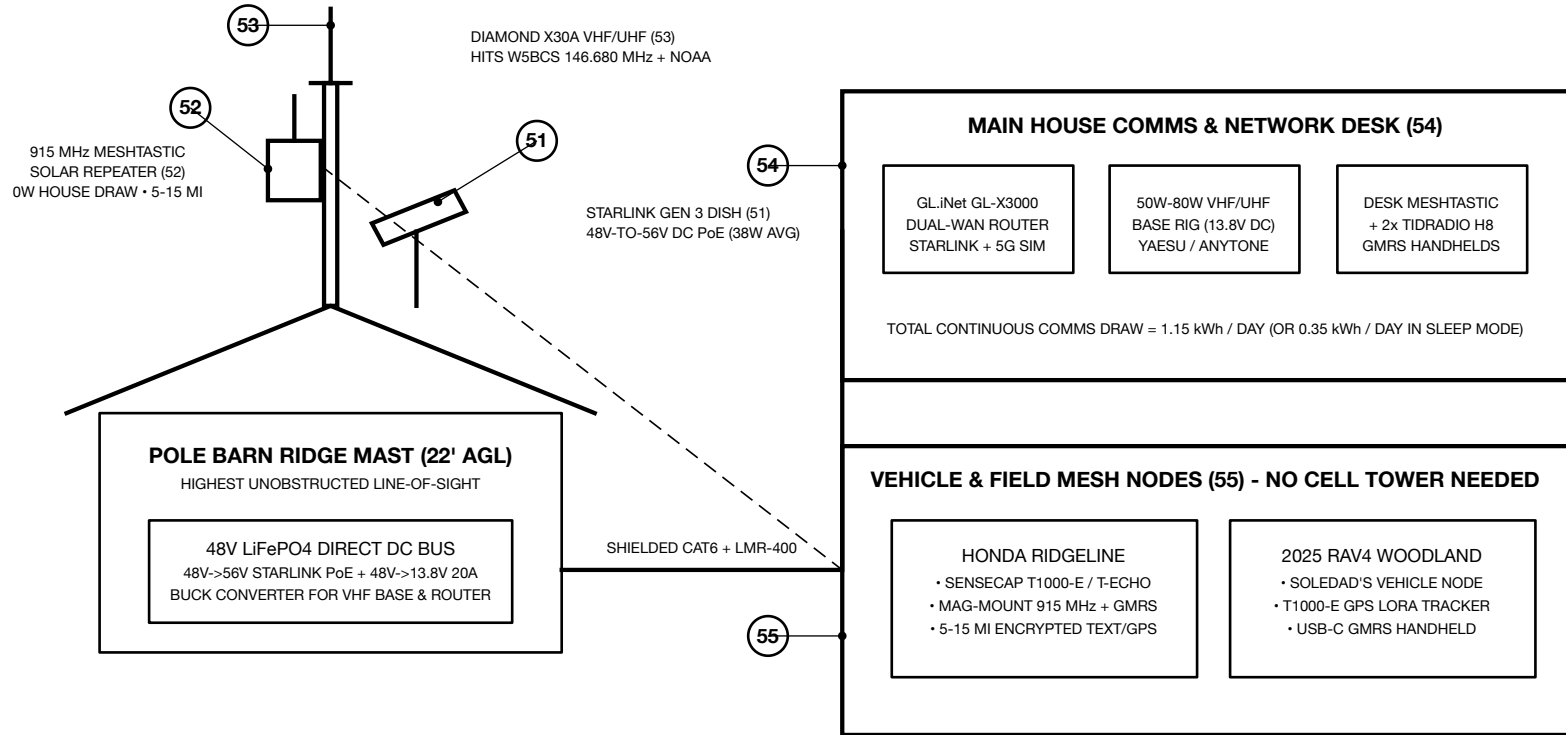
27 OCT 2026

REV

A

4-LAYER OFF-GRID COMMUNICATIONS & 915 MHz LORA MESH ARCHITECTURE

100% DC-POWERED (ZERO AC INVERTER IDLE LOSS). COVERS SATELLITE WAN, CELLULAR FAILOVER, 15-MILE LORA MESH & BRAZOS VHF.



KEYED NOTES

- 51 STARLINK GEN 3 DISH ON BARN RIDGE + 48V-TO-56V DC PoE INJECTOR.
52 RAK WISBLOCK 915 MHz MESHTASTIC SOLAR REPEATER + 5.8 dBi OMNI.
53 DIAMOND X30A DUAL-BAND VHF/UHF ANTENNA @ 22 FT AGL ON BARN.
54 HOUSE COMMS DESK: 50W VHF/UHF BASE RADIO + GL-X3000 5G FAILOVER.
55 MOBILE / FIELD NODES: RIDGELINE, 2025 RAV4 WOODLAND, & HANDHELDS.

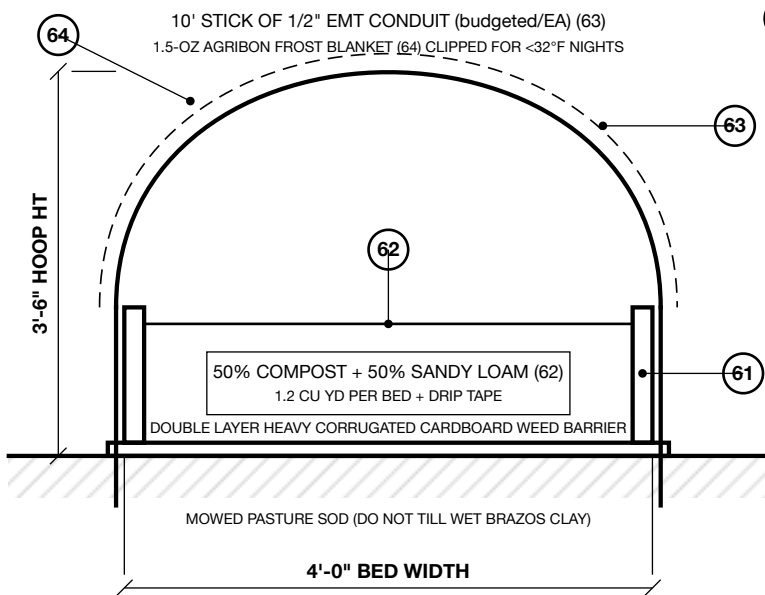
NOT FOR CONSTRUCTION - FIELD VERIFY ALL DIMENSIONS
SHEET 5 OF 7

PROJECT PROJECT CHICK-FORTRESS - 90-DAY OFF-GRID PLAN			
LOCATION 6950 CHICK LANE, BRYAN, TEXAS 77807			
SHEET TITLE OFF-GRID COMMS & MESH TOPOLOGY			
DWG NO. OG-5	SCALE NTS	DATE 27 OCT 2026	REV A

90-DAY WINTER FOOD ENGINE - RAISED BEDS, EMT LOW TUNNELS & TIMELINE

BRYAN, TX (USDA ZONE 9a). START NOVEMBER 1 FOR CONTINUOUS HARVESTS FROM DAY 7 THROUGH DAY 90.

1 SECTION: 4' x 8' RAISED BED + 1/2" EMT LOW TUNNEL



2 4-BED CROP ALLOCATION & 90-DAY HARVEST GANTT

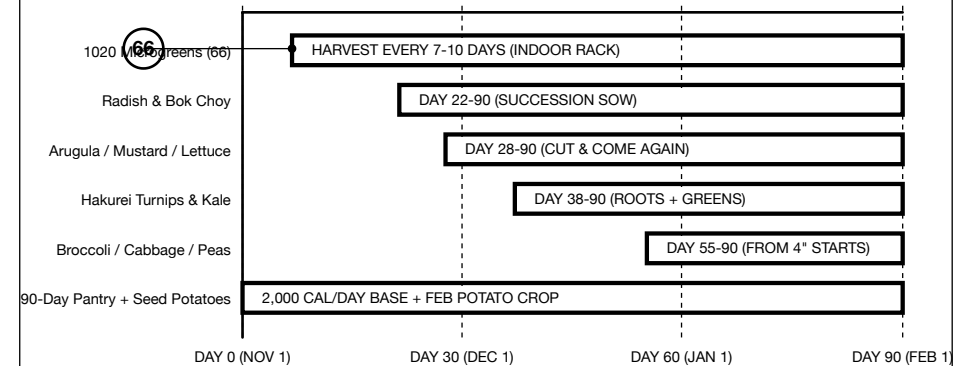
BED 1: FAST SPRINTERS (22-35d)
Radish, Baby Bok Choy, Arugula, Mustard

BED 2: CUT-AND-COME GREENS (30-45d)
Spinach, Romaine, Tatsoi, Hakurei Turnips

BED 3: HEAVY BRASSICAS (45-65d)
4* Starts: Kale, Collards, Broccoli, Cabbage

BED 4: STAPLE ROOTS & ALLIUMS
Garlic Cloves, Onion Sets, Carrots, Beets

3 CONTINUOUS 90-DAY CALORIE & FRESH HARVEST TIMELINE



KEYED NOTES

- 61 4' x 8' x 12" GALVANIZED OR CEDAR RAISED BED OVER CARDBOARD.
- 62 BULK 50/50 COMPOST + SANDY LOAM / EXPANDED SHALE (NO CLAY TILLING).
- 63 10-FT x 1/2" EMT CONDUIT HOOP SLIPPED OVER 3/8" REBAR STAKES.
- 64 1.5-OZ AGRIBON FROST CLOTH CLIPPED TO HOOPS FOR <32°F FREEZES.
- 65 2x 275-GAL IBC TOTES ON BLOCKS (550 GAL GRAVITY DRIP IRRIGATION).
- 66 INDOOR 1020 TRAY MICROGREENS RACK (HARVEST IN 7 TO 10 DAYS).

NOT FOR CONSTRUCTION - FIELD VERIFY ALL DIMENSIONS
SHEET 6 OF 7

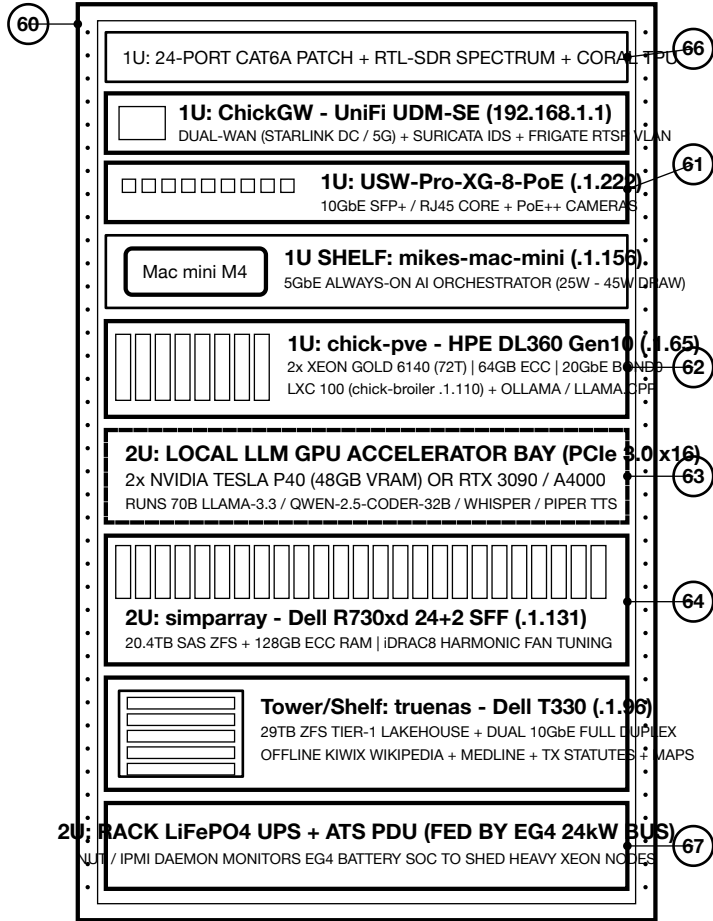
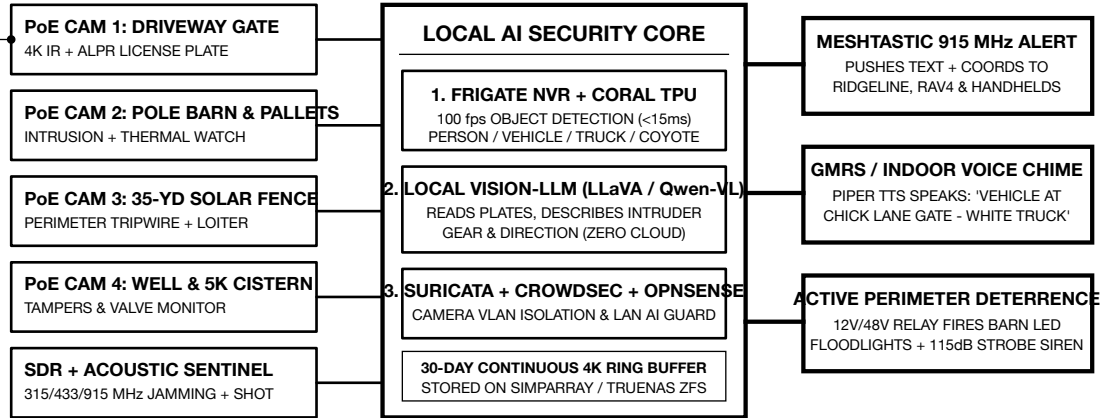
PROJECT PROJECT CHICK-FORTRESS - 90-DAY OFF-GRID PLAN			
LOCATION 6950 CHICK LANE, BRYAN, TEXAS 77807			
SHEET TITLE 90-DAY GARDEN & LOW-TUNNEL SYSTEM			
DWG NO. OG-6	SCALE AS NOTED	DATE 27 OCT 2026	REV A

PROJECT CHICK-FORTRESS - LOCAL RACK-MOUNT AI & AI PERIMETER PROTECTION

10GbE / 20GbE AIR-GAPPED SOVEREIGN LLM STACK, FRIGATE + CORAL EDGE-TPU VISION & IPMI SOLAR-AWARE POWER GOVERNOR

1. CHICK-FORTRESS RACK ELEVATION (192.168.1.0/24)

2. AI PERIMETER PROTECTION & THREAT DETECTION STACK



3. SOLAR-AWARE RACK POWER POSTURES (IPMI / iLO5 / iDRAC8)

SOLAR / SOC STATE	ACTIVE SERVERS	RACK DRAW	AI & SECURITY WORKLOADS RUNNING
MODE A: SOLAR SURPLUS 10:00 - 16:30 (SoC > 65%) PV Yield > 6.0 kW	ChickGW + XG-8 + Mini M4 + chick-pve (DL360 72T) + T330 + R730xd + GPUs	480W - 650W (~3.8 kWh/window)	70B LLM Deep Reasoning, Full Landman OCR/RAG, ZFS Replication Scrubs, 30-Day NVR Indexing, Offline Medical / Engineering / Legal Copilot
MODE B: STANDARD OPS Battery SoC 35% - 65% Day / Evening Normal	ChickGW + XG-8 + Mini M4 + chick-pve (110W Eco) + T330 TrueNAS (R730xd off)	240W avg (5.76 kWh/day)	8B-32B Local LLM (Llama-3.1 / Qwen-2.5), Frigate 4-Cam AI Vision, Kiwix Offline Web, Meshtastic AI Auto-Responder & Voice Alerts
MODE C: NIGHT SENTINEL 22:00 - 08:00 OR Multi-Day Storm (<35% SoC)	ChickGW + XG-8 + Mini M4 + Coral TPU + PoE Cams (DL360/T330/R730xd Standby)	55W - 72W (1.45 kWh/day)	24/7 AI Perimeter Vision (Frigate + Coral TPU), Local 8B/14B LLM on Apple Silicon M4 Neural Engine, SDR Spectrum Watch + iLO/iDRAC Wake-on-Demand
AIR-GAPPED VAULT Stored on T330 / NVMe (Zero Internet Required)	Kiwix ZIM + Qdrant + DuckDB Lakehouse + OpenWebUI LAN Portal	~650 GB Mirrored Flash	Full English Wikipedia (105GB), WikiMed/PubMed Emergency Medicine, Service Manuals (Ridgeline, RAV4, EG4, DeWalt), USGS Topo Maps, Brazos County Deeds & Survival Library

KEYED NOTES

- 60 42U ENTERPRISE SERVER RACK (10GbE / 20GbE BONDED AIR-GAPPED FABRIC).
- 61 CHICKGW (UNIFI UDM-SE .1.1) + USW-PRO-XG-8-POE 10G SWITCH (.1.222).
- 62 CHICK-PVE (HPE DL360 GEN10, 72T XEON GOLD 6140, 64GB ECC, 110W BASE).
- 63 GPU AI EXPANSION: DUAL NVIDIA TESLA P40 / RTX 3090 (48GB VRAM) OR M4 MAX.
- 64 SIMPARRAY (DELL R730xd 24-BAY 20.4TB SAS + 128GB ECC) & T330 TRUENAS (29TB).
- 65 POE PERIMETER VISION CAMERAS (GATE, BARN, SOLAR FENCE, WELL) -> FRIGATE NVR.
- 66 SDR SPECTRUM SENTINEL (915 MHz LORA + 462 MHz GMRS + 315/433 GATE GUARD).
- 67 SOLAR-AWARE IPMI / iLO5 / iDRAC8 POWER SHEDDING DAEMON (490W -> 55W NIGHT).

NOT FOR CONSTRUCTION - FIELD VERIFY ALL DIMENSIONS
SHEET 7 OF 7

PROJECT PROJECT CHICK-FORTRESS - 90-DAY OFF-GRID PLAN			
LOCATION 6950 CHICK LANE, BRYAN, TEXAS 77807			
SHEET TITLE RACK-MOUNT LOCAL AI AND AI PERIMETER PROTECTION			
DWG NO. OG-7	SCALE N.T.S.	DATE 27 OCT 2026	REV A