GOLDEN GATE BLIMP CO.

GGB-35 · 3.5 m Helium RC Advertising Blimp

ENGINEERING DRAWING SET — REVISION A — 2026-11-04

CONCEPT — NOT FOR CONSTRUCTION

DESIGN TARGETS (from budget-build.md Tier 2 + ggb-3d geometry class)

Envelope 3500 × 1200 mm TPU · V=2.425 m³ · A=10.20 m² · Gross lift (1.0 kg/m³)=2425 g

Cfg-B dry mass=2135 g · margin=290 g · Installed thrust=6.9 N · Est. max wind≈16 mph (Cd=0.2)

SHEET INDEX

00	Cover & sheet index	this sheet
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STATUS & CONTROLS

· All lift/wind/endurance figures are estimates.

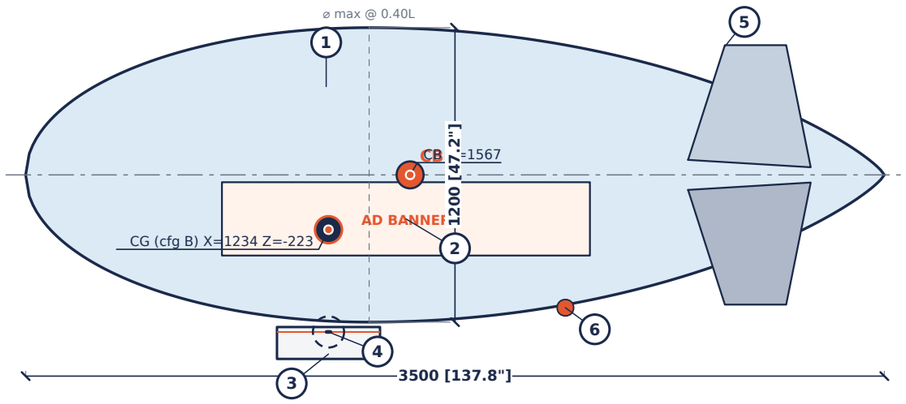
· Sources: /workspace/ggb-mvp/budget-build.md, prototype-build-plan.md, /workspace/ggb-3d (Envelope class). Calcs: calculations.md.

· Next: seam heat-seal test → air leak test → helium fill → ballast trim → guarded tethered hover → free flight.

COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 Drawing Set — Cover & Sheet Index**	DWG NO. **GGB-35-00**	REV **A**	SHEET **0 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **N/A**
NOTES Helium lift & wind figures are estimates — not flight-verified.				

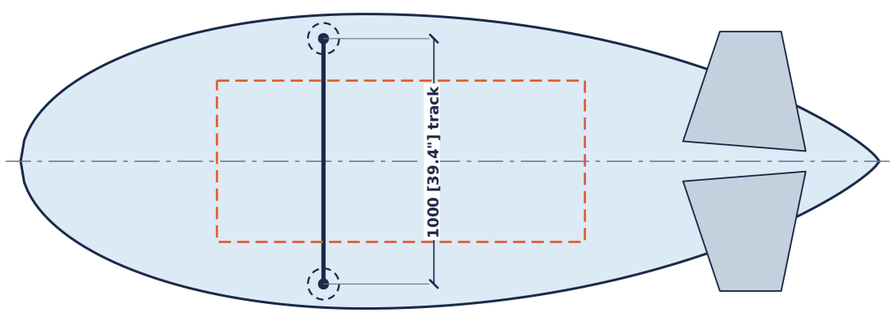
SIDE ELEVATION (port looking starboard)

Profile: GGB Envelope (nose ellipse → afterbody exp 0.8); L=3500 D=1200; fineness 2.92



3500 [137.8"]

TOP VIEW

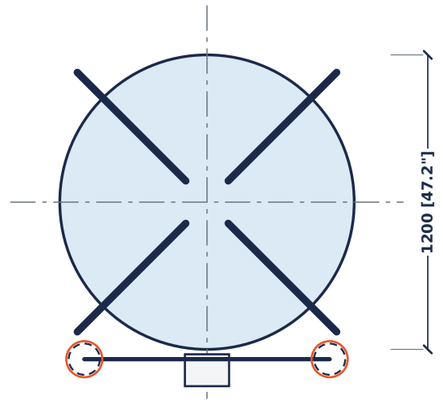


3500 [137.8"]

PARTS (see detail sheets)

1. Envelope, 0.1 mm TPU, 6 gores (sh.02)
2. Ad banner, 1 oz ripstop ×2 (sh.08)
3. Gondola / avionics pod (sh.04)
4. Vectored thruster pods ×2 (sh.05)
5. X-tail fin set (sh.06)
6. Fill valve (sh.02)

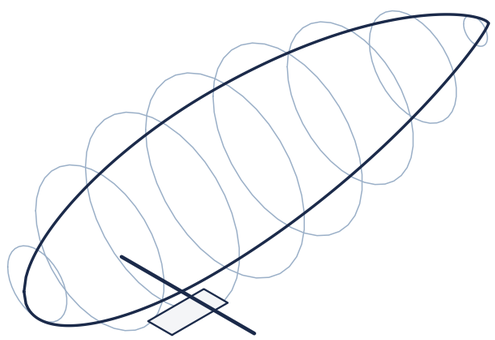
FRONT VIEW (looking aft)



Prop guards Ø147 · tilt ±90°

ISOMETRIC (sketch)

Not to scale — see orthographic views

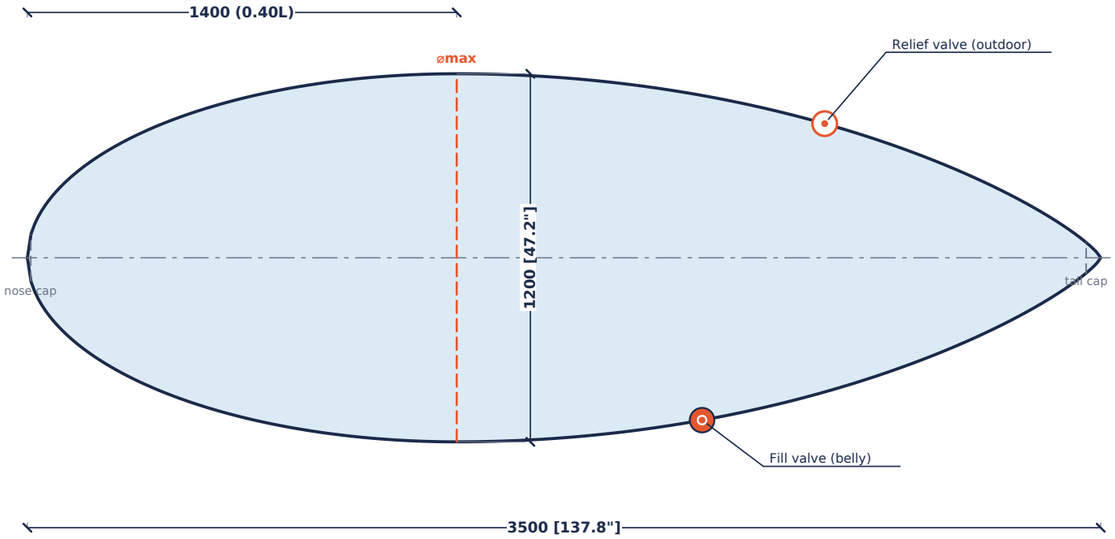


KEY: V=2.425 m³ A=10.20 m² Gross lift (1.0 kg/m³)=2425 g Cfg-B mass=2135 g Margin=290 g CB@X=1567 CG@X=1234

COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 General Arrangement — Side / Top / Front / Isometric**	DWG NO. **GGB-35-01**	REV **A**	SHEET **1 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **1:25 (views)**
NOTES Helium lift & wind figures are estimates — not flight-verified.				

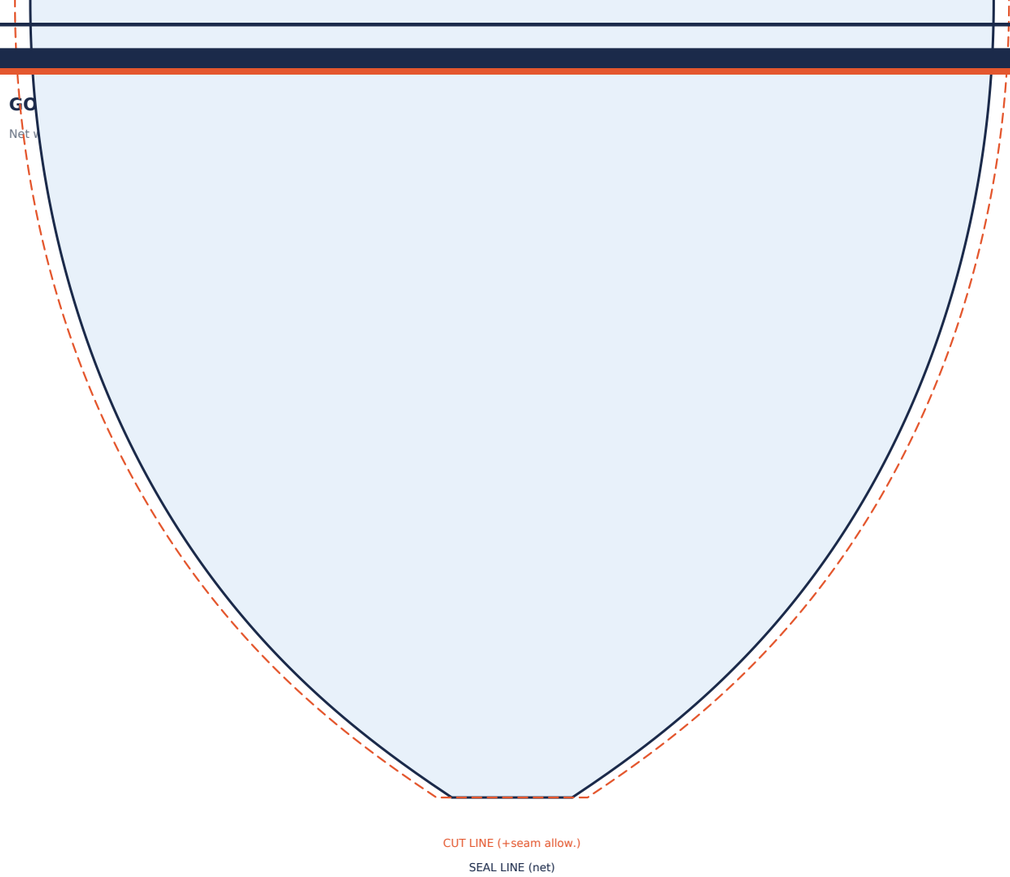
HULL PROFILE (side half-section)

Profile family: GGB Envelope — forward of xmax: r = R√(1−((xm−x)/xm)²); aft: r = R(1−t²)^0.8, t=(x−xm)/(L−xm). Same class as ggb-3d Envelope.



GO

Net w



OFFSET TABLE (X from nose tip, mm)

X	r	⌀	s (meridian)	s_gore	gore w	cut w
0	0.0	0.0	0.0	-76.1	0.0	—
250	342.2	684.4	442.4	366.3	358.3	378.3
500	459.6	919.2	719.1	643.0	481.3	501.3
1000	575.0	1150.0	1233.2	1157.2	602.1	622.1
1400	600.0	1200.0	1634.3	1558.2	628.3	648.3
1750	586.6	1173.3	1984.6	1908.6	614.3	634.3
2000	560.5	1121.0	2236.0	2160.0	586.9	606.9
2500	464.2	928.4	2745.5	2669.4	486.1	506.1
3000	299.5	598.9	3272.4	3196.3	313.6	333.6
3500	0.0	0.0	3860.1	3784.0	0.0	—

Meridian arc length = 3860.1 mm · Gore active length = 3714.6 mm · Cut length = 3734.6 mm (+10 ea end)

PROFILE EQUATIONS (X from nose, mm)

xm = 0.40·L = 1400 R = 600

0 ≤ x ≤ xm: r(x) = R · √(1 − ((xm − x)/xm)²)

xm < x ≤ L: r(x) = R · (1 − t²)^0.80 t = (x − xm)/(L − xm)

V = ∫ π r² dx = 2.4248 m³ A = ∫ 2π r √(1+r′²) dx = 10.197 m²

Prolate-ellipsoid check: V_ell = π/6·D²·L = 2.639 m³ (budget-build.md used this; GGB profile is 91.9% of ellipsoid)

Film: 0.1 mm TPU @ 120 g/m²

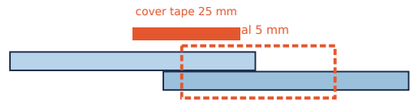
54" roll → 2 gores across; 3 row(s)

Yardage (6-gore): ~14.1 yd incl. test + caps

Yardage (8-gore alt.): ~18.3 yd

Impulse sealer bites/gore: 10 (16" bar)

SEAM DETAIL (SECTION) SCALE 5:1



overlap allow. 10/edge

Seam line load @ 150 Pa: 90.00 N/m; seal shear ≈ 18.00 kPa

Film hoop stress @ 150 Pa: 0.90 MPa (SF≈22 vs 20 MPa assumed UTS)

VERIFY heat-sealability of purchased film before cutting gores.

COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 Envelope Geometry — Profile, Offset Table, Gore Pattern, Seam**	DWG NO. **GGB-35-02**	REV **A**	SHEET **2 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **1:20 / 1:4**
NOTES Helium lift & wind figures are estimates — not flight-verified.				

1. ENVELOPE VOLUME & GROSS LIFT

Profile volume V = 2.4248 m³ (85.6 ft³)

Surface area A = 10.197 m² Side projected ≈ 3.102 m² Frontal = 1.131 m²

CB station XB = 1567.0 mm from nose Envelope areal centroid XA = 1604.4 mm

Lift rule (budget-build.md): net helium ≈ 1.0 kg/m³ at SF sea level (conservative). Range 1.0–1.1.

Ideal-gas check: L = purity · (ρ_air − ρ_He), ρ_He = ρ_air · M_He/M_air, ISA or stated T.

Design gross (1.0 kg/m³): 2425 g Helium mass @16 m/22 °C ≈ 400 g

ΔV ≈ +3.5% per +10 K (isobaric). Top up after heat soak; outdoor uses relief valve.

LIFT CASES

Case	ℓ (kg/m³)	Gross (kg)
Budget-doc rule (conservative)	1.0000	2.425
ISA sea level, 15 °C	1.0346	2.509
SF indoor venue, 16 m, 22 °C	1.0082	2.445
SF outdoor, 16 m, 12 °C	1.0435	2.530
SF high point ~282 m, ISA	1.0069	2.442
SF indoor, 95 % He purity	0.9773	2.370

CONFIG SUMMARY

B: Indoor baseline

Dry mass 2135 g

Margin 290 g

Ballast* 310 g

CG X=1234 BG=223

A: Indoor ad (FC + LED)

Dry mass 2300 g

Margin 125 g

Ballast* 145 g

CG X=1189 BG=193

O: Outdoor

Dry mass 2240 g

Margin 185 g

Ballast* 205 g

CG X=1197 BG=211

*ballast to fly +20 g heavy

BG = metacentric height (mm)

2. MASS BREAKDOWN (sources: C=calc, V=vendor, D=budget-doc, E=estimate)

ID	Item	g	Src	X	Z	Cfg
E1	Envelope film, 0.1 mm TPU, A×120 g/m²×1.15	1407.1	C	1604	0	BAO
E2	Caps, load / tab / fin-boot patches (TPU)	60.1	C	1700	-250	BAO
E3	Fill valve, self-sealing, generic	15.0	E	2200	-529	BAO
F1	Fins ×4, 3 mm XPS + 2 mm CF edge rod	125.3	C	2971	0	BAO
F2	Fin tip brace line + ties	4.0	E	3000	0	BAO
G1	Gondola shell, 3 mm XPS 420×180×130	36.9	C	G	-685	BAO
G2	Tray, rails, strap loops, webbing, buckles	30.0	E	G	-645	BAO
P1	Thruster arm, CF tube 10/8 mm × 1040	45.6	C	G	-640	BAO
P2	Motors ×2, 2204-class 2300KV	57.0	V	G	-640	BAO
P3	ESCs ×2, 20 A, no BEC	8.0	V	G	-685	BAO
P4	Props ×2, 5 in (CW + CCW)	10.0	E	G	-640	BAO
P5	Prop guards ×2, PETG ring + netting	40.0	C	G	-640	BAO
P6	Tilt servos ×2, SG90 9 g	18.0	D	G	-640	BAO
P7	Tilt yokes, bearings, shafts, motor plates	24.0	E	G	-640	BAO
A1	LiPo 3S 1300 mAh 45C	110.0	D	G	-705	BAO
A2	RC receiver, ELRS 6-ch PWM (ER6)	8.0	E	G	-685	BAO
A3	BEC 5 V 3 A (servos, RX, FC)	10.0	E	G	-685	BAO
A4	Power dist.: XT60, arming plug, fuses	15.0	E	G	-685	BAO
A5	Wiring harness 14/18/20/22 AWG	30.0	E	G	-685	BAO
B1	Banners ×2, 1500×500 1 oz ripstop +10 % hem	55.9	C	1550	0	BAO
B2	Banner hook-and-loop tabs ×24	25.0	E	1550	0	BAO
A6	Flight controller (F405-Wing class, ArduPilot)	25.0	E	G	-685	AO
A7	Telemetry radio, air side + antenna	15.0	E	G	-685	AO
L1	LED strips 5 V, 2×3.0 m, 30 LED/m	90.0	E	1550	0	A
L2	LED controller + 5 V 3 A LED BEC	20.0	E	G	-685	A
L3	LED harness to banners	15.0	E	1300	-400	A
O1	Remote ID broadcast module (FAA-accepted)	15.0	E	G	-685	O
O2	GNSS / compass module + 75 mm mast	20.0	E	G	-580	O
O3	Position / anti-collision lights	10.0	E	G	-685	O
O4	Pressure relief valve (outdoor sun heating)	20.0	E	2600	437	O

ENVELOPE MASS

A · 120 g/m² · 1.15

= 10.197 · 120 · 1.15

= 1407 g

Seam extra (calc) ≈ 9.2% of A

(doc factor 15% covers it)

vs budget-build.md

Doc V_ell=2.64 m³

This V=2.425 m³ (−8.2%)

Doc env≈1500 g (A=10.8)

This env=1407 g

Doc gear≈470 g, margin 650 g

Cfg-B gear=728 g

Cfg-B margin=290 g

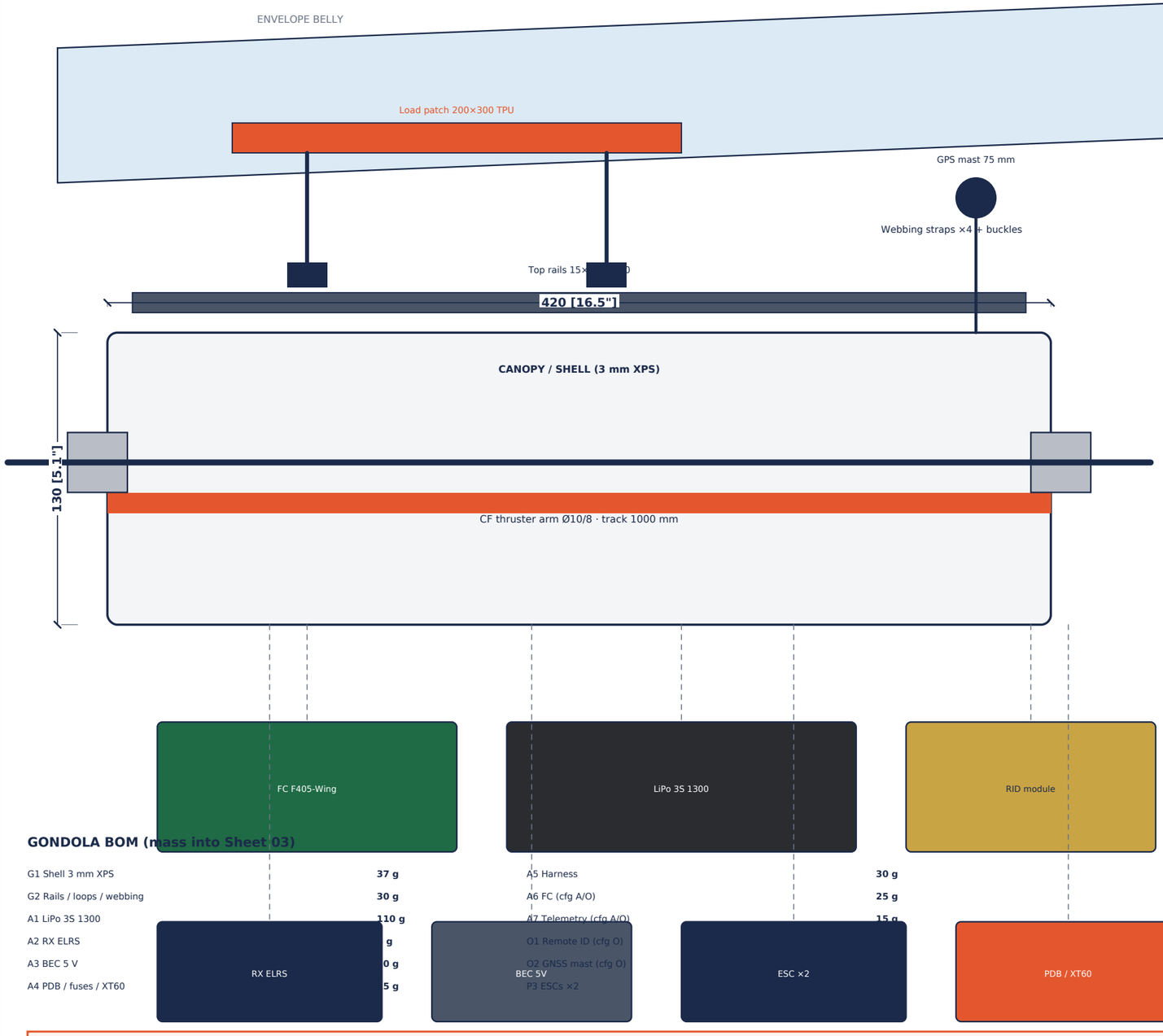
Lower V + fuller BOM → tighter margin. Still >0.

Trim: drop LED/FC for Tier-2 demo; keep cfg B.

COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 Buoyancy & Mass Budget**	DWG NO. **GGB-35-03**	REV **A**	SHEET **3 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **N/A (tables)**
NOTES Helium lift & wind figures are estimates — not flight-verified.				

EXPLODED SIDE VIEW (looking to starboard)

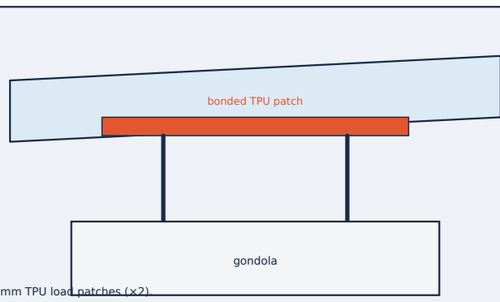
Pod 420 × 180 × 130 mm · strap-mounted to belly load patches



TOP VIEW — COMPONENT LAYOUT



BELLY MOUNT DETAIL



1. Bond 200×300 mm TPU load patches (×2).
2. Sew/bond 25 mm webbing loops to patch.
3. Strap through gondola rail loops; snug, not crush.

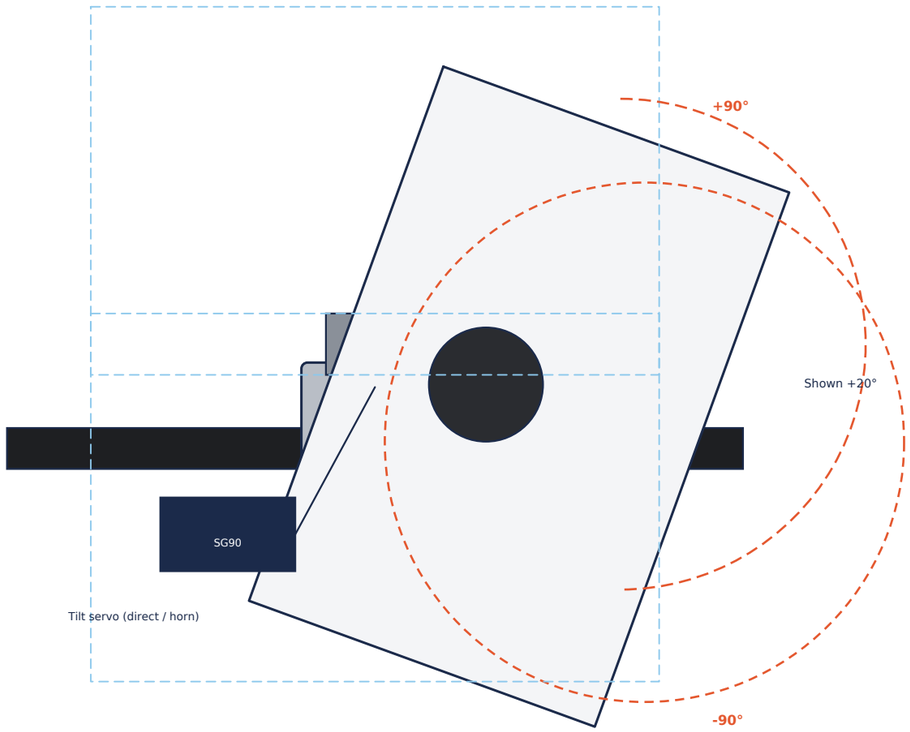
GONDOLA BOM (mass into Sheet 03)

G1 Shell 3 mm XPS	**37 g**	A5 Harness	**30 g**
G2 Rails / loops / webbing	**30 g**	A6 FC (cfg A/O)	**25 g**
A1 LiPo 3S 1300	**110 g**	A7 Telemetry (cfg A/O)	**15 g**
A2 RX ELRS	**g**	O1 Remote ID (cfg O)	
A3 BEC 5 V	**0 g**	O2 GNSS mast (cfg O)	
A4 PDB / fuses / XT60	**5 g**	P3 ESCs ×2	

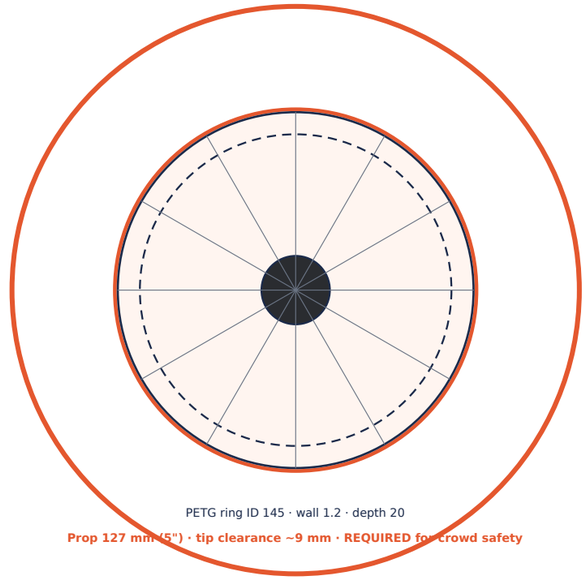
Outdoor: Remote ID must be FAA-accepted broadcast RID; antenna clear of carbon/XPS shielding. Kill/arming: keyed plug on PDB; failsafe = motors off (settle when flown +20 g heavy).

COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 Gondola / Avionics Pod — Exploded & Mount**	DWG NO. **GGB-35-04**	REV **A**	SHEET **4 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **1:2 / 1:1**
NOTES Helium lift & wind figures are estimates — not flight-verified.				

SIDE VIEW — TILT MECHANISM



FRONT VIEW — PROP GUARD



PETG ring ID 145 · wall 1.2 · depth 20

Prop 127 mm (5") · tip clearance ~9 mm · REQUIRED for crowd safety

THRUST & STRUCTURE

Motor: 2204-class 2300KV · 28.5 g · Ø27.9 × 32.2 mm

Vendor max thrust: 440 gf each (5–6" prop, 2–3S) — DrUAV listing

Installed thrust (×0.80 guard/sag): 6.90 N total (704 gf)

Arm lever (clamp→motor): 410 mm

Arm bending stress @ full T: 0.0 MPa (CF tube)

Arm tip deflection (cantilever est.): 3.4 mm

Servo torque from 10 mm thrust offset: 0.44 kgf·cm

SG90 stall ≈ 1.8 kgf·cm — OK with margin if e_off kept small; verify under load.

ESC: 20 A cont. bidirectional (set BLHeli reverse). Mount on arm or in gondola.

Tilt range ±90° supports hover vectoring and slow reverse. Mechanical stops at ±95°.

POD BOM (each)

1. Duct / guard ring PETG 14 g
2. Netting / spokes 6 g
3. Motor 2204 28.5 g
4. Prop 5" 5 g
5. Tilt servo SG90 9 g
6. Yoke / bearings / plate 12 g
7. ESC 20A (shared count) 4.0 g

SAFETY: never fly without prop guards over people.

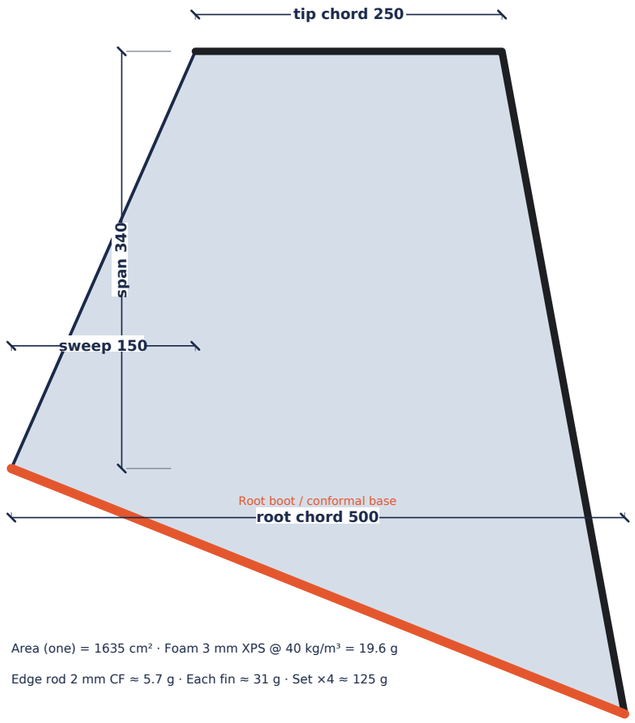
Failsafe = throttle cut. Soft props preferred for indoor.

Outdoor: consider larger props / lower KV for wind.

COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 Vectored Thruster Pod — Assembly, Tilt, Prop Guard**	DWG NO. **GGB-35-05**	REV **A**	SHEET **5 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **1:1 / 2:1**
NOTES Helium lift & wind figures are estimates — not flight-verified.				

FIN PLANFORM (one of four, unrolled to plane of fin)

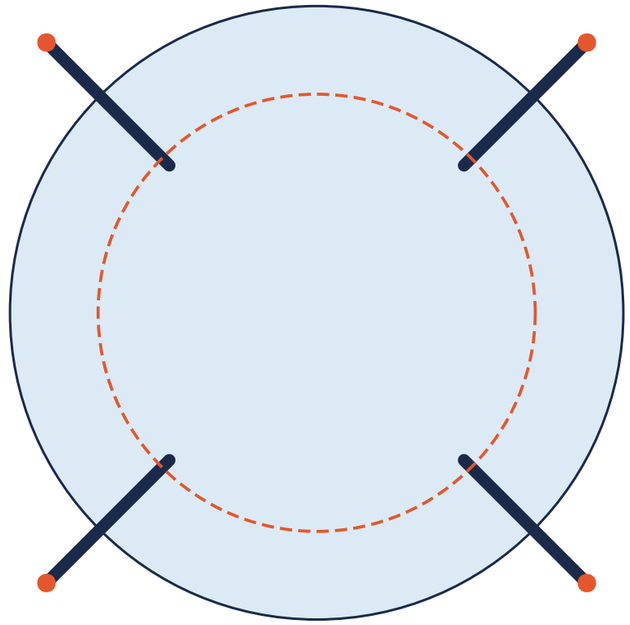
X-tail at 45° / 135° / 225° / 315°. Foam core + carbon edge rod. Soft trailing edge.



Area (one) = 1635 cm² · Foam 3 mm XPS @ 40 kg/m³ = 19.6 g

Edge rod 2 mm CF ≈ 5.7 g · Each fin ≈ 31 g · Set ×4 ≈ 125 g

AFT VIEW — X-TAIL ON ENVELOPE



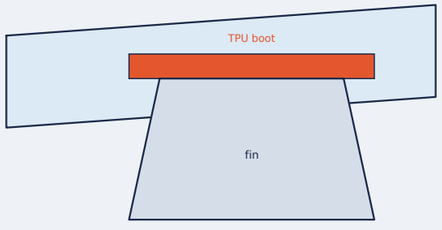
TIP BRACE WIRES

Light Spectra / kevlar line tip-to-tip keeps fins from folding under reverse thrust. Tip radius 748 mm from axis.

Circumferential straps ×2 (50 mm webbing)

Ratchet buckles on belly CL

ROOT ATTACHMENT DETAIL



1. Bond conformal TPU boot to envelope.
2. Seat foam fin into boot; optional light adhesive.
3. Pass 50 mm straps over fin roots; ratchet snug.
4. Add tip braces; check tracking (no twist).

No control surfaces on Tier-2 demo — vectored thrust provides pitch/yaw. Elevons = future option.

DESIGN NOTES

· Soft foam preferred over rigid sheet for crowd / doorway safety.

· Keep CG of fin set near envelope CB so it does not shift trim much.

· Fin set station ≈ X 2971 mm.

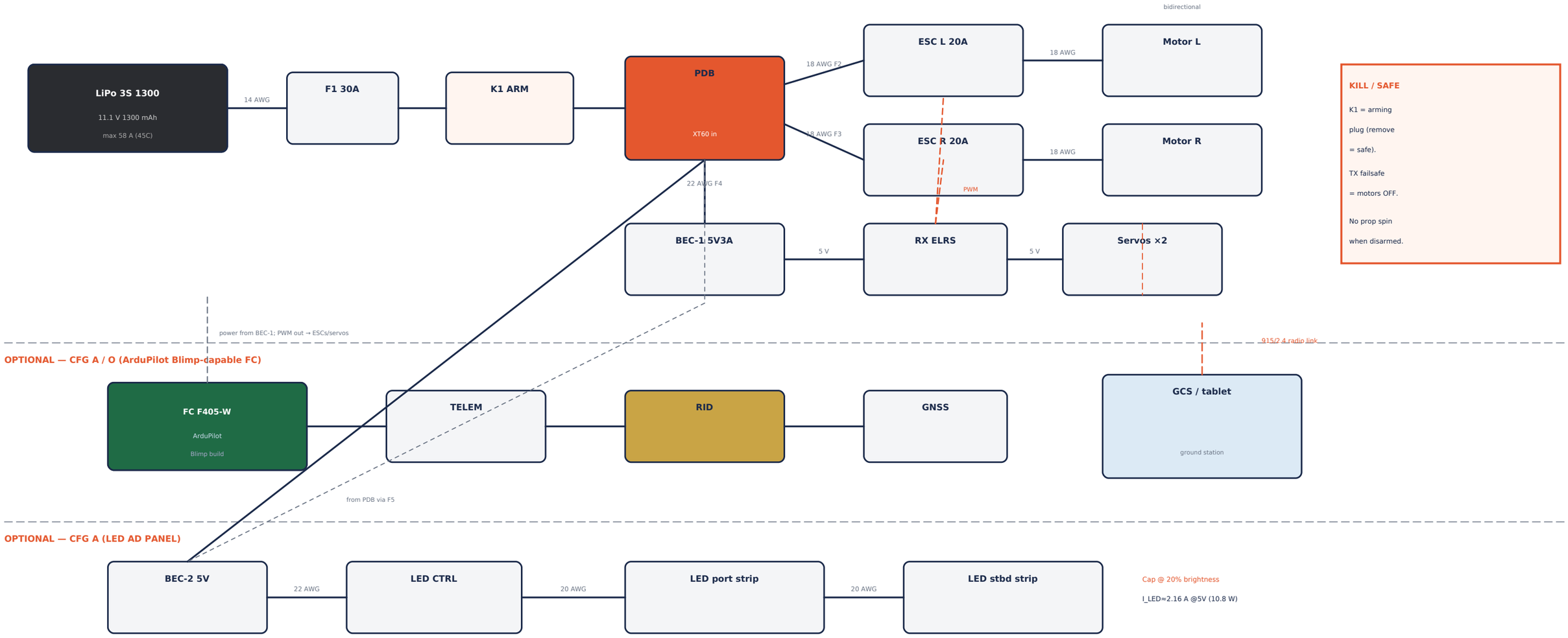
· Outdoor: increase span 20% or add inflatable fins if wind weathercocking is weak.

· Verify clearances with prop arcs at ±90° tilt.

COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 X-Tail Fin Set — Plan, Attachment, Dimensions**	DWG NO. **GGB-35-06**	REV **A**	SHEET **6 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **1:5**
NOTES Helium lift & wind figures are estimates — not flight-verified.				

POWER & SIGNAL BLOCK DIAGRAM

Plain-RC baseline shown solid; FC / telemetry / RID / LED are config options (dashed).



KILL / SAFE

K1 = arming plug (remove = safe).

TX failsafe = motors OFF.

No prop spin when disarmed.

WIRE GAUGE, FUSES & VOLTAGE DROP

Run	AWG	Loop m	I (A)	Ampacity	Fuse	Vd (V)
Main: battery → F1 → K1 → PDB	14	0.50	26.2	32	30	0.109
ESC branch: PDB → F2/F3 → ESC (each)	18	0.30	12.0	16	15	0.075
Motor phase: ESC → motor (each, 3 wires)	18	0.90	12.0	16	—	0.226
BEC-1 input: PDB → F4 → BEC (avionics)	22	0.20	1.8	7	3	0.019
BEC-2 input: PDB → F5 → BEC (LED)	22	0.20	1.8	7	3	0.019
LED 5 V feed, each side	20	1.80	1.1	11	—	0.065
Servo / RX / FC 5 V	22	0.60	1.5	7	—	0.048

Motor I_max ≈ (440 gf / 3.3 gf/W) / 11.1 V = 12.0 A each · Main bus ≈ 26.2 A · Battery 45C capability 58 A

Endurance (usable 1040 mAh): baseline ~28 min · ad+LED ~18 min · outdoor hold 10 mph ~10 min

ASSUMPTIONS

· gf/W = 3.3 at full throttle (5" prop, 3S) — VERIFY on stand

· Chassis wiring ampacity ≈ power-transmission table, short run

· BEC efficiency 85%

· LED capped 20% for lift/heat

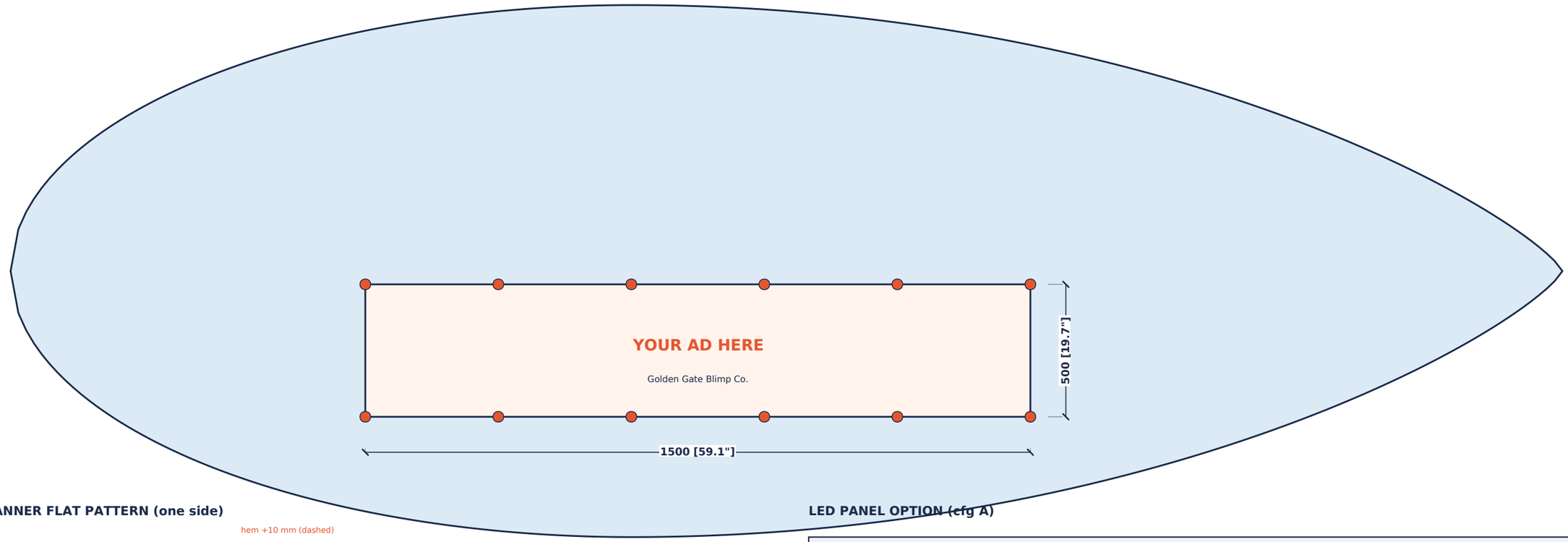
· Motor phase bumped to 18 AWG (20 AWG failed ampacity check)

No invented supplier PNs.

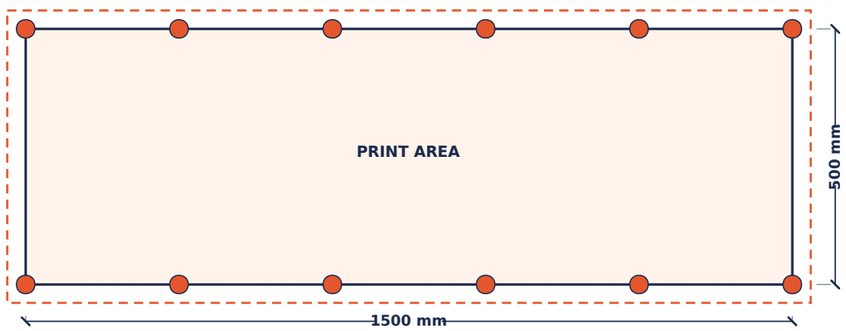
COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 Electrical Block Diagram / Wiring**	DWG NO. **GGB-35-07**	REV **A**	SHEET **7 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **N/A (schematic)**
NOTES Helium lift & wind figures are estimates — not flight-verified.				

BANNER ON ENVELOPE (SIDE)

Banner centre @ X=1550 · half-angle ≈ 24.0°



BANNER FLAT PATTERN (one side)



LED PANEL OPTION (cfg A)

Edge-lit strips: 2 × 3.0 m @ 30 LED/m (5 V addressable)

LED count = 180 mass ≈ 90 g strips + 20 g ctrl + 15 g harness

Full white current ≈ 10.8 A @5V — TOO HIGH for budget lift.

Cap brightness at 20% → 2.16 A (10.8 W) from BEC-2.

Mount: sew channel on banner hem OR thin PETG edge frame

clipped to same hook-and-loop tabs. Diffuser = banner fabric.

Driver in gondola; 20 AWG feed each side; keep connectors dry.

Night indoor demos only until outdoor light rules reviewed.

No invented LED controller PNs — use generic 5 V MCU/driver.

ATTACHMENT POINTS

· 24 hook-and-loop tabs (12 per side): 6 along top hem, 6 along bottom hem.

· Mating TPU patches 50×50 bonded to envelope on a 250 mm pitch along the print band.

· Swap banners on the ground without deflating. Keep spare “YOUR LOGO HERE” panel.

· Mass: fabric 56 g (2 sides, +10% hem) + tabs 25 g = 81 g.

· Do NOT use vinyl (270–340 g/m²) — exceeds lift margin (budget-build.md / prototype plan).

· Ripstop 1.0 oz/yd² ≈ 33.9 g/m² (Monolite / equiv.). Print: dye-sub or transfer.

PAYLOAD MASS

Banners + tabs: 81 g

LED option add: 125 g

Cfg B margin left: 290 g

Cfg A margin left: 125 g

Prefer cfg B for first demo.

COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 Ad Payload — Banner Wrap & LED Panel**	DWG NO. **GGB-35-08**	REV **A**	SHEET **8 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **1:10**
NOTES Helium lift & wind figures are estimates — not flight-verified.				

VARIANT COMPARISON

Item	Indoor baseline (B)	Indoor ad (A)	Outdoor (O)
Envelope	Same 3.5×1.2 m TPU	Same	Same + relief valve
Propulsion	2×2204 + guards	Same	Same; optional larger props
Avionics	RX + servos + BEC	+ FC + telem + LED	+ FC + telem + RID + GNSS + lights
Remote ID	Not required (indoor)	Not required	REQUIRED for outdoor UAS
Ad payload	Ripstop banner	+ LED edge light	Banner; LED only if rules allow
Dry mass	2135 g	2300 g	2240 g
Lift margin*	290 g	125 g	185 g
BG (est.)	223 mm	193 mm	211 mm
Ops limit	Gym / mall / hall	Same, HVAC OFF	Day VMC; wind ≤ estimate below

*Margin at design lift 1.0 kg/m³ before +20 g heavy-trim ballast. Outdoor still needs Product Liability insurance before public ops.

WIND / DRAG vs THRUST (ESTIMATED — NOT FLIGHT-VERIFIED)

$F = ½ \rho v^2 C_d A_{frontal}$

ρ = 1.2 kg/m³ (assumed) Cd = 0.2 (streamlined body, assumed)

$A_{frontal} = \pi R^2$ = 1.131 m² · Installed thrust T = 6.90 N (2×440 gf × 0.8)

Speed	v (m/s)	q (Pa)	F_drag (N)	F / T
5 mph	2.24	3.00	0.68	10%
10 mph	4.47	11.99	2.71	39%
15 mph	6.71	26.98	6.10	**88%**

Max flyable (F=T, Cd=0.2): ~16.0 mph

Practical continuous (F=0.5 T): ~11.3 mph

Cd sensitivity: vmax @ Cd0.10=22.6 mph; Cd0.30=13.0 mph

Side force @10 mph (Cd_side=0.5, A_side=3.10 m²): 18.6 N — weathercock with X-tail; do not beam-reach in wind.

To hold 15 mph with 50% throttle margin need ~12.2 N (≈778 gf/motor vendor rating).

THRUST-INDUCED PITCH

Thruster height below CB ≈ 640 mm

Cfg B pitch @10 mph ≈ 19°

(nose-up if thrusters below CB)

Trim with tilt angle / ballast.

Restoring ≈ mg·BG = 5.4 N·m/rad

ESTIMATE only — flight-test.

OUTDOOR OPS NOTES (SF BAY AREA)

· FAA Part 107 applies outdoors; Remote ID broadcast required on the aircraft (Part 89). Manufacturer DOC needed if selling outdoor aircraft.

· Stay under 55 lb (helium mass counts toward AUW). GGB-35 AUW ≈ dry + He ≈ 2.5 kg + 0.4 kg ≪ 55 lb.

· LAANC / airspace authorization near SFO/OAK. Max 400 ft AGL. No flight in controlled airspace without auth.

· SF afternoon winds regularly exceed 15 mph — treat outdoor free-flight as early-morning / calm only until thrust upgraded.

· Prefer tethered outdoor display (aerostat mode) when wind > practical continuous estimate.

· Lithium batteries = hazmat for transport. Product liability insurance before any public outdoor flight.

· FCC Covered List / tariffs: prefer US-sourced radio/FC; stock imported drone parts before Feb 9, 2027 tariff date.

· This sheet is CONCEPT — NOT FOR CONSTRUCTION. Wind numbers are order-of-magnitude estimates.

COMPANY **Golden Gate Blimp Co.**	TITLE **GGB-35 Indoor vs Outdoor Variant & Wind Loading**	DWG NO. **GGB-35-09**	REV **A**	SHEET **9 / 9**
STATUS **CONCEPT — NOT FOR CONSTRUCTION**		DATE **2026-11-04**	UNITS mm (in)	SCALE **N/A**
NOTES Helium lift & wind figures are estimates — not flight-verified.				