

FLUX WIKI

STARTER KIT — CONFIGURATION & CONTRACTS

THE IMPLEMENTATION CONTRACTS — ENVIRONMENT VARIABLES, THE CANONICAL-NAMING ALGORITHM, AND THE CATALOG.JSON + SUBMISSION.JSON DATA SCHEMAS.

flux.dantesisofo.com/wiki/starter-kit-configuration/

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FLUX DOCUMENTATION SYSTEM Layer 11 — STARTER KIT | starter-kit-configuration
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STARTER KIT — CONFIGURATION & CONTRACTS

Implement this page first. Everything else depends on the config module, the naming function, and the two JSON schemas defined here.

1. CONFIG MODULE (config.py)

One module reads .env (via python-dotenv) and exposes constants. **No identifier may be hardcoded anywhere else.**

Env var	Meaning	Example
FLUX_BUCKET	S3 bucket name	your-cityflux-site
FLUX_CF_DIST	CloudFront distribution ID	E000000000000000
FLUX_REGION	AWS region	us-east-1
FLUX_BASE_URL	public base URL	https://your-domain
FLUX_AUTHOR	photographer/display name	Your Name
COLLECTION	hub membership tag	boston-in-flux
CORRIDOR_TARGET	coverage goal (int)	50
ROUTE_COLOR	route accent hex	#b84000
TILE_URL	Leaflet tile template	CARTO light_all
PORTAL_USER / PORTAL_PASS	local portal auth	—
ANTHROPIC_API_KEY	optional AI about-text	blank = template

Derived constants: HUB_KEY="hub/index.html", EMBED_KEY="hub/embed/index.html",
 LISTING_KEY="catalog/index.html", CATALOG_KEY="data/catalog.json", HUB_URL="/hub/",
 EMBED_URL="/hub/embed/", ROUTE_MAX_POINTS=120.

2. CANONICAL NAMING (THE NAMING AUTHORITY)

One street name → every identifier. Deterministic, pure. Implement exactly:

```
STREET_TYPES = { # normalize street-type tokens to canonical abbreviations
  "avenue": "AVE", "ave": "AVE", "av": "AVE", "street": "STREET", "st": "STREET", "str": "STREET",
  "boulevard": "BLVD", "blvd": "BLVD", "road": "RD", "rd": "RD", "drive": "DR", "dr": "DR",
  "lane": "LN", "ln": "LN", "place": "PL", "pl": "PL", "court": "CT", "ct": "CT",
  "highway": "HWY", "hwy": "HWY", "parkway": "PKWY", "pkwy": "PKWY", "pike": "PIKE",
  "terrace": "TER", "ter": "TER",
}

def canonical(street_name: str) -> dict:
  words = re.sub(r"[^A-Za-z0-9 ]+", " ", street_name or "")
  words = re.sub(r"\s+", " ", words).strip()
  if not words:
```

```

    return {"title":"","slug":"","folder":"","export_name":"","collections":[COLLECTION]}
    toks = [STREET_TYPES.get(w.lower(), w.upper()) for w in words.split(" ")]
    title = "_".join(toks) + "_IN_FLUX" # e.g. PASSYUNK_AVE_IN_FLUX
    slug = slugify(" ".join(toks) + " in flux") # e.g. passyunk-ave-in-flux
    return {"title":title, "slug":slug, "folder":slug,
            "export_name":f"{slug}-project.zip", "collections":[COLLECTION]}

def slugify(text): # lower, non-alnum -> '-', collapse, trim, cap length
    return re.sub(r"^[a-z0-9]+","-",text.lower()).strip("-")[:60].strip("-")

Contract tests: canonical("Passyunk Ave").title == "PASSYUNK_AVE_IN_FLUX"; canonical("Passyunk
Avenue").slug == "passyunk-ave-in-flux"; canonical("Broad Street").title == "BROAD_STREET_IN_FLUX".

```

3. SCHEMA — catalog.json (THE INDEX / SOURCE OF TRUTH)

Lives at `s3://YOUR_BUCKET/data/catalog.json`, mirrored locally. The hub, embed, and listing render **only** from this file.

```

{
  "schema_version": "1.1",
  "last_updated": "2026-06-09T12:00:00Z",
  "reserved_slugs": ["passyunk-ave-in-flux", ...], // tombstones; never reuse
  "walks": [ WalkRecord, ... ]
}

// WalkRecord:
{
  "walk_id": "WALK_001", // sequential, frozen
  "slug": "passyunk-ave-in-flux", // frozen once published
  "title": "PASSYUNK_AVE_IN_FLUX",
  "photographer_name": "Your Name",
  "location_text": "Passyunk Ave, Your City",
  "date_range": "2026-06-06",
  "total_photos": 118,
  "geotagged_count": 116,
  "distance_km": 9.0, // CANONICAL unit = km
  "duration_minutes": 154,
  "duration_formatted": "2h 34m",
  "cover_image": "passyunk-ave-in-flux/large/<photo_id>.jpg",
  "public_url": "/passyunk-ave-in-flux/",
  "published_at": "2026-06-06T18:00:00Z",
  "collections": ["boston-in-flux"], // hub membership (array)
  "route": [[39.913,-75.242], ...], // downsampled <= ROUTE_MAX_POINTS
  "bbox": [minLat, minLon, maxLat, maxLon]
}

```

Rules: slug and walk_id are immutable after first publish; removed slugs stay in reserved_slugs. route/bbox are an index projection of the full route (the full route stays in the draft) — storing them here lets the hub render with zero per-project fetches.

4. SCHEMA — submission.json (THE DRAFT)

One per project, in the draft run folder. The Worker writes it; the Publisher reads it. This **is** the draft — there is no separate draft model.

```
{
  "schema_version": "1.0",
  "slug": "passyunk-ave-in-flux",
  "status": "new|uploaded|generating|draft_ready|publishing|published|error",
  "created_at": "...", "updated_at": "...",
  "submitter": { "name": "Your Name", "email": "" },
  "walk": {
    "title": "PASSYUNK_AVE_IN_FLUX",
    "location_text": "Passyunk Ave, Your City",
    "collections": ["boston-in-flux"]           // explicit hub membership
  },
  "photos": [ Photo, ... ],
  "stats": Stats,
  "about_generated": "A walk through ...",
  "about_source": "ai|template",
  "contact_sheet": "contact_sheet.png",
  "zine": { "selection": ["<photo_id>", ...] } // optional final 36; else null
}

// Photo:
{
  "id": "<sha256[:16]>", "seq": "001",
  "original_filename": "R0010001.JPG",
  "timestamp": "2026:06:06 11:52:17", "timestamp_unix": 1781000000,
  "lat": 39.913, "lon": -75.242, "address": "Passyunk Avenue, ...",
  "make": "...", "model": "...", "lens": "...", "focal": "18mm",
  "aperture": "f/8.0", "shutter": "...", "iso": "ISO 200",
  "width": 3504, "height": 2336, "file_size": 4500000,
  "geotagged": true,
  "large": "large/<id>.jpg", "thumb": "thumbs/<id>.jpg"
}

// Stats:
{
  "total_photos": 118, "geotagged_count": 116, "geotagged_pct": 98,
  "duration_minutes": 154, "duration_formatted": "2h 34m",
  "date_range": "2026-06-06", "start_time": "...", "end_time": "...",
  "distance_km": 9.0,
  "route": [[lat,lon], ...],           // FULL route (not downsampled)
  "first_photo_id": "...", "last_photo_id": "..."
}
```

photo.id = sha256(file)[:16] (dedup key + derivative filename). seq is assigned after chronological sort by timestamp_unix.

5. FILE / DIRECTORY LAYOUT (LOCAL)

```
cityflux/
  config.py           # $1
  naming.py           # $2 canonical()
  worker.py           # ARCHITECTURE
  publisher.py        # DEPLOYMENT
  deploy.py           # aws s3 sync wrapper (full-site)
  portal/app.py       # optional Flask studio
```

```
zine/          # client-side PDF + vendored leaflet/qrcode/jspdf
data/catalog.json # the index (seed: empty walks[])
_drafts/<slug>/  # per-project: originals/ large/ thumbs/ submission.json contact_sheet.png
.env .env.example .gitignore requirements.txt
```

_drafts/, .env, data/catalog.json (except an empty seed) are gitignored.

6. ACCEPTANCE CHECKS

- config raises a clear error if FLUX_BUCKET/FLUX_CF_DIST/FLUX_BASE_URL are unset.
- canonical() passes the §2 contract tests.
- A hand-written minimal catalog.json (one WalkRecord) validates against §3 and the hub builder renders it.

Next: SETUP.

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