https://gemini.google.com/u/1/app/431cc17871bb821b

Markdown

```

# Table Specification - `public.route\_media` (V1 Draft)

Date: May 18, 2025

### 1. Purpose & Primary Use-Cases

This table links records from `public.routes` to specific media items in `public.media`, assigning a semantic role to each link. While `public.routes` has direct foreign keys for a primary GPX track (`overall\_gpx\_media\_id`), a primary map overview image (`map\_overview\_media\_id`), and a primary banner image (`banner\_media\_id`)[cite: 2334, 2335, 2336], this `public.route\_media` table is intended for \*\*additional\*\* media.

Its primary purpose is to support image galleries specific to a route, showcasing its character, key sections, or points of interest not covered by segment-level media. It could also potentially link to other types of illustrative media if defined by appropriate roles.

\*\*Key User-Story Touchpoints:\*\*

\* \*\*Pilgrim (Anna)\*\*: Browse a gallery of images for a selected route to get a better visual understanding of its scenery, terrain, and highlights before deciding or while planning.

\* \*\*Regional Content Manager (Sofia) / Platform Administrator\*\*: Uploading, selecting, and curating images for route-specific galleries. Managing captions, alt text, and display order for these media items.

\* \*\*System/Developer\*\*: Retrieving all media with a `gallery\_image` role for a specific route to display in a carousel or gallery view on the route's detail page.

### 2. Schema

| Column Name | Data Type | Constraints | Description (Translatable fields marked) |

| :---------------------- | :------------ | :---------------------------------------------------------------------------------------------------------------- | :--------------------------------------------------------------------------------------------------------------------------------------------------------------------- |

| `id` | `BIGINT` | `PRIMARY KEY, GENERATED ALWAYS AS IDENTITY` | Unique identifier for this route-media link. |

| `route\_id` | `BIGINT` | `NOT NULL, REFERENCES public.routes(id) ON DELETE CASCADE` | The ID of the route this media is associated with[cite: 2302]. |

| `media\_id` | `UUID` | `NOT NULL, REFERENCES public.media(id) ON DELETE RESTRICT` | The ID of the media item from `public.media`. `ON DELETE RESTRICT` to prevent deleting media still in use. |

| `media\_role\_code` | `TEXT` | `NOT NULL, REFERENCES public.media\_roles\_master(code) ON DELETE RESTRICT ON UPDATE CASCADE` | Semantic role of the media for this route (e.g., 'gallery\_image'). From `public.media\_roles\_master`. |

| `display\_order` | `SMALLINT` | `NOT NULL, DEFAULT 0` | Order for displaying media items within a specific role for this route (e.g., sequence in a gallery). Admins can reorder. |

| `caption\_override` | `TEXT` | `NULL` | Optional override for the media's default caption, specific to its use with this route. Primary reference language (English). (Translatable via `public.translations`) |

| `alt\_text\_override` | `TEXT` | `NULL` | Optional override for the media's default alt text, specific to its use with this route, for accessibility. Primary reference language (English). (Translatable via `public.translations`) |

| `created\_at` | `TIMESTAMPTZ` | `NOT NULL, DEFAULT now()` | Timestamp of when this link record was created. |

| `created\_by\_profile\_id` | `UUID` | `NULL, REFERENCES public.profiles(id) ON DELETE SET NULL` | Profile ID of the user who created this link. |

| `updated\_at` | `TIMESTAMPTZ` | `NOT NULL, DEFAULT now()` | Timestamp of when this link record was last updated (auto-updated by trigger). |

| `updated\_by\_profile\_id` | `UUID` | `NULL, REFERENCES public.profiles(id) ON DELETE SET NULL` | Profile ID of the user who last updated this link. |

| | | `UNIQUE (route\_id, media\_id, media\_role\_code)` | Prevents linking the same media item with the same role to the same route multiple times. |

| | | `UNIQUE (route\_id, display\_order, media\_role\_code)` | Ensures display order is unique within a specific role for a given route. |

### 3. PostgreSQL DDL

```sql

-- Assumes the following tables exist:

-- public.routes (id BIGINT PK) [cite: 2302]

-- public.media (id UUID PK) [cite: 857]

-- public.media\_roles\_master (code TEXT PK)

-- public.profiles (id UUID PK)

-- public.translations (for translatable fields)

-- Assumes standard functions like public.set\_current\_timestamp\_updated\_at() or extensions.moddatetime exist.

-- Assumes public.cleanup\_related\_translations(TEXT, TEXT) function exists.

CREATE TABLE public.route\_media (

id BIGINT PRIMARY KEY GENERATED ALWAYS AS IDENTITY,

route\_id BIGINT NOT NULL REFERENCES public.routes(id) ON DELETE CASCADE,

media\_id UUID NOT NULL REFERENCES public.media(id) ON DELETE RESTRICT,

media\_role\_code TEXT NOT NULL REFERENCES public.media\_roles\_master(code) ON DELETE RESTRICT ON UPDATE CASCADE,

display\_order SMALLINT NOT NULL DEFAULT 0,

caption\_override TEXT NULL,

alt\_text\_override TEXT NULL,

created\_at TIMESTAMPTZ NOT NULL DEFAULT now(),

created\_by\_profile\_id UUID NULL REFERENCES public.profiles(id) ON DELETE SET NULL,

updated\_at TIMESTAMPTZ NOT NULL DEFAULT now(),

updated\_by\_profile\_id UUID NULL REFERENCES public.profiles(id) ON DELETE SET NULL,

CONSTRAINT uq\_route\_media\_link UNIQUE (route\_id, media\_id, media\_role\_code),

CONSTRAINT uq\_route\_media\_role\_order UNIQUE (route\_id, display\_order, media\_role\_code)

);

-- Indexes

CREATE INDEX IF NOT EXISTS idx\_route\_media\_route\_id ON public.route\_media(route\_id);

CREATE INDEX IF NOT EXISTS idx\_route\_media\_media\_id ON public.route\_media(media\_id);

CREATE INDEX IF NOT EXISTS idx\_route\_media\_media\_role\_code ON public.route\_media(media\_role\_code);

CREATE INDEX IF NOT EXISTS idx\_route\_media\_created\_by\_profile\_id ON public.route\_media(created\_by\_profile\_id) WHERE created\_by\_profile\_id IS NOT NULL;

CREATE INDEX IF NOT EXISTS idx\_route\_media\_updated\_by\_profile\_id ON public.route\_media(updated\_by\_profile\_id) WHERE updated\_by\_profile\_id IS NOT NULL;

-- Comments

COMMENT ON TABLE public.route\_media IS 'Links routes to additional media items (e.g., galleries), defining display order, role, and translatable caption/alt-text overrides. Supplements direct media FKs on public.routes. V1.0';

COMMENT ON COLUMN public.route\_media.id IS 'Surrogate unique identifier for the route-media link.';

COMMENT ON COLUMN public.route\_media.route\_id IS 'Foreign key to the public.routes table.';

COMMENT ON COLUMN public.route\_media.media\_id IS 'Foreign key to the public.media table. Restricted delete to prevent orphaned links if media is in use.';

COMMENT ON COLUMN public.route\_media.media\_role\_code IS 'Semantic role of the media in relation to the route. FK to public.media\_roles\_master.code.';

COMMENT ON COLUMN public.route\_media.display\_order IS 'Order for displaying media items within a specific role for this route (e.g., sequence in a gallery). Admins can reorder. Default 0.';

COMMENT ON COLUMN public.route\_media.caption\_override IS 'Optional override for the media''s default caption, specific to its use with this route. Primary reference language (English). (Translatable via public.translations using route\_media.id).';

COMMENT ON COLUMN public.route\_media.alt\_text\_override IS 'Optional override for the media''s default alt text, specific to its use with this route. Primary reference language (English). (Translatable via public.translations using route\_media.id).';

COMMENT ON COLUMN public.route\_media.created\_at IS 'Timestamp of when this link record was created.';

COMMENT ON COLUMN public.route\_media.created\_by\_profile\_id IS 'Profile ID of the user who created this link.';

COMMENT ON COLUMN public.route\_media.updated\_at IS 'Timestamp of when this link record was last updated (auto-updated by trigger).';

COMMENT ON COLUMN public.route\_media.updated\_by\_profile\_id IS 'Profile ID of the user who last updated this link.';

-- Standard updated\_at trigger

CREATE TRIGGER trigger\_route\_media\_set\_updated\_at

BEFORE UPDATE ON public.route\_media

FOR EACH ROW

EXECUTE FUNCTION public.set\_current\_timestamp\_updated\_at(); -- Or extensions.moddatetime('updated\_at')

COMMENT ON TRIGGER trigger\_route\_media\_set\_updated\_at ON public.route\_media IS 'Automatically updates the updated\_at timestamp on row modification.';

-- Orphaned translation cleanup trigger for route\_media's own translatable fields

CREATE OR REPLACE FUNCTION public.cleanup\_route\_media\_translations()

RETURNS TRIGGER AS $$

BEGIN

IF TG\_OP = 'DELETE' THEN

DELETE FROM public.translations

WHERE table\_identifier = 'route\_media'

AND row\_foreign\_key = OLD.id::TEXT; -- Uses the surrogate PK of route\_media

END IF;

RETURN OLD;

END;

$$ LANGUAGE plpgsql SECURITY DEFINER;

COMMENT ON FUNCTION public.cleanup\_route\_media\_translations() IS 'Removes related entries from public.translations for route\_media.caption\_override and route\_media.alt\_text\_override when a route\_media record is deleted. Runs as SECURITY DEFINER.';

CREATE TRIGGER trigger\_cleanup\_route\_media\_translations\_after\_delete

AFTER DELETE ON public.route\_media

FOR EACH ROW

EXECUTE FUNCTION public.cleanup\_route\_media\_translations();

COMMENT ON TRIGGER trigger\_cleanup\_route\_media\_translations\_after\_delete ON public.route\_media IS 'After a route\_media link is deleted, removes its associated translations from the public.translations table.';

-- (Conceptual trigger to update media.last\_linked\_or\_used\_at would be similar to trail\_media)

```

### 4\. JSON Schema Mirror

JSON

```

{

"title": "route\_media\_link",

"description": "Links routes to additional media items (e.g., galleries), defining display order, role, and translatable caption/alt-text overrides. Supplements direct media FKs on public.routes. V1.0",

"type": "object",

"properties": {

"id": {

"type": "integer",

"format": "int64",

"description": "Surrogate unique identifier for the route-media link.",

"readOnly": true

},

"route\_id": {

"type": "integer",

"format": "int64",

"description": "Foreign key to the public.routes table."

},

"media\_id": {

"type": "string",

"format": "uuid",

"description": "Foreign key to the public.media table."

},

"media\_role\_code": {

"type": "string",

"description": "Semantic role of the media in relation to the route. FK to public.media\_roles\_master.code."

},

"display\_order": {

"type": "integer",

"format": "int16",

"default": 0,

"description": "Order for displaying media items within a specific role for this route."

},

"caption\_override": {

"type": ["string", "null"],

"description": "Optional override for the media's default caption, specific to this route link. Primary reference language (English). (Translatable via public.translations using route\_media.id)."

},

"alt\_text\_override": {

"type": ["string", "null"],

"description": "Optional override for the media's default alt text, specific to this route link. Primary reference language (English). (Translatable via public.translations using route\_media.id)."

},

"created\_at": {

"type": "string",

"format": "date-time",

"description": "Timestamp of when this link record was created.",

"readOnly": true

},

"created\_by\_profile\_id": {

"type": ["string", "null"],

"format": "uuid",

"description": "Profile ID of the user who created this link."

},

"updated\_at": {

"type": "string",

"format": "date-time",

"description": "Timestamp of when this link record was last updated.",

"readOnly": true

},

"updated\_by\_profile\_id": {

"type": ["string", "null"],

"format": "uuid",

"description": "Profile ID of the user who last updated this link."

}

},

"required": [

"route\_id",

"media\_id",

"media\_role\_code",

"display\_order",

"created\_at",

"updated\_at"

],

"primary\_key": ["id"],

"unique\_constraints": [

{"columns": ["route\_id", "media\_id", "media\_role\_code"], "name": "uq\_route\_media\_link"},

{"columns": ["route\_id", "display\_order", "media\_role\_code"], "name": "uq\_route\_media\_role\_order"}

],

"foreign\_keys": [

{"columns": ["route\_id"], "references\_table": "public.routes", "references\_columns": ["id"], "on\_delete": "CASCADE"},

{"columns": ["media\_id"], "references\_table": "public.media", "references\_columns": ["id"], "on\_delete": "RESTRICT"},

{"columns": ["media\_role\_code"], "references\_table": "public.media\_roles\_master", "references\_columns": ["code"], "on\_delete": "RESTRICT", "on\_update": "CASCADE"},

{"columns": ["created\_by\_profile\_id"], "references\_table": "public.profiles", "references\_columns": ["id"], "on\_delete": "SET NULL"},

{"columns": ["updated\_by\_profile\_id"], "references\_table": "public.profiles", "references\_columns": ["id"], "on\_delete": "SET NULL"}

]

}

```

### 5\. Relationships & Integrity

- Primary Key: `id BIGINT` (surrogate key).

- Foreign Keys:

- `route\_id` references `public.routes(id)` `ON DELETE CASCADE`.

- `media\_id` references `public.media(id)` `ON DELETE RESTRICT`.

- `media\_role\_code` references `public.media\_roles\_master(code)` `ON DELETE RESTRICT ON UPDATE CASCADE`.

- Audit FKs to `public.profiles(id)` `ON DELETE SET NULL`.

- Unique Constraints:

- `UNIQUE (route\_id, media\_id, media\_role\_code)`

- `UNIQUE (route\_id, display\_order, media\_role\_code)`

### 6\. Multilingual Strategy

- Translatable Fields: `caption\_override`, `alt\_text\_override`.

- Mechanism: Store English in these columns; other languages in `public.translations` linked via `route\_media.id`. Fallback to `media.default\_caption/alt\_text` if overrides are `NULL`.

- Orphan Cleanup: `trigger\_cleanup\_route\_media\_translations\_after\_delete` handles this.

### 7\. Role-Based Workflow & RLS Notes

- Content Management: Primarily by Admins (`admin\_platform`) and Regional Content Managers (`regional\_content\_manager`).

- RLS Policy Sketch:

- Public Read: `SELECT` if parent `public.routes` is published and not deleted.

SQL

```

CREATE POLICY "Allow public read access to route\_media"

ON public.route\_media FOR SELECT

USING (

EXISTS (

SELECT 1 FROM public.routes r

JOIN public.trails t ON r.trail\_id = t.id -- Assuming routes are visible if their parent trail is also published

WHERE r.id = route\_media.route\_id

AND r.content\_visibility\_status = 'published'::public.content\_visibility\_status\_enum

AND r.deleted\_at IS NULL

AND t.content\_visibility\_status = 'published'::public.content\_visibility\_status\_enum -- Check trail status

AND t.deleted\_at IS NULL

)

);

```

- Content Manager Write Access: `INSERT`, `UPDATE`, `DELETE` for roles like `admin\_platform` or `regional\_content\_manager` if they can manage the parent `route\_id`.

SQL

```

CREATE POLICY "Allow content managers to manage route\_media"

ON public.route\_media FOR ALL

USING (

(SELECT public.has\_role('admin\_platform')) OR

(SELECT public.has\_role('regional\_content\_manager') AND public.user\_manages\_route(route\_media.route\_id)) -- Conceptual helper

)

WITH CHECK (

(SELECT public.has\_role('admin\_platform')) OR

(SELECT public.has\_role('regional\_content\_manager') AND public.user\_manages\_route(route\_media.route\_id))

);

```

(The `public.user\_manages\_route(BIGINT)` helper function would need to be defined, likely checking management of the parent trail/region).

### 8\. ENUM vs. Lookup Discussion

- N/A for this table directly; relies on `public.media\_roles\_master`.

### 9\. UI/UX Enablement

- Populates route-specific image galleries (`gallery\_image` role).

- Allows for additional illustrative maps or visuals beyond the route's primary ones.

- `display\_order` ensures consistent presentation.

### 10\. Key Considerations & Definitions

- Media Roles for Routes:

- `gallery\_image`: This should be the primary role used by this table for V1, allowing multiple images to form a route gallery.

- `map\_image\_detailed` (Potential New Role for `media\_roles\_master`): If needed for detailed static map sections specific to a route, beyond the single `map\_overview\_media\_id` on `public.routes`. For V1, focus on `gallery\_image`.

- Avoid functional overlap with `public.routes` direct FKs (`overall\_gpx\_media\_id`, `map\_overview\_media\_id`, `banner\_media\_id`). This table is for \*additional\* media.

- `display\_order`: Should default to 0. Admins/managers set this for ordering within a role (e.g., gallery sequence). Application can provide logic to suggest next available order on insert.

- `ON DELETE RESTRICT` for `media\_id`: Important for media asset integrity.

### 11\. Scalability & Future-Proofing

- Standard linking table design, scales with the number of routes and associated media.

- Flexible due to `media\_roles\_master`.

### 12\. Seed Data

- N/A. Transactional data.

### 13\. Next-Action Checklist

1. 🔴 Verify Dependencies: `public.routes`, `public.media`, `public.media\_roles\_master`, `public.profiles`, `public.translations` must be V2 compliant.

2. 🔴 Confirm `media\_roles\_master` Entries: Ensure `gallery\_image` and any other desired roles (e.g., `map\_image\_detailed` if pursued) exist in `public.media\_roles\_master`.

3. 🔴 Implement DDL: Execute the `CREATE TABLE public.route\_media` DDL.

4. 🔴 Implement Triggers: Apply `updated\_at` and `cleanup\_route\_media\_translations` triggers.

5. 🟠 RLS Policies & Helper Functions: Define, implement, and test RLS policies. Create helper functions like `public.user\_manages\_route(BIGINT)`.

6. 🟢 Application Logic: For `display\_order` management and caption/alt text fallbacks.

7. 🟢 Data Migration: Plan if relevant.

\* \* \* \* \*

This completes the specification for `public.route\_media`. Please let me know which parent entity and media linking table you'd like to address next from the list we identified.