

HEADWATER-LOT

SUMMARY

At the metropolitan scale, this project extends the city center around the Saint Charles river corridor, linking the suburban neighborhoods to the historic core. By concentrating around this river, the city may revitalize its civic and ecological fabrics, refocus its housing and transit development, and establish a coherent metropolitan identity. At the district scale, the proposed 'Headwater-lots' reclaim the space of redundant roads in order to create local connections to each river, improve water quality, and make space for collective activities.

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IDENTITY

Quebec's historic core is the heart of the city, yet much of the urban territory is disengaged from the heritage narrative and the Saint Lawrence. Suburban neighborhoods are linked functionally to the center, via an extensive road network, but they do not count as places of civic importance. This project takes the Saint Charles River corridor as the focused extension of the city's heart. The proposed streetcar, mixed-use redevelopment, and riparian parks reinforce the urban-suburban corridor and consolidate growth.

CONNECTIVITY

Historically, river access was priority in Quebec's development. Every property owner held a strip of land, known as a long-lot, that interfaced with the river. Twentieth century urbanization, however, offered few interfaces with the water. Today, access to the rivers is dependent on automobile and the few entry points are inconspicuous. This project recreates the long-lot, retrofitting the city with a network of prominent spaces even within the context of close-packed private lots.

INFILTRATION STREETS















Quebec has more roads per capita than any city in Canada. Redundant roads fragment riparian corridors. The city's impervious character is a leading cause of poor water quality and river bank deterioration. While recent upgrades to the stormwater system offer relief, this project proposes reconsidering the city's roads as urban and ecological spaces that can contribute to, rather than undermine, water quality.

ECOLOGY

The length of each river is assigned an urban-ecological priority: conservation, regeneration, recreation, or concentration. The strategy proposes that the heads of Beauport and Montmorency, like Saint Charles today, are dedicated to hydrological and habitat conservation. Similarly, the agricultural lands of Cap Rouge are alleviated with a forest buffer along the river. Further downstream, areas currently having water quality issues are prioritized for riparian restoration and wetlands. Segments with higher population density are outfitted with abundant outdoor offerings, as well as prominent public spaces along the river. The mouths of each river are developed as urban places having close contact with the tidal zone.

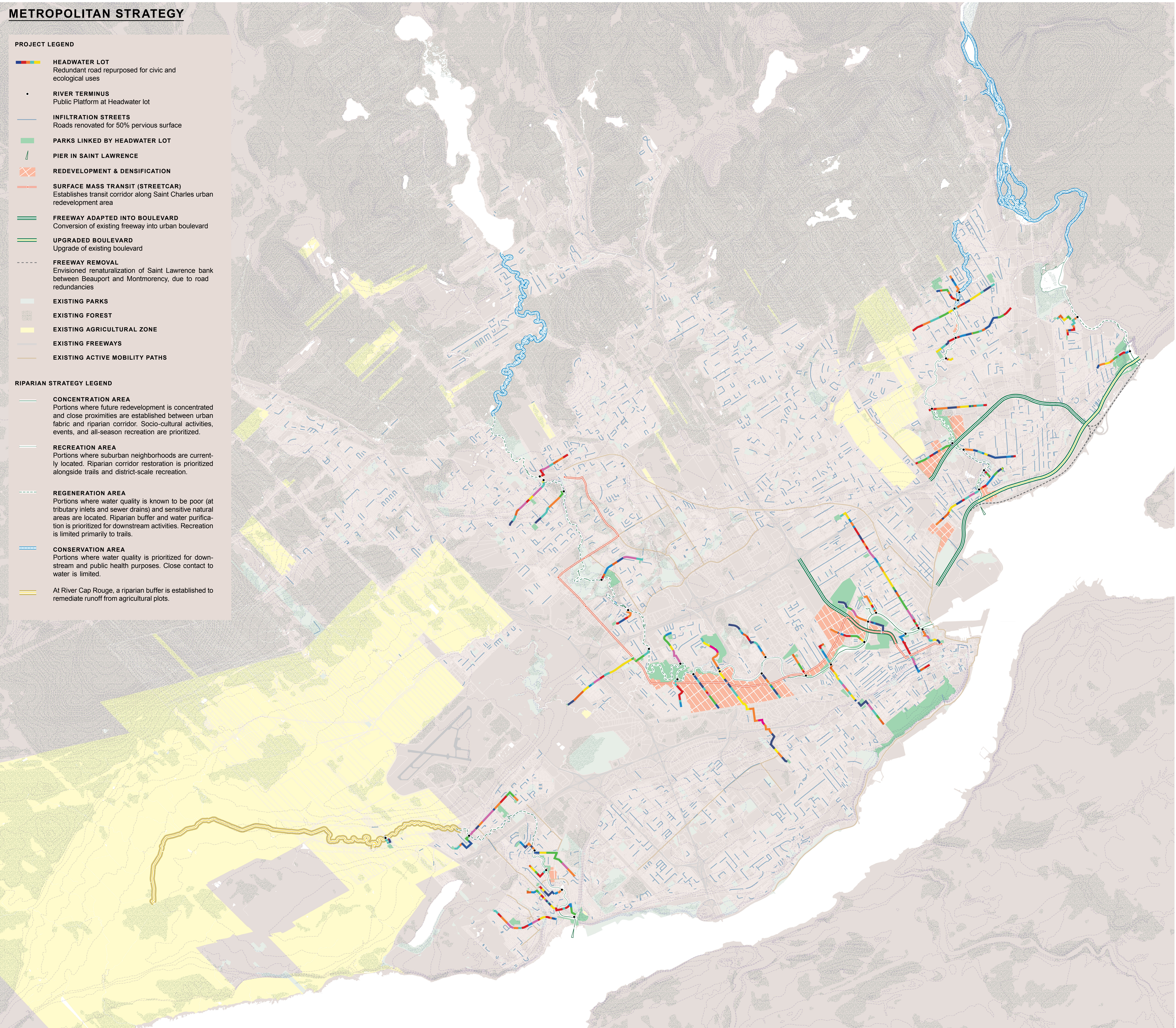
METROPOLITAN STRATEGY

PROJECT LEGEND

-  **HEADWATER LOT**
Redundant road repurposed for civic and ecological uses
-  **RIVER TERMINUS**
Public Platform at Headwater lot
-  **INFILTRATION STREETS**
Roads renovated for 50% pervious surface
-  **PARKS LINKED BY HEADWATER LOT**
-  **PIER IN SAINT LAWRENCE**
-  **REDEVELOPMENT & DENSIFICATION**
-  **SURFACE MASS TRANSIT (STREETCAR)**
Establishes transit corridor along Saint Charles urban redevelopment area
-  **FREEWAY ADAPTED INTO BOULEVARD**
Conversion of existing freeway into urban boulevard
-  **UPGRADED BOULEVARD**
Upgrade of existing boulevard
-  **FREEWAY REMOVAL**
Envisioned renaturalization of Saint Lawrence bank between Beauport and Montmorency, due to road redundancies
-  **EXISTING PARKS**
-  **EXISTING FOREST**
-  **EXISTING AGRICULTURAL ZONE**
-  **EXISTING FREEWAYS**
-  **EXISTING ACTIVE MOBILITY PATHS**

RIPIARIAN STRATEGY LEGEND

-  **CONCENTRATION AREA**
Portions where future redevelopment is concentrated and close proximities are established between urban fabric and riparian corridor. Socio-cultural activities, events, and all-season recreation are prioritized.
-  **RECREATION AREA**
Portions where suburban neighborhoods are currently located. Riparian corridor restoration is prioritized alongside trails and district-scale recreation.
-  **REGENERATION AREA**
Portions where water quality is known to be poor (at tributary inlets and sewer drains) and sensitive natural areas are located. Riparian buffer and water purification is prioritized for downstream activities. Recreation is limited primarily to trails.
-  **CONSERVATION AREA**
Portions where water quality is prioritized for downstream and public health purposes. Close contact to water is limited.
-  **At River Cap Rouge, a riparian buffer is established to remediate runoff from agricultural plots.**



The long-lot is Quebec's historic property structure. It was based on providing river access to all property owners.

OPPORTUNITIES: ACCESS

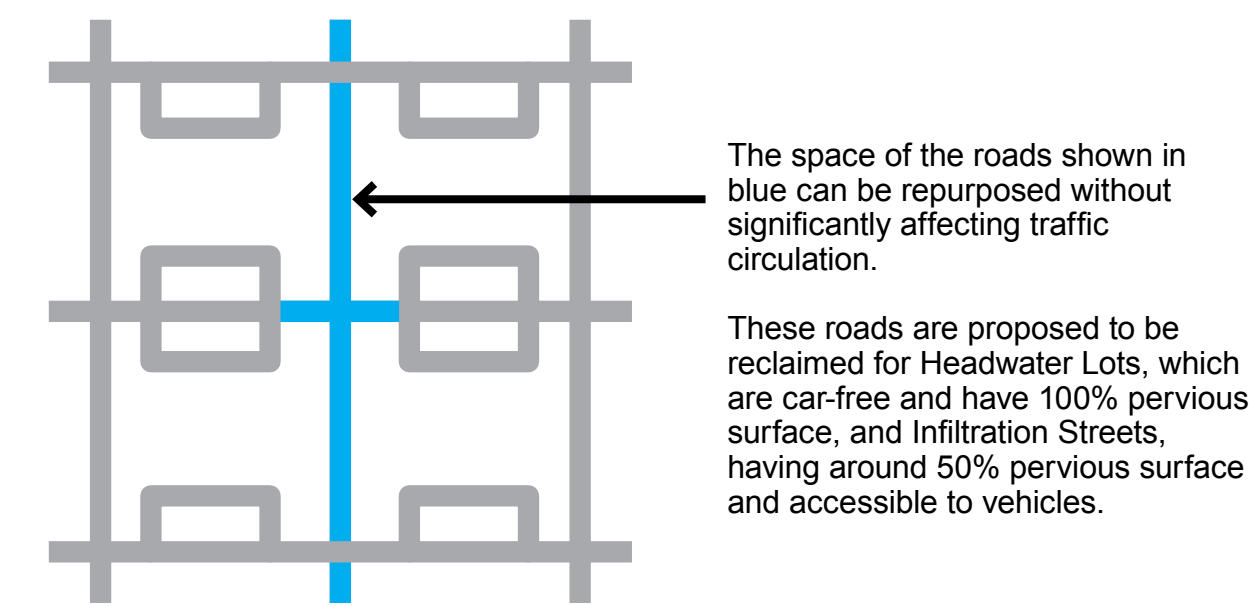


Planning of certain neighborhoods provided for public corridors that run between private properties. This allocation, although small, is crucial for river access.

Thin property allocation for river access at Saint Charles river.

This dock, located at Montmorency River, demonstrates the inspiring spaces that can be created along the water, using floating platforms, piers, low-water crossing, etc.

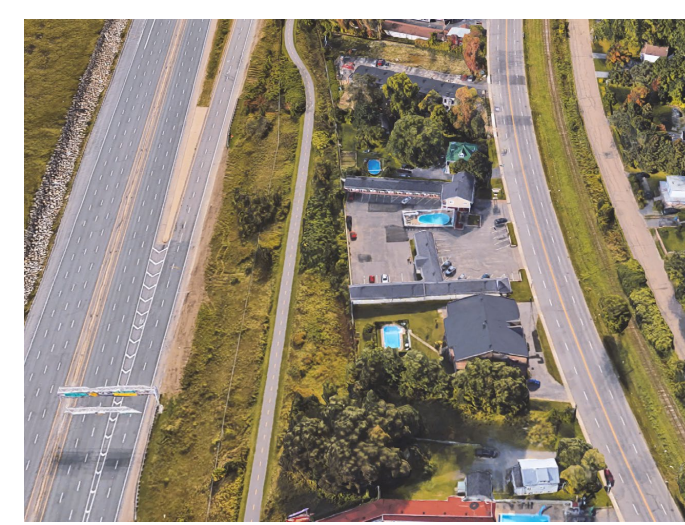
OPPORTUNITIES: REPURPOSE ROADS FOR SOCIO-CULTURAL USES AND ECOLOGICAL URGENCIES



ROAD NETWORK DIAGRAM

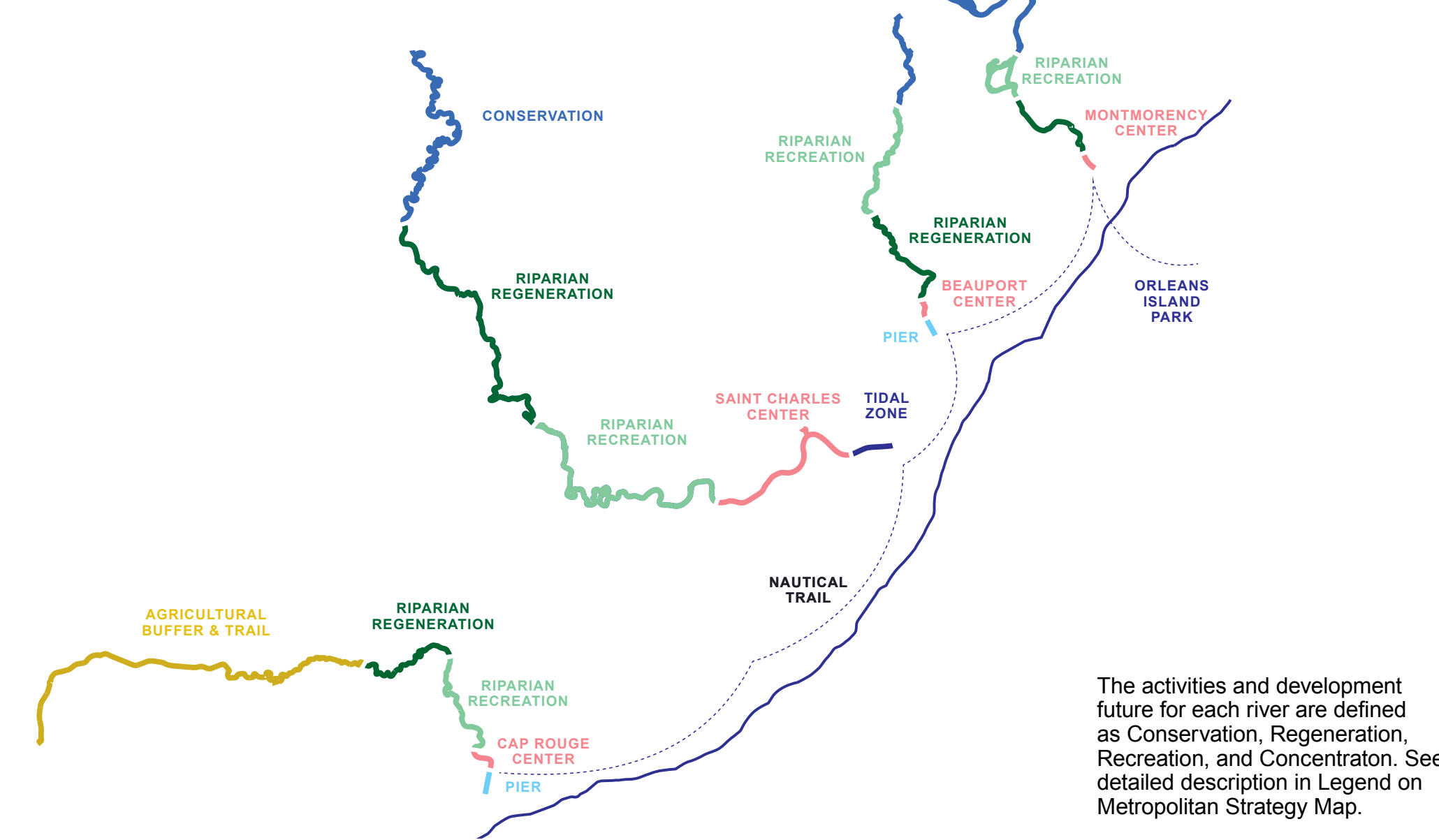
The space of the roads shown in blue can be repurposed without significantly affecting traffic circulation.

These roads are proposed to be reclaimed for Headwater Lots, which are car-free and have 100% pervious surface, and Infiltration Streets, having around 50% pervious surface and accessible to vehicles.



Road redundancies, especially in areas of low population density, are an opportunity to repurpose the rights-of-way. Autoroute Dufferin-Montmorency shown above.

RIPIARIAN CORRIDORS STRATEGY



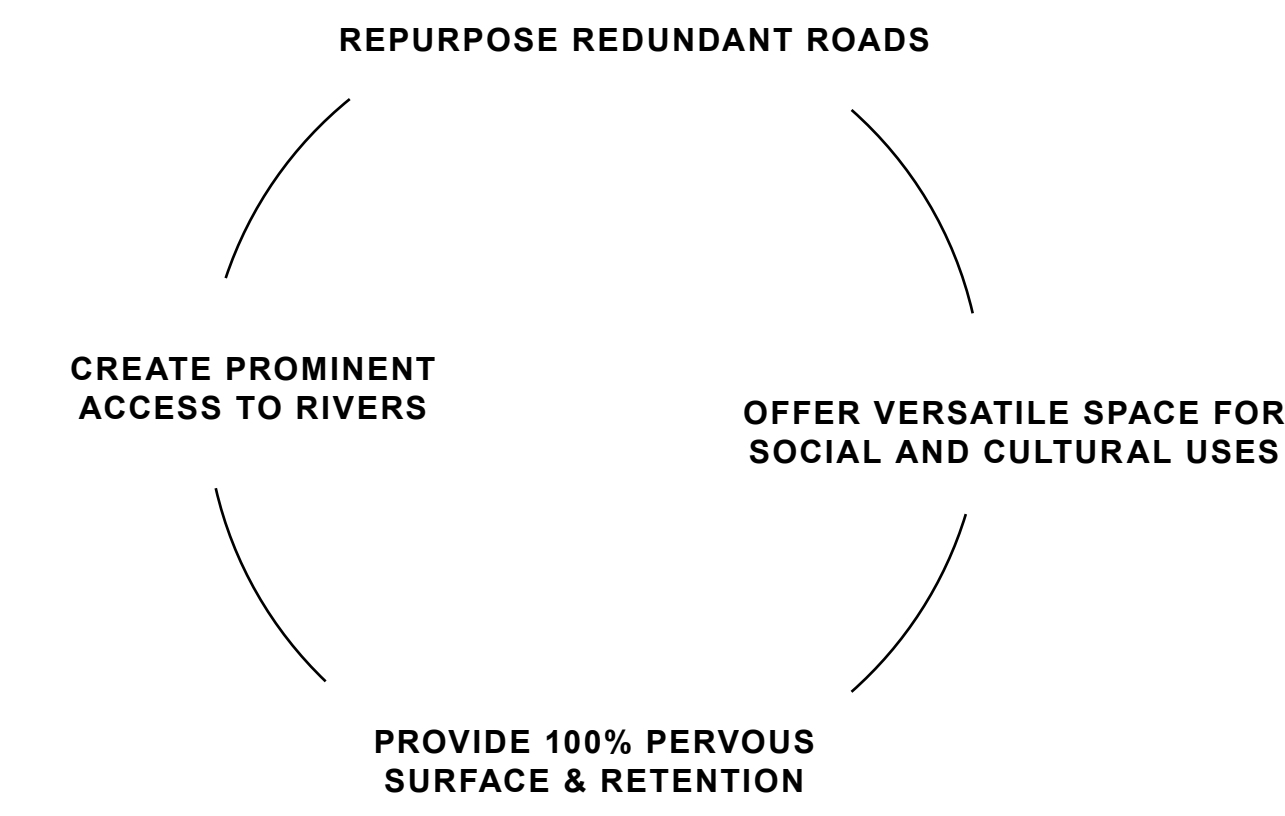
The activities and development future for each river are defined as Conservation, Regeneration, Recreation, and Concentration. See detailed description in Legend on Metropolitan Strategy Map.

HEADWATER-LOT

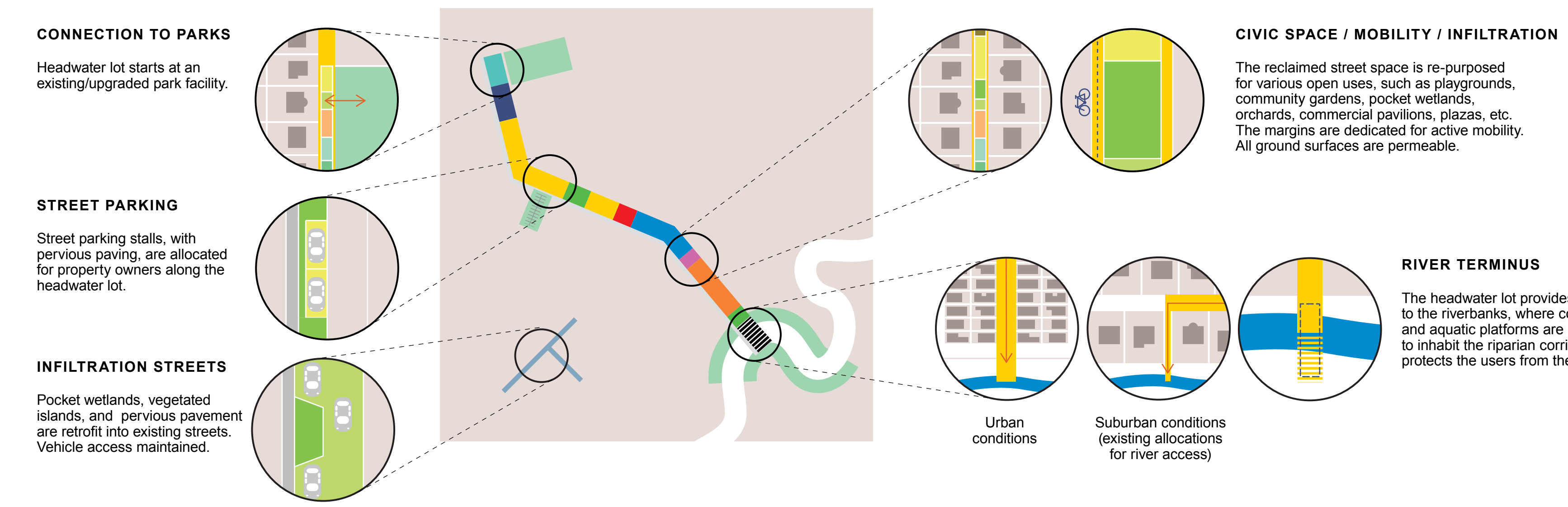
PLAN LEGEND

	HEADWATER LOT Redundant road repurposed for civic and ecological uses
	INFILTRATION STREET Roads renovated for 50% pervious surface
	RIVER TERMINUS Public Platform at Headwater lot
	EXISTING PARKS
	PROPOSED PARK REDEVELOPMENT SITE
	REDEVELOPMENT & DENSIFICATION
	AGRICULTURAL ZONE
	SURFACE MASS TRANSIT (STREETCAR)
	AUTOROUTE ADAPTED INTO BOULEVARD
	PEDESTRIAN & BIKE PATH
	RAILWAY
	REMOVED AUTOROUTE

HEADWATER LOT CONCEPT



URBAN STRUCTURE OF HEADWATER LOTS



HEADWATER LOT SCENES



RIVER BEAUPORT AREA OF INTEREST



- 1 PROPOSED BROWN MILL DAM BRIDGE
 - 2 PROPOSED TRAIN STATION
 - 3 AVENUE ROYALE
 - 4 PROPOSED CORRIDOR DU LITTORAL PARK
 - 5 BOULEVARD SAINT ANNE UPGRADE
 - 6 MAISON GIRARDIN
- BEAUPORT LINEAR PARK AREA CULTURAL ROUTE AND LOCAL MARKET SQUARE**
The headwater lots at Avenue Royale and Boulevard François-De Laval meet at the Brown Mill Dam site and create a public platform to reinforce the site and an inviting space for social activating that extends as a local market along Avenue Royale. The platform is designed as a covered bridge with seating area to invite people to sit and enjoy the sounds and view of the river. The proposed train station is imagined to revitalize the existing railway. The proposal considers Autoroute Dufferin-Montmorency as a redundant road, which could be transformed to expand the Corridor du Littoral park.

RIVER SAINT CHARLES AREA OF INTEREST (SC1)



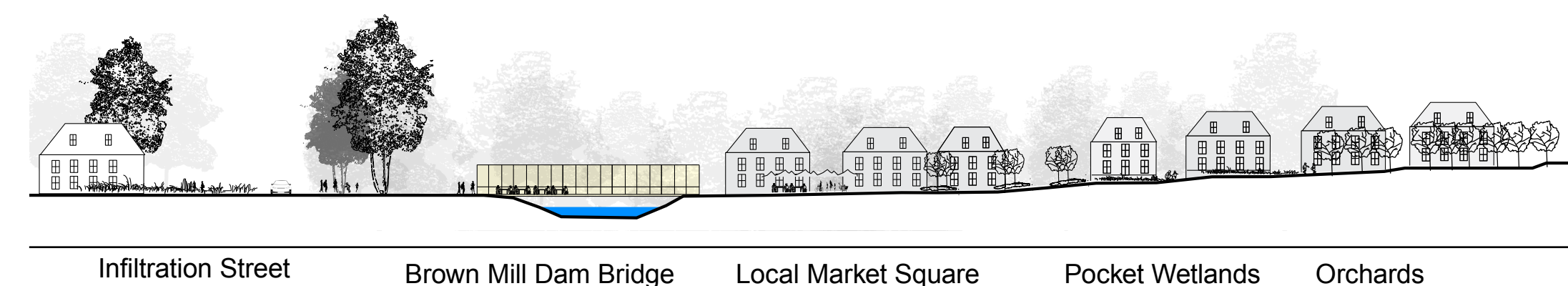
- 1 MAISON DORION-COULOMBE
 - 2 SITE DES SPORTS D'HIVER DE LA POINTE-AUX-LIÈVRES
 - 3 ECO-DISTRICT POINTE-AUX-LIÈVRES
 - 4 SAINT ROCH MARINA
 - 5 PROPOSED GRAVEL BEACH
- SAINT CHARLES URBAN AREA: EXPANDED MIXED-USE CORRIDOR**
The proposed headwater lot at Rue de la Pointe-aux-Lièvres reconnects the existing parks and creates an inviting public platform at the intersection with the river. This space refocuses mixed-use development in an urban setting. The proposed park redevelopment features exhibitions and event grounds in connection to Maison Dorion Coulombe to be revitalized in all seasons.

RIVER CAP ROUGE AREA OF INTEREST

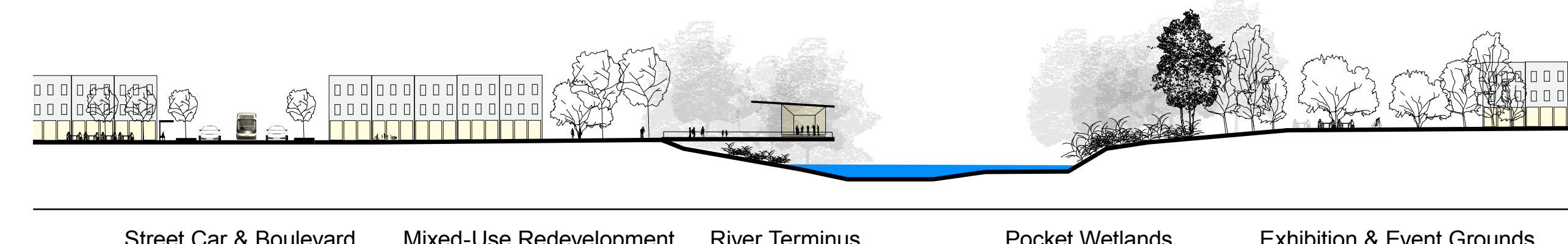


- 1 PARC NAUTIQUE DE CAP ROUGE
 - 2 PROPOSED TRESTLE PARK
 - 3 VIEUXCAP ROUGE HERITAGE AREA
 - 4 PARC DES SENTIERS DE LA RIVIÈRE DU CAP ROUGE
 - 5 BOULEVARD CHAUDIÈRE
- VIEUX-CAP-ROUGE AREA: TRESTLE PARK**
The proposed headwater lot at Rue Provancher creates a path that extends from a proposed main plaza in the heritage core towards the marina at the river mouth and the trestle. The proposed Trestle Park takes the grounds of an existing parking lot and street. The existing pier is extended into the Saint Lawrence as a celebration of this intertwined natural and industrial heritage setting.

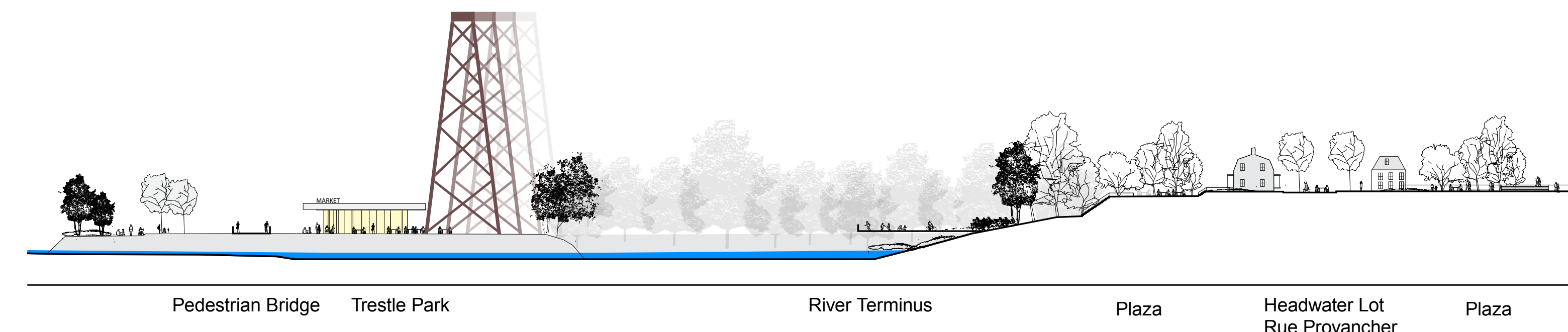
SECTION AT AVENUE ROYALE



SECTION AT REDEVELOPMENT AREA



SECTION AT TRESTLE PARK



HEADWATER-LOT

RIVER BEAUPORT



RIVER TERMINUS OF HEADWATER LOT AVENUE ROYAL

The Brown Mill Dam Bridge and Park area at the intersection of Headwater Lots at Avenue Royale and Boulevard François-De Laval is a space for cultural activity. It invites people to stay and enjoy the sounds of the cascades.

RIVER SAINT CHARLES (SC1)



RIVER TERMINUS OF HEADWATER LOT AT POINTE-AUX-LIÈVRES

The covered platform at the river space is shown as an exhibition grounds connected to Pointe-aux-Lièvres sports site and proposed park redevelopment area. This terminus is mixed-use corridor, existing urban areas, and ecological design of the headwater lot.

RIVER CAP ROUGE



HEADWATER LOT AT AGRICULTURAL TRAIL

The river terminus here is designed as a low water crossing, a space for close interaction with the water. The space of the headwater lot is proposed to be a path for local agricultural trail. The riparian forest buffer is regenerated to improve water quality.



BEAUPORT RIVER AT PROPOSED "BOULEVARD" FÉLIX LECLERC

The Beauport Linear Park is to be extended and can continue below the overpass of the upgraded boulevard. Banks are shown to be renaturalized in this area. The river terminus is designed as a multi-use wooden dock.



RIVER TERMINUS OF HEADWATER LOT NEAR PARK CHAUVEAU

The headwater lot in suburban areas is imagined as an expanded public space that provides a strong access to the rivers. The river terminus in wide riparian corridors is considered to have a minimal intervention for public interaction. Gravel beach on the inner bend meanders and a suspended walkways are proposed here.



RIVER TERMINUS OF HEADWATER LOT RUE PROVANCHER

The proposed Trestle Park is designed to have a market building and outdoor seating area below the Trestle. The terminus here is shown as wooden deck that connects the proposed Vieux-Cap-Rouge plaza to the Trestle Park and Marina area where the Saint Lawrence pier is extended.

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