

THE MEADOWAY VISUALIZATION TOOLKIT

EXISTING CONDITIONS, LITERATURE REVIEW AND CASE STUDIES REPORT

PERKINS
+ WILL

A project of:





ACKNOWLEDGEMENTS

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VIEW OF THE MEADOWAY, LOOKING EAST.
INTERSECTION OF LAWRENCE AVE WEST AND
BRIMLEY ROAD. PHOTO COURTESY OF TORONTO
AND REGION CONSERVATION AUTHORITY (TRCA).

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SUNFLOWERS IN BLOOM ON THE MEADOWAY. PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).

INTRODUCTION

About The Meadowway

OVERVIEW

Formerly known as the Gattineau hydro corridor, The Meadowway will evolve to become a green, active, east-west link between downtown Toronto and Rouge National Urban Park, while creating urban agriculture opportunities and connecting greenspaces across the communities of Scarborough. Led by Toronto and Region Conservation Authority (TRCA) and in partnership with The W. Garfield Weston Foundation, City of Toronto, and Hydro One, The Meadowway is transforming 16 kilometres of transmission corridor in Scarborough into one of the largest urban linear greenspaces in Canada. There is high potential for The Meadowway to serve as a blueprint for revitalization, becoming a worldclass example of linear corridor transformations.

VISUALIZATION TOOLKIT

Perkins+Will has been retained by the TRCA to develop a visualization toolkit, from conceptual plans to renderings and animations, to demonstrate the look and feel of The Meadowway. The purpose of this document is a compilation of the research, field investigations, and layers of analyses that the team has done in Phase 1 to prepare for the development of the visualization toolkit. The extent of this background reporting will ensure that the visual elements produced in Phase 2 will be technically accurate.

BRIEF HISTORY

The hydro corridor was first established in its agricultural context in the 1920s, as the surrounding communities began to urbanize and emerge in the 1950s. The hydro corridor remained manicured over the decades, with a few landscape trees planted for ornamental purposes. In 2012, prairie restoration began, with segments of a multi-use trail used for recreational purposes. A few sports fields and community garden plots also provide local amenity today.

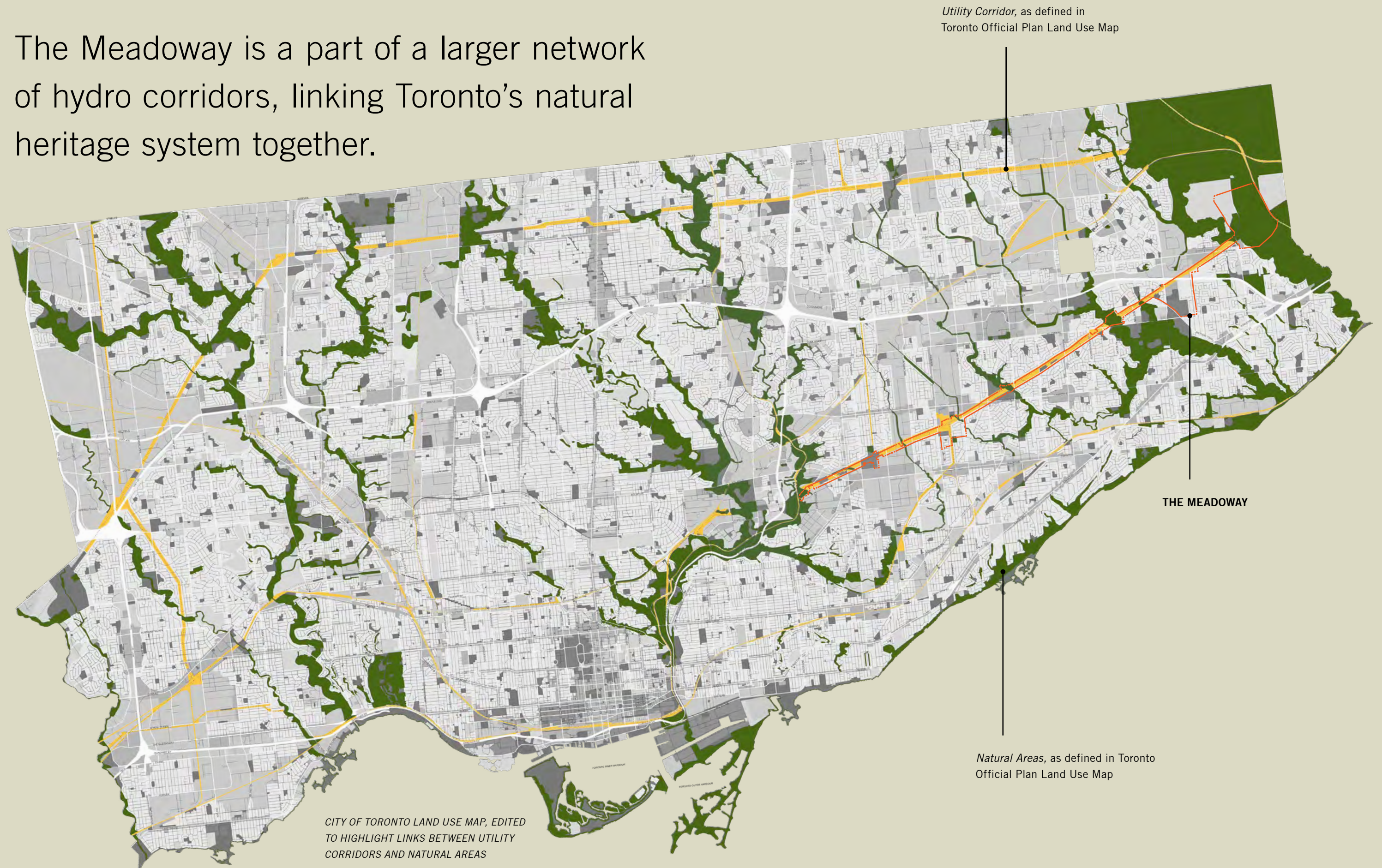
INDIGENOUS COMMUNITIES

As reported in the Stage 1 Archaeological Assessment: The Meadowway, TRCA's jurisdiction encompasses the overlapping Traditional territories and Treaty areas relating to the Anishinaabe, Haudenosaunee, Huron-Wendat, and Métis Nations. TRCA lands contain hundreds of known ancestral archaeological sites, as well as the high potential to discover more. TRCA has Engagement Guidelines that provide guidance on stewardship and management decisions within land management processes.

*PORTION OF THE MEADOWWAY BETWEEN BIRCHMOUNT ROAD AND MIDLAND AVE,
1960. PHOTO RETRIEVED FROM CITY OF TORONTO ARCHIVES.*



The Meadowway is a part of a larger network of hydro corridors, linking Toronto's natural heritage system together.

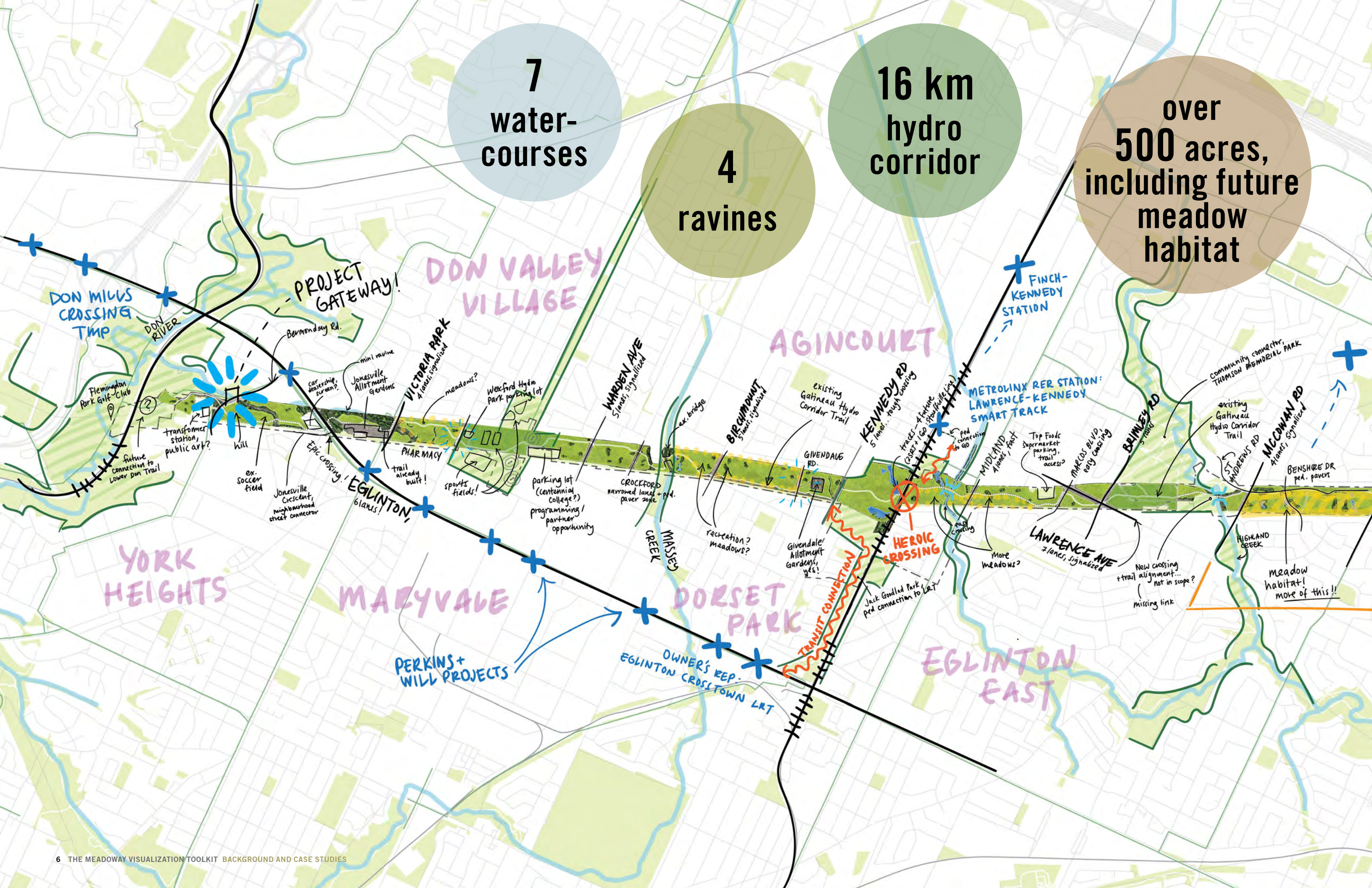


7
water-
courses

4
ravines

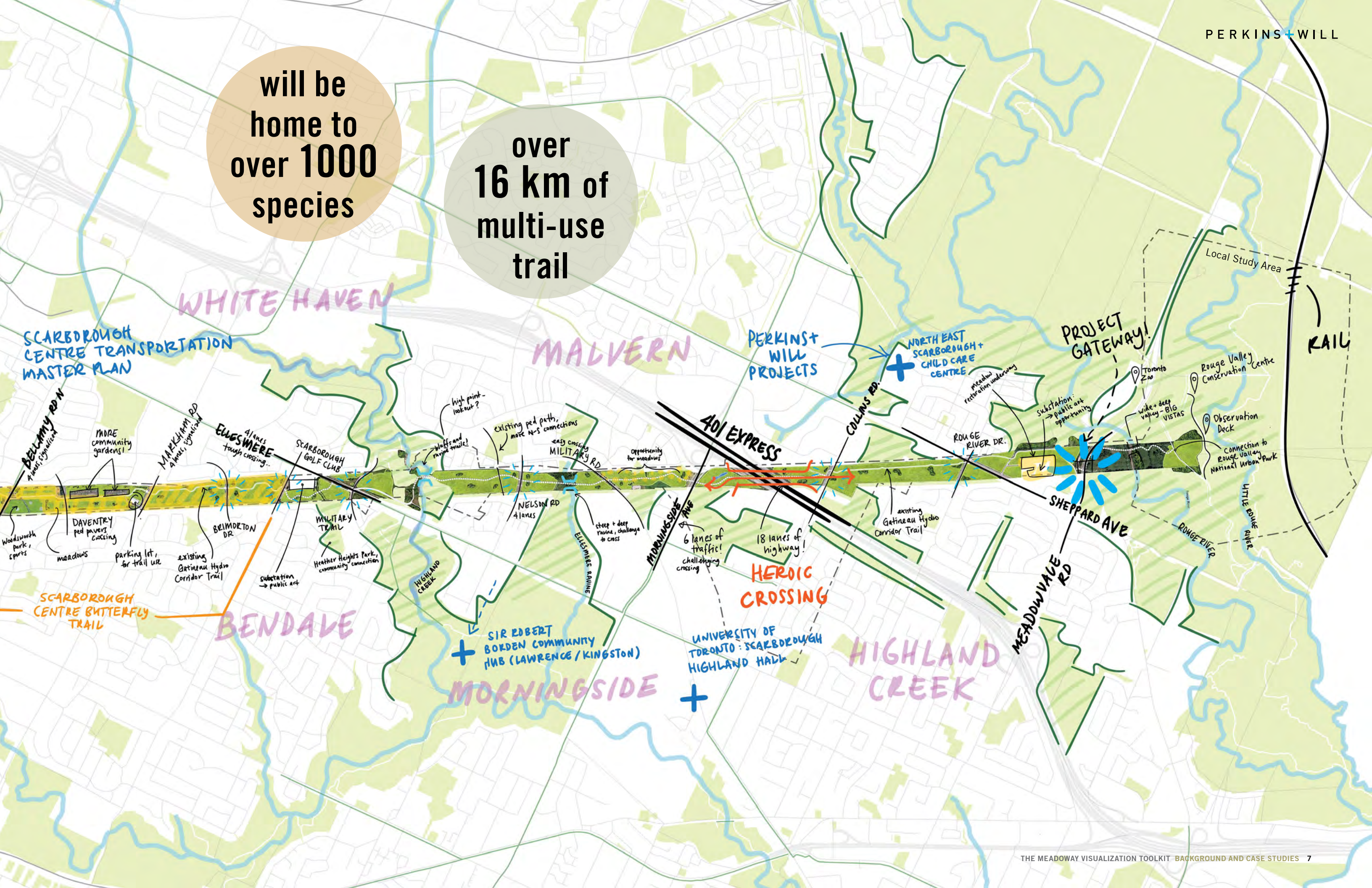
16 km
hydro
corridor

over
500 acres,
including future
meadow
habitat



will be
home to
over 1000
species

over
16 km of
multi-use
trail



EXISTING CONDITIONS

Demographics

CORRIDOR-WIDE OVERVIEW

Within the Regional Study Area, The Meadowway spans five municipal wards, thirteen neighbourhoods, and holds over 172,000 people within about 60,000 households. The Meadowway will serve as a green corridor that stitches together the diverse and unique local characters between these distinct neighbourhoods and communities.

ENVIRONICS

The Environics Analytics data showcased the demographic, psychographic, and behavioural data within the study area boundary for The Meadowway. Relevant to this Visualization Toolkit exercise, the top 3 strong values of the population is Attraction to Nature, Ethical Consumerism, and Confidence in Advertising. The strong desire for people living along this green corridor to be close to nature and enjoy the outdoors is a positive indicator of how The Meadowway can provide a new amenity as a multi-use trail with a strong tie to the natural environment.



APRIL 2018 LAUNCH OF THE MEADOWWAY - WITH KIM WHEATLEY (ANISHINAABE OJIBWAY BAND MEMBER OF SHAWANAGA FIRST NATION), JOHN TORY, AND TAMARA REBANKS OF THE W. GARFIELD WESTON FOUNDATION. PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).



LOCAL COMMUNITY MEMBERS HELP TO PLANT FLOWERS AND GRASSES IN THE MEADOWWAY. PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).



172,273 people
59,348 households
33% population aged 58 and over
53% people identify as immigrants
69% belong to a visible minority group
4% people have no knowledge of English or French



42% housing is rental
48% dwellings are houses (compared to apartments)
\$83,918 average household income



58% people in labour force
24% population with university degree



56% people commute to work by car (as driver)
34% people commute to work by public transit

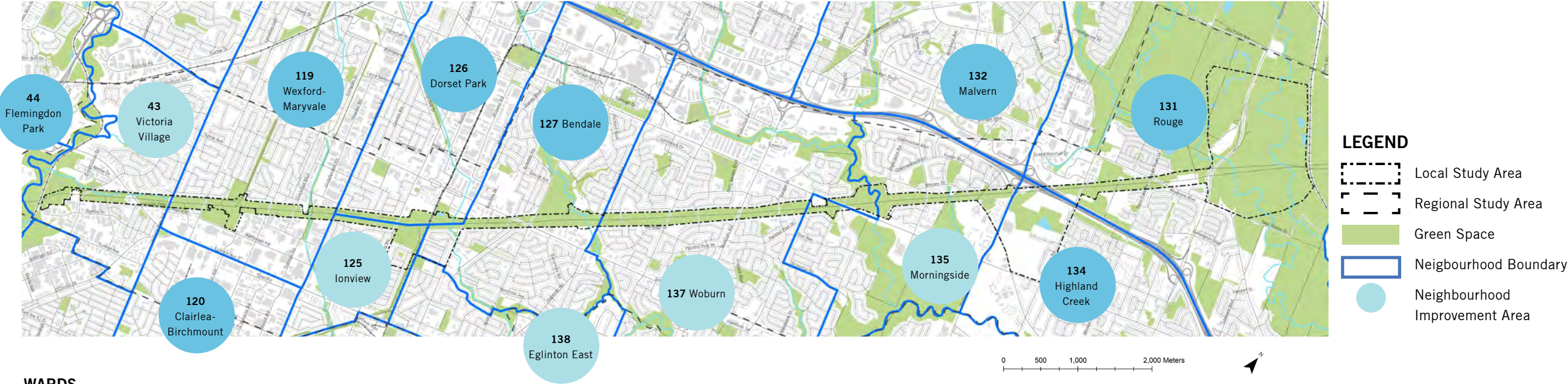


45% people participate in fitness walking
30% people participate in jogging

NOTE: PERCENTAGES HAVE BEEN ROUNDED TO NEAREST WHOLE NUMBER

NEIGHBOURHOODS

The Regional Study Area of The Meadowway crosses thirteen (13) identified neighbourhoods within the City, five of which are Neighbourhood Improvement Areas (NIAs, identified in light blue). NIAs are designated under the Toronto Strong Neighbourhoods Strategy 2020, where the City is working with residents, community agencies and businesses to make changes to strengthen the neighbourhood.



WARDS

The Meadowway corridor stretches over six of the City's 25 wards. Ward profiles are available through the City website, providing demographic information on population by age, households and dwelling types, families, language group, household tenure, immigration, mobility, ethnic origin, education and labour force, income and shelter cost.



EXISTING CONDITIONS

Land Use

LAND USE

According to the City of Toronto Zoning By-Law and existing Land Use, the areas surrounding the hydro corridor are largely residential, in the form of low-rise dwellings such as single-detached houses or townhomes. Clusters of apartment towers provide higher residential density at certain nodes as well. Employment uses (largely industrial, low rise) frame sections of The Meadowway, currently offering retail or local community uses.

RELATED PROJECTS

A number of ongoing or recent projects will impact the future planned context of The Meadowway and its surroundings. These are described through map annotations, including:

- Golden Mile Secondary Plan Study
- Highland Creek Pan Am Path
- Scarborough Subway Extension
- University of Toronto Scarborough Master Plan



MANY LOWER RISE RESIDENTIAL DWELLINGS FRAME THE MEADOWWAY CORRIDOR, WITH SOME CLUSTERS OF APARTMENT NEIGHBOURHOODS CLOSER TO ARTERIAL ROADS. PICTURED: INTERSECTION OF GATINEAU HYDRO CORRIDOR WITH SCARBOROUGH GOLF CLUB ROAD.

The Golden Mile Secondary Plan Study will develop a Vision and Planning Framework for a complete community within the Golden Mile area. The draft vision includes: “A balance of residential, commercial and employment uses is anchored by community services and an improved network of parks and open spaces that invites residents, workers and visitors to explore and interact within its neighbourhoods”.



LEGEND

	Local Study Area		Hydro Corridor		Recreational
	Commercial		Industrial		Residential - High
	Conservation Lands		Institutional		Residential - Low/Med
	Golf Course		Open Space		Road (ROW)
	Green Space		Park		Transportation

Plans for the Line 3 **Scarborough Subway Extension** – including details on stops, alignment, and opening date – are still unknown due to recent announcements and changes.

The **University of Toronto Scarborough Campus Master Plan** is a response to the substantial growth in the campus population and the built environment recently. It sets out the evolution of the campus and its three zones (North Campus, South Campus and Ravine) over the next 25 to 50 years. It includes a plan to relocate Military Trail northward to create a pedestrian and student friendly inner core, a central public transportation hub, commercial partnerships, and a hotel-conference centre.



The **Highland Creek Pan Am Path** will provide a new connection (3-4 metre wide paved asphalt trail) with bridge crossings. It will provide increased connectivity onto The Meadoway.

EXISTING CONDITIONS

Destinations and Community Facilities

DESTINATIONS ALONG THE MEADOWAY

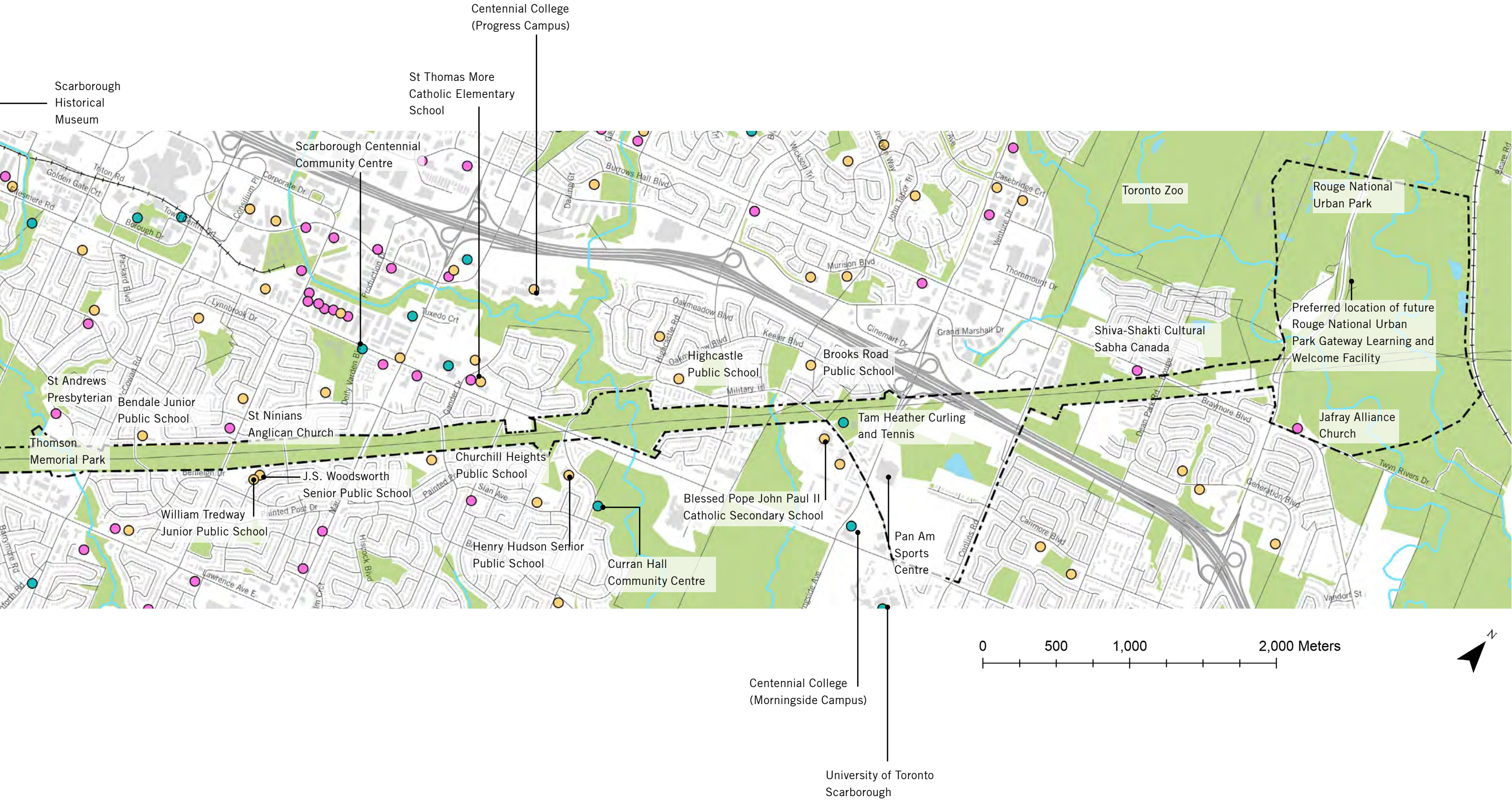
As outlined in the Strategic Business Case for The Meadoway, the creation of this corridor system is and will continue to be developed with an understanding that conservation begins with connection. The more connected a community, the more effective that community will be in working together to build innovative and transformational ideas that will guide the future of conservation. The Meadoway will help revitalize Scarborough and establish important connections between the community and the natural environment.

The span of The Meadowway offers abundant opportunities to create connections with local schools, cultural centres such as libraries or community centres, and places of worship. Not only will The Meadowway provide increased access to these local facilities, but it can bring residents and visitors onto the corridor, engaging in stewardship or community events.



LOCAL COMMUNITY MEMBERS HELP TO PLANT FLOWERS AND GRASSES IN THE MEADOWWAY. PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).





EXISTING CONDITIONS

Cultural Heritage and Archaeology

Cultural heritage and archaeology provide valuable storytelling opportunities for The Meadowway that enrich our connection to the land.

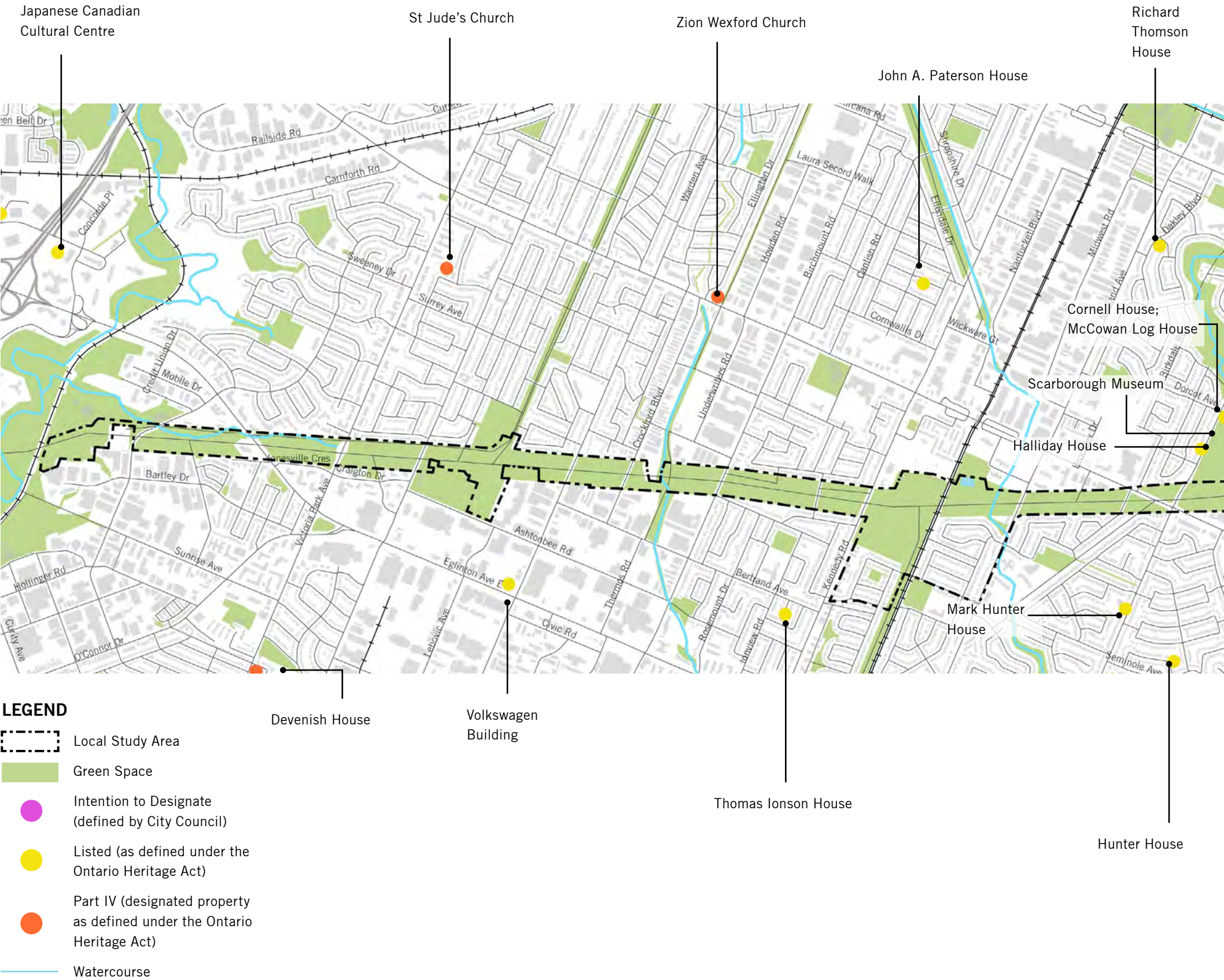
CULTURAL HERITAGE

Numerous heritage resources can be encountered along The Meadowway study area, including municipally designated and listed heritage structures, bridges, cemeteries, commemorative plaques and cultural heritage landscapes. The corridor runs adjacent to Thomson Memorial Park, home of the Scarborough Historical Museum, which was founded to commemorate and preserve some of the historical homes of the Thomson family, who were the first settlers of Scarborough in the 1790s.

ARCHAEOLOGY

To date, a total of thirteen (13) archaeological sites have been discovered within one kilometre of The Meadowway. This number is quite low within the context of over 10,000 years of human occupation within the Toronto region, and likely due to the destruction of archaeological resources in the wake of rapid urbanization during the twentieth century. It is only in recent times that cultural resources have been recognized as important connections to the past and in need of documentation and preservation.

A Stage 1 archaeological assessment for The Meadowway was completed by TRCA, providing a detailed record of the archaeological and land use history of the study area and its present condition. This background study also identified archaeological potential, through the review of general geography and geology, site predictive models, archival records, historic mapping and aerial photographs, and previous archaeological assessments. A detailed evaluation of these sources determined that previously undisturbed parts of The Meadowway study area hold potential to contain archaeological sites.





TABER HILL OSSUARY WITH A 1961 TABER HILL PLAQUE AND AN IROQUOIS PRAYER (PHOTOS BY ALAN L BROWN, 2007)

EXISTING CONDITIONS

Transit Connectivity

EXISTING TRANSIT CONTEXT

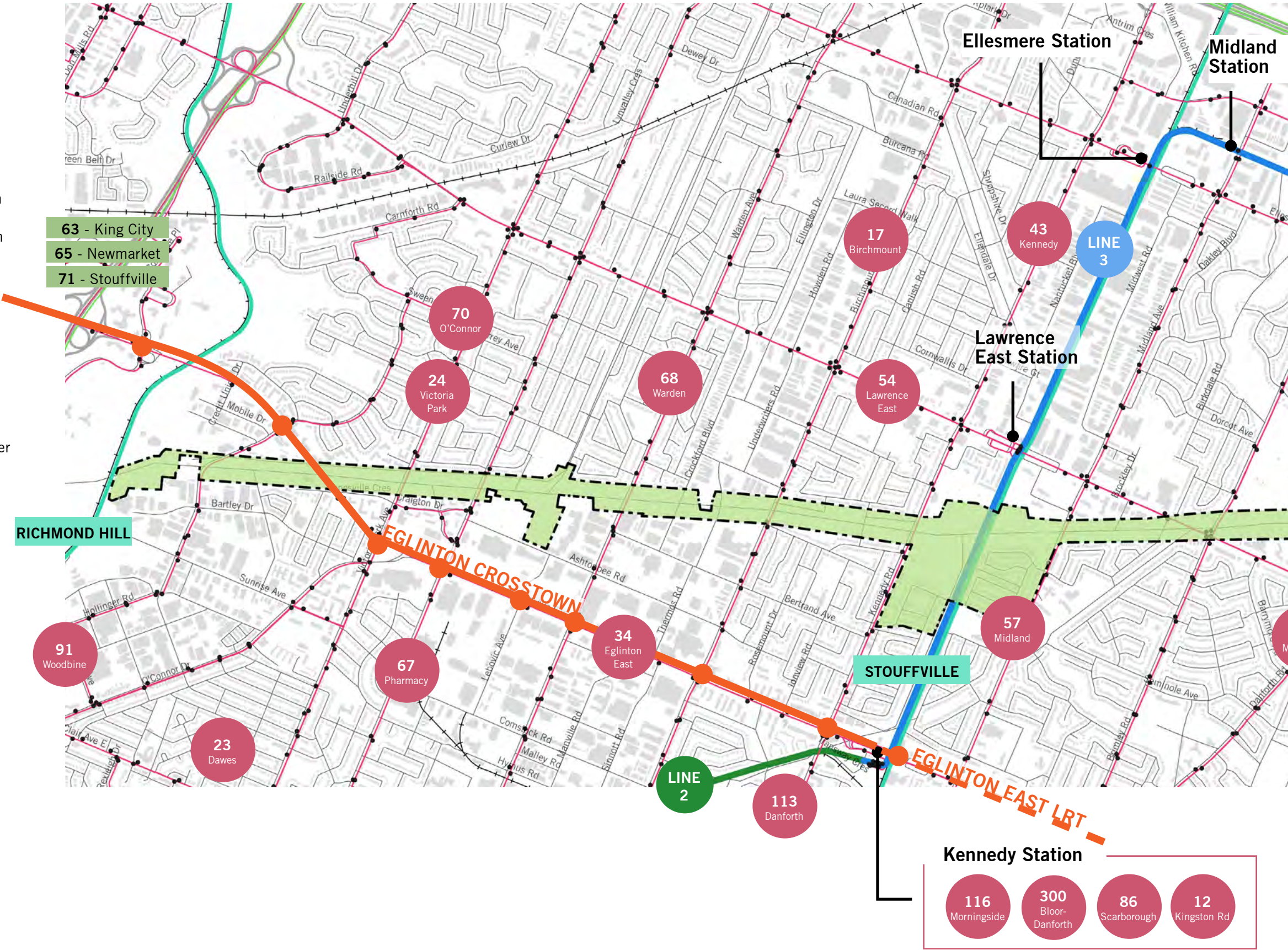
The Meadowway has great connectivity to local and regional transit systems, from both the Toronto Transit Commission (TTC) and Metrolinx networks. Local buses that run north-south cross The Meadowway at almost every intersection (e.g. Victoria Park Ave., Warden Ave., Kennedy Rd., McCowan Rd., Markham Rd., etc.). On the other hand, intermodal transfer points to rail systems such as Kennedy Station, Lawrence East Station, Ellesmere Station, Midland Station, Scarborough Town Centre, and McCowan Station provide access to GO Transit bus service or TTC Subway service (Lines 2 and 3).

PLANNED TRANSIT CONTEXT

Although currently unbuilt, the Light Rail Transit (LRT) systems planned along Eglinton Avenue will increase higher-order transit connectivity to The Meadowway. The portion of Eglinton Crosstown is currently under construction, whereas the extension eastward is still in the planning stages. Furthermore, electrification of the Stouffville GO rail corridor east of Kennedy Road will provide faster and more frequent service.

LEGEND

- Local Study Area
- TTC Stop
- TTC Line 2 Bloor-Danforth
- TTC Line 3 Scarborough
- Metrolinx - Train line
- TTC Bus route
- Metrolinx - Bus line
- Eglinton Crosstown - under construction
- Eglinton East LRT - planned



Scarborough
Town Centre

92 - Oshawa
/ Yorkdale

93 - UOIT

96 - Oshawa

134
Progress

130
Middlefield

169
Huntingwood

91
Brimley



0 500 1,000 2,000 Meters



EXISTING CONDITIONS

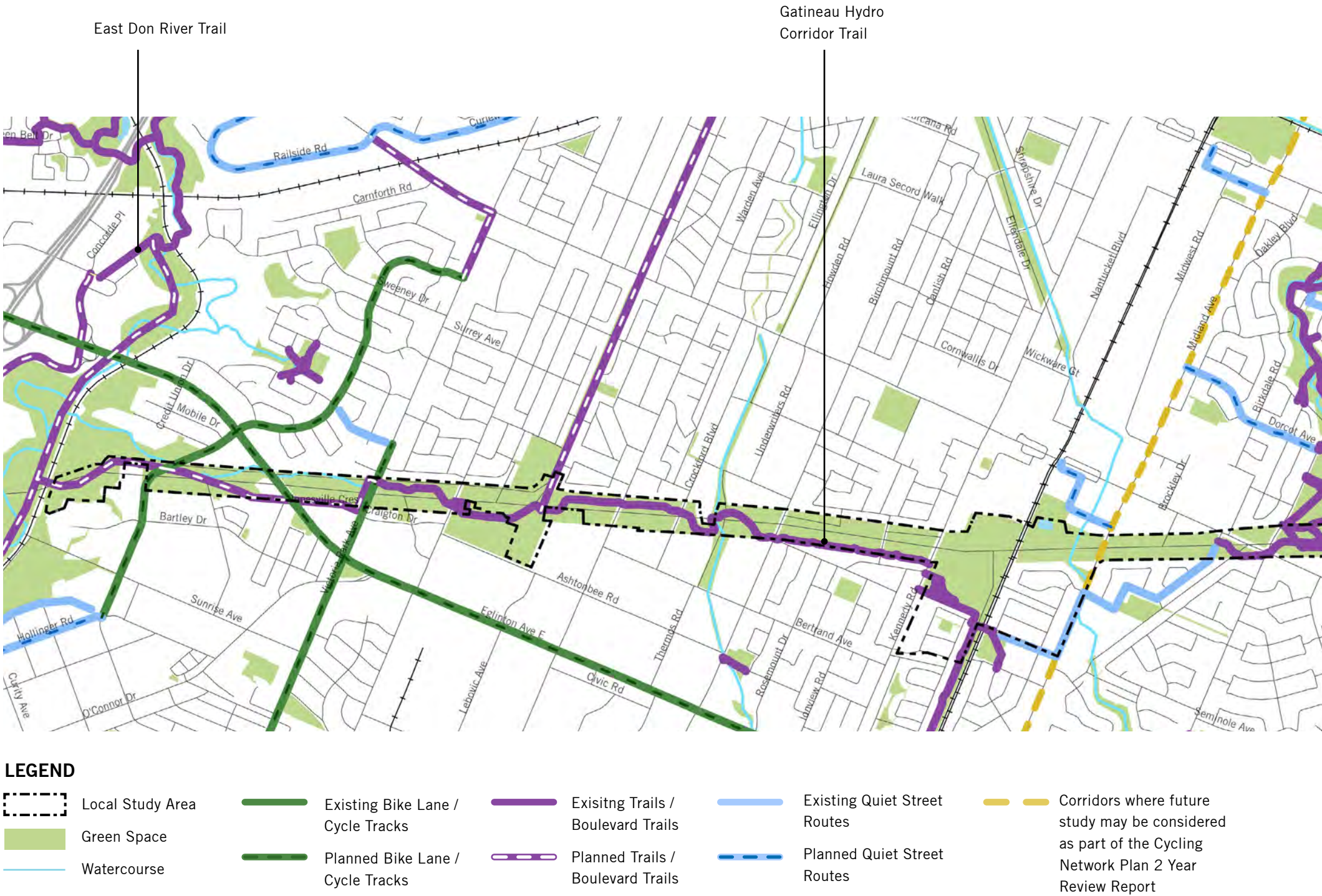
Cycling Connectivity

COUNCIL APPROVED CYCLING PLAN 2016

The City of Toronto’s Ten-Year Cycling Plan outlines new and improved bike routes that will connect, grow, and renew cycling infrastructure over the next decade. For the context of The Meadoway, these improved routes will extend safe cycling environments from the hydro corridor and into the existing ravine trails. The Meadoway will serve as a critical link between bike lanes, cycle tracks, trail routes, and quiet street routes.



EXISTING CYCLING ACTIVITY ALONG THE MEADOWAY MULTI-USE TRAIL. PHOTOS COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).





EXISTING CONDITIONS

Pedestrian Connectivity

The Meadowway is well connected with pedestrian infrastructure (i.e. sidewalks or trail) within the local area. These formalized paths will allow accessible and efficient connectivity to the hydro corridor. However, it is important to also consider the informal desire paths that show other frequented paths of travel in the surrounding community.

MULTI USE TRAIL DESIGN GUIDELINES

As for the multi-use trail along the hydro corridor, the design of the trail alignment must follow the City’s Multi Use Trail Design Guidelines, to ensure that the hard-surfaced, off-road routes will provide a significant recreation asset for all users.

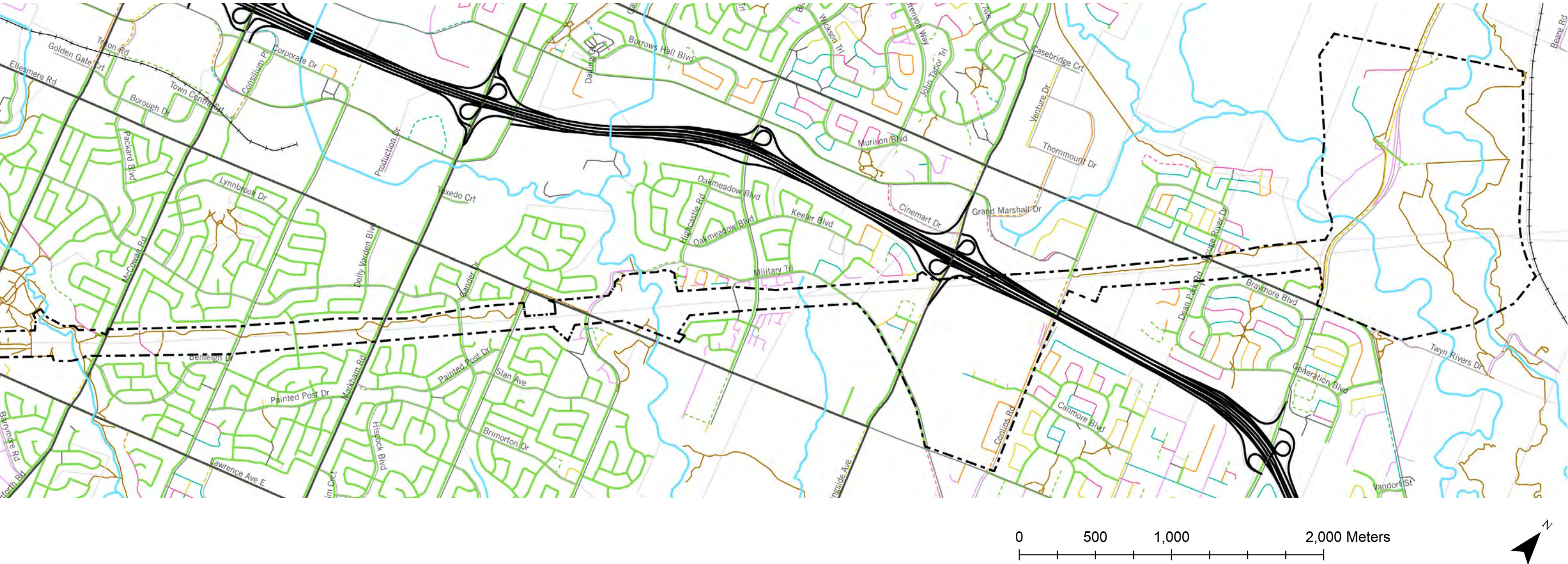


PEDESTRIANS LEISURELY STROLL ALONG THE EXISTING MULTI-USE PATH. PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).



LEGEND

	Local Study Area		Roadway Under Development		Sidewalk on south side only
	Collector Road		Sidewalk on both sides		Sidewalk on south side, partially on other side
	Arterial Road		Sidewalk on east side only		Sidewalk on west side only
	Highway / Highway Ramp		Sidewalk on east side, partially on other side		Sidewalk on west side, partially on other side
	Walkway or POPs (Privately Owned Publically-Accessible Space)		Sidewalk on north side only		Watercourse
	Recreational Trail		Sidewalk on north side, partially on other side		



EXISTING CONDITIONS

Crossings

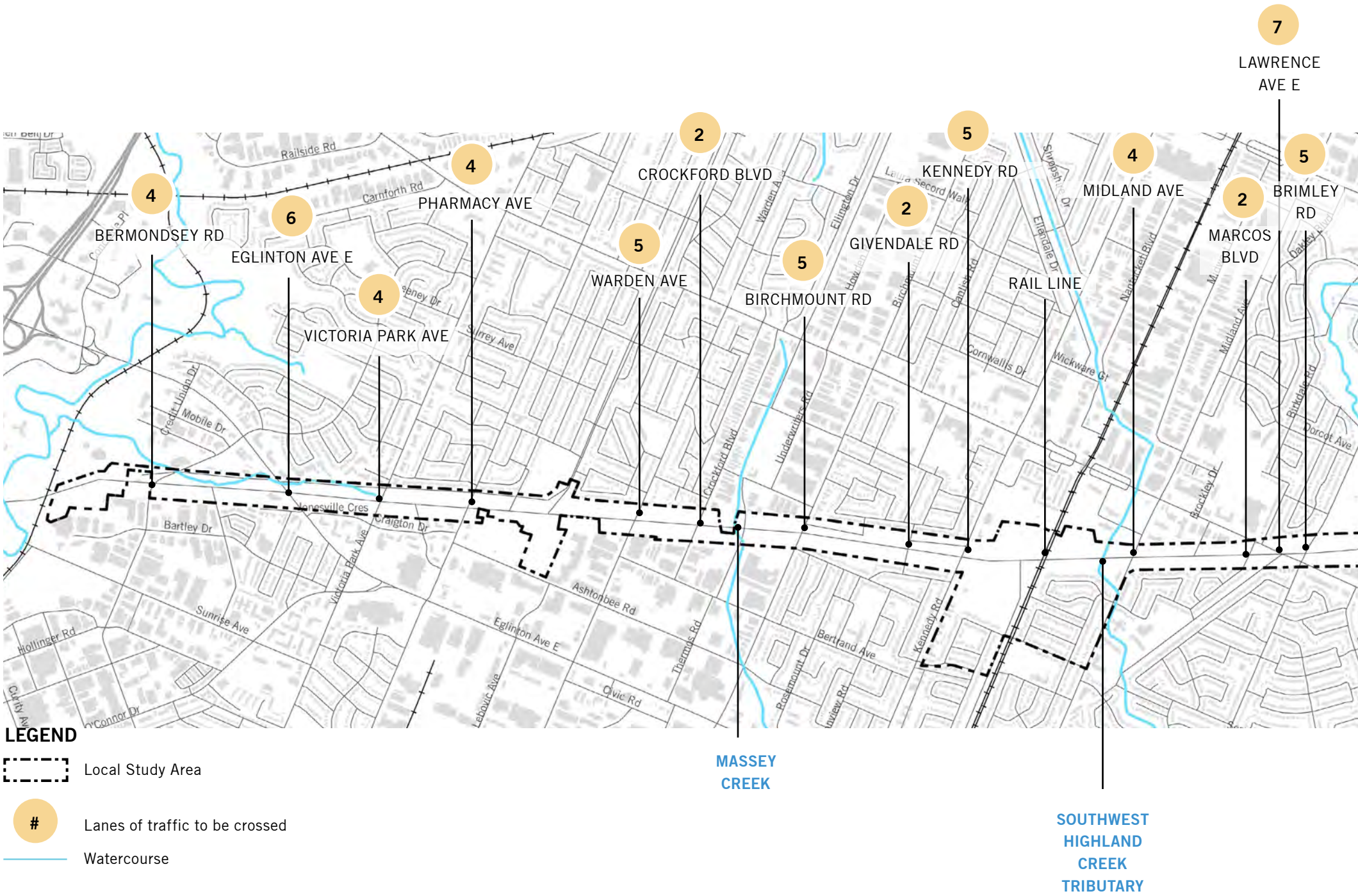
There are a total of 31 road crossings and 5 creek crossings along The Meadowway, all which impact east-west active transportation connectivity. Not all road crossings are signalized and each must be approached on a case-by-case basis, dependent on site specific conditions and other information gathered through the planning process. Signage, streetscape, and pedestrian furniture (e.g. benches, lighting) can identify safe points of crossing and create an enjoyable travelling experience.

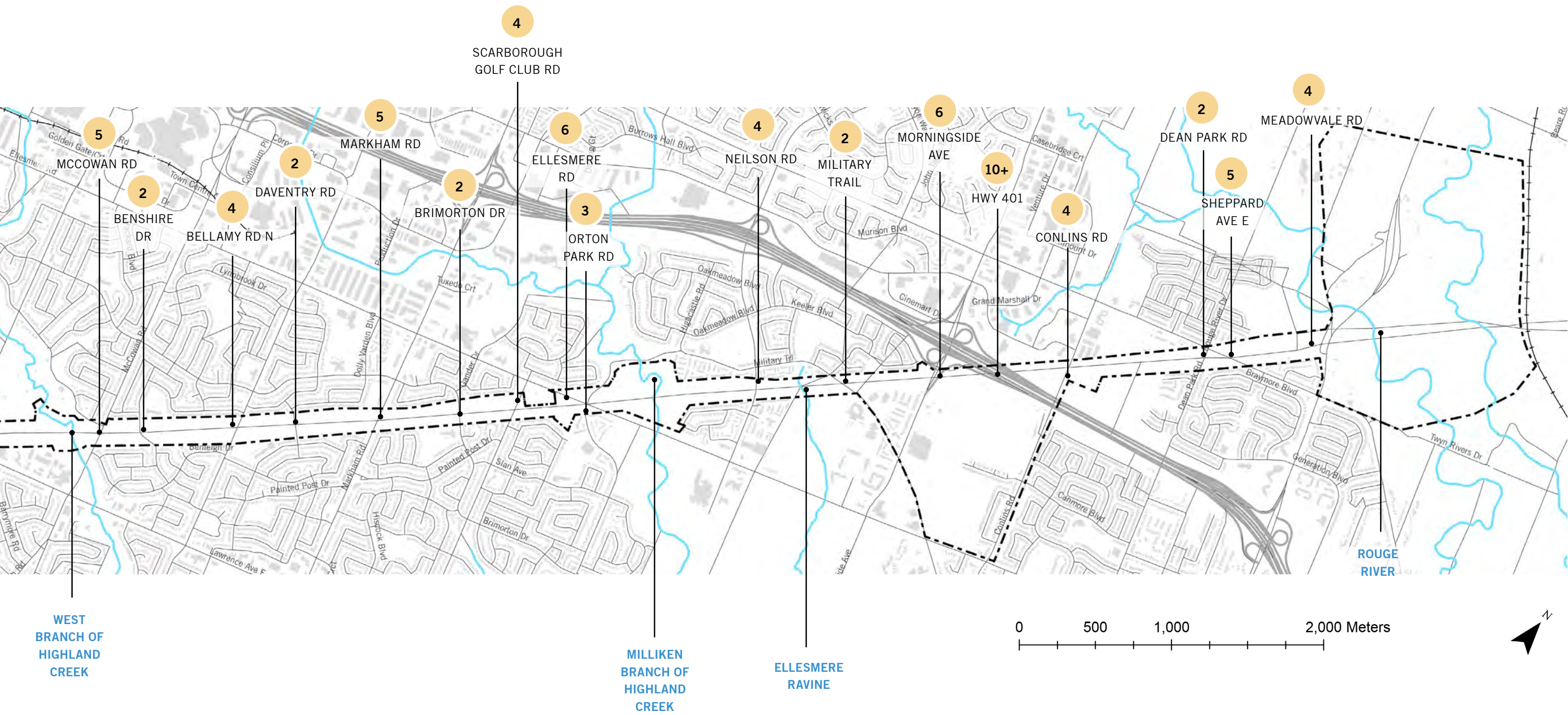
CROSSING GUIDELINES FOR VALLEY AND STREAM CORRIDORS

These guidelines, developed by Toronto and Region Conservation Authority, outline recommendations for the planning and design of valley or stream corridor crossings. It is important to understand that the locations of these crossings will impact the natural heritage functions, including aquatic and terrestrial habitat and connectivity for fish and wildlife passage. Furthermore, impacts of natural hazards such as flooding, geomorphology (e.g. channel erosion) and geotechnical impacts (e.g. slope stability) are important considerations when designing valley and stream crossings.



EXISTING BRIDGE CROSSING OVER THE RAIL CORRIDOR, EAST OF KENNEDY ROAD. PHOTO BY PERKINS+WILL.





EXISTING CONDITIONS

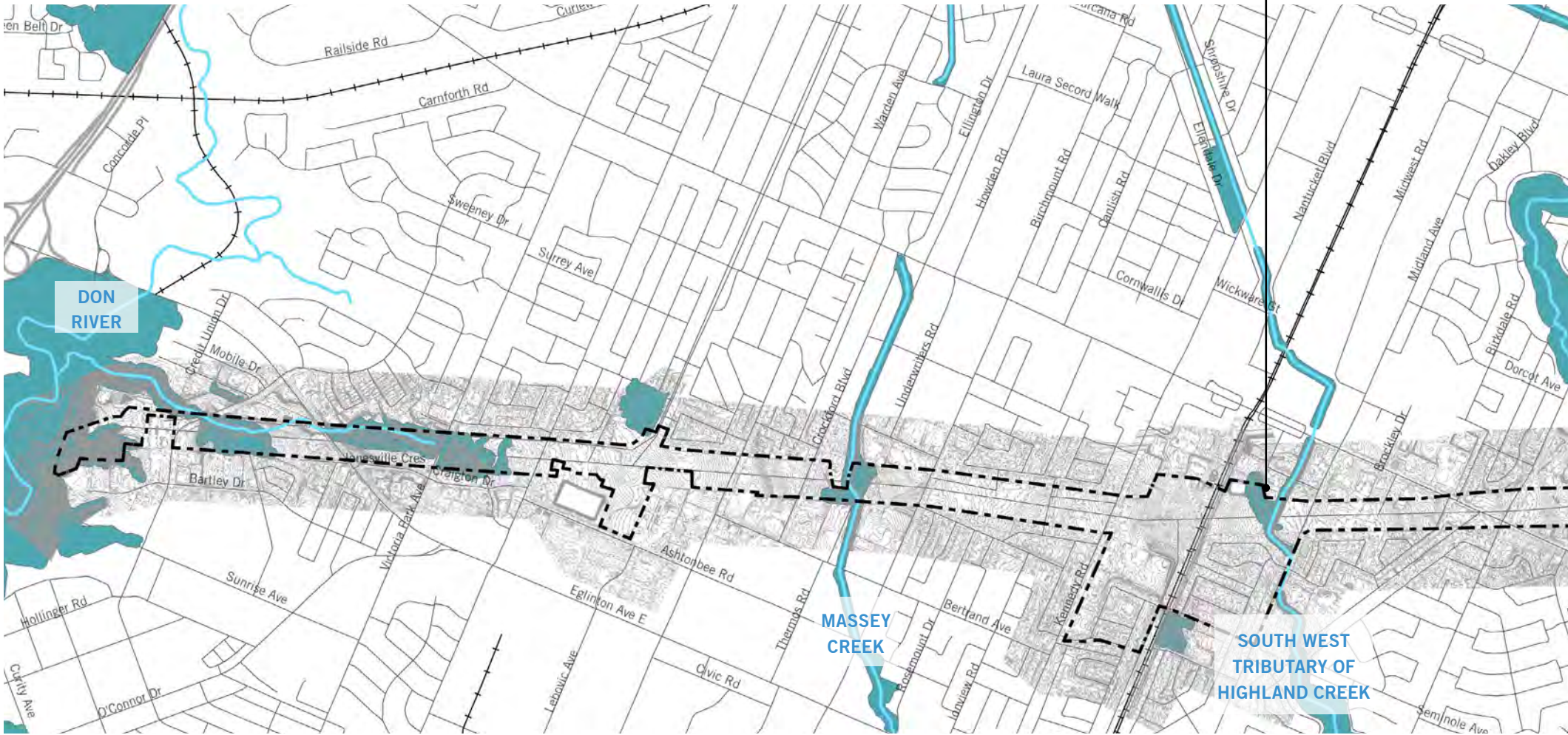
Ravine Coverage, Water Bodies, and Topography

The natural systems of the ravines and waterbodies that cross The Meadowway provide ecological value, a strong connection to nature, significant views and vistas. As important passages that were once used for travel and trade, these cultural landscapes are also valuable storytelling opportunities. The topography / physiography along the corridor is generally flat to gently rolling until it approaches the steep dips into the ravines that cross through.



EDGE OF BLUFFS, LOOKING EAST IN THE MILLIKEN BRANCH OF HIGHLAND CREEK. PHOTO BY PERKINS+WILL.

Southwest Tributary of Highland Creek: This branch of Highland Creek could potentially be rehabilitated: the concrete channel could be replaced with a naturalized channel. This opportunity could potentially be represented if visualizations that show the watercourse are produced (either in a view from the bridge(s) or a view from the rail corridor crossing). If this channel rehabilitation is pursued, the visualizations should also show riparian vegetation.



LEGEND

- Study Area
- Ravine By-Law Boundary
- Watercourse (Stream, River, Creek)
- 25cm Contour Line

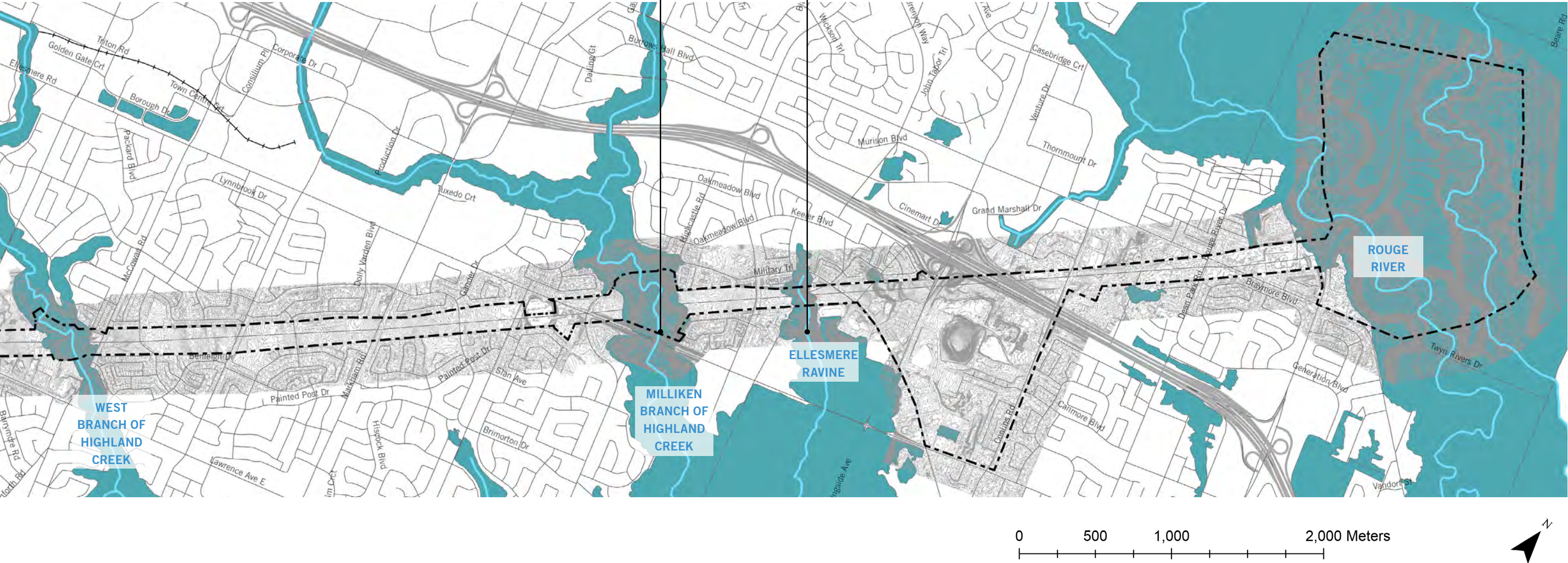
TOPOGRAPHY



NOTE: TOPOGRAPHY HAS BEEN VERTICALLY EXAGGERATED 8-10 TIMES, FROM GOOGLE EARTH PRO

Milliken Branch of Highland Creek: The proposed bridge crossing location of Highland Creek is approximately 50m upstream of Ellesmere Road. The channel has been armoured at this location, results in a more gentle trail transition to the elevated hydro corridor east of the Creek, and is in close proximity to the Upper Highland Creek Pan Am Path, all logical reasons for choosing this location. It will not, however, bring The Meadowway users in close proximity to the Creek bluffs, resulting in a less interesting visual experience. If visualizations are produced at this crossings, it may make the most sense to face South, showing the connection to the Upper Highland Creek Pan Am Path, the impressive Ellesmere Road bridge (with public art), and the views of the open Creek valley beyond.

Ellesmere Ravine: Due to the extensive and active channel and valley erosion at this location, the report recommends a crossing which would span the entirety of Ellesmere Ravine! This would be a significant structure, and a unique experience of The Meadowway and Ravine. A view from the top of the bridge looking south would be an opportunity to generate excitement in this approach and The Meadowway restoration if it is pursued. Additionally, the report also recommends revegetation to help stabilize the valley, and channel rehabilitation to improve the watercourse, something that could also be represented.



EXISTING CONDITIONS

Tree Canopy and Green Space

Despite restrictions for tree planting on the hydro corridor, an assessment of the edge conditions along The Meadowway will reveal areas that currently provide shade via tree canopy. These street trees as indicated in the map are a public amenity that support sun protection. These shall be protected where possible as they are critical for the surrounding streetscape and essential in creating a safe and comfortable environment.

SHADE GUIDELINES

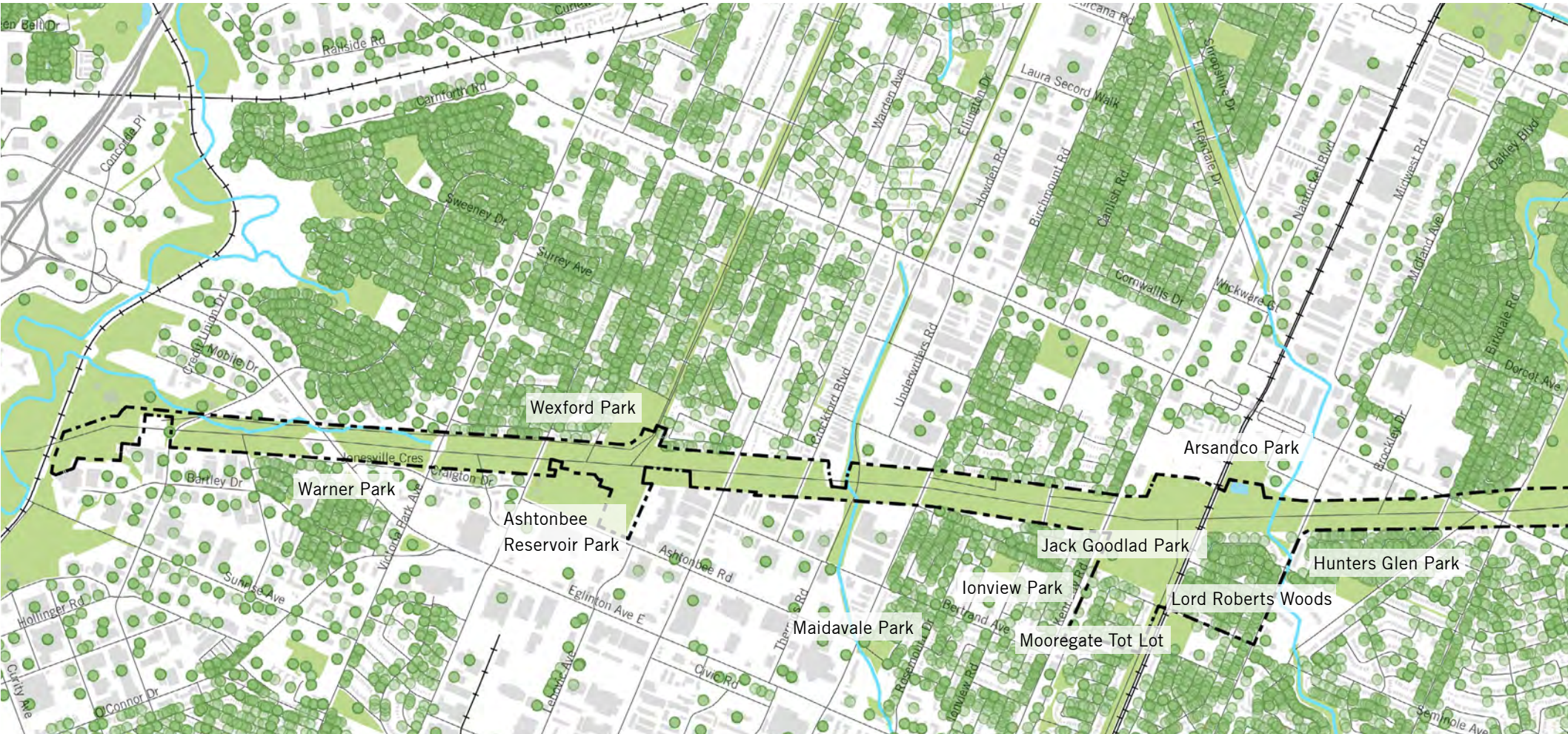
As indicated in the City of Toronto Shade Guidelines, the provision of shade “can be an effective means of reducing exposure to ultraviolet radiation and its associated health risks such as skin cancer.” By maintaining the natural shade from tree canopy surrounding The Meadowway and enhancing it with built shade/canopy structures within the corridor, it will ensure that users can have a comfortable travelling or resting environment.

PARKLAND STRATEGY

Toronto’s Parkland Strategy indicates that parkland supply is low in several parts of the city, and it should be a continual effort that investment in open green spaces be prioritized throughout Toronto. The Meadowway can be an expansion of the city’s usable green space, and therefore equitable access to this amenity should be ensured so that everyone can share in the benefits of parks.



TREES ALONG THE EDGES OF THE MEADOWWAY PROVIDE SHADE FOR PEDESTRIANS AND CYCLISTS. PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).



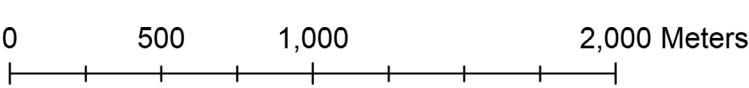
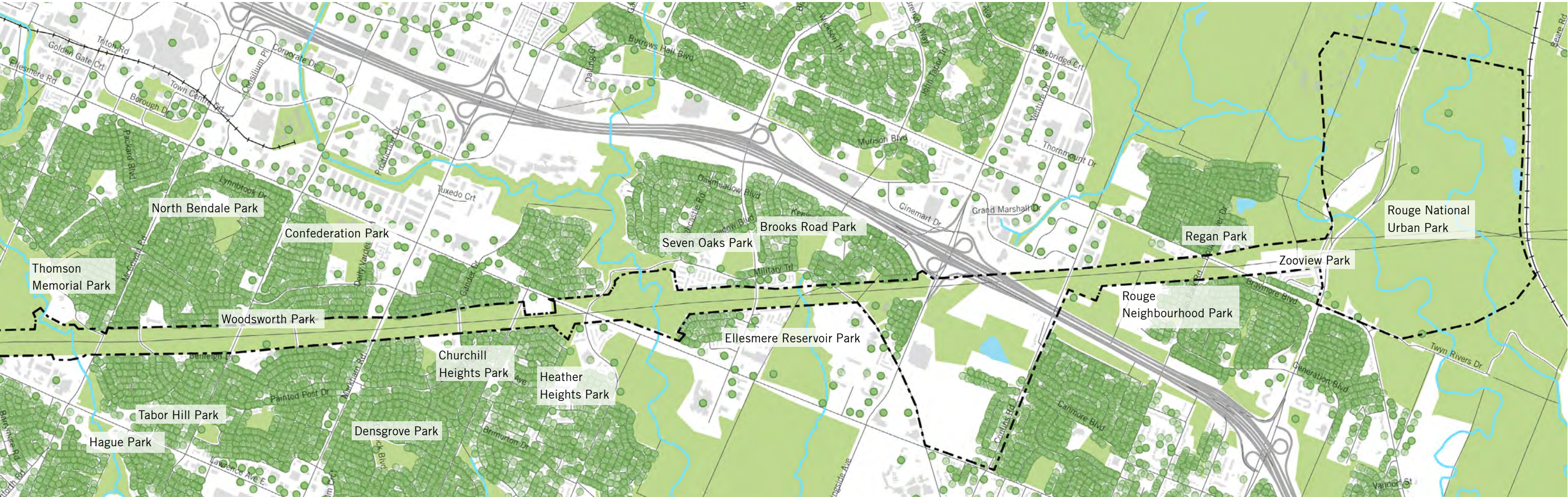
LEGEND

Study Area

Green Space

Watercourse (Stream, River, Creek)

Street Tree (Public Lands)



EXISTING CONDITIONS

Biodiversity

TERRESTRIAL BIOLOGICAL INVENTORY

The Terrestrial Biological Inventory provided by TRCA outlines an assessment of the existing natural cover, the vegetation communities, vascular plants, birds, and frogs. It analyzes how The Meadowway study area fits within the larger regional national heritage system, and how the corridor's biodiversity can be protected and maximized.

Despite its proximity to high urban activity, The Meadowway is a source of dense flora and fauna. Specifically, the restored portions of the meadow (e.g. Phase 1 Scarborough Centre Butterfly Trail) have shown a noticeable improvement in biodiversity. However, heavy recreational use, soil disturbance and intrusions of invasive plants or predators are impacts to the vegetation communities on the site. Vegetation communities identified include:

CLASS	NUMBER OF TYPES	TOTAL AREA (Ha)	% NATURAL COVER
Forest	25	13.8	15
Successional	22	22.7	24
Wetland	11	4.1	4
Aquatic	2	1.5	2
Dynamic	10	2.9	3
Meadow	4	48.4	52
TOTAL	74	93.4	100

Within the project area, a total of 74 vegetation types were observed, creating moderate community diversity given the size of the site. 499 naturally occurring flora species were observed (13 of them of Regional Concern and 57 of Urban Concern). In 2018, the fauna survey revealed 46 bird species, 1 frog species, 1 other herpetofauna, 11 mammal species, and 1 crayfish.

Invasive species were prominent (e.g. dog-strangling vine, creeping thistle) meaning that the corridor will have to be managed indefinitely to control these species that could interfere with The Meadowway.

However, the inventory did indicate that although The Meadowway does not rank highly within a regional context in terms of patch score, size, shape, or matrix influence, it does stand out as a large linear natural corridor, especially due to its intersections with existing ravine corridors. There are additional anticipated improvements in ecological function and biodiversity while the entire length of The Meadowway is transformed into diverse, beautiful, and thriving meadow habitat.



BUTTERFLIES AND BEES ON WILD BERGAMONT PLANTS ON THE MEADOWAY. PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).



PREVIOUS EDUCATIONAL OPPORTUNITIES REGARDING FAUNA ON SITE. PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).



COMMUNITY INSTALLATION OF BIRD BOXES ON SITE. PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).

MEADOWWAY SPECIES GUIDE

GRASSES & FORBS



Big Bluestem
Andropogon gerardii



Canada Wild Rye Grass
Elymus canadensis



Virginia Rye Grass
Elymus virginicus



Switchgrass
Panicum virgatum



Little Bluestem
Schizachyrium scoparium



Indian Grass
Sorghastrum nutans



Nodding Wild Onion
Allium cernuum



Thimbleweed
Anemone cylindrica



Swamp Milkweed
Asclepias incarnata



Butterfly Milkweed
Asclepias tuberosa



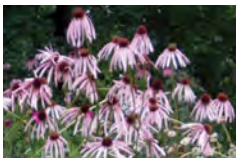
Tall Coreopsis
Coreopsis tripteris



Lanceleaf Coreopsis
Coreopsis lanceolata



Canada Tick-trefoil
Desmodium canadense



Pale Purple Coneflower
Echinacea pallida



Tall Sunflower
Helianthus giganteus



Sweet Ox-eye
Heliopsis helianthoides



Great Blue Lobelia
Lobelia siphilitica



Wild Bergamot
Monarda fistulosa

MEADOWWAY SPECIES GUIDE

FORBS & SHRUBS



Smooth Beardtongue
Penstemon digitalis



Hairy Beardtongue
Penstemon hirsutus



Virginia Mountain Mint
Pycnanthemum virginianum



Grey Headed Coneflower
Ratibida pinnata



Black-eyed Susan
Rudbeckia hirta



Grey Goldenrod
Solidago nemoralis



Blue Vervain
Verbena Hastata



Hoary Vervain
Verbena stricta



Missouri Ironweed
Vernonia missourica



Culver's Root
Veronicastrum virginicum



New Jersey Tea
Ceanothus americanus



Button Bush
Cephalanthus occidentalis



Silky Dogwood
Cornus Amomum spp. *obliqua*



Grey Dogwood
Cornus racemosa



Red-osier Dogwood
Cornus sericea



Bush Honeysuckle
Diervilla lonicera



Honeysuckle
Lonicera spp.



Ninebark
Physocarpus opulifolius

MEADOWWAY SPECIES GUIDE

SHRUBS



Fragrant sumac
Rhus aromatica



Smooth Rose
Rosa blanda



Pasture Rose
Rosa carolina



Common Blackberry
Rubus allegheniensis



Red Raspberry
Rubus idaeus



Black Raspberry
Rubus occidentalis



Purple-flowering Raspberry
Rubus odoratus



Pussy Willow
Salix discolor



Heart-leaved Willow
Salix eriocephala



Slender Willow
Salix petiolaris



Common Elderberry
Sambucus canadensis



Red-berried Elder
Sambucus pubens



Meadowsweet
Spirea alba



Snowberry
Symphoricarpos alba



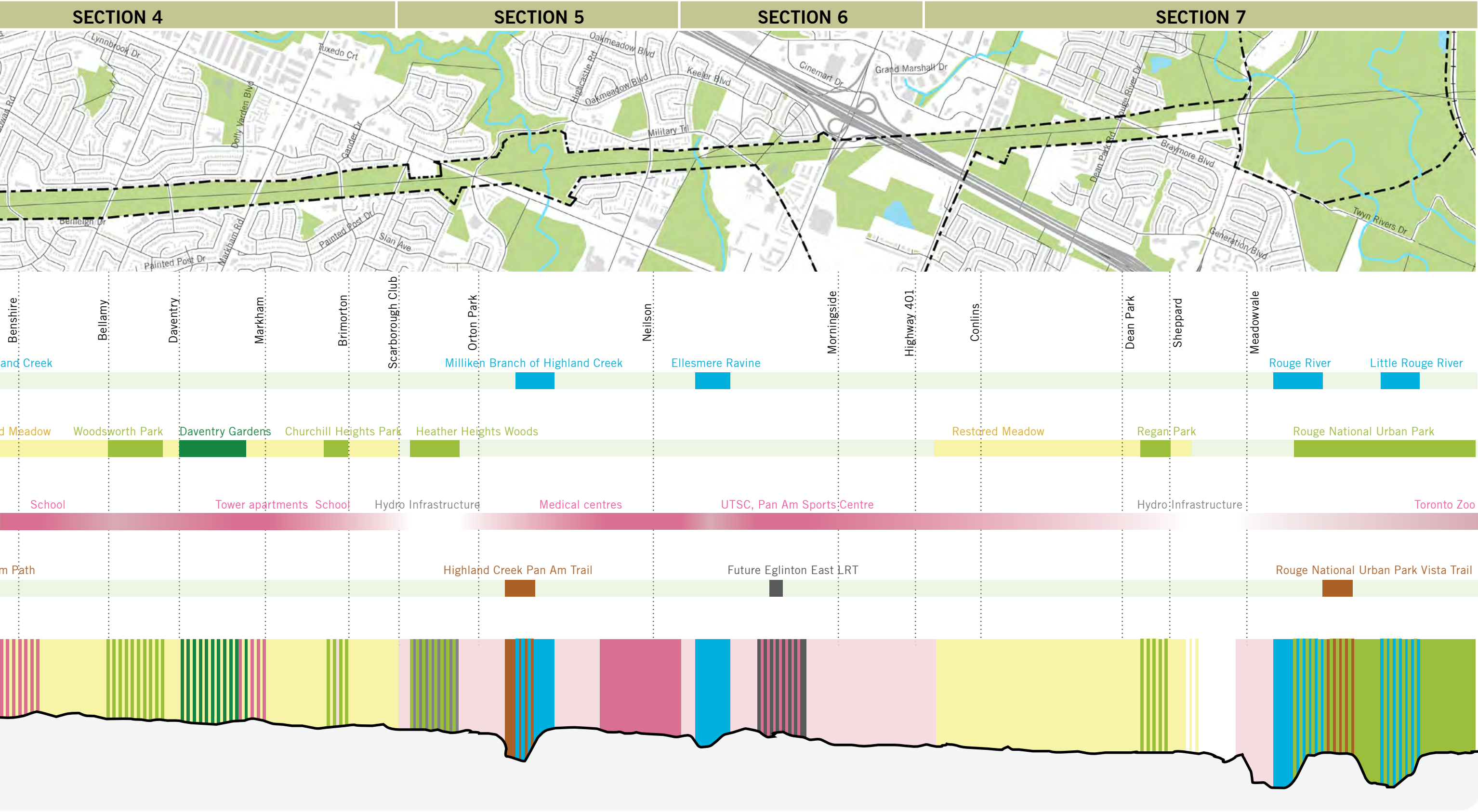
Maple-leaved Viburnum
Viburnum acerifolium



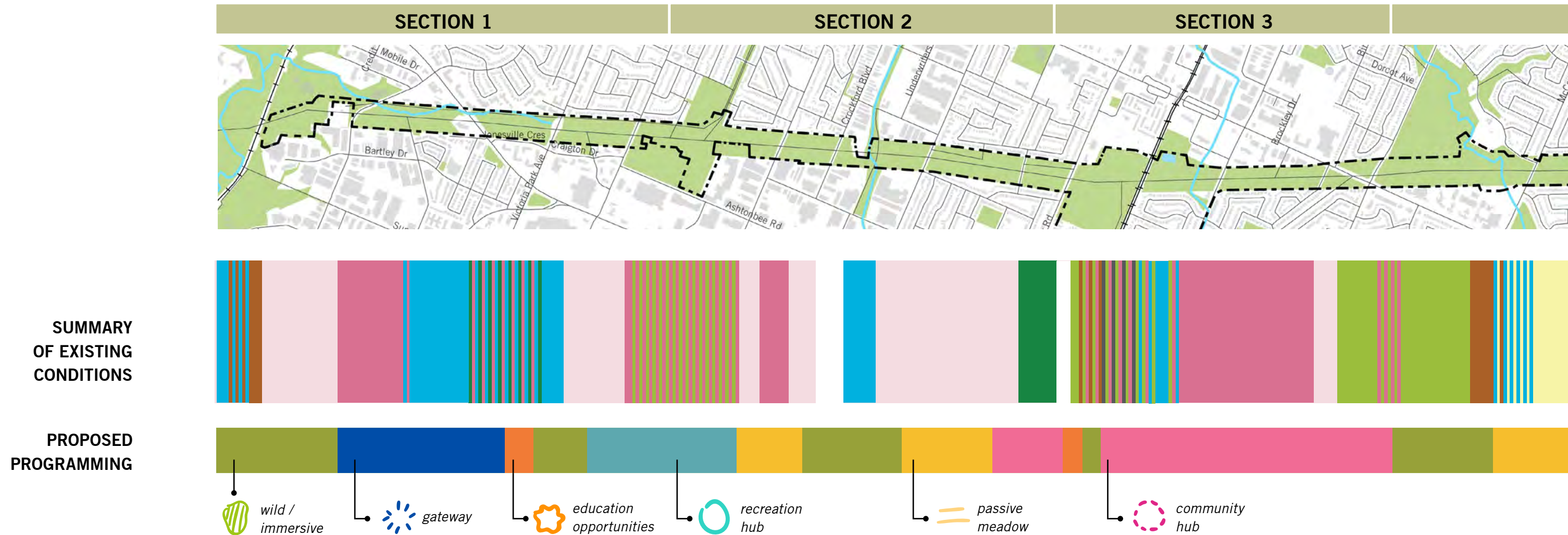
Highbush Cranberry
Viburnum trilobum

CORRIDOR FEATURE CATALOG





CORRIDOR FEATURE CATALOG



IMMERSIVE EXPERIENCES WITH NATURAL HERITAGE (THE MEADOWAY)



AESTHETIC AND DRAMATIC PLANNED GARDEN PLOTS WITH LOOKOUT
POINTS (KONGJIAN YU TURENSCAPE)



SIGNAGE PROVIDING EDUCATIONAL OPPORTUNITIES (E.G. LEARNING OR DISCOVERY WALKS)



LOW-IMPACT RECREATIONAL HUBS FOR PLAY



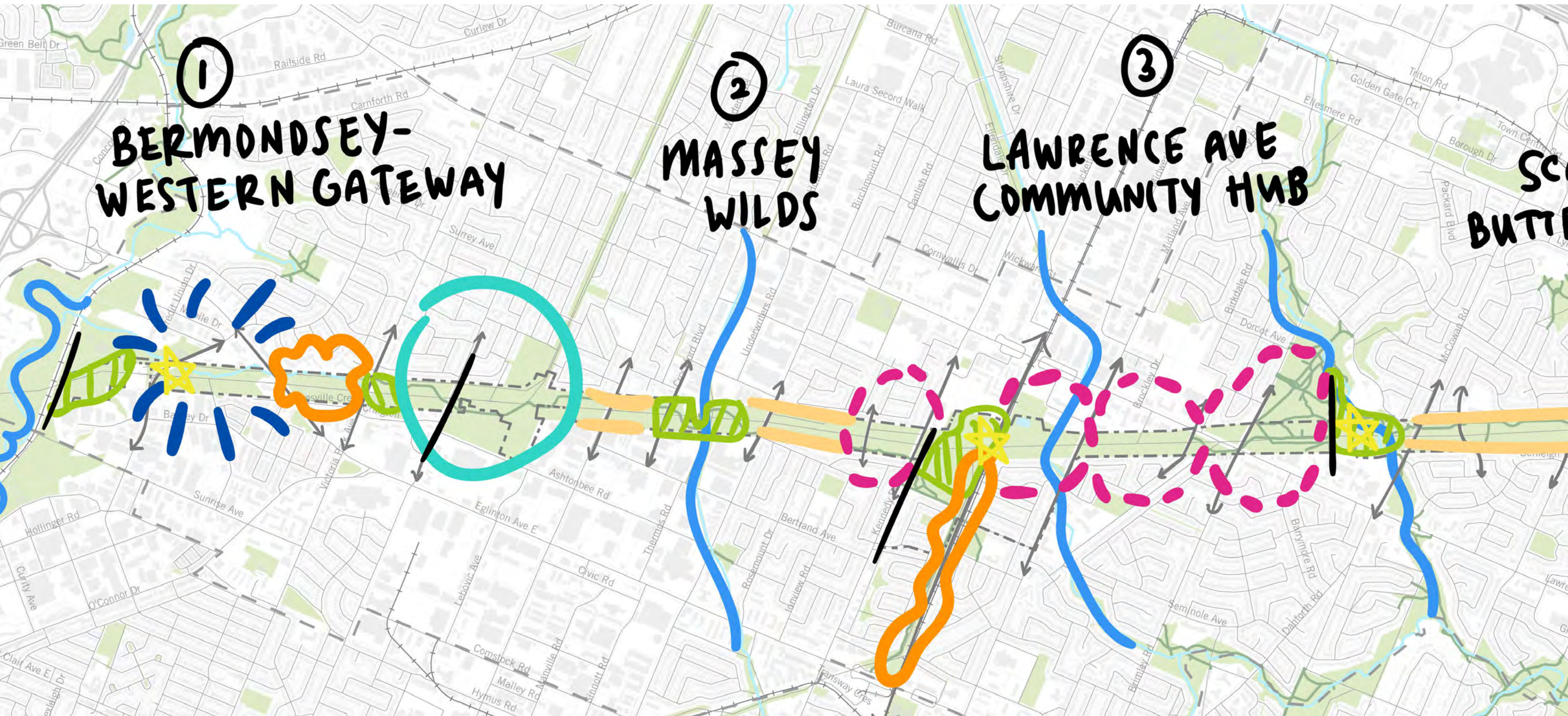
IMMERSIVE AND PASSIVE MEADOWS FOR TRAVEL OR REST (THE MEADOWAY)

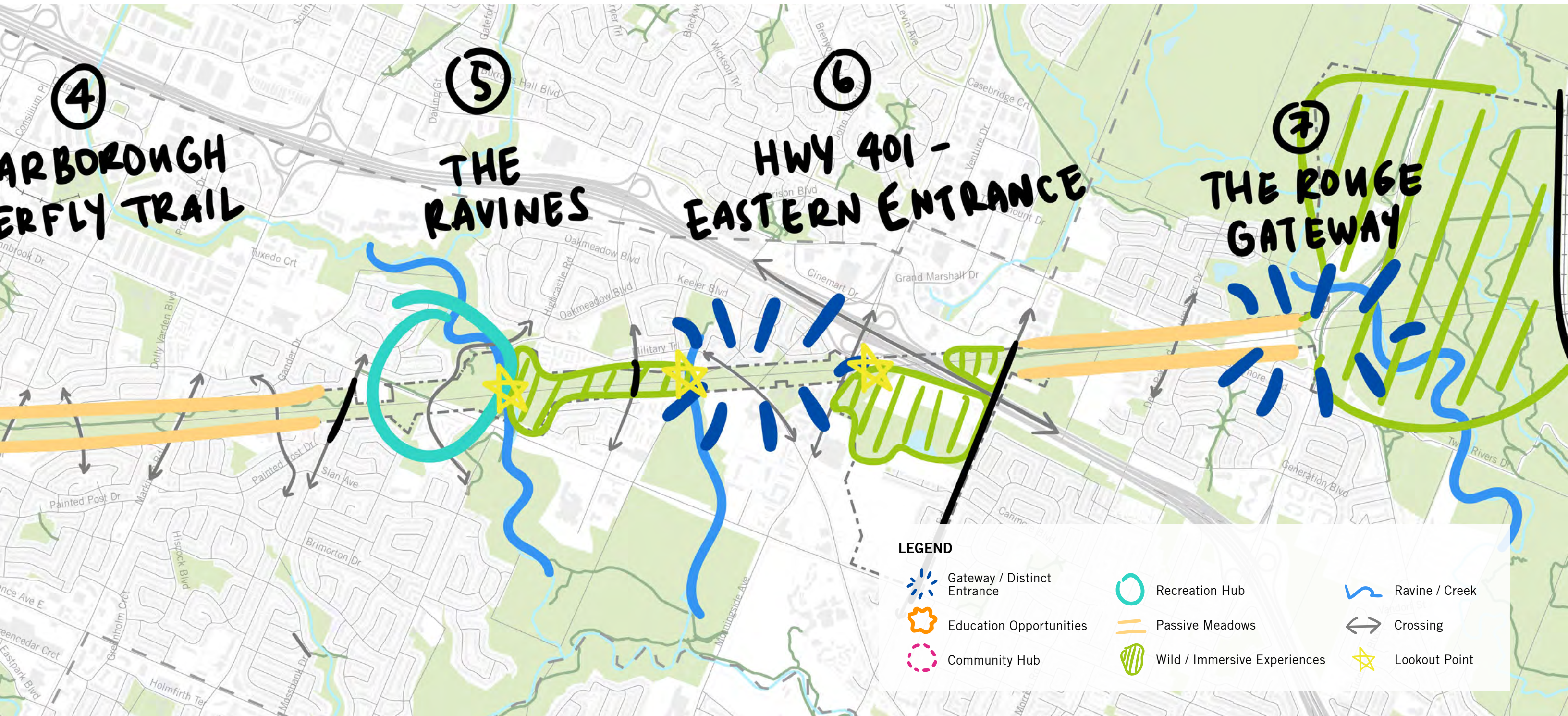


POINTS OF HIGHER ACTIVITY FOR COMMUNITY EVENTS (THE MEADOWAY)

PRELIMINARY CONCEPT PLAN

A visual layering of our analysis: cataloging where natural and built features exist throughout The Meadowway and analyzing what it means when the layers come together. We started with the existing physical base of the corridor – the road crossings, ravines, and parklands. Next, we analyzed the intensity of usage within and adjacent to the corridor, based on the location of existing residential and employment densities, current community hubs, school grounds, future planned communities, and hydro infrastructure - to understand where people are most likely to use the corridor. We then studied where multi-modal connections can be made to existing trails or transit corridors. Finally, we merged all these layers together and used the resulting visualization to characterize segments of the corridor, as seen below.











SECTION 1: BERMONDSEY-WESTERN GATEWAY

East Don Trail to Pharmacy Ave

LEGEND

- Gateway / Distinct Entrance
- Education Opportunities
- Community Hub
- Recreation Hub
- Passive Meadows
- Wild / Immersive Experiences
- Ravine / Creek
- Crossing
- Lookout Point

Emerging Vision










The Bermondsey-Western Gateway could utilize a variety of planting types including gardens to emphasize the entrance to The Meadowway. With the existing community use (i.e. Jonesville Allotment Garden), the tower apartment neighbourhoods surrounding the corridor, and the implementation of the new Eglinton Crosstown LRT, this is a potential future education hub. The interface with the natural creek ridge and the Don River can provide an intimate connection to nature.



SECTION 2: MASSEY WILDS

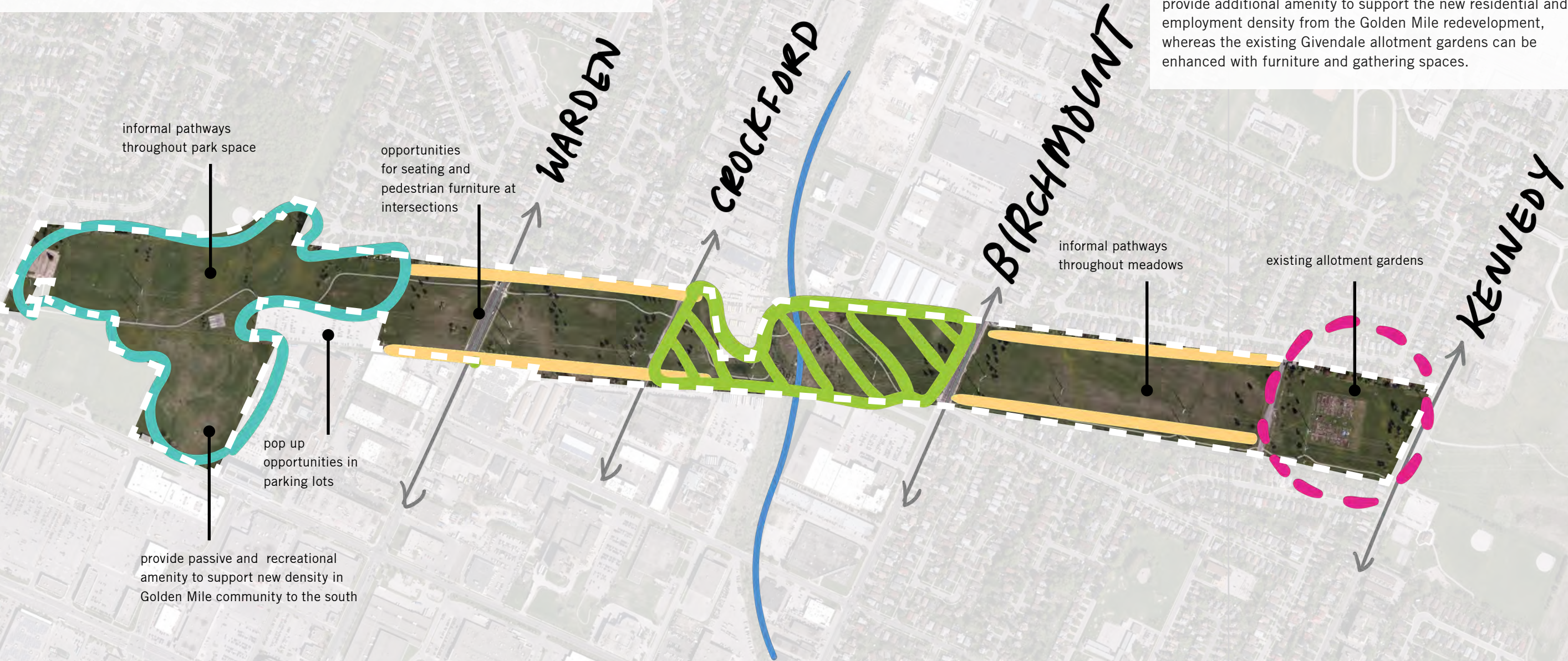
Pharmacy Ave to Kennedy Rd

LEGEND

-  Gateway / Distinct Entrance
-  Education Opportunities
-  Community Hub
-  Recreation Hub
-  Passive Meadows
-  Wild / Immersive Experiences
-  Ravine / Creek
-  Crossing
-  Lookout Point

Emerging Vision







Centered around the Massey Creek, this section of the corridor could have the level of activity increase gradually as it reaches Pharmacy Ave to the west and Kennedy to the east. Passive stretches of restored meadows provide a relaxing and stable travelling experience, leading to and from the nodes at the ends. By Wexford Park, the recreation hub could provide additional amenity to support the new residential and employment density from the Golden Mile redevelopment, whereas the existing Givendale allotment gardens can be enhanced with furniture and gathering spaces.



SECTION 3: LAWRENCE AVE COMMUNITY HUB

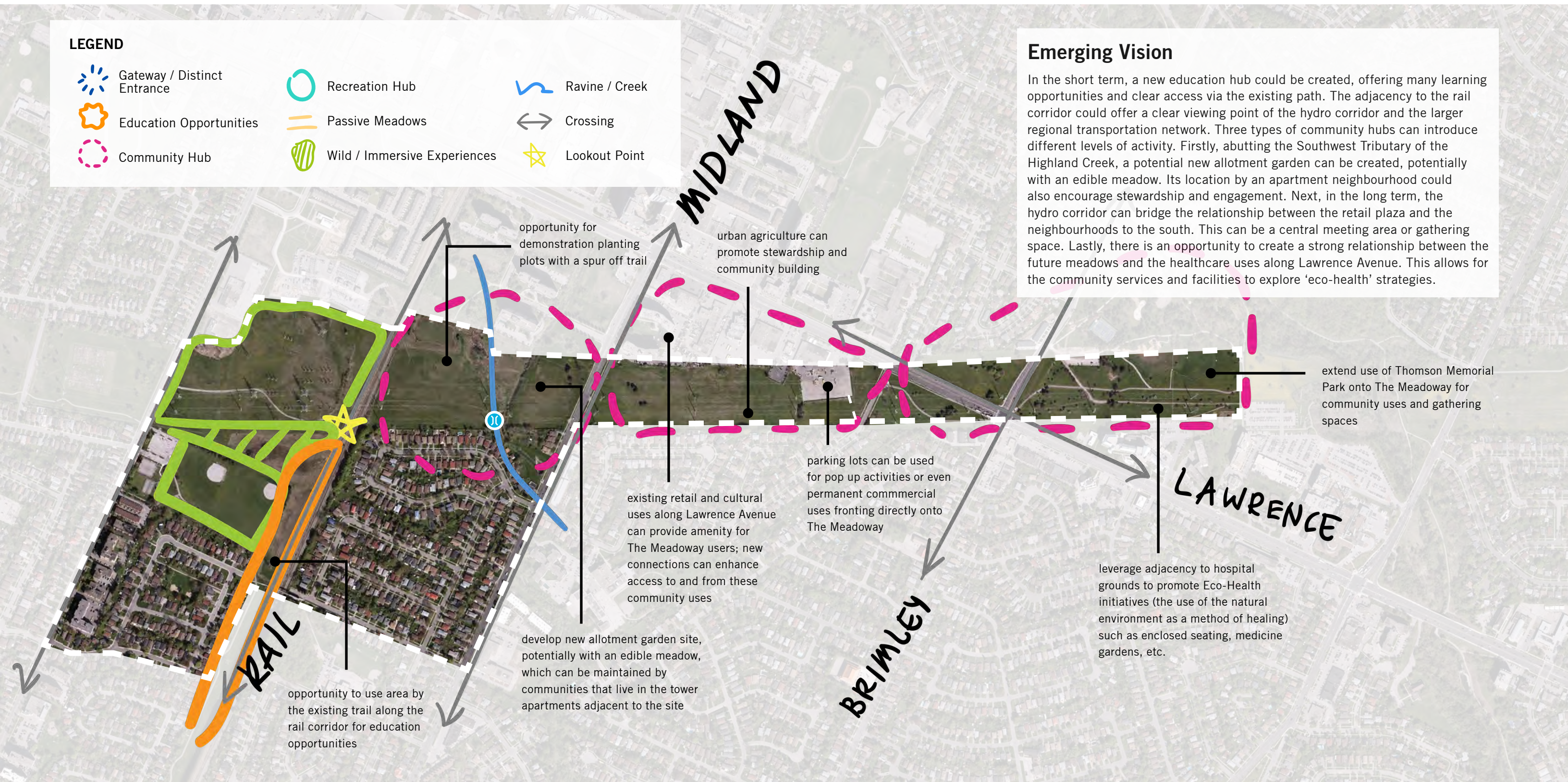
Kennedy Rd to Thomson Memorial Park

LEGEND

-  Gateway / Distinct Entrance
-  Education Opportunities
-  Community Hub
-  Recreation Hub
-  Passive Meadows
-  Wild / Immersive Experiences
-  Ravine / Creek
-  Crossing
-  Lookout Point

Emerging Vision

In the short term, a new education hub could be created, offering many learning opportunities and clear access via the existing path. The adjacency to the rail corridor could offer a clear viewing point of the hydro corridor and the larger regional transportation network. Three types of community hubs can introduce different levels of activity. Firstly, abutting the Southwest Tributary of the Highland Creek, a potential new allotment garden can be created, potentially with an edible meadow. Its location by an apartment neighbourhood could also encourage stewardship and engagement. Next, in the long term, the hydro corridor can bridge the relationship between the retail plaza and the neighbourhoods to the south. This can be a central meeting area or gathering space. Lastly, there is an opportunity to create a strong relationship between the future meadows and the healthcare uses along Lawrence Avenue. This allows for the community services and facilities to explore 'eco-health' strategies.



SECTION 4: SCARBOROUGH CENTRE BUTTERFLY TRAIL

Thomson Memorial Park to Scarborough Golf Club Rd

LEGEND

Gateway / Distinct Entrance

Education Opportunities

Community Hub

Recreation Hub

Passive Meadows

Wild / Immersive Experiences

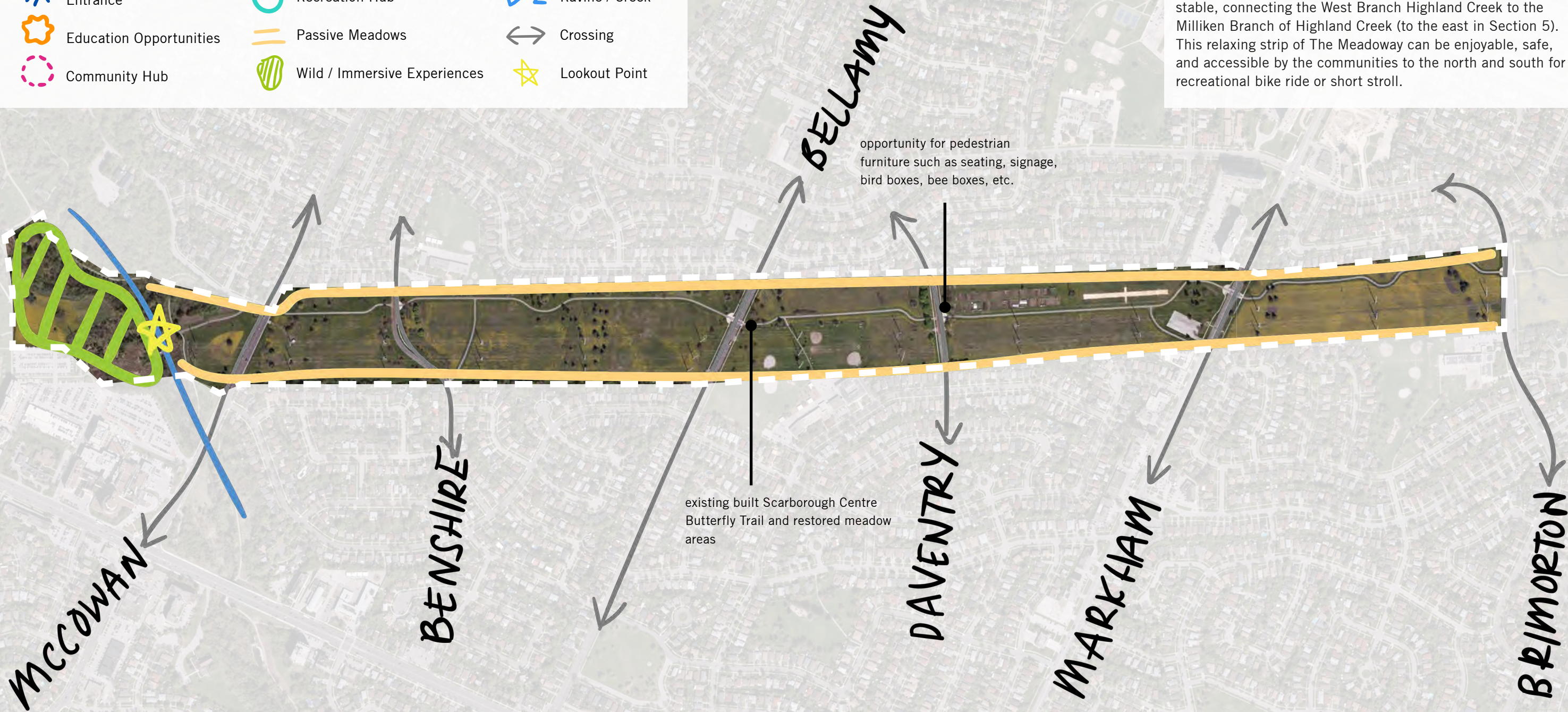
Ravine / Creek

Crossing

Lookout Point

Emerging Vision










This established portion of the Gatineau trail could remain stable, connecting the West Branch Highland Creek to the Milliken Branch of Highland Creek (to the east in Section 5). This relaxing strip of The Meadoway can be enjoyable, safe, and accessible by the communities to the north and south for a recreational bike ride or short stroll.



SECTION 5: THE RAVINES

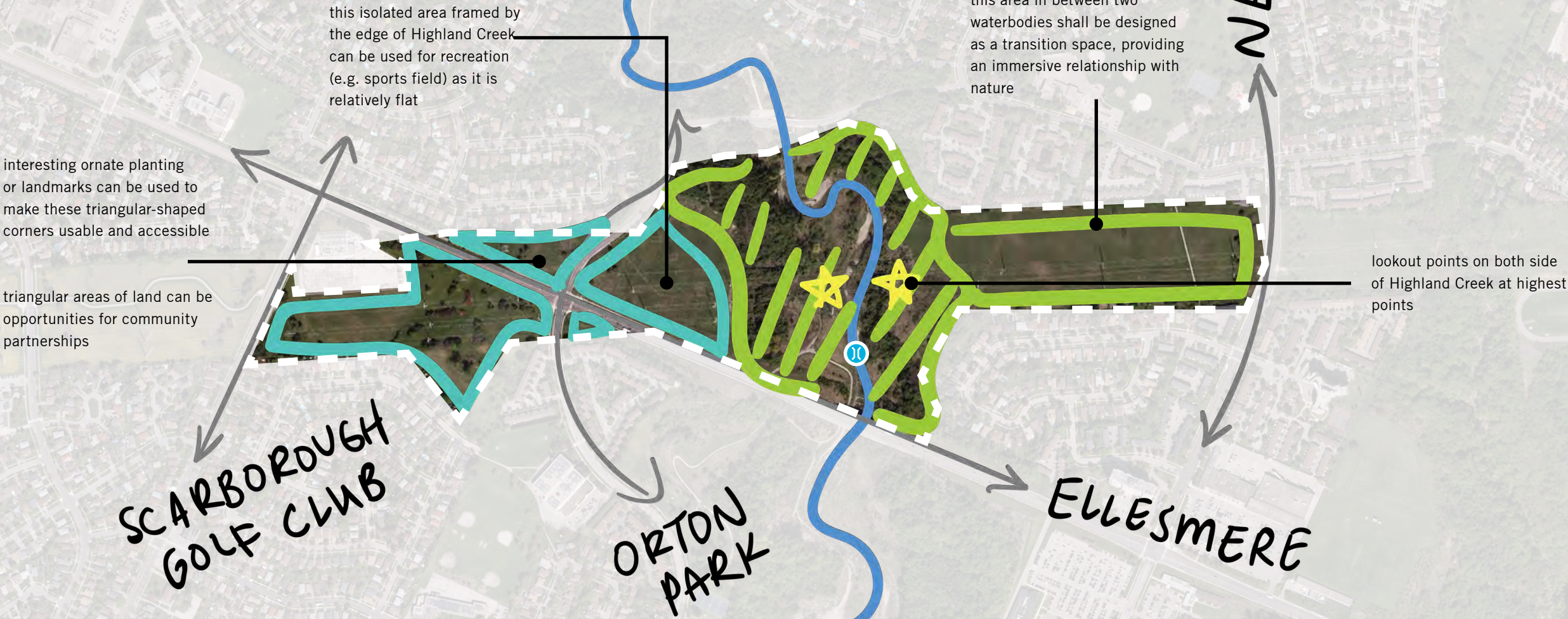
Scarborough Golf Club Rd to Neilson Rd

LEGEND

-  Gateway / Distinct Entrance
-  Education Opportunities
-  Community Hub
-  Recreation Hub
-  Passive Meadows
-  Wild / Immersive Experiences
-  Ravine / Creek
-  Crossing
-  Lookout Point

Emerging Vision

The intersection of Ellesmere and Orton Park / Military Trail provides a unique separation of parcel sizes and shapes. To connect these together, both passive and active recreation can be encouraged, ranging from gathering spaces and immersive meadows, to a sportsfield. To preserve and highlight the natural area around the ravine, two lookout points could be created to allow visitors to enjoy the landscape around them.



SECTION 6: 401-EASTERN ENTRANCE

Neilson Rd to Conlins Rd

due to the large freeway crossing, this area should serve as the eastern entrance, utilizing the topography to provide landformed lookout points and opportunities for landmark garden features

these corners are restricted by existing regulations due to their small size; they should be reserved for larger and denser planting

- LEGEND
- Gateway / Distinct Entrance
 - Education Opportunities
 - Community Hub
 - Recreation Hub
 - Passive Meadows
 - Wild / Immersive Experiences
 - Ravine / Creek
 - Crossing
 - Lookout Point

Emerging Vision


The span of green open space before the highway creates an enclave condition and gateway. Due to the rolling topography, garden planting could enhance the changes in grade, with a lookout point to highlight this. For safety purposes, restricted areas around the highway and accompanying infrastructure (e.g. maintenance storage facilities, landfill, etc.) should be visually and physically buffered with planting.



SECTION 7: THE ROUGE GATEWAY

Conlins Rd to Rouge Park

LEGEND

- | | | |
|---|--|--|
|  Gateway / Distinct Entrance |  Recreation Hub |  Ravine / Creek |
|  Education Opportunities |  Passive Meadows |  Crossing |
|  Community Hub |  Wild / Immersive Experiences |  Lookout Point |

stable area with typical pattern of planting to provide a standardized travelling experience, leading to and from the Rouge

Emerging Vision

This is the current site for Phase 2 of the meadow restoration occurring on the corridor (“Gatineau Site 2”). It could remain as a stable, maintained, and enjoyable stretch of The Meadowway, leading seamlessly into the Rouge National Urban Park gateway. A future education hub can be located at the location where The Meadowway meets the Rouge and its trail network, highlighting the gateway transition between the two contexts. Signage and public art features can emphasize this grand entrance.

DEAN
PARK

SHEPPARD

MEADOWVALE

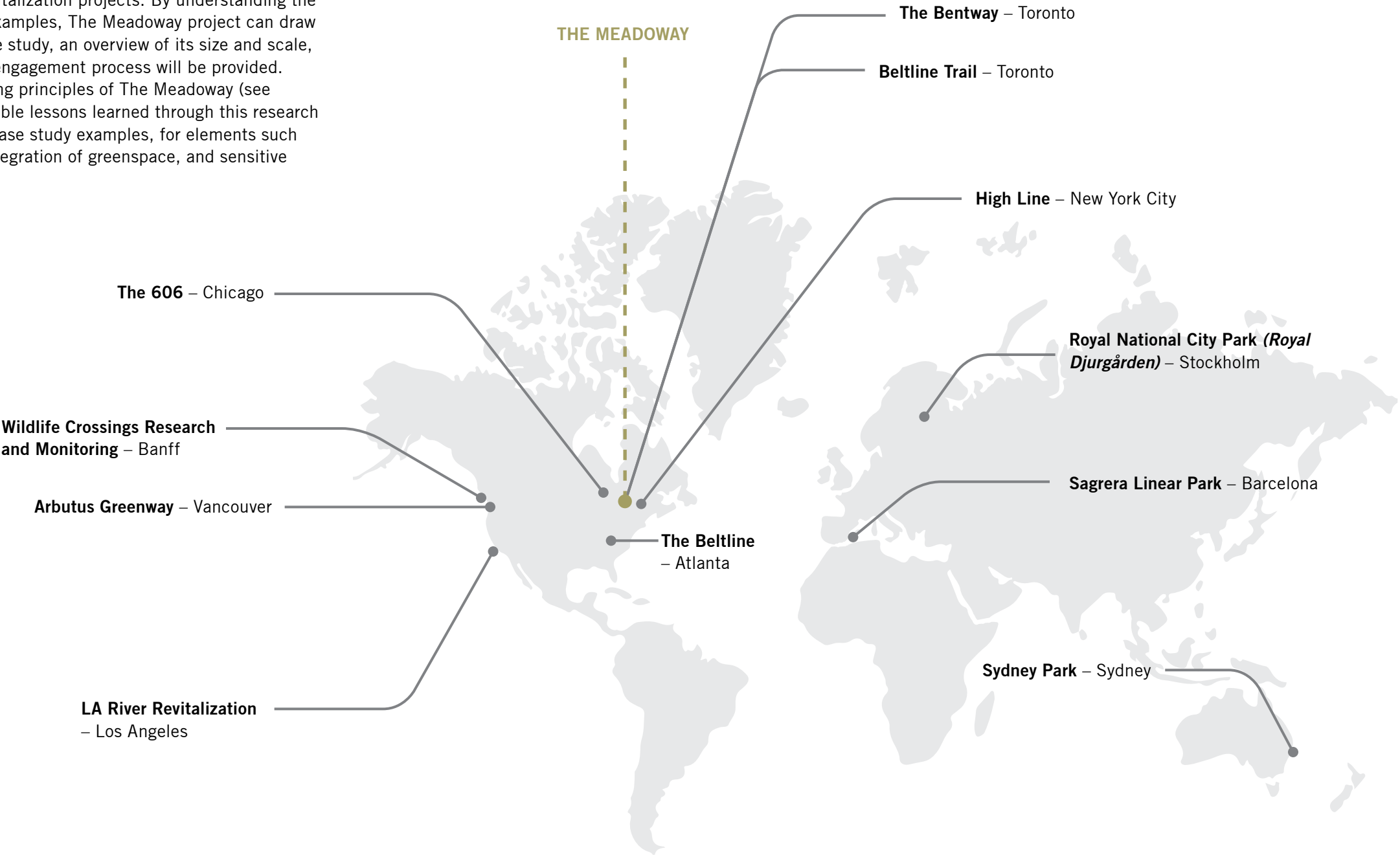
VIEW EASTBOUND ALONG EXISTING MULTI-USE TRAIL, EAST OF DAVENTRY ROAD.
PHOTO COURTESY OF TORONTO AND REGION CONSERVATION AUTHORITY (TRCA).



CASE STUDIES

Overview of Case Studies

A variety of case studies from both local and international contexts will serve as successful examples of green space planning, development, and revitalization projects. By understanding the methodology and approach processes of each of these examples, The Meadowway project can draw insightful and inspiring lessons from them. For each case study, an overview of its size and scale, strategy or plan for implementation, and insight into its engagement process will be provided. Furthermore, links between the case study and the guiding principles of The Meadowway (see following page) will be created, to distill the main applicable lessons learned through this research process. There are valuable takeaways in each of these case study examples, for elements such as landscape analysis, public consultation, public art, integration of greenspace, and sensitive development of park or recreational infrastructure.



Six Guiding Principles of The Meadoway

Six overarching guiding principles are the core elements of The Meadoway, which will guide the Environmental Assessment and the evaluation of opportunities through the subject site: Connections; Natural Environment and Education; Recreation; Community and Public Realm; Transportation; and Blueprint for Revitalization. They will ground the corridor in its vision to serve as a complete active transportation spine, linking together communities and filling any social or physical gaps within the larger context of Toronto.



CONNECTIONS

A seamless east-west connection should be created to link Rouge National Urban Park to downtown Toronto. The Meadoway will re-establish the original link between the region’s ravine systems that run north-south through the corridor.



TRANSPORTATION

Increasing opportunities for alternative, non-vehicular modes of transportation within the Greater Toronto Area will reduce car dependency and increase equitable access. The Meadoway will advance the integration of a multi-modal transportation system.



RECREATION

The Meadoway will encourage outdoor recreational opportunities along the trail network or adjacent spaces, for a wide range of users and communities or neighbourhoods.



COMMUNITY AND PUBLIC REALM

The Meadoway will stitch together the surrounding neighbourhoods, creating new connections and enhancing existing links. A wide range of public spaces will be provided for people to socialize, congregate, and support community events.



NATURAL ENVIRONMENT AND EDUCATION

The creation of meadow habitat, restoration and programming of The Meadoway should increase access for a wide range of users so that they can explore, learn, and enjoy the urban naturalized green space. It will become a platform for stewardship, education, and research on natural habitats. The restoration initiatives of the meadows will provide for higher ecological diversity within the urban setting.



BLUEPRINT FOR REVITALIZATION

Throughout the process and upon implementation, The Meadoway will serve as a model for how to successfully revitalize and repurpose hydro corridors in both a local and international context.



CASE STUDY

THE BELTLINE

Atlanta, USA



35.4 km trail



ATLANTA BELTLINE TRAIL, A REVITALIZATION OF AN ABANDONED RAILWAY LINE

ABOUT

As the most comprehensive transportation and economic development effort in the history of the City of Atlanta, the Atlanta BeltLine is one of the largest urban revitalization programs in the United States today.

Born from an abandoned stretch of derelict railroad and vacant industrial sites, this redevelopment plan is envisioned to be a community mobilizer. Composed of a planned loop of parks, trails, transit, and affordable housing, this 22-mile (35.4 km) network will connect 45 neighbourhoods and provide first- and last-mile connectivity. It opened in 2008, with anticipated completion in 2030. The first phase of the Atlanta streetcar opened downtown in 2014, with future expansion planned to connect the streetcar with the BeltLine, forming a parallel loop around the city, as a 'rail-with-trail' system.

STRATEGY

The 2030 strategic implementation plan of the BeltLine, which is delivered through 7 phases, is based on a two-pronged approach: Infrastructure Work Streams (transit, trails, parks and streetscapes) and Investment Work Streams (brownfield redevelopment, job creation, affordable workforce housing, economic development, public art, and sustainability).

The Atlanta BeltLine Partnership raises funds from the private sector and philanthropic community, public engagement, and targeted partnerships.

ENGAGEMENT

As of 2017, over 315 public meetings were held, engaging around 12,200 participants in the planning process. Methods included flyers in public places, door-to-door campaigns, direct mail, email distribution lists, social media, a website, e-newsletters and automated phone calls.

As implementation of the loop continues to occur, other engagement efforts include walking and cycling tours, marathons, open houses, performances, parades, outdoor workouts, artist installations, volunteer opportunities, and more.

In November 2018, the inaugural "Beltline U" class was announced, which is a 4-month long civic university that will explore the implementation strategy for the BeltLine, from history to process and programmatic elements.



ATLANTA BELTLINE PROJECT OVERVIEW MAP



THE TRAIL IS ENJOYED VIA ALL ACTIVE TRANSPORTATION MODES, FOR ALL USERS/ABILITIES



EXISTING PORTIONS OF THE MULTI-USE TRAIL HAVE ALREADY OPENED FOR THE PUBLIC, WHERE EVENTS SUCH AS CYCLING TOURS OCCUR

QUICK STATISTICS

- **TYPE:** Railway Revitalization
- **LENGTH:** 22 miles (35.4 km) of pedestrian friendly rail transit, 33 miles (53.1 km) of multi-use trails
- **AREA:** 2,000 acres of parks
- **STATUS:** Ongoing
- **COST:** est. \$4.8 billion
- 5,600 units of affordable housing
- 1,100 acres of brownfields remediated
- 30,000 permanent jobs
- \$10-20 billion in economic development

Lessons for The Meadoway



CONNECTIONS

The BeltLine connects over 40 neighbourhoods, which over time have evolved in their own separate ways, without any common thread until this trail was planned. This is an opportunity to bridge both literal and figurative gaps, allowing those neighbourhoods that have fallen into disrepair to join a cohesive new, broader community. Regular community meetings (e.g. study groups, city wide conversations, quarterly briefings, etc.) throughout the neighbourhoods ensure that all voices are heard and every resident or future user of the BeltLine gets a seat at the table.



RECREATION

An important element of the trail system along the BeltLine is the variety it offers in length, natural environment, views/vistas, and adjacent uses and amenities. This allows users to explore the range of natural and built typologies throughout the corridor. The BeltLine also has a large focus on health and fitness, offering the “Run.Walk.Go!” series, which are 5k or 10k races that allow users to explore specific segments of existing trails. Participants range from avid runners to families with strollers and pets. In other times of the year, free fitness classes are offered, such as yoga, aerobics and zumba.



COMMUNITY AND PUBLIC REALM

A variety of community based events draw residents and visitors to the BeltLine. This includes volunteer opportunities, performances, parades, markets, and more. However, one specific initiative that stands out is its integration of art. Art on the Atlanta Beltline is a program that features a year-round public art collection aimed to engage the community. This includes a variety of mediums: sculpture, murals, dance, music, theatre, photography, fashion, film and more. The BeltLine also leverages the popular use of social media to promote their landmarks and infrastructure. For example, the BeltLine website features ‘Top Instagram Spots’, paired with a destination brochure that maps these memorable spots: <https://beltline.org/top-instagrammable-spots-on-the-atlanta-beltline/>



TRANSPORTATION

The BeltLine is developed through a long-term vision, with a transportation plan that includes modes of transit, trails, and connectivity, including an eventual 50-mile streetcar system that will run through the city of Atlanta. A municipal System Plan is in place to focus on connecting neighbourhoods to key points of interest and activity hubs. The design of the system of trails along the BeltLine is categorized by typologies, all providing a different immersive experience of the city and its natural and built environments. It offers accessible (American with Disabilities Act compliant) access points and multi-use facilities, supporting travel for any active transportation mode.



PUBLIC ENGAGEMENT ACTIVITIES FOR ALL AGES INCLUDE PUBLIC ART CREATION USING EXISTING INFRASTRUCTURE



LOCAL ORGANIZATIONS HOST PHYSICAL ACTIVITY EVENTS SUCH AS ZUMBA CLASSES, SPORTS AND GAMES FOR CHILDREN



PUBLIC ART, SUCH AS UNDER THE VIRGINIA AVENUE BRIDGE, ALLOW FOR INTERESTING PHOTOGRAPHY AND SOCIAL MEDIA OPPORTUNITIES

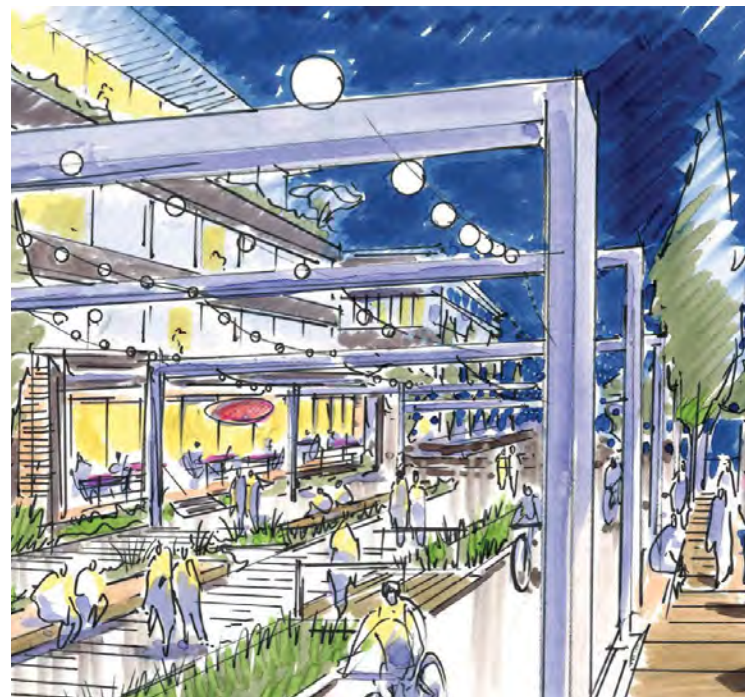


CASE STUDY

ARBUTUS GREENWAY

Vancouver, BC

8.5 km trail



CONCEPTUAL ARTIST SKETCHES OF VARIOUS POINTS OF INTEREST ALONG THE ARBUTUS GREENWAY

ABOUT

The nine-kilometre stretch of Arbutus Greenway is planned to be rebuilt, with new parks and open spaces, bike and pedestrian paths, and a configuration for a future streetcar line. The City of Vancouver purchased 42 acres of land from Canadian Pacific Railway for the purpose of creating this high-quality public space.

This north-south transportation corridor is a reimagining of a historic rail corridor, connecting people, parks and places from False Creek to the Fraser River. A temporary path is built while the plan and design is underway, with expected completion of the entire greenway by 2034.

STRATEGY

It will be constructed in phases to help accommodate for funding strategies and changing circumstances. A total of 8 character zones will help reflect local site conditions and features. In addition to the long-term character zone design and development, a number of spot improvements will ensure minimum standards of the temporary greenway path as the individual character zones are phased in over the upcoming years.

ENGAGEMENT

The opportunities for input from the public included an online questionnaire, stakeholder meetings, open houses, pop-up city hall events, and advisory committee meetings, all which helped inform the vision statement and help the design team develop various options

to be tested. Other notifications of opportunities to get involved included social media, video content, project websites, newsletters, newspaper advertisements, postcards and posters.

In October 2017, a three-day 'Design Jam' was held. The collaborative workshop allowed public participants ('Arbutus Champions' to work to develop emerging design themes and options with the project team.



EXISTING CONDITION OF GREENWAY



CORRIDOR CONCEPT PLAN, BY CHARACTER ZONES



SKETCH OUTPUTS FROM VARIOUS COMMUNITY ENGAGEMENT ACTIVITIES

QUICK STATISTICS

- **TYPE:** Railway Revitalization
- **LENGTH:** 8.5 kilometres
- **STATUS:** Ongoing, first phase of construction 2019
- **COST:** First phase an estimated \$30 million

Lessons for The Meadoway



CONNECTIONS

The strategy for the Arbutus Greenway prioritizes the natural environment, especially the connectivity between False Creek and Fraser River. Following that, the Greenway as a whole provides excellent connectivity between neighbourhoods and character zones. It is in an ideal location to connect to existing and future frequent transit service, and also to retail hubs, institutional zones such as school areas, and community services and facilities. For example, having adjacent community uses such as a coffee shop will bring people to and from the Greenway, even in its interim, pre-construction phase.



NATURAL ENVIRONMENT AND EDUCATION

Some of the public feedback had noted that the Greenway should support biodiversity, creating central themes of urban agriculture and urban ecology. It can support the sensory landscape of the corridor and connect the activity back to its roots. This project also represents an opportunity to honour First Nations culture and traditional activities, collaborating with the Musqueam, Squamish, and Tsleil-Waututh First Nations through wayfinding, naming, storytelling and public art.

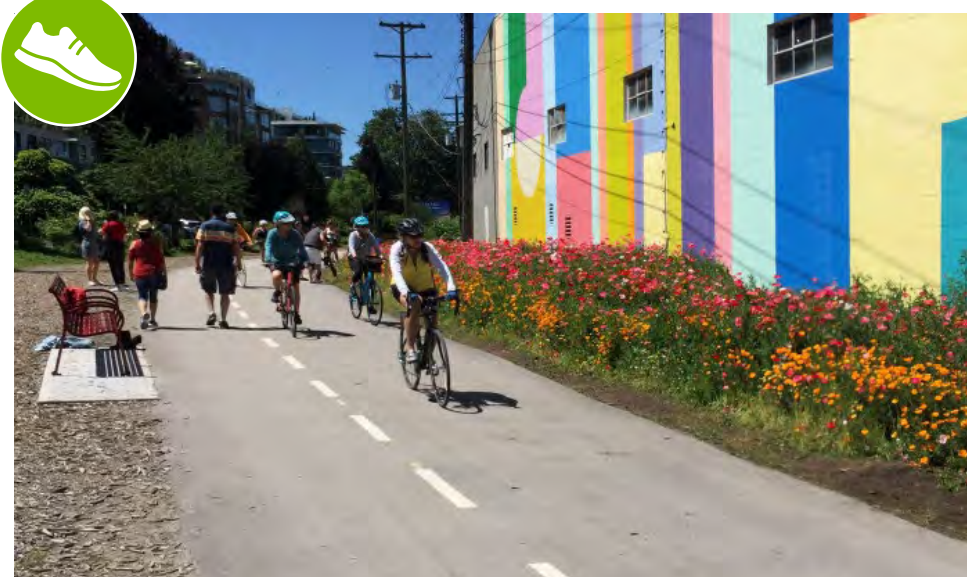


TRANSPORTATION

As options analysis and further investigation and planning is underway, the City of Vancouver has developed a temporary path so it can be open for all users. It allows for people to get a sense of what it will eventually feel like, and also for them to provide meaningful feedback from their experiences on the site. Other activities hosted by community organizations such as scavenger hunts bring people of all ages onto the Greenway.



COMMUNITY COMMERCIAL HUBS ALONG THE CORRIDOR SUCH AS COFFEE SHOPS INCREASE USABILITY OF THE GREENWAY



THE TEMPORARY PATH WAS CREATED AS PART OF THE FIRST STEP OF THE DESIGN PROCESS TO OPEN UP THE SITE TO FUTURE USERS



POLLINATOR-FRIENDLY PLANTS AND BEE BOXES OR BIRD NESTING BOXES HELP INCREASE BIODIVERSITY AND EDUCATION OPPORTUNITIES



CASE STUDY

THE 606

Chicago, USA

4.3 km trail



GRAFFITI ART BY LOCAL ARTISTS ALONG THE TRAIL

ABOUT

Once a busy freight line through an industry-focused area of Chicago, The 606, otherwise known as the Bloomingdale Trail, is now a repurposed, elevated trail that “knits communities together where it once divided them”.

STRATEGY

Beginning in 2004, the reuse of the former industrial rail corridor was championed by the Friends of the Bloomingdale Trail residents group that would champion the project for the next decade. They also partnered with the Trust for Public Land non-profit, which helped bring a coalition of city and civic organizations to move the project forward.

The project broke ground in 2013, with the elevated Bloomingdale Trail opening in 2015, followed by six additional parks and additional landscaping.

ENGAGEMENT

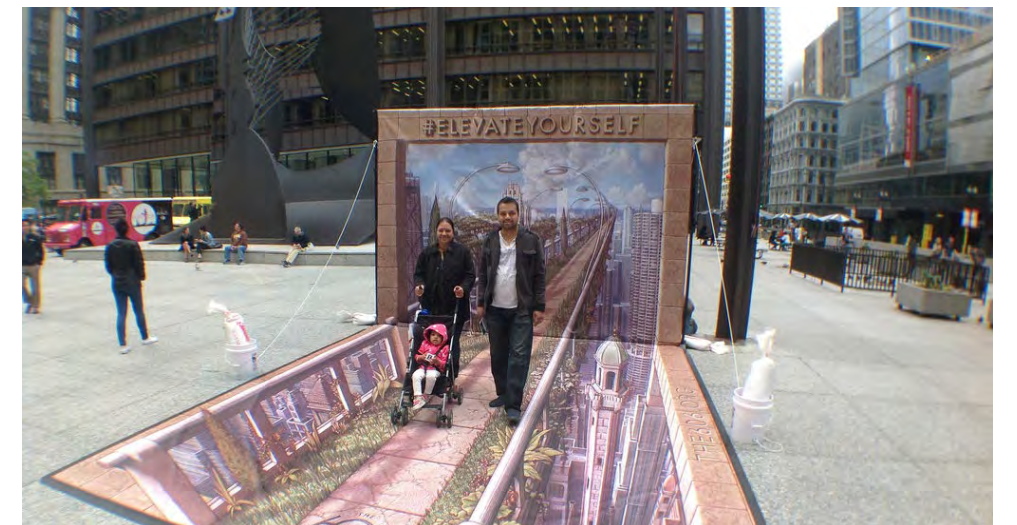
Civic engagement was at the core of the 606, engaging neighbourhoods in the design, functionality, and aesthetic decisions for the trail, including access and safety. They were reached in person via public meetings or smaller gatherings like block clubs. The level of engagement continues today, with ongoing discussions to extend the trail to connect to significant park spaces underway.



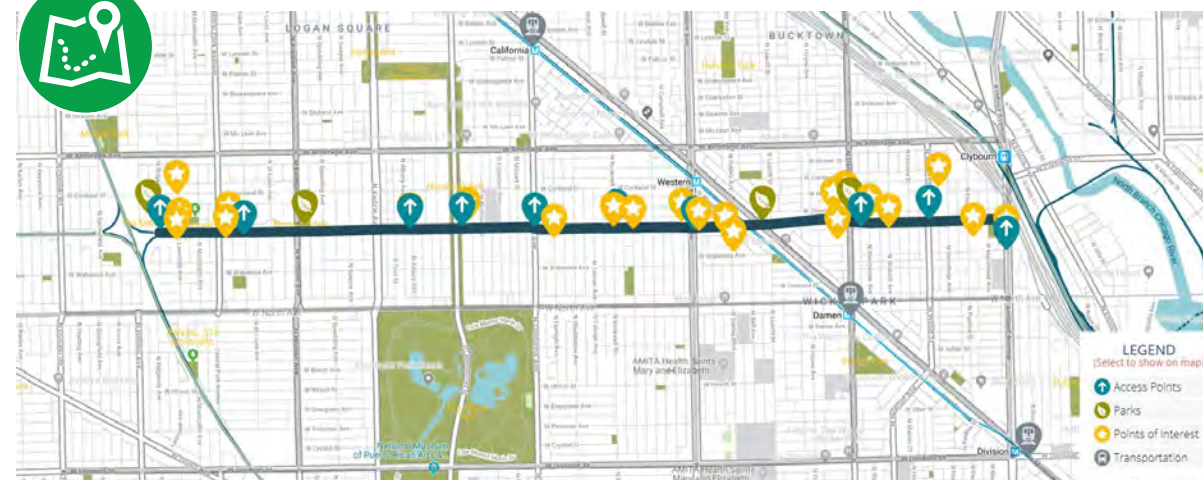
GRASS PLANTINGS INTRODUCED ONTO CORRIDOR



SUMAC SAPLINGS, ONE OF THE MANY SPECIES NOW ALONG THE TRAIL



#ELEVATE YOURSELF PHOTO CAMPAIGN



ONLINE INTERACTIVE MAPPING TOOL

QUICK STATISTICS

- **TYPE:** Railway Revitalization
- **LENGTH:** 4.3 kilometres
- **STATUS:** Opened 2017
- **COST:** \$95 million budget
- Connects four diverse neighbourhoods
- 80,000 residents, including 20,000 children live within a 10-minute walk

Lessons for The Meadoway



CONNECTIONS

The director of The Trust for Public Land, Beth White, noted that the name, the 606 “is a perfect fit because the project is about connection, on so many levels, and the name reflects the connection residents across Chicago share through our common zip code prefix – 606”. The 606 is a link, bringing together communities, nature, science, and culture. The location of the 606 is also augmented with transit access, bike share stations, and numerous scenic look-out points.



BLUEPRINT FOR REVITALIZATION

The introduction of planting is a strategy for connecting communities together, and connecting them to the outdoors. This once fragmented set of neighbourhoods can now not only share the trail, but also the education opportunities it brings. The use of greening interventions such as plantings and parks to liven up the old railway lands creates a strong and harmonious relationship between the built and natural environment.

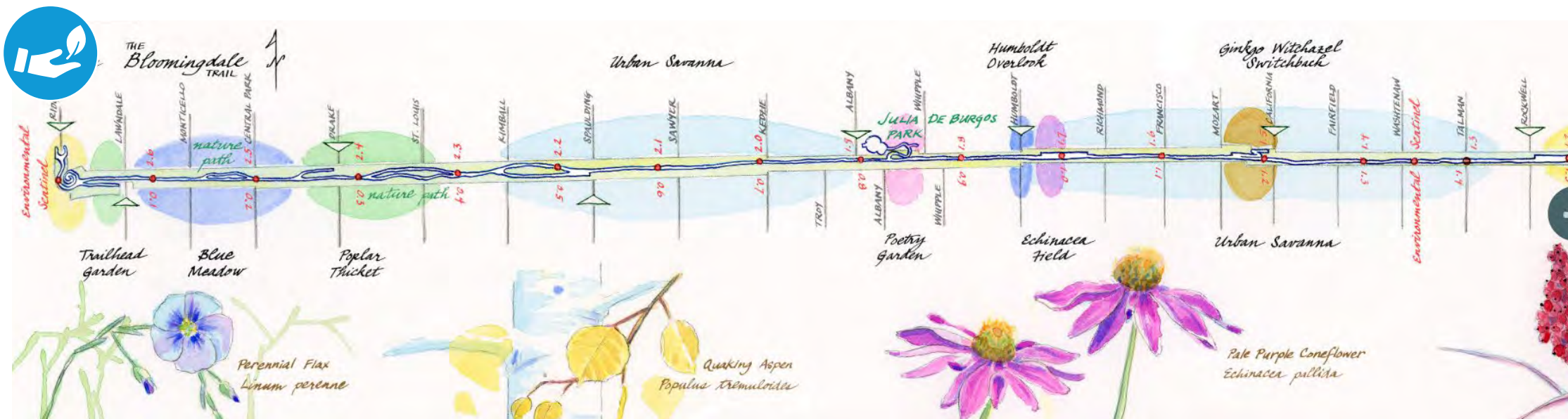


COMMUNITY AND PUBLIC REALM

The 606 Block Party was an example of a free annual event – now a tradition and new favourite among Chicagoans – that brings together the community to celebrate the revitalized Bloomingdale Trail. It celebrates the community, with opportunities all along the trail for local groups, from breweries to musical groups. On a smaller scale, the trail invites people through social media. For example, an *instagram post* invited people to explore the 606 to find limited-edition magnets, which can then be used to get perks (e.g. discounts at dozens of local businesses). This is an example of how small interventions can encourage more trail usage while giving back to local businesses.



INSTAGRAM POST FOR
“FINDING LOVE” MAGNET
CAMPAIGN, FEBRUARY 2019



A SERIES OF “DISTINCT GARDEN ROOMS” DRAWING VISITORS THROUGH THE TRAIL TO EXPLORE A ROTATING DISPLAY OF FLOWERING SHRUBS, DECIDUOUS TREES, AND PERENNIAL FLOWERS AND GRASSES; MAP AND ILLUSTRATIONS BY MOLLY O'HALLORAN



THE 606 BLOCK PARTY INCLUDED A VARIETY OF PERFORMANCES FROM LOCAL GROUPS AND ORGANIZATIONS FROM THE COMMUNITY



CASE STUDY

WILDLIFE CROSSINGS RESEARCH AND MONITORING

Banff, AB



WILDLIFE CROSSING

ABOUT

As the oldest wildlife crossing research and monitoring program in the world at 22-years, the Banff crossings were built when the Trans-Canada highway expanded from 2 to 4 lanes.

A 17-year study of the effectiveness of these crossing structures have confirmed a total of 152,152 crossings by 11 different species such as grizzly and black bears, wolves, coyotes, cougars, moose, elk, deer, bighorn sheep, and more recently, wolverine. Most importantly, mortality rates on the highway have dropped by more than 80% due to these crossing structures.

STRATEGY

The project has turned Parks Canada into a world leader in highway wildlife mitigations, resulting in collaborations with institutions who are trying to implement similar infrastructures.

Banff National Park has the most numerous and various wildlife crossing structures in the world. It also supports the world's longest, year-round monitoring program and largest dataset on wildlife mitigations.

In 2012, eleven species of large mammals have been recorded using these crossings more than 150,000 times since 1996.

ENGAGEMENT

The Animal Road Crossings (ARC) has supported the study, design, and

construction of this type of infrastructure. As an interdisciplinary partnership, they facilitate new thinking, methods, and materials to ensure safe passage for both humans and animals.



PHASING OF PROJECT AND LOCATION OF OVERPASS OR UNDERPASS CROSSING STRUCTURES

Lessons for The Meadoway



NATURAL ENVIRONMENT AND EDUCATION

This project demonstrates the ability to create a harmonious environment between humans and animals, while collecting valuable data on the movement patterns. As a live testing site for roadway mitigation and wildlife passages, it is the leading source of information for the field of road ecology.



CONNECTIONS

There is a larger ecological footprint associated with the physical footprint of roads – planners and managers need to consider the broader landscape rather than the one-dimensional road corridor. This science based guidance on the crossing network has also analyzed the “learning curve” for animals using the wildlife crossings.

QUICK STATISTICS

- **TYPE:** Overpass and Underpass structures
- **LENGTH:** 82 km
- **STATUS:** Complete, 2014
- **COST:** \$2-4 million per overpass structure, \$26 million for fencing upgrades in 2016
- 44 structures in total: 6 overpasses and 38 underpasses
- 82 km of fencing on both sides of the highway



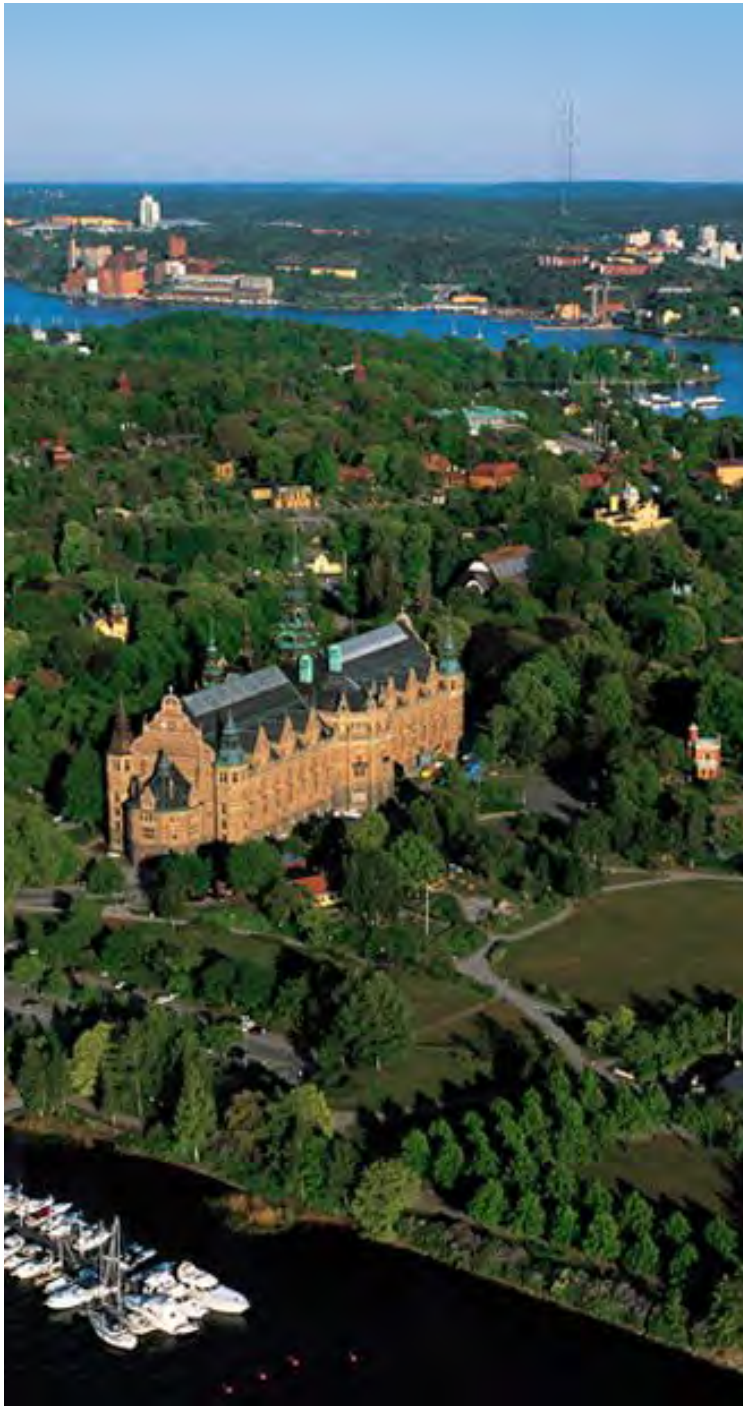
CASE STUDY

ROYAL NATIONAL CITY PARK

Stockholm, Sweden



27 km² park



OVERVIEW OF ROYAL NATIONAL CITY PARK

ABOUT

The Royal National City Park is Sweden's most visited greenspace, and the world's first national park established in a city. It stretches over the municipalities of Stockholm, Solna and Lidingö along a historical landscape.

It focuses on high biodiversity and ecosystem services such as cleaning air, dampening noise, microclimate stability, and recreation. Many rare species are found and protected in this park, as this is the only place in the country that some plants and insects on the verge of extinction are still found. You can also encounter animals, swim, visit castles, enjoy the amusement park, and stay at inns and hotels – all within this city park.

The majority of the park is owned by the national government, with some areas owned by the municipalities and private landowners.

STRATEGY

The strategy included moving the process up to the national level to obtain a protective regulation for the park. Diverse groups such as social movement organizations and sporting organizations formed into an alliance aimed towards protection of this park. A movement to create this park was based on the existing social infrastructure of Stockholm, which tended to be against development (e.g. new highway infrastructure).

WWF Sweden's approach is "Värna-vårda-visa" – Protect, care for, and show. This is done through many strategies

including providing eco-tourism support.

ENGAGEMENT

Information and communication work was a critical part of this project, specifically using public-governance and media channels to identify what and which natural or cultural values were held in this open space.

It elevated the analysis from a city-level to a national and international culture, nature, and biodiversity view. It engaged UNEP, UNESCO, and the UN-level recognition of species in the park.



AREAS FOR PICNICS AT THE EDGE OF THE PARK



GRAZING ANIMALS IN THE PARK

Lessons for The Meadoway



NATURAL ENVIRONMENT AND EDUCATION

Stretching around the city, the park encounters a large range of species, including: deer, hares, foxes, moose, rare birds, butterflies, and insects. Meadows even have grazing cows, horses and sheep. Located right in the city, residents and visitors are fully immersed in this wild natural area. The mix of built and natural environments in this wildlife reserve is an example of how they can co-exist in harmony, serving as a haven for nature lovers, but also offering education opportunities throughout.



EXTENT AND AREA OF THE ROYAL NATIONAL CITY PARK OVER THE MUNICIPALITIES OF STOCKHOLM, SOLNA AND LIDINGÖ

QUICK STATISTICS

- **TYPE:** Urban Park
- **LENGTH:** ~10 km
- **AREA:** 27 km²
- **STATUS:** Complete
- Houses 75% of the species found in middle Sweden
- Most frequented urban park area in Sweden, with 15 million visits per year
- Four royal palaces (in Sweden there is a total of 11)



CASE STUDY

THE BENTWAY

Toronto, ON

1.75 km trail



COMMUNITY EVENTS TO ENGAGE VARIOUS GROUPS OF THE PUBLIC

ABOUT

Formerly an empty space under the Gardiner Expressway, The Bentway project created a year-round programmed public space with a multi-use trail that provides a vital east-west connection for both pedestrians and cyclists. Located adjacent to 70,000 residents, Phase 1 of the project opened in the winter of 2017, while work on the remaining trail is ongoing. Private owners are coming forward to help activate the space they own under the Gardiner Expressway.

The project was designed and built in two and a half years, as multiple levels of government approvals were expedited through the project management team led by Waterfront Toronto. The Bentway was funded through a \$25 million private donation from Judy and Wilmot Matthews.

One of the main design features is a skate trail, which is planned to extend further north. The area also features several performance areas, with

bleachers and stage at the western end.

STRATEGY

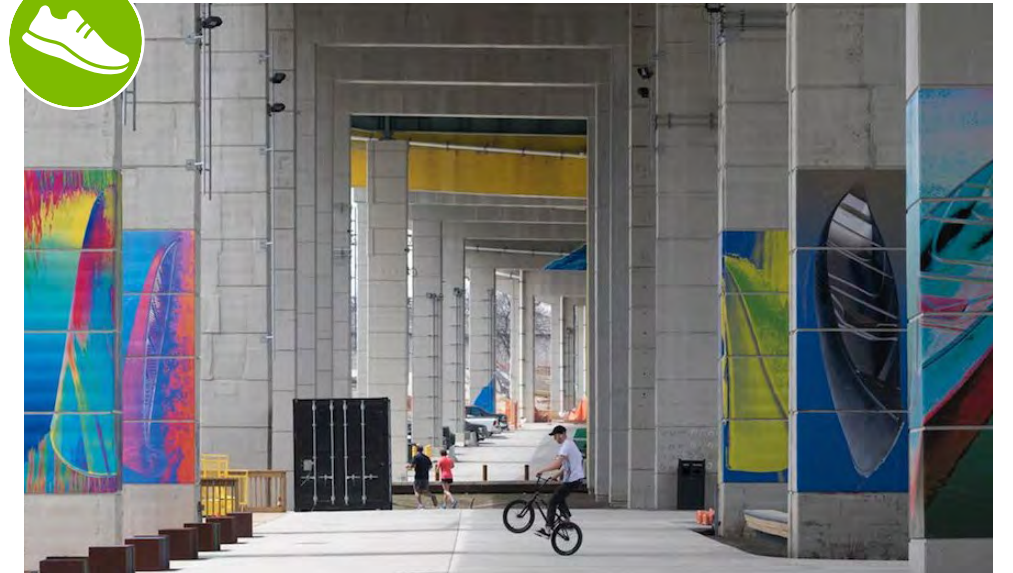
A portion of the overall budget was set aside for The Bentway Conservancy, which was formed near the completion of the design phase; the Conservancy currently programs, maintains, and operates the space.

A huge part of the project's success stems from the efforts The Bentway Conservancy has made to make the space inclusive, interactive, and interesting for Torontonians through various types of programming. Some of the work they do includes:

- Partnering with private companies to offer diverse programming throughout the year, such as a temporary skate park sponsored by Vans
- Funding seasonal art installations and hosting art-focused events, such as Daan Roosegaarde's "WATERLICHT"



EXISTING PHASE 1 AND FUTURE ROUTE OF THE BENTWAY TRAIL



- Acting as a civic platform for discussing issues around life in the city with cultural innovators, creative practitioners, and other instigations by hosting events and talks that are free and open to the public, such as "Ideas City", in partnership with New York's New Museum

ENGAGEMENT

The Bentway Conservancy is very active at promoting their events on social media platforms, with over 10,000 followers engaged.

QUICK STATISTICS

- **TYPE:** Underpass Public Space
- **LENGTH:** 1.75 km
- **STATUS:** Ongoing, Phase 1 Complete
- **COST:** Phase 1 - \$25 million CAD



DAAN ROOSEGAARDE'S WATERLICHT LIGHT INSTALLATION

Lessons for The Meadoway



CONNECTIONS

The Bentway will knit together seven downtown neighbourhoods and enhance connectivity to the waterfront. The Gardiner has been often seen as a dividing structure Downtown, but this new public space provides increased permeability, iconic crossings, and a more open public realm. The reclamation of this space will transform the corridor into a gateway to important attractions and destinations, from the Canadian National Exhibition to the Rogers Centre and the Air Canada Centre.



COMMUNITY AND PUBLIC REALM

A key feature of The Bentway is that there are 55 unique urban “rooms” along the corridor that are designed to be flexible, facilitating different experiences. These sites are for community programming of all kinds, from placemaking, civic engagement, food, education, health, wellness, and the environment. Also, the collaborative model that the project works under allows for active public participation in the design of the public space.



RECREATION

The span of the space and the flexibility in programming increase the amount of recreational amenity within Downtown Toronto. Despite the hardscaped nature of the infrastructure in place, The Bentway has adapted to provide recreational space, from a skate park, cycling trail, skating trail, and areas for dance and performance. The flexibility of these areas allow different types of recreation to rotate through the space.



BENTWAY SKATE TRAIL IS A POPULAR ATTRACTION IN THE WINTER MONTHS



PUBLIC COMMUNAL AREAS FOR SEATING, WITH STANDS FOR FOOD AND DRINK FOR PEOPLE OF ALL AGES AND ABILITIES



“IDEAS CITY” EVENT TO HIGHLIGHT INITIATIVES FROM LOCAL RESIDENTS

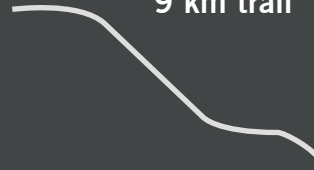


CASE STUDY

THE BELT LINE TRAIL

Toronto, ON

9 km trail



HEATH STREET PEDESTRIAN BRIDGE OVER MOORE PARK RAVINE

ABOUT

On what used to be the Toronto Belt Line Railway line, the Beltline Trail is a nine-kilometre multi-use path, weaving west-east throughout midtown Toronto.

At one end, it intersects with the York Beltline Trail, and at the other end, it travels through the Mount Pleasant Cemetery, and extends into the natural ravine trail system. The Belt Line Trail provides a seamless link between these two important trail systems in Toronto.

STRATEGY

The possibilities surrounding the Belt Line after it was decommissioned were promising in 1972, initiating a study to plan a Metro-wide “bikeway” network.

ENGAGEMENT

Many studies have been undertaken since the creation of the Belt Line, to identify and propose solutions to address different emerging issues along the trail, such as maintenance, width, areas of erosion, wayfinding, branding, amenities, and access improvements or connections.

Lessons for The Meadowway



CONNECTIONS

Leading through areas of Rosedale, Forest Hill, Moore Park, and options for detours through Evergreen Brick Works, the Belt Line has multiple access and egress points, so the trail can be experienced through its entire 9 kilometre run, or be a part of a quick stroll or commute. This is evident as certain parts are already more frequented by recreational cyclists whereas others have an influx of dogs and young children. A range of travelling options and context provide variety for users.



EXISTING BELT LINE SIGNAGE / BRANDING



FORK IN THE ROAD - TRAVELLERS CAN CONTINUE ON THE BELT LINE OR TAKE A DETOUR THROUGH DON VALLEY BRICK WORKS PARK



FIRST SECTION OF THE BELT LINE - THE YORK BELT LINE TRAIL

QUICK STATISTICS

- **TYPE:** Railway Revitalization
- **LENGTH:** 9 kilometres
- **STATUS:** Complete



CASE STUDY

THE HIGH LINE New York City, NY



VIEW OF THE HIGH LINE

ABOUT

Once destined for demolition, the community of New York City rallied together to repurpose it into a park. Today, the High Line is one continuous greenway with over 500 species of plants and trees.

It is maintained, operated and programmed by the Friends of the High Line, with the NYC Department of Parks & Recreation. Iconic spots along the corridor include lookout points, woodlands, semi-enclosed passages, water features, reused warehouses, seating or viewing areas, and gardens.

STRATEGY

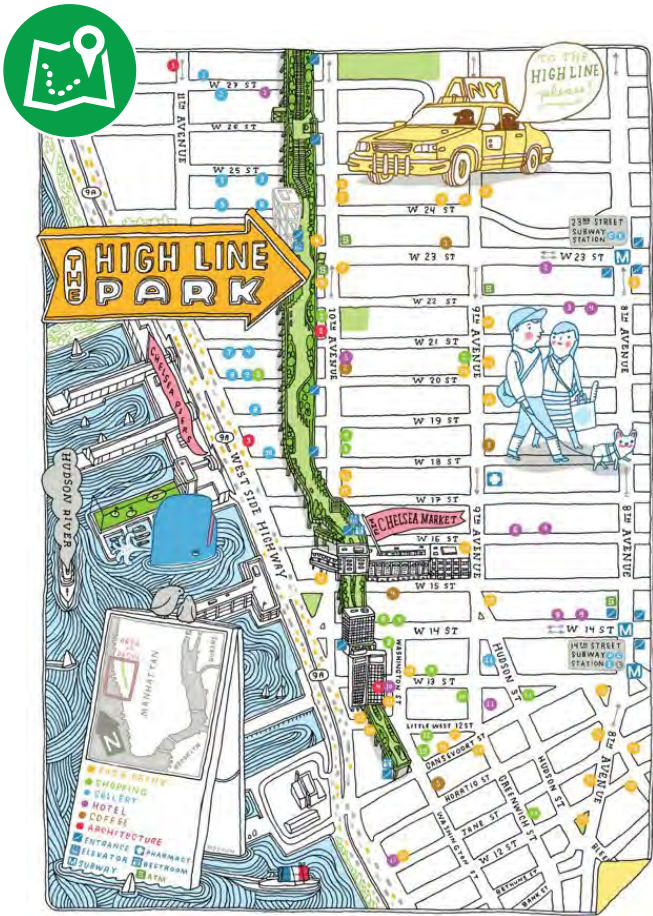
A large part of this redevelopment is its roots in sustainability. From its plant selection to local sourcing practices, the High Line pays special attention to the care of the biodiversity along the corridor, in all months and seasons.



THE HIGH LINE ATTRACTS OVER 4 MILLION VISITORS A YEAR

ENGAGEMENT

Right from the start of the project, the Friends of the High Line launched an open, international competition to get ideas for the reuse of the corridor. Since then, multiple design competitions and interdisciplinary teams have supported the overall design of the High Line. Now, new projects are in the works for expanding the High Line to include more room for programming, art, seating, and lush, natural environments.



ILLUSTRATED MAP OF THE HIGH LINE

Lessons for The Meadoway



CONNECTIONS

The variety of destinations, views, and passages throughout the High Line offer a range of experiences for all types of users. Multiple access and egress options from different neighbourhoods allow both passive and active functions to occur. If one was to travel throughout the entire length of the corridor, they would experience a range of species, view points, multiple retail options, and different intensities of the convergence of the industrial and the natural.



BLUEPRINT FOR REVITALIZATION

The High Line is a good example of successful economic development and railway revitalization. Now attracting over four million tourist visits per year, it is one of New York's most popular outdoor attractions, with over \$900 million of tax revenues. This railway corridor reuse is now one of the most popular markets for upscale residential, retail, and office-center development. New uses are popping up, fronting the corridor rather than away from it. Keeping all events accessible and free draw both locals and tourists to the High Line.

QUICK STATISTICS

- **TYPE:** Railway Revitalization
- **LENGTH:** 2.3 km
- **STATUS:** Complete
- **COST:** Approximately \$260 million to build
- Over 350 species of perennials, grasses, shrubs, vines and trees
- Over 20 million visitors (as of July 2014)
- Over 450 programs and activities each year



CASE STUDY

SAGRERA LINEAR PARK

Barcelona, Spain

3.7 km park



RENDERING OF THE SAGRERA LINEAR PARK, DEMONSTRATING RANGE OF ACTIVE AND PASSIVE USAGE

ABOUT

The Mediterranean Corridor high speed rail project will transform Barcelona into the main node of the corridor, turning the capital into a macro-region ('Barce-Lyon'). The Sagrera project includes a new urban area, a park with services and new uses, and a large central station and exchange node. This is a new green diagonal axis extending into historical Barcelona, that promotes a "slow" paced lifestyle.

The parkland will be the primary component of the green area system in the city. The areas include places

for strolling, relaxing and cycling. It will connect districts historically separated by the presence of railway.

STRATEGY

The Barcelona Sagrera Alta Velocitat is a public company whose mission is to guide the transformation of the Sagrera, Sant Andreu and Sant Marti areas, including the railway and transportation system.



MAP OF THE SAGRERA LINEAR PARK



RANGE OF TREES AND MEADOW PLANTING PROVIDE AESTHETIC AND BIODIVERSITY BENEFIT

Lessons for The Meadoway



CONNECTIONS

There is great emphasis on the use of vegetation to create a new set of 'green lungs' for the city. The development of this linear park as part of the larger transit project is the glue between the built and natural environments. With over 10,000 trees with shrubs, meadows, and permeable paving, this natural spine traverses through multiple neighbourhoods and gathering spaces. With central nodal areas created by the transit infrastructure, the park will complement the currently fragmented pieces of the community, due to the historical railway. It will now offer unimpeded, continuous travel from the Catalan Pyrenees to the heart of its capital city. The park varies throughout its length to relate to the pattern and itinerary of the underground train, so some spaces are more public whereas others are more intimate.

QUICK STATISTICS

- **TYPE:**
- **LENGTH:** 3.7km park
- **AREA:** 40 hectares of parkland
- **STATUS:** Ongoing
- **COST:** \$2 billion, including transit station construction
- 180,000 people live 10 minutes from the park
- 8,000 new trees



CASE STUDY

LA RIVER REVITALIZATION

Los Angeles, CA

51.5 km river



RENDERING OF SUBJECT SITE AND SURROUNDING DEVELOPMENTS

ABOUT

After multiple catastrophic flooding events and the eventual channelization, the Los Angeles River has been neglected for many years. However, the City recognized its potential for natural, community, and economic resources, and its overall ability to revitalize the adjacent neighbourhoods.

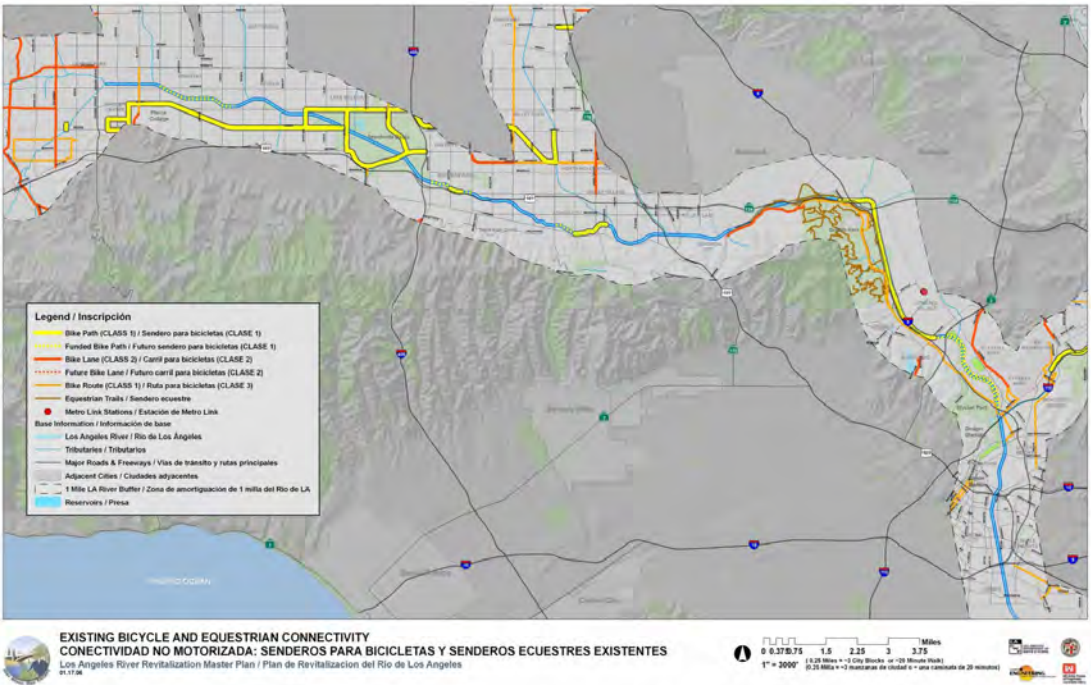
The project focuses on a 32 mile (51.5 km) stretch of the River, where the plan will ensure flood risk management while restoring natural features and creating opportunities for recreation and community amenity. It uses a human-scaled approach to overcome the contrast between the concrete channelization of the river to the scale of the surrounding neighbourhoods.

STRATEGY

In 2002, the City's Ad Hoc Committee on the Los Angeles River spearheaded a Revitalization Master Plan. As a joint effort among the City of Los Angeles, the County of Los Angeles, and the US Army Corps of Engineers, they will guide the revitalization efforts.

ENGAGEMENT

Stakeholders were asked to describe what improvements they would like along the River. Community and stakeholder meetings helped shape design objectives with site-specific projects identified throughout the corridor, focusing on public use and open space access.



MAP OF CONNECTIONS ALONG THE RIVER CORRIDOR

Lessons for The Meadoway



BLUEPRINT FOR REVITALIZATION

The restored river will attract both native species as well as people who can now use the river – for simple recreational uses, new shops and businesses, or even housing. This vision will address housing shortage, unemployment, as well as create more usable open space. As both a wildlife corridor and a future multi-modal pathway, this ambitious project will be a good example of how flora, fauna, and humans can share this space.

QUICK STATISTICS

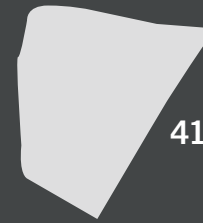
- **TYPE:** River revitalization
- **LENGTH:** 32 miles (51.5 km)
- **AREA:** 870 square miles (2253 km²) watershed
- **STATUS:** Ongoing
- **COST:** est. \$1.2 billion
- From 2000 data, the corridor is home to more than 1 million people, more than 390,000 housing units, 480,000 workers, 35,000 businesses, and more than 80 schools



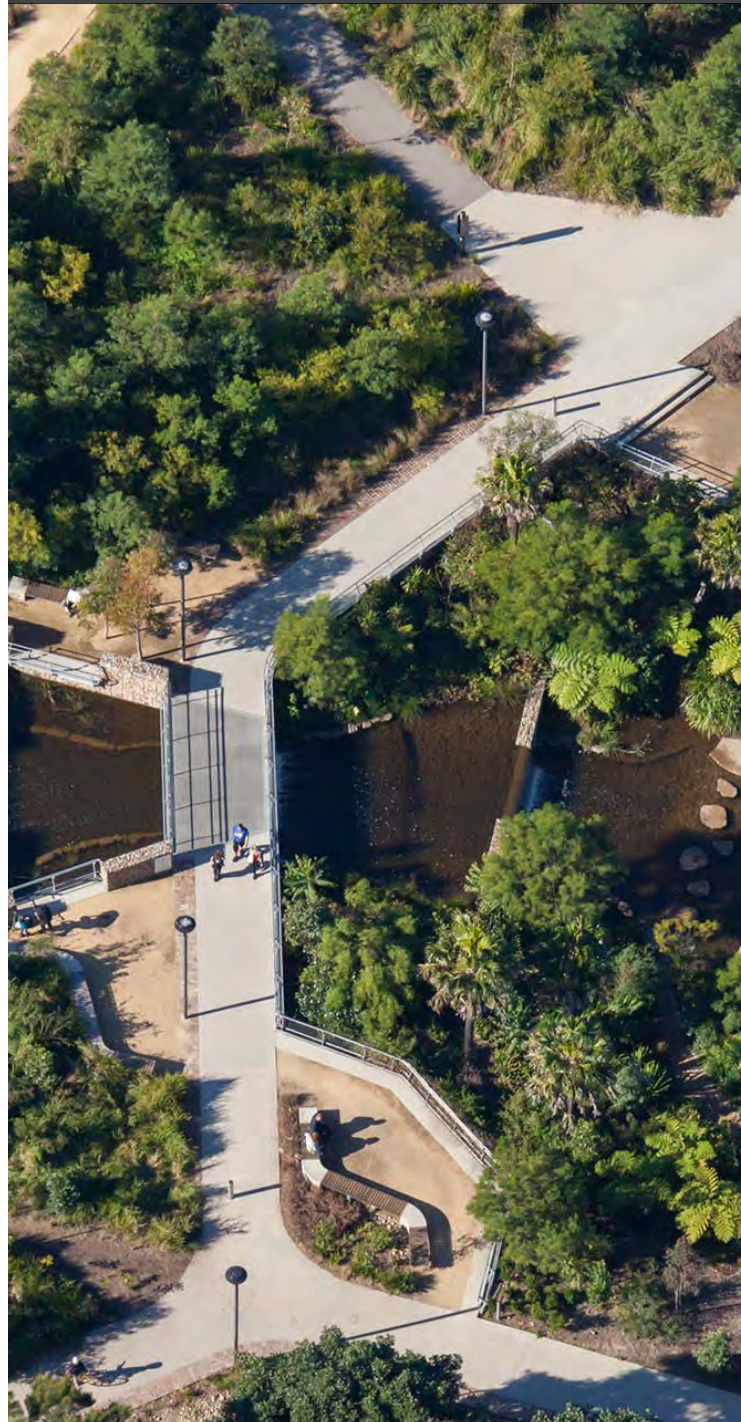
CASE STUDY

SYDNEY PARK

Sydney, Australia



41.6 ha park



AERIAL VIEW OF SYDNEY PARK CROSSINGS AND PATHWAYS

ABOUT

Formerly the location of a major landfill and brickmaking site, Sydney Park is made up of over 40 hectares of lush grass, landscaped gardens, rolling hills, meandering pathways and picturesque wetlands. It is the City's largest environmental project to date, built in partnership with the Australian Government. From the late 1940s and 1980s there was no wildlife in this industrial-heavy, contaminated site. This infrastructure opportunity has evolved into a vibrant environmental asset.

One of the main highlights of this project is its award-winning sustainable water reuse design that created the Sydney Park Wetlands. As the largest water harvesting system, it will help the city achieve their 2030 target to reduce sediments from stormwater runoff, and 10% of water demand to be achieved by local water retention and reuse.

From the emergence of these urban wetlands, they attract more wildlife to these metropolitan areas.

STRATEGY

When the landfill was closed, a layer of soil and rubble was placed over the pits to create the park. From there, the existing topography was used to enhance panoramic views of the skyline and for recreational activities. The new wetland habitat now co-exists with the industrial heritage structures, and new roadways provide recreational facilities. Various community groups such as the CARES (Community and Road Education Scheme) provide a safe place for children to learn about road safety.

ENGAGEMENT

The City engaged a multi-disciplinary design team that participated in a roundtable, discussing the intersections of art, design, science, and ecology.



MAP OF SYDNEY PARK



CHILDREN PLAY AREA INTRODUCED ONTO FORMAL LANDFILL SITE

QUICK STATISTICS

- **TYPE:** Landfill revitalization, into public park space
- **AREA:** 41.6 hectares
- **STATUS:** Ongoing
- **COST:** \$11.3 million

Lessons for The Meadoway



NATURAL ENVIRONMENT AND EDUCATION

The multi-faceted 'waterscape' of Sydney Park celebrates the connection between people and place. It offers educational opportunities throughout, specifically regarding the function of wetland environments. Learning opportunities also include the habitat creation for both flora and fauna, as well as the remaining brickworks heritage area.



BLUEPRINT FOR REVITALIZATION

This is a good example of how priorities of water reuse, recreation, biodiversity and habitat are all addressed in the project. Moving from a formal post-industrial site and waste disposal zone, the parkland now invites recreation and playground areas. The bioretention wetlands not only capture, hold, and clean about 340 Olympic-sized swimming pools per annum, but they also improve local water quality, habitat, and reduce potable water consumption in the area.



TRANSPORTATION

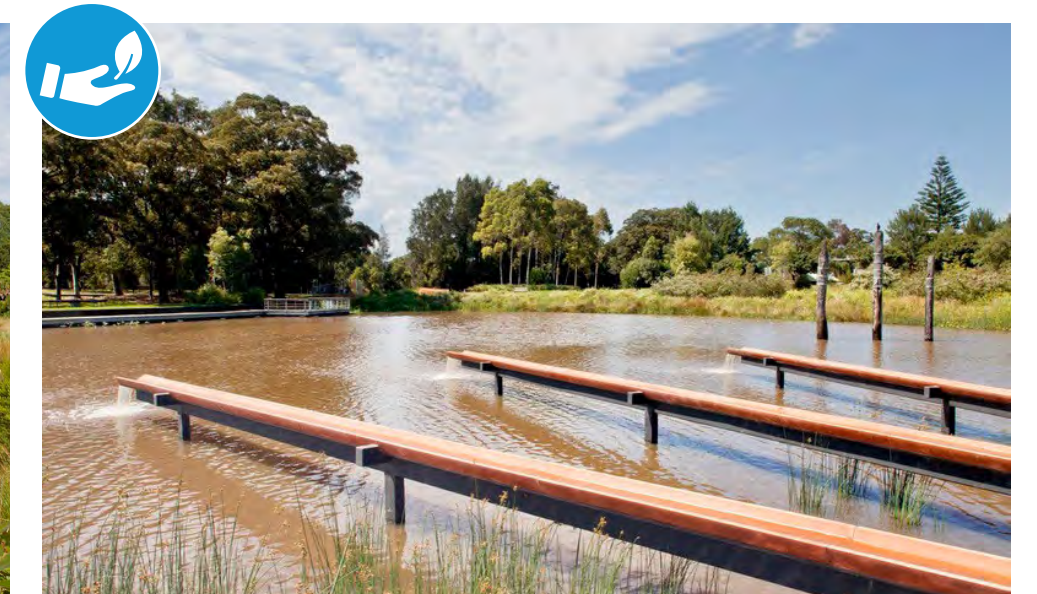
This interwoven series of community infrastructures and systems are all integrated within the fabric of the park. New pathways and crossings intersect throughout the wetland systems, so park users can discover playful, dramatic, and peaceful parts of the larger natural and built landscapes.



CROSSINGS CAN BE EXCITING AND PLAYFUL



CROSSINGS AND WALKWAYS ARE INTEGRATED SEAMLESSLY INTO WETLAND HABITATS



WATER HARVESTING SYSTEMS ALSO SERVE AS PUBLIC ART PIECES

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EXISTING CONDITION OF THE SCARBOROUGH
CENTRE BUTTERFLY TRAIL

THANK YOU!

For more information, please see <https://themeadoway.ca/>

EXISTING ALLOTMENT GARDENS ON THE MEADOWAY,
FREQUENTLY USED BY COMMUNITY MEMBERS

