



Orbit Potential and Innovation Plan (OPIP)

Public Information Centre | 12.15.2022

Presentation Slides



Materials available online

<<https://innisfil.ca/OrbitEngagement>>



OPIP Public Information Centre

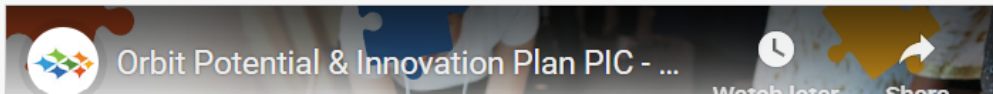
We hosted a virtual Public Information Centre (PIC) for the Orbit Potential and Innovation Plan (OPIP) on December 15, 2022. Please take some time to review the presentation materials and submit your comments on the OPIP by January 11, 2023. All comments will be considered and included in the documentation of the Class Environmental Assessment process.

[PIC Comment Sheet](#)

— PIC presentation materials and meeting recording

View materials related to the Orbit Potential & Innovation Plan (OPIP) Public Information Centre (PIC) that took place on December 15, 2022:

- [PIC Presentation Slides](#)
- [PIC Boards](#)



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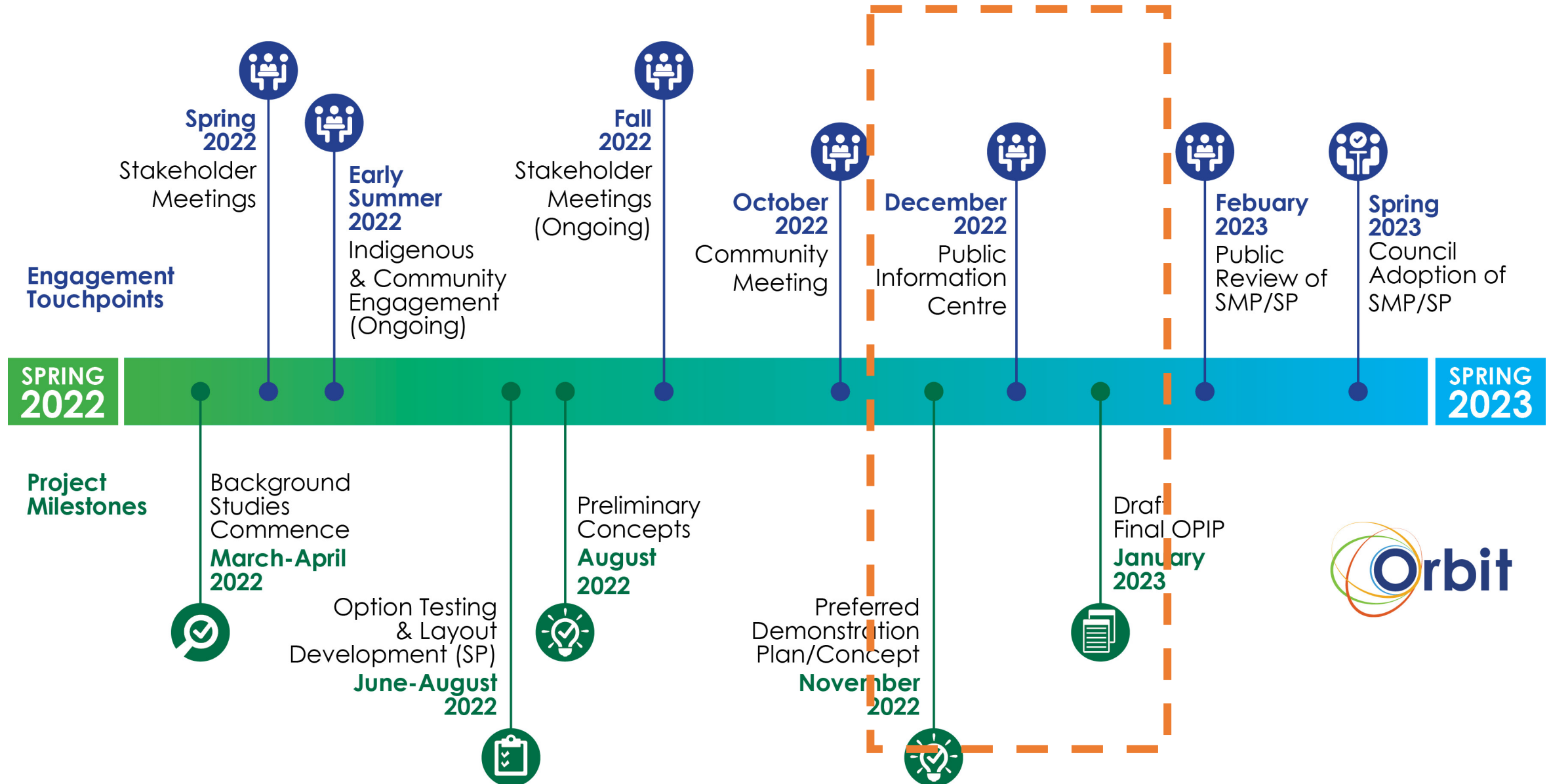
■ [OPIP Public Information Centre Registration](#)

[View Full Building, Construction and Development Menu](#)

Agenda

- Welcome and Introductions
- Orbit Context
- Draft Secondary Plan
- Phasing
- Servicing Master Plan
- Sustainability
- What's Next?

OPIP Timeline & Engagement Touchpoints



GREEN INFRASTRUCTURE
CONNECTING COMMUNITIES



GENTLE DENSITY,
MIXED BUILDING TYPOLOGIES



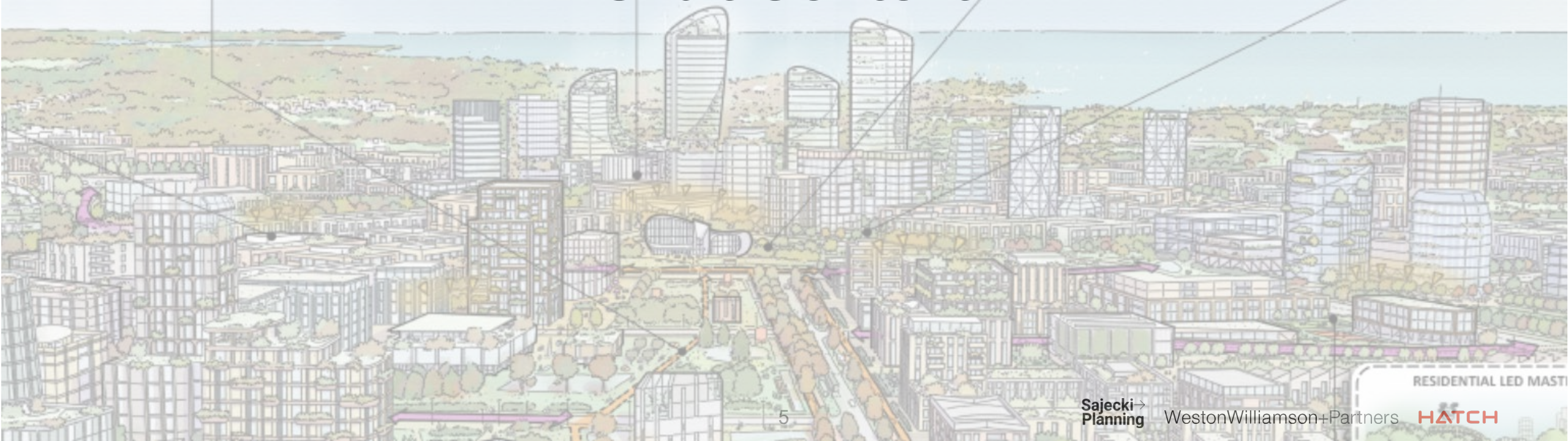
SMART PUBLIC TRAVEL - LOOPED AUTONOMOUS
BUS ROUTE LINKING COMMUNITIES,
ACTIVATING STREESCAPES



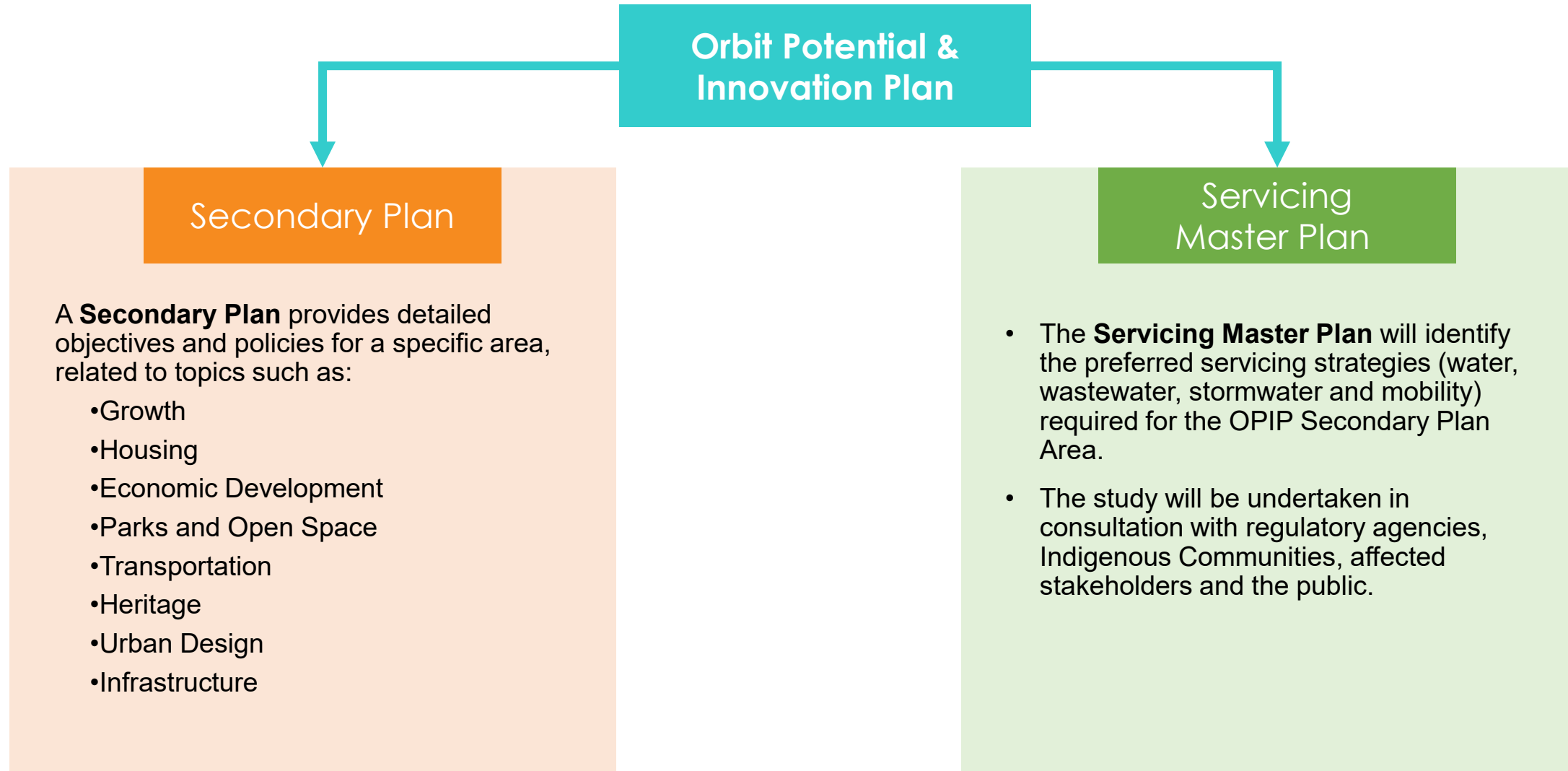
ACTIVE TRAVEL / MODE SHIF



Orbit Context



What is the OPIP?



Location



Proposed Innisfil
GO Station







Location



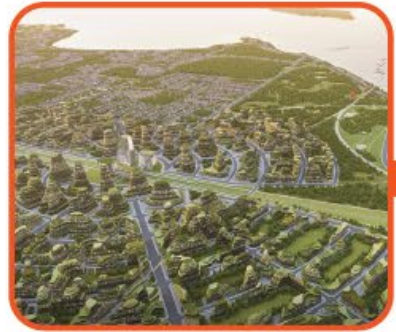
Secondary Plan Area



-  Protected Major Transit Station Area Settlement Area
-  Secondary Plan Area
-  TOC 1 (225m Radius)
-  TOC 2 (425m Radius)



Process to Date

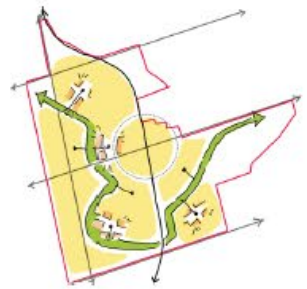
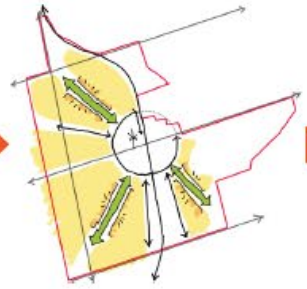
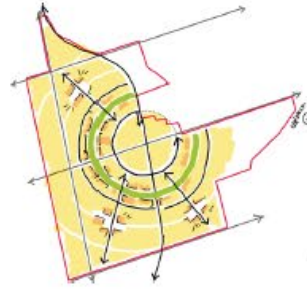


Partisan's concept visual




Discussion Paper

Key themes to be explored with the design implementation



Strategies and Concepts
Exploration of three concept designs

Current Stage



- Streets and blocks
- Open Space Iterations
- Land Use
- Heights and Densities
- Public Realm
- Urban Design
- Active Transportation
- Transit

Concept Development
Design development and population number testing

Secondary Plan
Finalized demonstration plan

Preliminary Vision



Vision Statement

*"The Orbit is a cutting-edge community where **small town and rural lifestyles co-exist with the benefits and attributes of urban living.***

The public realm is at the forefront with housing density & affordability, mobility, transit, arts, culture, technology, connectivity, business, digital innovation, economy, healthcare, social cohesion & infrastructure, sustainability, agriculture, open spaces, access to trails & waterfront and walkability.

*The Orbit creates a dynamic centre of activity **for visitors and residents alike**, appealing to a variety of lifestyle activities that are possible and available in the area [...] Offering a **rural-urban, all-season experience and easy access to the City**"*

Orbit Goals



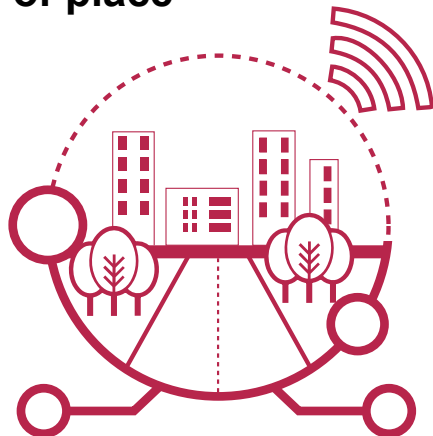
Achieving a sense of place



15 Minute Neighbourhoods



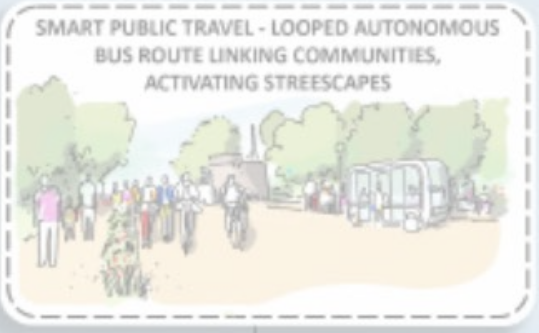
Higher quality density



An 'Insightful' City



Sustainable community



Draft Secondary Plan



Secondary Plan Principles



Principle 1: Sustainability

- Environmental
- Social
- Economic
- Energy
- Digital innovation



Principle 2: Streets and Blocks



Principle 3: Land Uses & Built Form



Principle 4: Public and Private Space



Principle 5: Mobility

Secondary Plan Directions



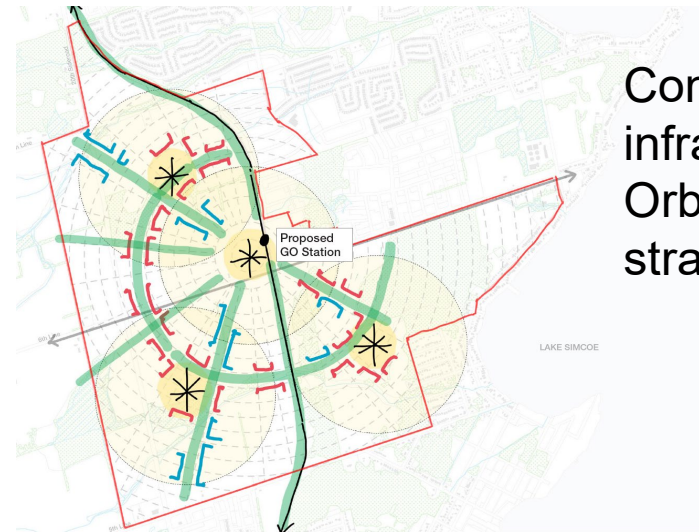
A Concentric Grid as an Organizing Geometric Principle



15-Minute Neighbourhoods

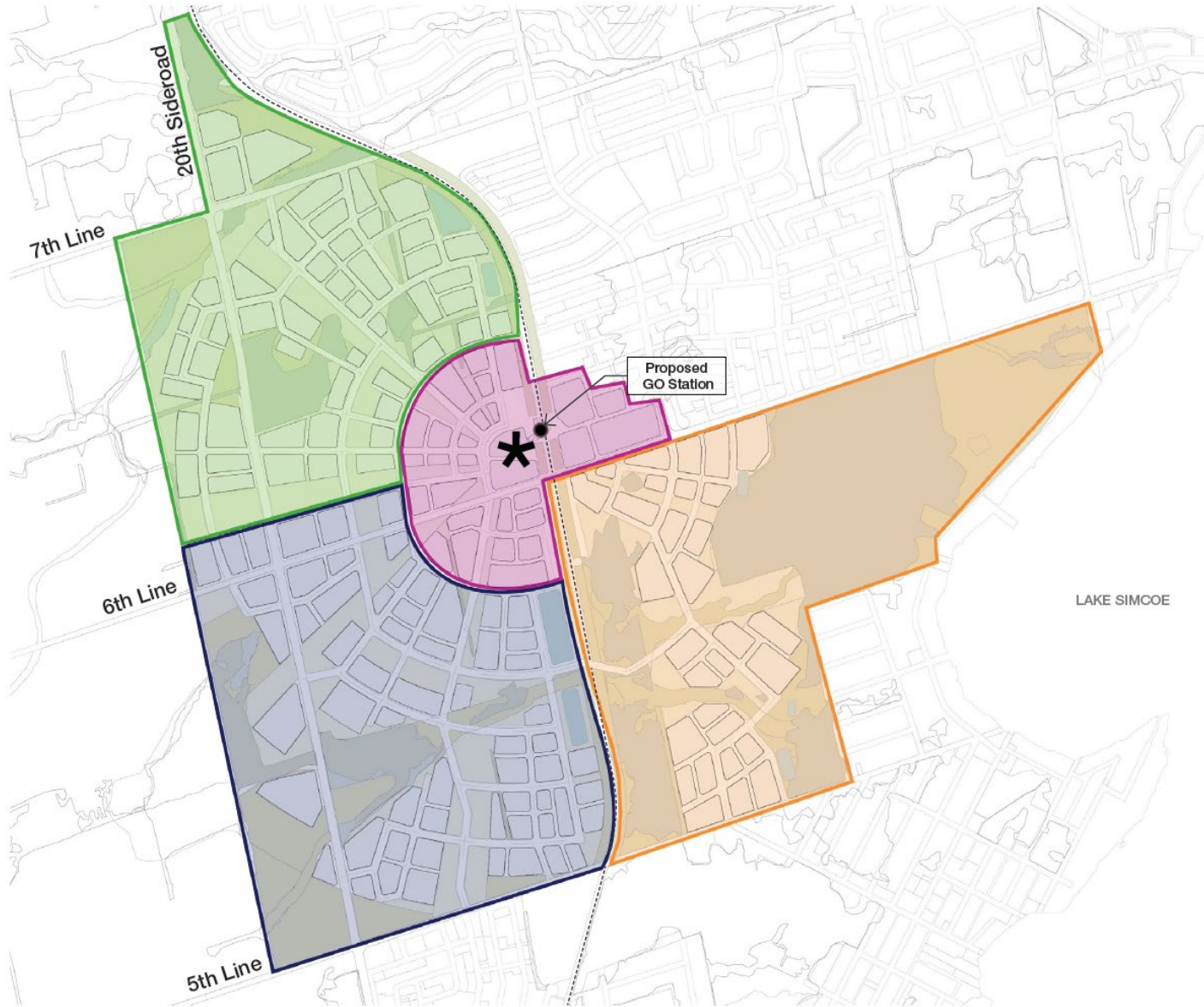







Proposed GO Station will act as the area's heart with green connections as the spine



Connecting green infrastructure with Orbit's land use strategy

Precincts



-  Neighbourhood Centre
-  Precinct A
-  Precinct B1
-  Precinct B2
-  Precinct B3







Road Network



Existing

-  Innisfil Arterial
-  Major Collector

Proposed

-  Minor collector Transit Priority
-  Minor collector Transit and Active Nodes
-  Minor collector
-  Local Street Urban
-  Local Street Neighbourhood



Walking and Cycling Trails



FUTURE MULTI-USE TRAIL



CYCLE PATH

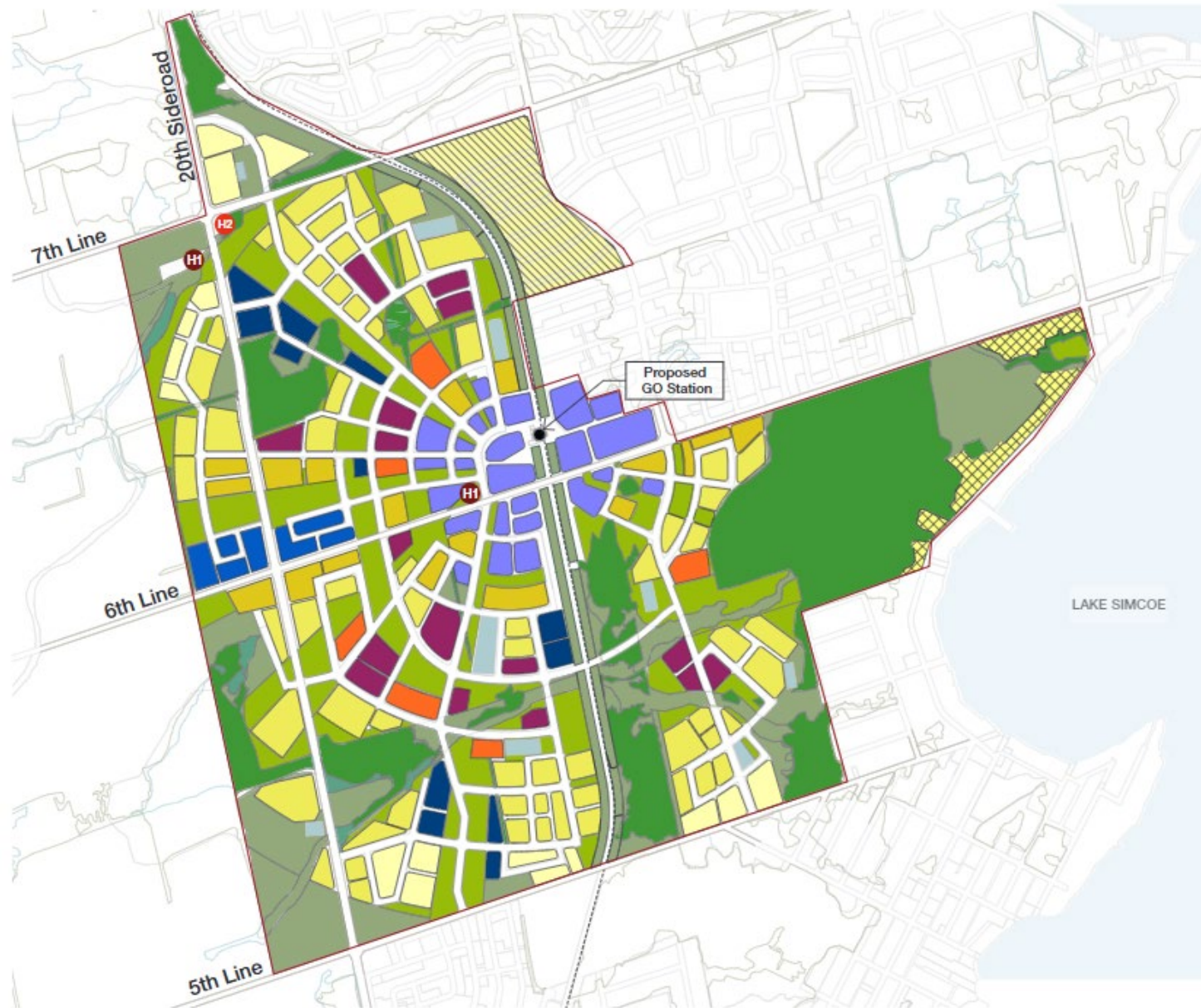















PEDESTRIAN PATH



- Proposed Cycle Path
- Proposed Multi-Use Trail
- Multi-Use Trail

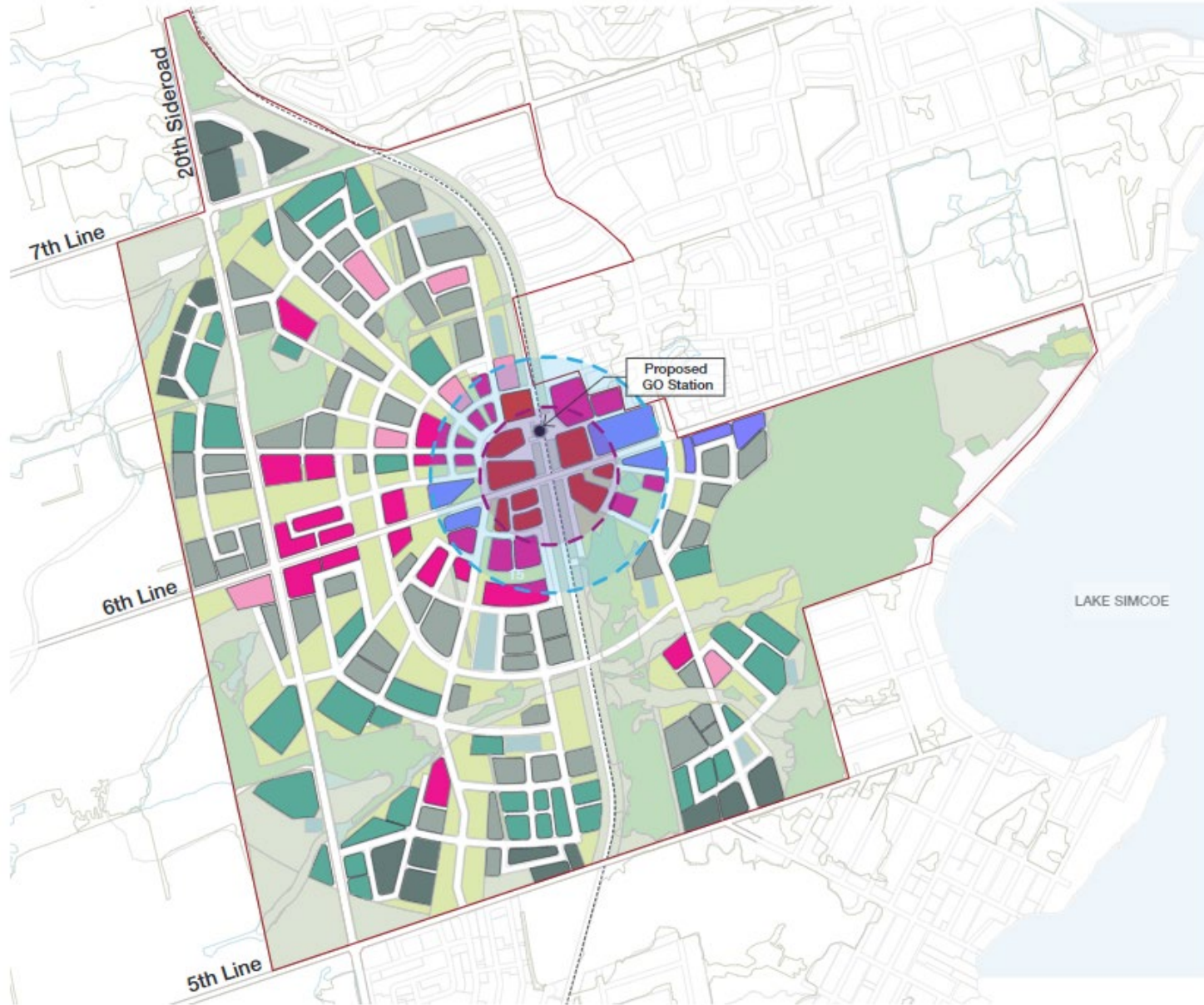
Land Use



-  Parks & Open Space
-  Natural Heritage Features
-  Proposed Woodland
-  Existing Development Application
-  Residential Low Density
-  Residential Medium Density 2
-  Residential Medium Density 1
-  Residential High Density
-  Neighbourhood Commercial Area
-  Community Uses
-  Employment Area
-  Mixed Commercial/ Employment Area
-  Major Transit Station Mixed Use Area
-  Designated Heritage Property
-  Listed Heritage Property



Building Heights



Minister's Zoning Order

- TOC 1 (225m Radius)
- TOC 2 (425m Radius)

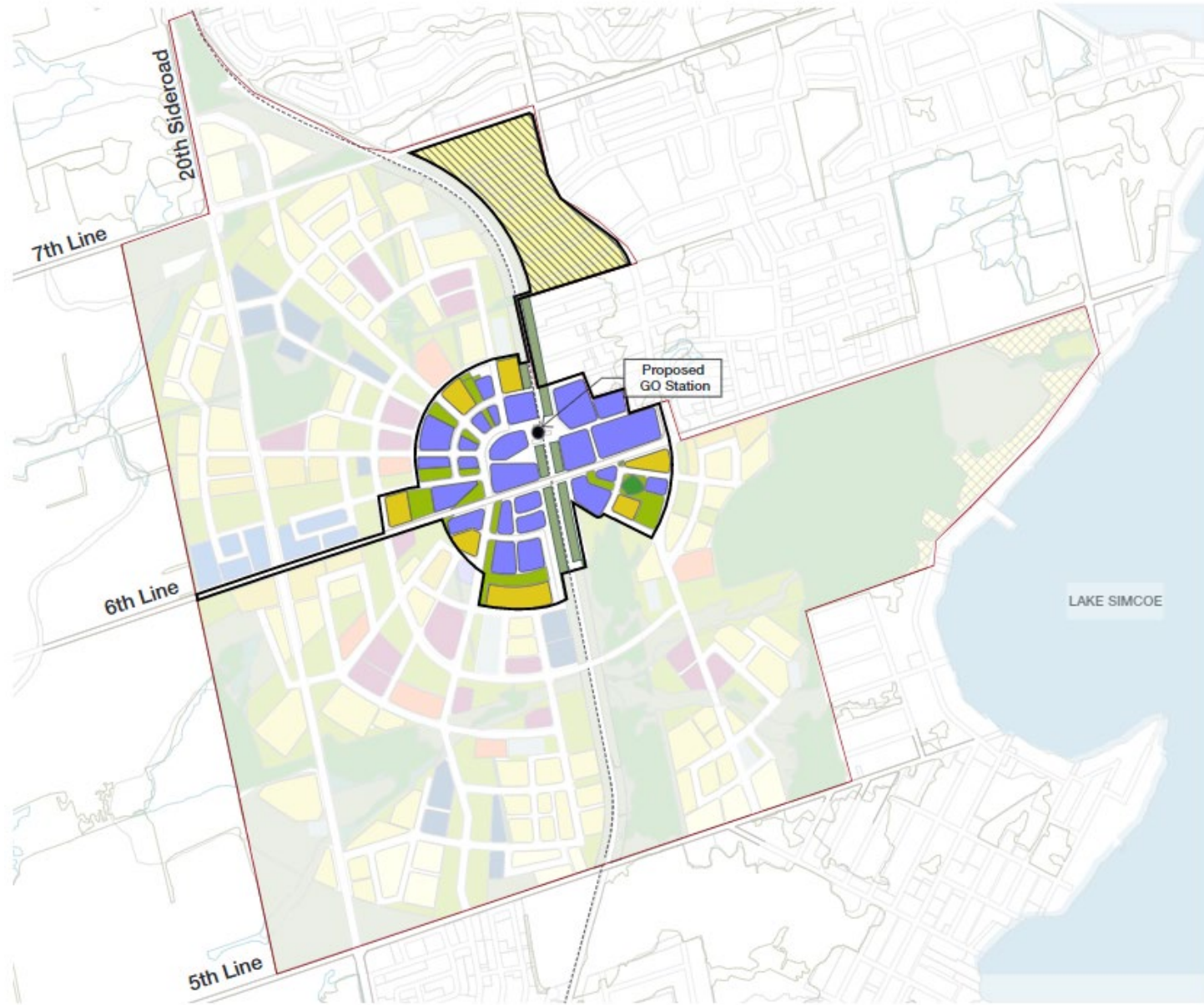
- 2 to 3 Storeys
- 3 to 4 Storeys
- 4 to 6 Storeys
- 4 to 10 Storeys
- 4 to 15 Storeys
- 4 to 25 Storeys
- 6 to 40 Storeys

Open Space



- Watercourses
- Existing Natural Heritage Features
 - Provincially Significant Wetlands
 - Unevaluated Wetlands
 - Woodlands
- 30m Naturalized Rail Buffer
- Public Parks and Open Spaces
- Proposed Woodland
- Stormwater Pond

Phasing



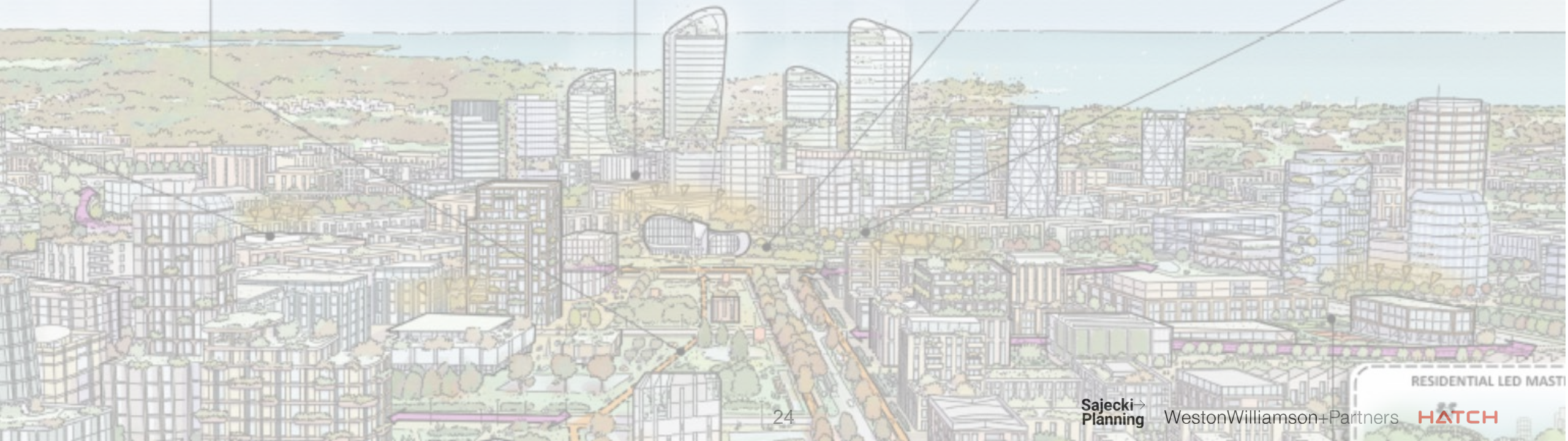
 Development to 2051

**GREEN INFRASTRUCTURE
CONNECTING COMMUNITIES**

**GENTLE DENSITY,
MIXED BUILDING TYPOLOGIES**

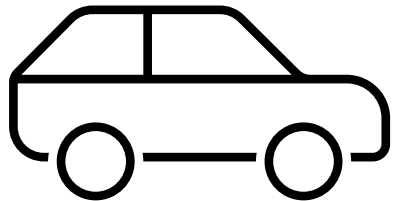
**SMART PUBLIC TRAVEL - LOOPED AUTONOMOUS
BUS ROUTE LINKING COMMUNITIES,
ACTIVATING STREESCAPES**

ACTIVE TRAVEL / MODE SHIF

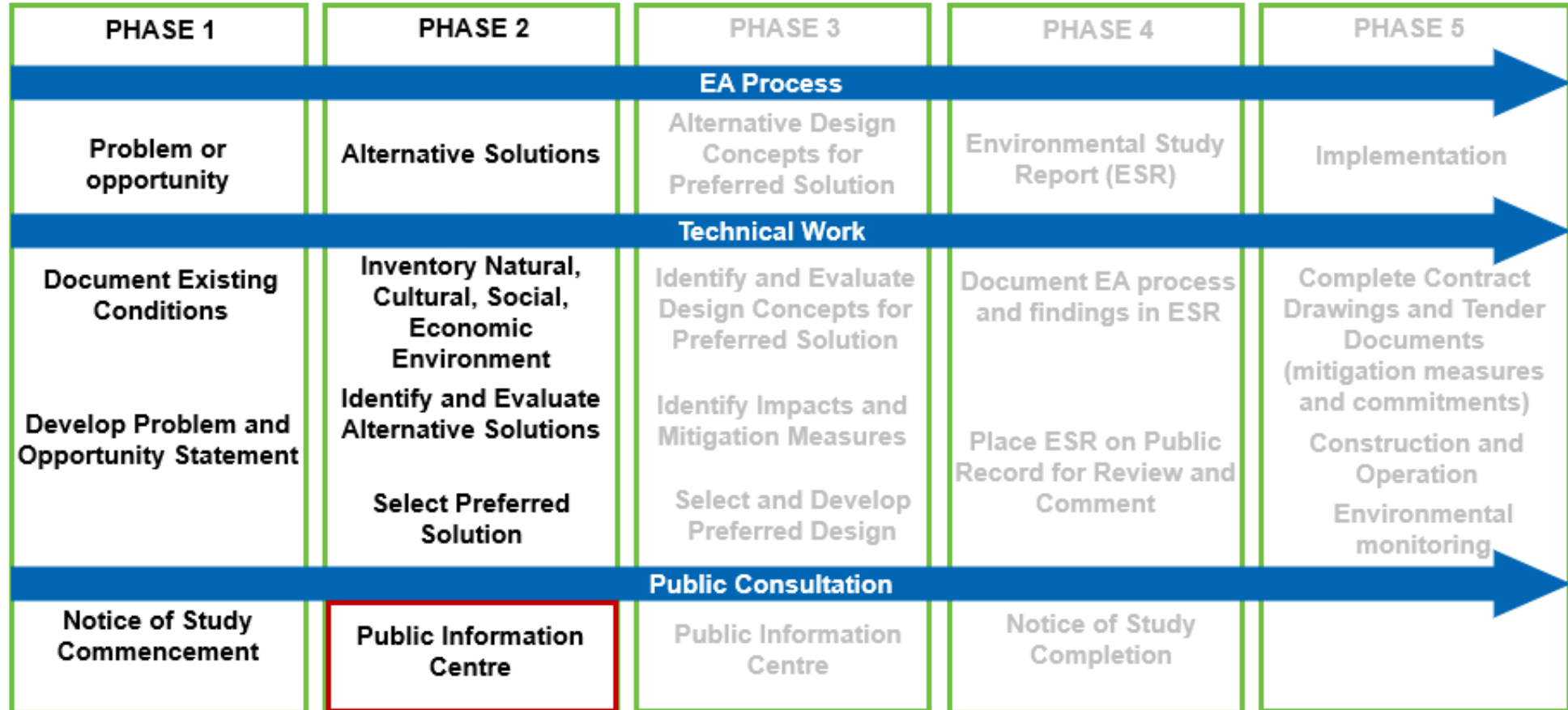


RESIDENTIAL LED MAST

Servicing Master Plan



Servicing Master Plan



What We've Heard

I don't feel the current plan is reflective on conservation of wildlife and the lake.



The Secondary Plan has taken into consideration existing natural heritage constraints including Provincially Significant Wetlands and other natural heritage features to avoid development in these areas. Any subsequent developments will further assess the impact on the natural environment. Release of water whether via the storm network and/or the wastewater network must meet the criteria set out by the LSRCA and MECP to protect Lake Simcoe and the surrounding natural environment.

Very concerned about the impact on Lake Simcoe and its tributaries, including runoff, disruption to wildlife and natural areas.



The criteria set in place by the LSRCA must be met for quality control to ensure protection of Lake Simcoe. These include removal of 80% of total suspended solids and 80% of annual total phosphorus from all major development areas.

Where would the main access point(s) be for the Orbit and how will traffic flow be managed to not impose on existing neighbourhoods?



The Plan will be encouraging alternative modes of travel, to get to and from the Orbit, including active transportation and transit. A major collector with transit priority will provide access to the Orbit from 7th Line, 6th Line and 5th Line. In addition, access will be via active transportation spines from 20th Sideroad. Traffic flow will be managed by adding additional lanes on arterial and collector roads to help alleviate traffic.

Where will wastewater go and what impact will that have on natural springs and existing wastewater treatment areas? Will our lake be protected?



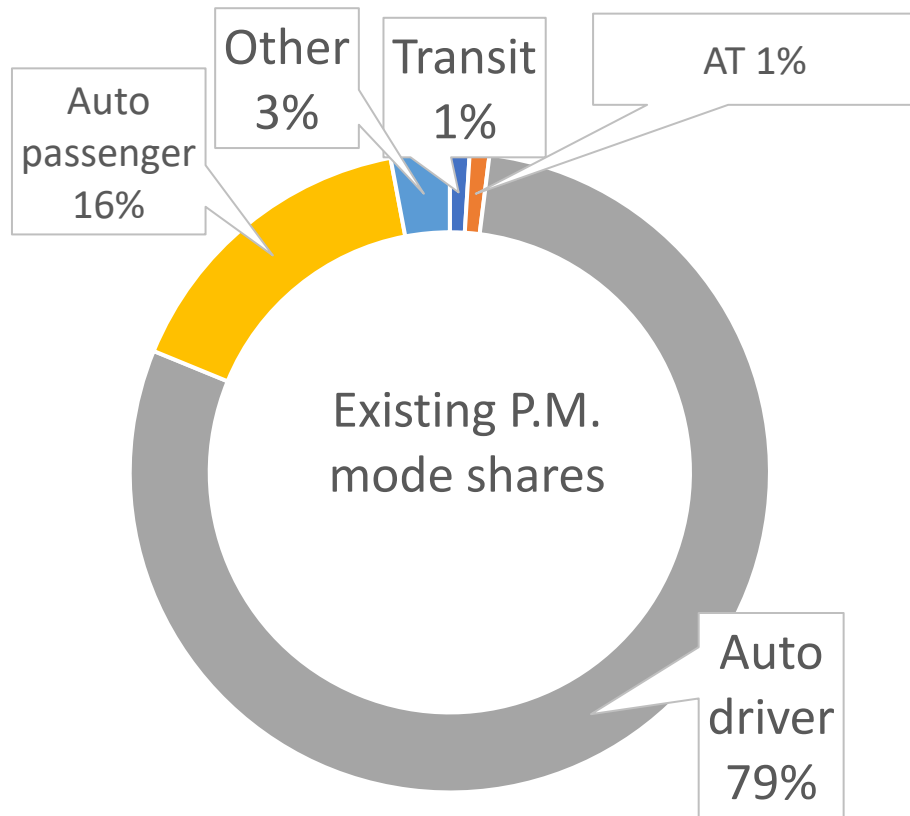
Based on the work that the Servicing Master Plan has undertaken, the wastewater will be directed to the existing Lakeshore Wastewater Treatment Plant (WWTP). The existing plant's capacity will be increased within the same site to accommodate the additional flow. The WWTP complies with the effluent criteria established by the MECP to mitigate any adverse impact to Lake Simcoe.

What is the transportation plan? It doesn't seem like the Uber system is working well for many.



The TMP recommends several improvements which will support a multi-modal transportation system. Improvements include widening of a number of different roadways within the study area, adding multi-use trails to 6th Line, 7th Line and 20th Sideroad and dedicated cycle lanes along Webster Boulevard, a secondary trail along the Barrie rail corridor, delivery of the proposed Innisfil GO Station, as well as a transit system with scheduled fixed-route services.

Transportation Existing Conditions

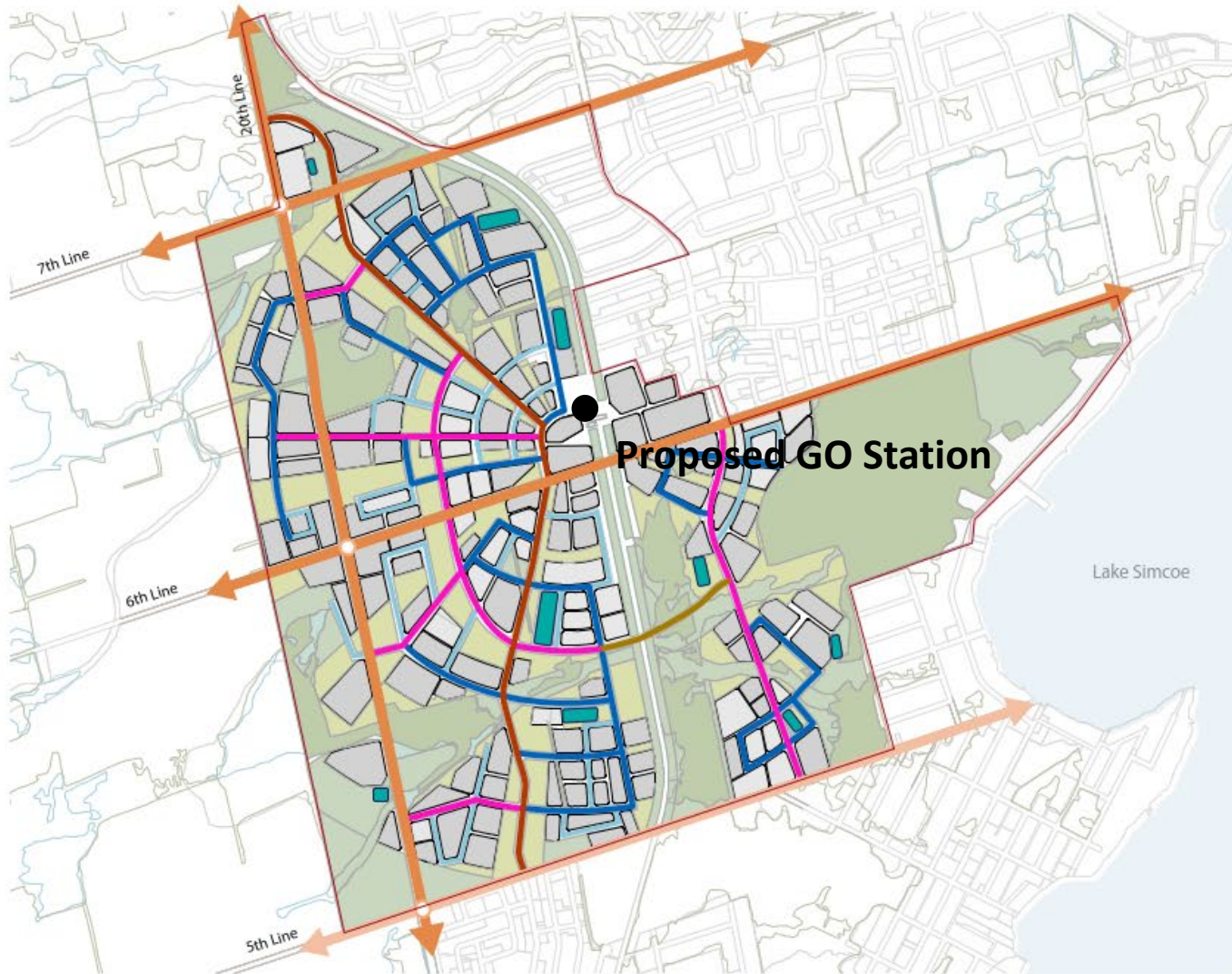


Transportation Conditions & Recommendations by 2051

- By 2051, Orbit will have approximately 25,000 residents and 2,500 employees
- Orbit will generate approximately 5,800 peak hour trips, but only 3,200 will be taken by automobile
- Recommendations include the implementation of TMP planned upgrades, notably:
 - 6th Line widening from two to four lanes between County Road 27 and St. Johns Road
 - 7th Line widening from two to three lanes between 20th Sideroad and Webster Boulevard
 - 20th Sideroad Bypass near Innisfil Beach Road
 - Webster Boulevard extension from 6th Line to 5th Line
 - Multi-use trails along 6th Line, 7th Line, 20th Sideroad, and dedicated cycle lanes along Webster Boulevard
 - Secondary trail along the Barrie rail corridor between 7th Line and Belle Aire Beach Road
 - Deliver the proposed Innisfil GO Station
 - Deliver a transit system with scheduled fixed-route services
- Future intersection control treatments (notably at 6th Line & 20th Sideroad) to be determined in subsequent studies.
- Recommend revisiting prior analysis undertaken for 6th Line EA and 7th Line EA to ensure consistency with most up-to-date planning targets.



Transportation Road Network



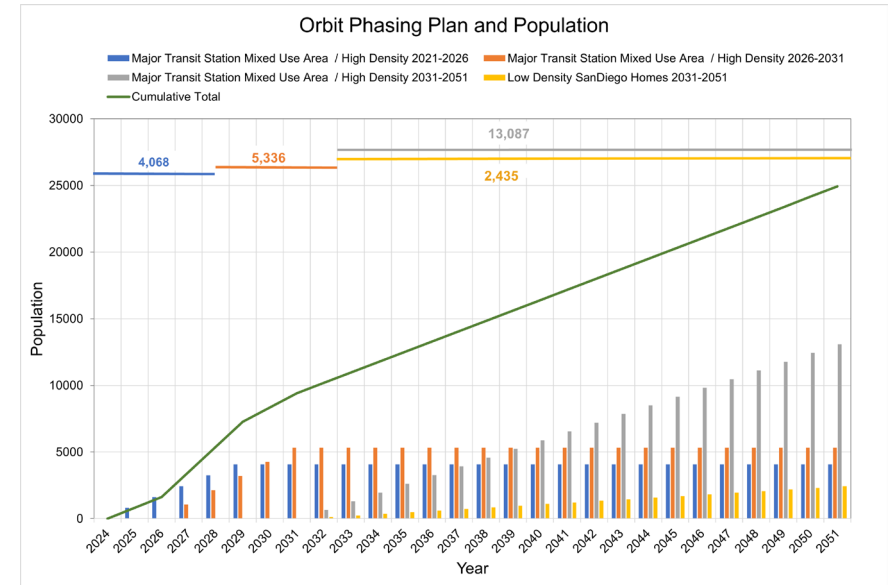
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- | | |
|----------|--|
| | Proposed |
| | Minor collector Transit Priority |
| | Minor collector Transit and Active Modes |
| | Minor collector |
| | Local Street Urban |
| | Local Street Neighbourhood |
| | Stormwater Pond |
| Existing | |
| | Innisfil Arterial |
| | Major Collector |

Water Existing Conditions



Phasing Plan and Population



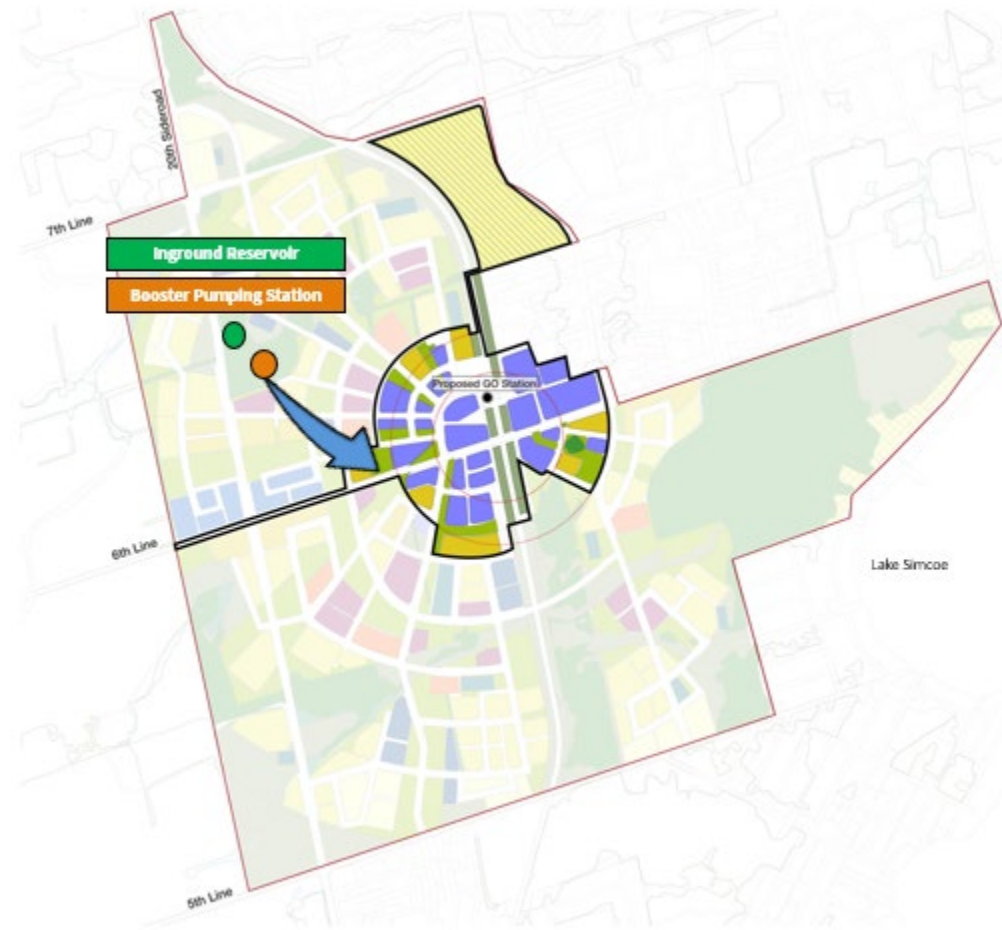
Forecasted Total Population: 27,424 people (Residential 24,927; Employment 2,497)



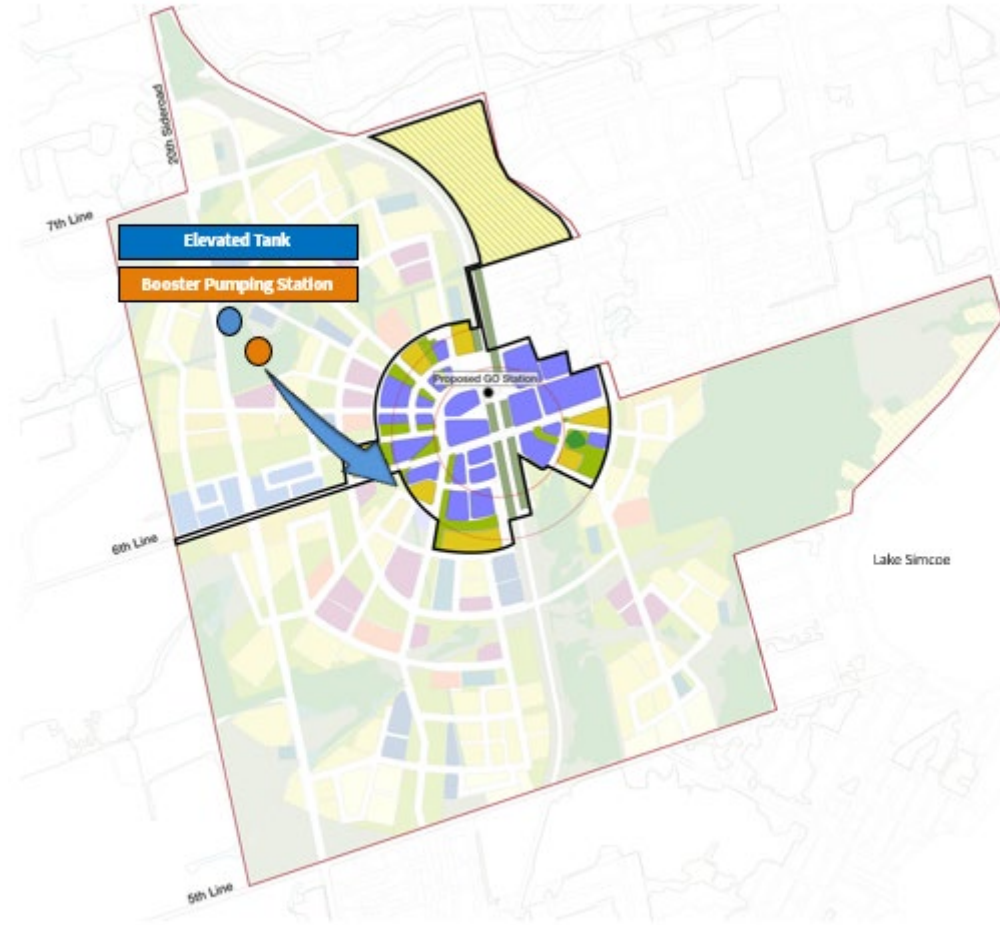
Design Criteria and Design Basis for Water Servicing

	Unit	Residential	Industrial and Commercial
Average Day Demand	L/day per person	250	128
Maximum Day Factor		1.8	1.8
Maximum Day Demand	L/day per person	450	230
Maximum Day Flow	m ³ /day	11,217	575
Total Maximum Day Flow	m ³ /day	~11,800	
Minimum Required Water Storage Volume	m ³	To be in compliance with MECP guidance for calculation and with minimum 130 L/s fire flow.	

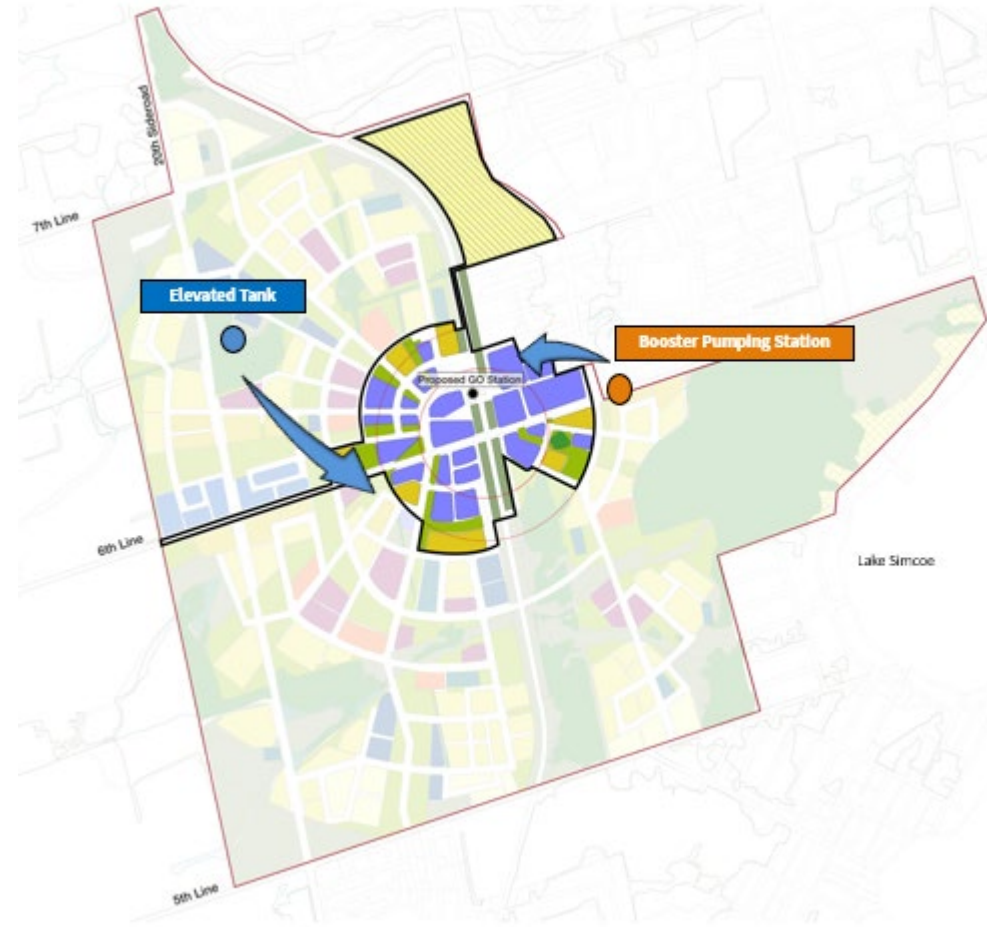
Water Alternative 1



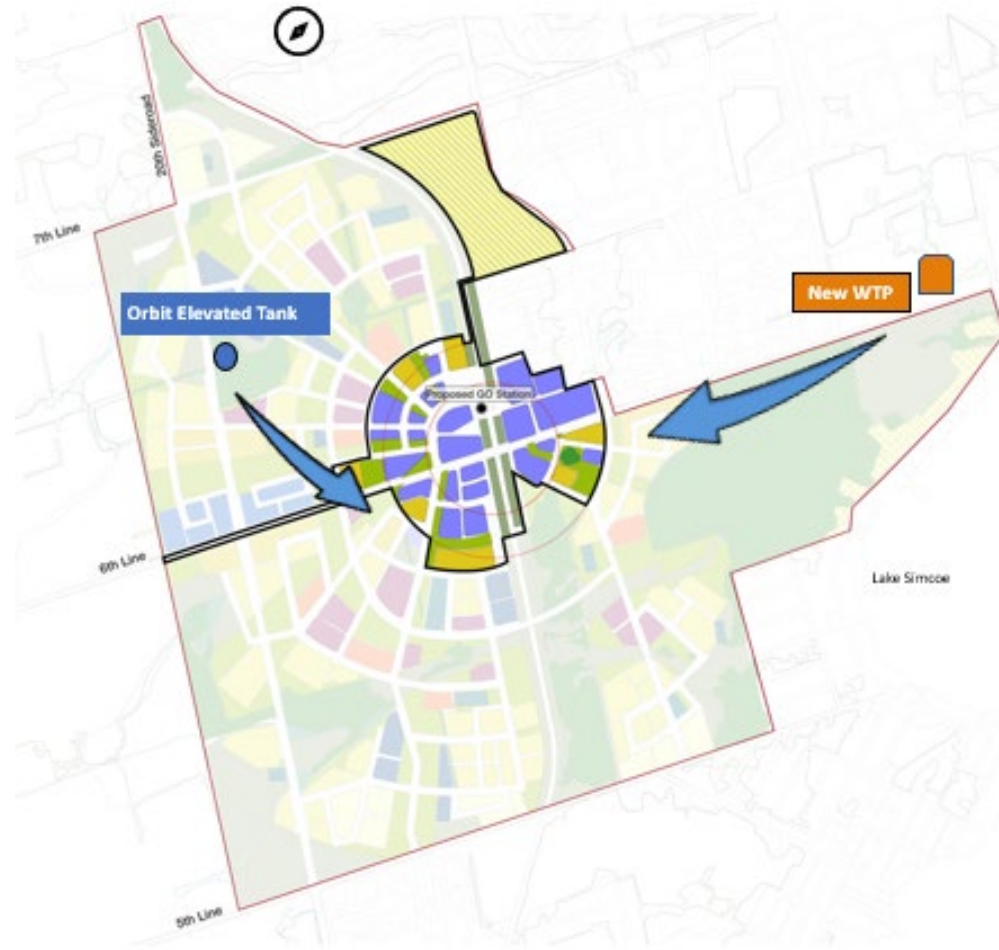
Water Alternative 2



Water Alternative 3



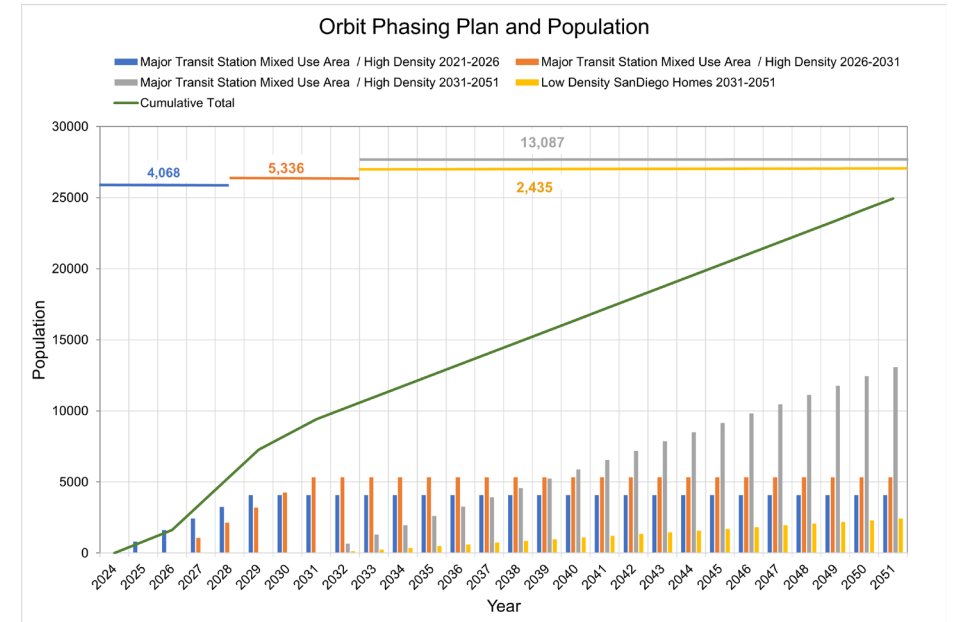
Water Alternative 4



Wastewater Existing Conditions and Design Criteria



Phasing Plan and Population



Forecasted Total Population: 27,424 people (Residential 24,927; Employment 2,497)

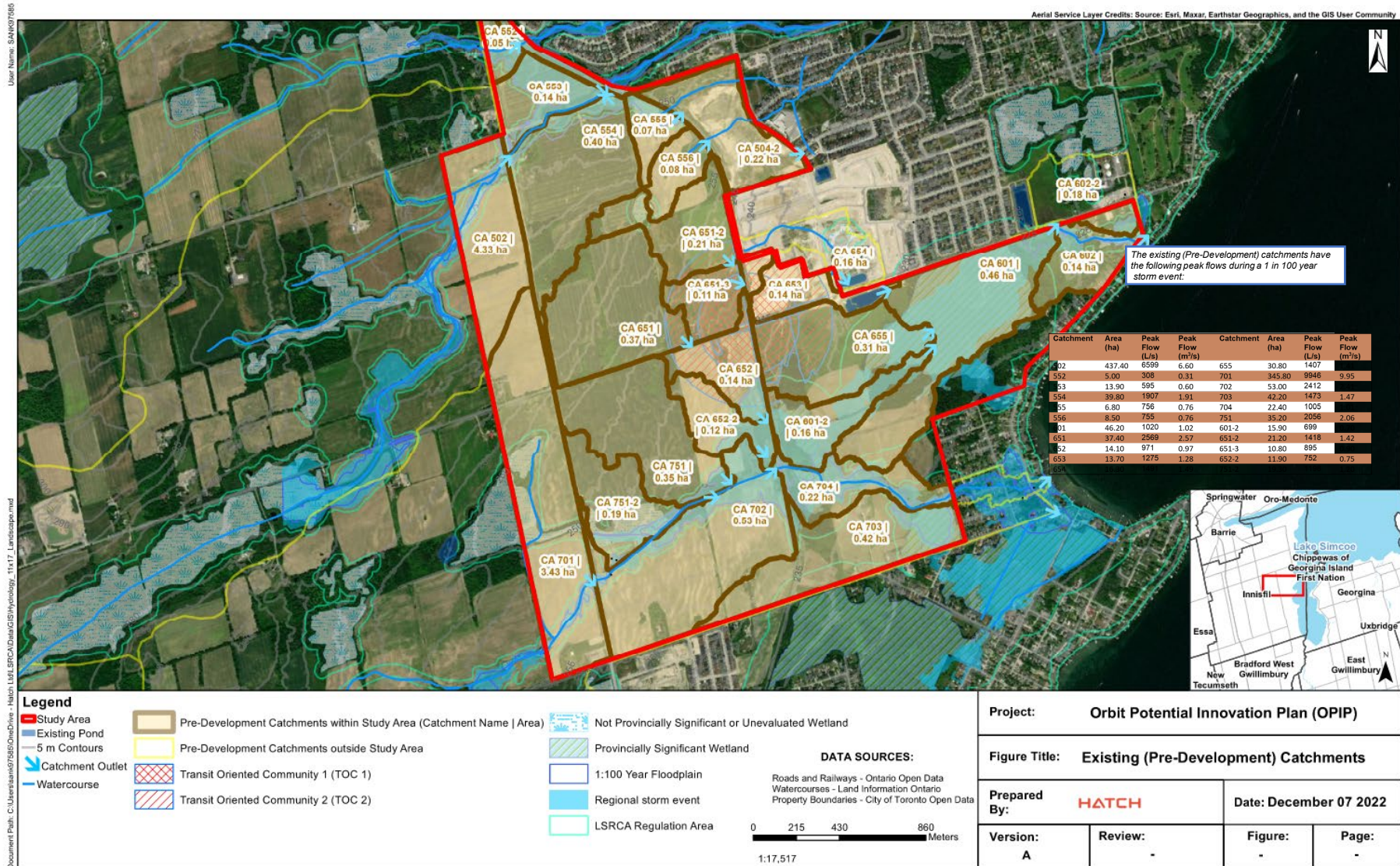
Design Criteria and Design Basis for Wastewater Servicing

	Unit	Value
Average Residential Flow	L/day per person	325
Average Industrial and Commercial Flow (20 m³/ha/d)	L/day per person	128
Harmon Peak Factor	2.6 (Residential) 3.5 (Commercial and Industrial)	
Average Day Flow	m ³ /day	7,175
Peak Flow	m ³ /day	28,619

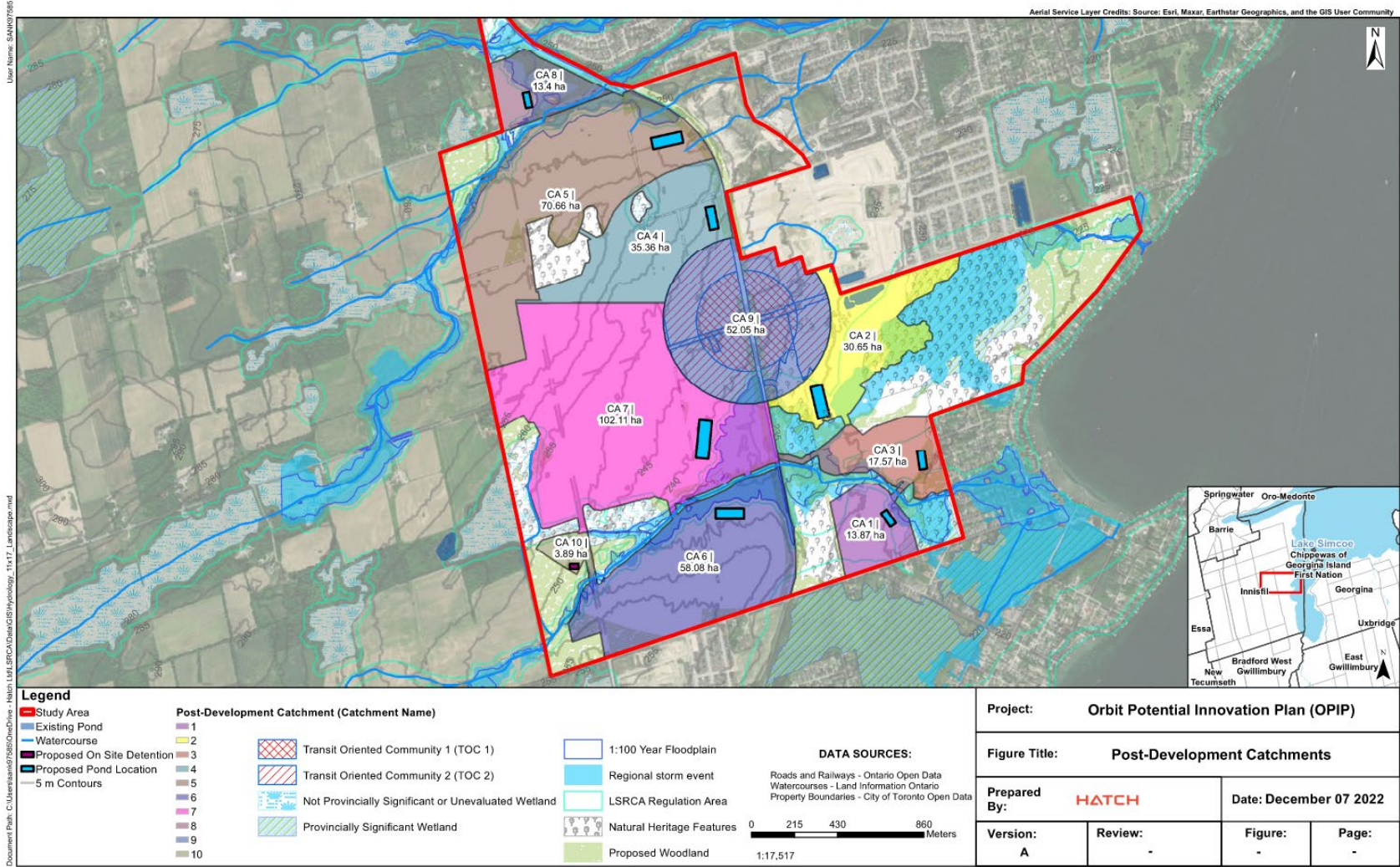
Wastewater 2051



Stormwater Existing Conditions



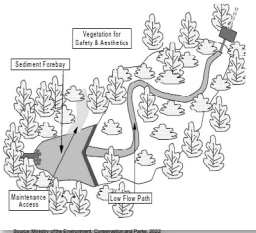
SWM Post Development Conditions



Stormwater Management

Best Management Practices – Water Quantity

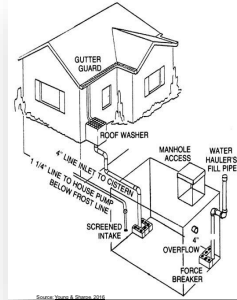
Dry Detention Ponds



Dry Ponds

Flood control structures to accommodate occasional excess overflow downstream. Ideal for managing infrequent extreme flow events; can be incorporated into parks and other green recreational spaces.

Storm Cisterns



Storm Cisterns

A storage tank located to collect runoff water from an impervious area such as parking lots.

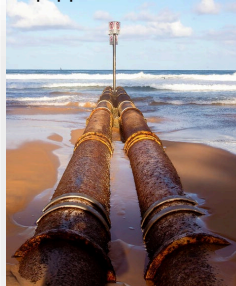
Stormwater Detention Units



Stormwater Detention Units

Stormwater detention systems are used to prevent flooding by temporarily holding stormwater runoff and providing the flexibility to release it in a slower, controlled way. By enabling a consistent runoff rate, detention systems help to manage stormwater surge.

Superpipes

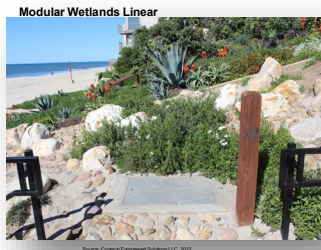


Superpipes

Oversized storm sewers to create extra pipe storage which can act as a detention storage and reduce water quantity.

Stormwater Management

Best Management Practices – Water Quality & Quantity



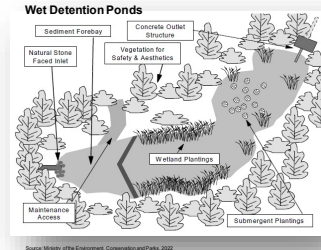
Modular Wetlands Linear

A biofiltration system can be installed downstream of storage for additional volume control and treatment. It can enhance pollutant removal, has greater filter surface area, and eliminates flooding.



Permeable Pavement

Allows stormwater to drain through the pavement surface into a storage reservoir.



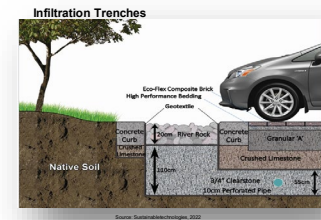
Wet Detention ponds with Sediment Forebay

An artificial lake typically surrounded by vegetation and continually contains water. It can be used to reduce flooding and protect the environment.



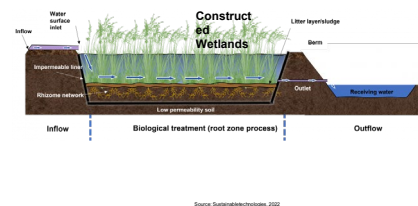
Bioretention & Rain Garden

Vegetated stormwater practices that temporarily store roof and pavement runoff in depressed planting beds or vertical-walled structures. It can be adapted to fit into many different development contexts and provides a convenient area for snow storage and treatment.



Infiltration Trenches & Chambers

Includes a range of proprietary manufactured, modular structures installed underground to create large void spaces that temporarily store and infiltrate runoff into the underlying native soil. Balancing the requirements to infiltrate excess stormwater whilst conveying excess.

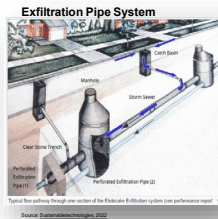


Constructed Wetlands

Free-water surface flow wetlands designed to incorporate shallow zones for wetland plants. Ideal for enhancing biodiversity and providing a more aesthetic aquatic landscape and can reduce health and safety risks.

Stormwater Management

Best Management Practices – Water Quality



Exfiltration Pipe System

Infiltration trenches integrated with conventional stormwater conveyance systems and designed for both conveyance and infiltration functions. It is ideal for road retrofits where sewer lines are being replaced, and new road/storm sewer constructions where no constraints to infiltration exist.



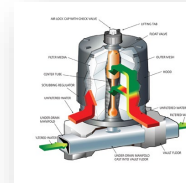
Sorbitive Media

Sorbitive Media is an oxide-based, high surface area reactive engineered media that absorbs and retains large amounts of dissolved phosphorus. It does not desorb (leach) pollutants.



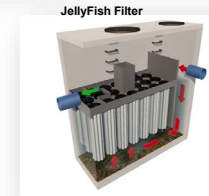
Vegetated Filter Strips

Gently sloping, densely vegetated areas that are designed to treat runoff as sheet flow from adjacent impervious surfaces.



StormFilter with PhosphoSorb Media

An underground stormwater treatment device comprised of one or more structures with PhosphoSorb media that removes total phosphorus.



Jellyfish Filter

A stormwater quality treatment technology featuring a large surface area membrane that filters litter, oil, debris, TSS and fine silt-sized particles at a high flow rate.



Stormceptor

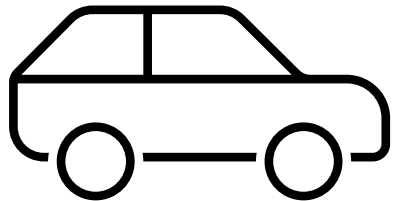
An oil grit separator/hydrodynamic separator designed to protect waterways from hazardous material spills and stormwater pollution. It can continuously provide treatment of TSS regardless of flow rate.



BayFilter with Enhanced Media Cartridges

A system consisting of modular cartridges placed in vaults for stormwater treatment. It can self-cleaning backwash component and prevent unwanted standing water during dry period.




Looking for your feedback



Sustainability in Orbit

The Town of Innisfil defines sustainability as measures and actions that assure there will be sufficient resources for both present and future generations. The principles for Orbit move us toward a natural and forward-thinking shift in sustainability practices. The principles feature themes that guide development and involve the creation, monitoring, and maintenance of conditions that support a harmonized existence between the Orbit and our natural environment.




The team has created a series of Key Performance Indicators (KPIs) for the sustainability principles. These indicators can be used by the Town to measure whether, and to what extent, the Orbit is achieving these goals.

Principle	Key Performance Indicators (KPIs)	Recommended Measure / Target
Social and Cultural Viability 	Access to healthy and locally-sourced food	Consistent with Canadian Local Food Infrastructure Fund reporting requirements
	# of multi-function spaces	Spaces that can serve as community assets in the event of emergency: tornado shelters, medical facilities, and other
Quality of Lake Simcoe 	% of riparian areas under management	Management plans help to provide buffer zones that mitigate flood damage and help to avert soil erosion
	Removal of 80% of total suspended solids (TSS) and phosphorus from stormwater	Protect health of Lake Simcoe by preventing release of pollutants
Environment and Green Space 	# of trees planted annually	Like Toronto's Strategic Forest Management Plan, track how many trees are planted with a >75% survival rate within five years of planting
	% of residents with access to green space	Access defined as within 0.5km, i.e., a five-to-ten-minute walk

Sustainability in Orbit

The Town of Innisfil defines sustainability as measures and actions that assure there will be sufficient resources for both present and future generations. The principles for Orbit move us toward a natural and forward-thinking shift in sustainability practices. The principles feature themes that guide development and involve the creation, monitoring, and maintenance of conditions that support a harmonized existence between the Orbit and our natural environment.

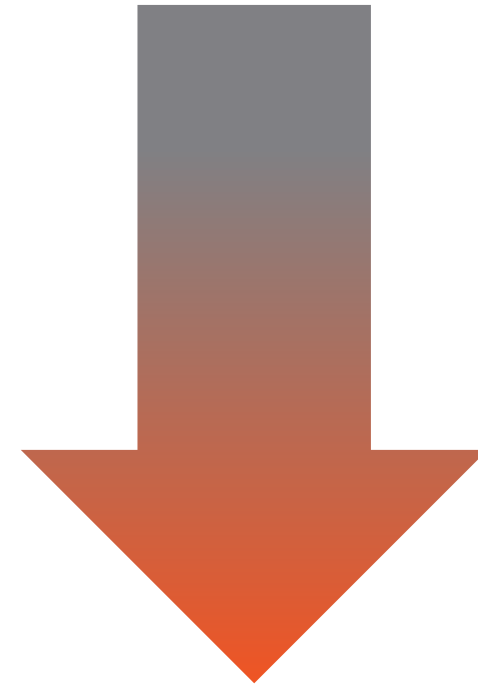
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Principle	Key Performance Indicators (KPIs)	Recommended Measure / Target
Energy 	Amount of energy consumed by the neighbourhood	Requires energy-usage monitoring systems
	Existence of a Power Disruption Risk Management Plan	Creation of a plan to provide steps to be taken to minimize the chances, and effects of, a loss of electrical power to the Orbit
Transportation and Mobility 	At least 15% of trips to/from Orbit by bicycle or walking (active transportation)	Consistent with Town of Innisfil's broader goals for moving to active transportation
	Provision of EV-ready parking within all multi-residential units	Preparation for all-EV marketplace expected next decade
Buildings 	% of sustainable materials used in building construction	Requires energy-usage monitoring systems
	% of rainwater retained from building roofs	Minimum of 75% retained is a good target

What's next?

Upcoming Milestones and Activities

- Receive and address comments.
- Finalize Servicing Master Plan and Secondary Plan.
- The Servicing Master Plan will be published for comment in early 2023.
- The Secondary Plan will be presented to Council in early 2023.
- Council Adoption of Secondary Plan.



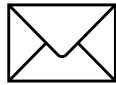
Q1 2023

We Want Your Feedback

Your feedback is important to inform the Orbit Potential and Innovation Plan. Please share your comments by:



Submitting a Comment Sheet online via the Project website:
<https://innisfil.ca/en/building-and-development/orbit.aspx>



Sending an email with your comments to the Project inbox:
Orbit@Innisfil.ca



Visit the Project website for updates and sign up to be added to the Project Contact List

Comments received up to January 11, 2023 will be included in the PIC Summary Report which will be published on the Project website in January 2023.