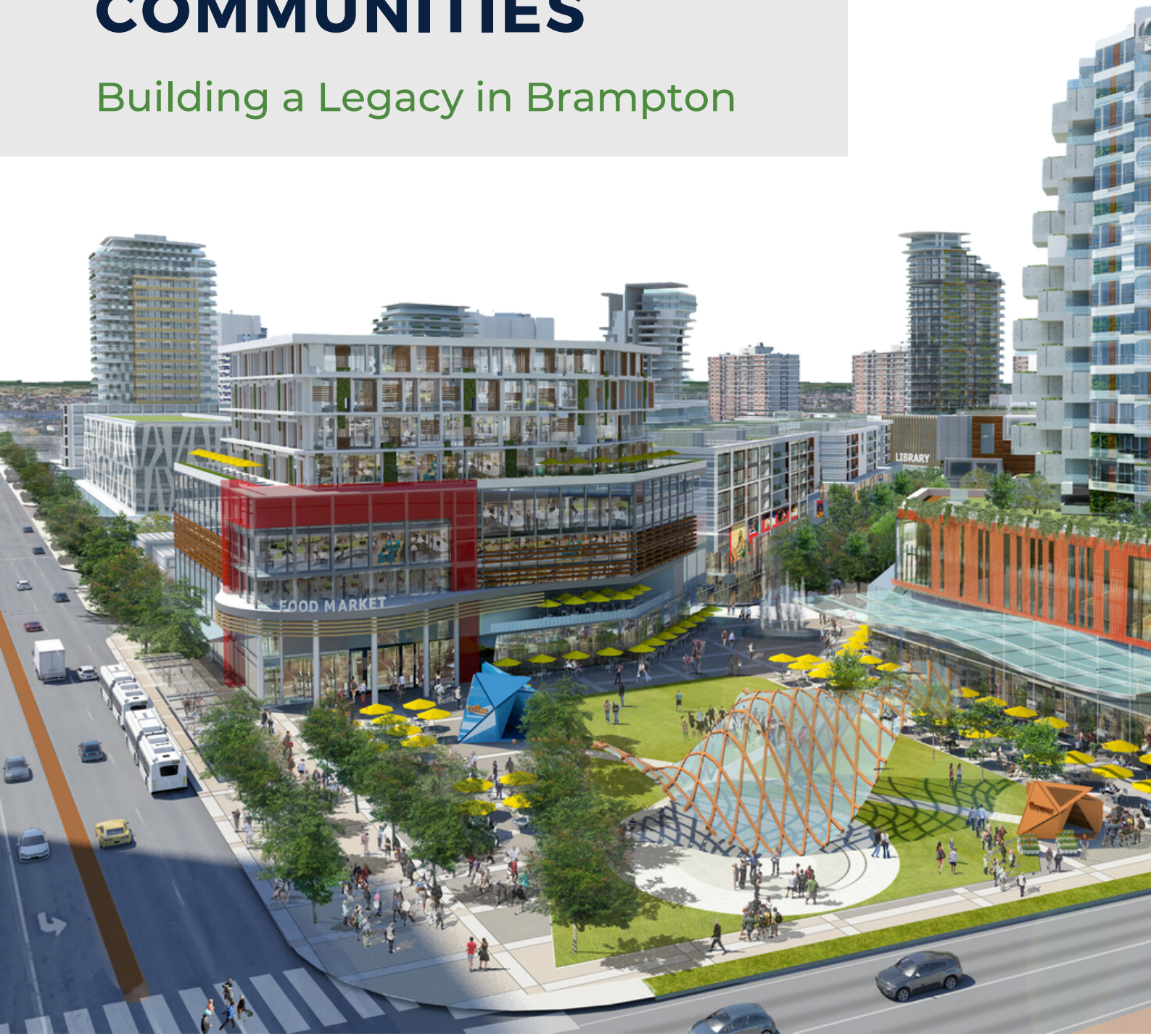


GETTING TO TRANSIT ORIENTED COMMUNITIES

Building a Legacy in Brampton



GETTING TO TRANSIT ORIENTED COMMUNITIES: BRAMPTON, ONTARIO

An unprecedented investment in transit presents a unique opportunity to transform the communities in the Toronto Region and provide a lasting legacy for future generations. The municipalities circling Toronto have used the investment to turn ambitious plans into reality by providing focal points to their communities.

Building successful transit-oriented communities requires a balance between density, diversity, and design. These municipalities must become destinations themselves, mixing housing with employment, public services and local retail, parks, restaurants and other amenities, wrapped together with local character. Building tightly packed residential properties alone will reinforce the status of these municipalities as places where people sleep, while travelling to work and spend their free time elsewhere.

The Urban Land Institute Toronto and the Future of Infrastructure Group looked at Brampton, Ontario in more detail to provide learnings for successful approaches to developing transit-oriented communities. The output is this report explores the different approaches Brampton has taken to help all the different stakeholders work together to deliver a successful and vibrant transit-oriented community.

Decisions made now will shape the community for decades ahead. It will set the platform for the success of Brampton as it looks to attract people, jobs, and investment, and enable the community to absorb the level of population growth anticipated over the long-term. The choices made now around the integration of the transit network, the availability of public spaces and public services, the mix of residential and commercial, all shape how the area will develop and evolve over time.

By looking to provide clarity through a vision and overall plans, and enabling coordination around local infrastructure and development, Brampton is engendering a shared sense of pride across all those with a stake in transforming the Shoppers World site and providing the mechanisms to enable people to work together towards that vision. A key challenge to address is how each party contributes in a fair way to pay for the local infrastructure and amenities that will provide a significant value uplift to the area, and how to demonstrate that by working together that value uplift can be significantly greater.

BRAMPTON UPTOWN HURONTARIO-STEELES

Transit: Hurontario light rail

Description: Suburban light rail

Former use: Shoppers World Mall and parking

A new light rail is providing a catalyst to densify the area, with a new community hub, green space, and private development building a vibrant, welcoming community.



CASE STUDY: BRAMPTON

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Key Organizations Involved:

- Government of Canada – funder
- Province of Ontario – funder
- Infrastructure Ontario – procurement and delivery
- Metrolinx – project owner, regional transit authority
- City of Brampton – planning, approvals, and funder
- Region of Peel – stakeholder, planning
- Brampton Transit – municipal transit provider
- Mobilinx – design, construction, financing, operating and maintaining joint venture for LRT
- Developers – real estate development around station
- Conservation authorities – oversee environmental protection, and creeks and rivers

Brampton is the fastest growing large city in Canada, and is seeing a major investment in transit, most notably the Hurontario light rail line. A major challenge identified previously is delivery. With a complex network of landowners, and competing priorities between infrastructure providers and developers, Brampton has tackled this in two main ways. Firstly, it has a clear vision for how it sees its community develop, ensuring all the local decision-makers are on the same page. Secondly, it has created a unique living plan, this provides ongoing visibility of the development taking place across the City and enables different local landowners and developers to work together to identify win-wins and approach problem solving in a more collaborative way.

The vision has also shaped how Brampton will approach building a true community where people live, work, and play. The transit investment has acted as a catalyst but the city is looking to make sure it is easy for people to walk, cycle or take transit by creating safe streets. Brampton has set in motion an innovative community hub which brings together various public services and recreational activities under one roof to enable people to more easily get access to public services and make the most of municipal infrastructure.

The transit investment has also supported efforts to attract students and employers. The city's economic development department has strived to carve out a niche that ensures people will be able to work locally, and by making the area transit accessible it is easier for the growing student population to get around. The city has also worked to support local businesses to help provide a unique character to Brampton, building on their vision.

Finally, Brampton has also used this transformation to help meet its environmental goals, while also enhancing the attractiveness of the community by making their creeks and parks a key feature of the community. The city has designed the streetscape around nature with the added benefit of providing greater resilience to extreme weather and reducing costs by using nature to reduce flood risk and extreme temperature. Investment in district energy and high quality, energy efficient building design they hope will also be attractive to companies looking at potential locations.



Credit: BDP Quadrangle

STRIKING A BALANCE TO ACHIEVE TRANSIT ORIENTED COMMUNITIES

The Greater Toronto Region is the fastest growing metropolitan region in Canada and the US with 128,000 more people living in the region over the course of 2019. As with many cities across North America this growth puts strain on housing supply and local infrastructure. A greater emphasis on the connection between infrastructure and land use within Ontario through the development of Transit Oriented Communities provides an opportunity boost housing supply, reduce regional congestion, support economic growth, and reach environmental goals. This requires a balance of density, diversity, and design, as coined by Cervero and Kockelman, to deliver a successful transit oriented community for the long-term.

	DENSITY	DIVERSITY	DESIGN
Shared vision and living plan	Coordinated vision and planning creates more win-wins and trade offs that enable greater density	Visibility of what is being built highlights gaps and opportunities to find space and the best location for amenities and public services	Provides clarity between property and contract lines to enable better connections and coordination and a better end product for all
Designing for social equity	Co-locating services under one roof ensures public facilities are used round the clock and saves space and operating and maintenance costs	Variety of services delivered under one roof provides more integrated services and better outcomes for users of public services	Better design enables people to integrate better into their communities, provides more access to jobs and amenities, and encourages healthy choices
Unlocking transit's potential	Transit acts as a catalyst for density as more people can walk and take transit, and less space needs to be dedicated to roads and parking	Mixed land use ensures that travel on transit is two way at peak times, reducing strain on the system and ensuring it takes longer to reach capacity	Safer street design encourages pedestrians, cyclists and transit users. Reducing barriers between transport modes drives more transit ridership
Catalyst for Climate Action and Resilience	Density enables services to be concentrated, reduces the need for travel and reduces cost of delivering services, it also provides opportunities for shared facilities and energy systems	Green spaces attract people into the community and offset the extremes of heat and flooding, more diverse local activities reduce the need to travel	Integrating nature into the community provides a natural defence against extreme weather, smart design encourages active travel and transit use
Creating Jobs and a Local Legacy	Walkable and transit access to employment attracts more people into the community, and attracts more businesses to invest	Attracting local jobs helps break a cycle of municipalities around Toronto sending workers into the city during the day, local jobs support local businesses	A unique location is attractive to businesses and skilled workers looking to choose where to locate

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The Future of Infrastructure Group (FIG) and the Urban Land Institute Toronto (ULI) brought together leading experts from the developer and infrastructure communities, and the public sector to host workshops around five themes critical to the success of transit oriented communities to develop recommendations.

With thanks to the **ULI Curtis Infrastructure Initiative** for supporting this work. The ULI Curtis Infrastructure Initiative aims to build a movement to promote infrastructure solutions that are equitable and resilient and that enhance long-term community value. By creating new global and strategic partnerships, providing technical assistance, building capacity at the local level, and acting as a feedback loop to promote the most innovative and effective best practices, the Curtis Infrastructure Initiative supports ULI's mission to positively shape the future of the built environment for transformative impact in communities worldwide. A thoughtful approach to infrastructure planning and implementation addresses the pressing needs of today and improves diverse communities for the long term.



ABOUT THE URBAN LAND INSTITUTE TORONTO

Our mission is to shape the future of the built environment for transformative impact in communities worldwide. We provide our members with independent forums for discussion and debate about city building issues and best practices. ULI Toronto carries forth that mission, while helping to shape a sustainable and thriving future for the Toronto Region. We are supported by over 2500 public and private sector members.



ABOUT THE FUTURE OF INFRASTRUCTURE GROUP

The Future of Infrastructure Group brings together industry leaders in the sector to provide a positive, and coherent voice to help governments across Canada deliver the best value from infrastructure investments. To make the most out of Canada's planned investments, this group discusses and shares their expertise on best approaches to prioritizing, planning, purchasing, constructing, maintaining, and operating infrastructure.

2023

With thanks to working group leads:

Rowan Mills, Colliers Project Leaders
 Yvonne Yeung, SDG Strategies
 Ken Greenberg, Greenberg Consultants
 Matti Siemiatycki, University of Toronto
 Richard Joy, ULI Toronto
 Alexandra Rybak, ULI Toronto
 Jess Neilson, Future of Infrastructure Group
 John Allen, Future of Infrastructure Group
 Alexander Kostenko, Future of Infrastructure Group

BENEFITS OF TRANSIT ORIENTED COMMUNITIES

Transit-oriented communities was a phrase coined by the Ontario provincial government. They are defined as higher density, mixed-use developments that are connected, next to, or within a short walk from transit. With the Ontario Government committing C\$62 billion to transit from 2022-2032, there are swathes of land that could be developed into vibrant, mixed-use communities. Decisions made now around how to shape communities around this massive transit investment will be felt over generations.

Benefits of Transit-Oriented Communities

- increasing transit ridership and reducing traffic congestion
- increasing housing supply (including affordable housing) and jobs
- catalyzing complete communities based on good planning principles
- offsetting the cost of station construction which would save taxpayers' money
- stimulating the economy through major projects

The Greater Toronto and Hamilton Area lays claim to being the fastest growing metropolitan region in Canada and the US. The population across the region is expected to grow by over one third to 9.5 million people by 2046. There are consequences to this growth. House prices in the city have risen by 128% in the last 10 years, and Toronto saw house prices rise 18.3% from September 2020 to September 2021 alone. Research from the Toronto Region Board of Trade also found that a lack of affordable housing for the workforce is costing the region \$7.98 billion per year. Congestion continues to choke the Toronto Region and was calculated to cost the economy over \$6 billion a year and negatively impact quality of life.

The solution to the housing crisis involves building significantly more homes and more besides. People need to travel to work, people need access to public services like education and healthcare, people need to go to the shops, and people want to enjoy their leisure time. Building a mixed community of homes, services, and workplaces around stations will ensure that the transit network is better placed to handle growing ridership as people travel into Brampton at different times of day, rather than predominantly using transit to commute into major employment centres like Toronto.

The C\$62 billion planned investment can be transformational for the province, and in particular for the municipalities that circle downtown Toronto. To successfully transition from car-dependent, or commuter centres, into thriving cities for the long-term there needs a balance of density, diversity, and design (Cervero and Kockelman). These municipalities need to be destinations themselves, mixing housing, employment, public services, and enjoyment to attract people and jobs.

DENSITY	DIVERSITY	DESIGN
Dense communities built within 10-15 minutes walking distance of rapid transit	Diverse land use that encourages high transit ridership into the community and a vibrant neighbourhood	High quality urban design and green space that draws people to public spaces

To deliver on this vision of a successful Transit Oriented Community is not simple given the different interests and stakeholders involved. The Urban Land Institute and Future of Infrastructure Group previously undertook research which outlined the main barriers and subsequent learnings to deliver successful transit-oriented communities.

BARRIERS

- Organizational and responsibility fragmentation
- Established, inflexible processes
- Lack of dedicated personnel and resources
- Different mindsets between infrastructure and development
- Accepted concept of fair value capture
- Technical challenges and physical barriers
- Integration of stations with other transit and the community
- Availability and provision of public services
- Land ownership and multiple owners
- Role of cars and relationship with transit and development
- Competing priorities

LEARNINGS

- Starting from a clear, shared vision across stakeholders
- Clear governance, expedited processes, and dedicated resources
- Integrating the station into the community through design and land use
- Policies that enable prioritization of pedestrians and transit
- Building in adaptability to processes by focusing on vision and outcomes
- A fair and consistent mechanism to capture value from transit and infrastructure investment
- Building a mixed-use community where people can live, work, and play that becomes a destination

The benefits of transit-oriented communities are well defined. The challenge is to develop an environment where different levels of government, landowners, and developers can work together to deliver a community that adds up to more than the sum of its parts. Based on the Brampton workshops there were three key elements that help turn the concept into a successful transit-oriented community:

CLARITY	COORDINATION	CONTRIBUTION
Build a clear vision and ensure all municipal plans and processes work together to deliver a vibrant community	Provide visibility of local infrastructure and development plans, and create opportunities to partner	Develop a fair approach to paying for the development infrastructure and amenities that demonstrates value uplift

Credit: BDP Quadrangle



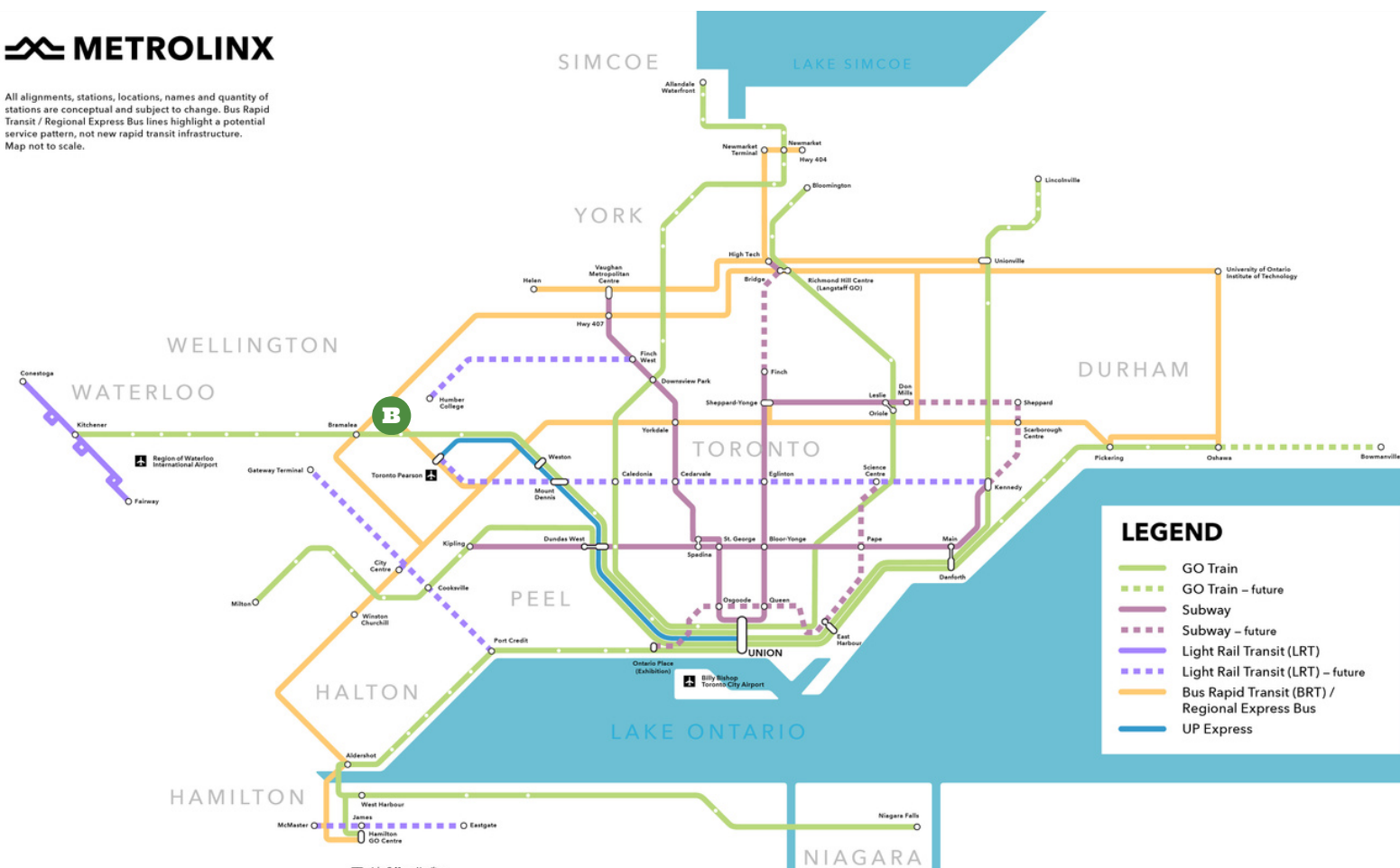
BRAMPTON

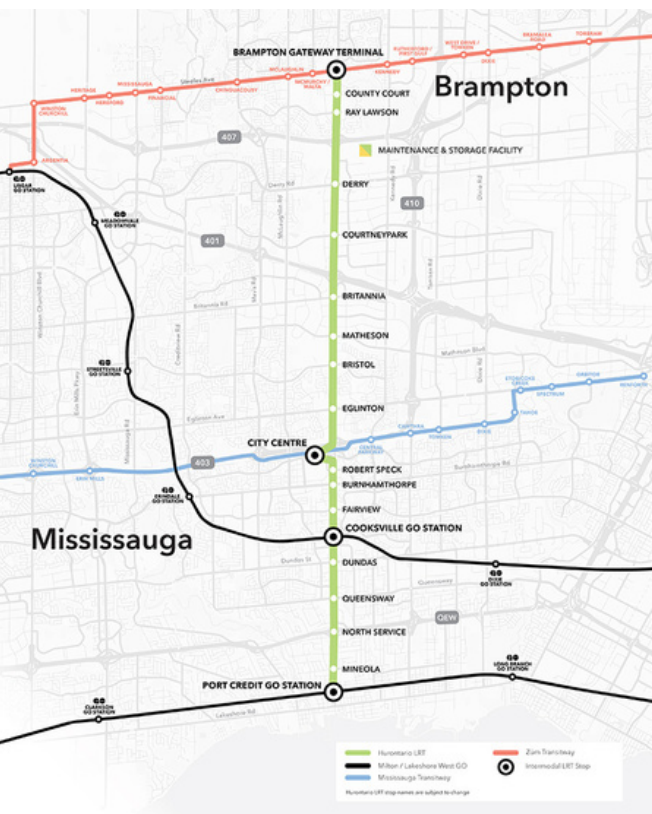
The City of Brampton is located northwest of Toronto, in Ontario. Brampton is Canada’s ninth largest city, Canada’s fastest growing large city, and one of Canada’s youngest cities. It is undergoing a period of rapid transformation and is currently growing at three times the provincial average. In 2021, Brampton had roughly 700,000 residents and gained 36,000 new residents with a growth rate of 10.6% between 2016 and 2021. The city is one of the most diverse in Canada with 73% of the population coming from visible minorities, 52% of the population are immigrants to Canada, with 39% of those immigrants aged 25-44.

One of the challenges it is looking to address through its Vision 2040 Plan is to increase the proportion of people working within Brampton. Currently 60% of working people must leave the city for their jobs. Brampton Economic Development has gained traction in attracting businesses into the area and is leveraging a growing educational ecosystem to build on areas of strength such as healthcare and cybersecurity. To support this growth the city has recognized it needs to build out the kinds of services and activities people need and enjoy. This includes providing a variety of retail, restaurants and entertainment, leisure activities, and natural spaces. Brampton is building on its assets of a young population, diverse community, strategic location, and its system of creeks to attract people and businesses to the area.



All alignments, stations, locations, names and quantity of stations are conceptual and subject to change. Bus Rapid Transit / Regional Express Bus lines highlight a potential service pattern, not new rapid transit infrastructure. Map not to scale.





Hurontario LRT

- Size: 18km of LRT
- Cost: \$4.6 billion
- Number of stops: 19
- Contract Type: Design Build Finance Operate Maintain
- Estimated Completion: 2024

TRANSIT INVESTMENT

Linked to this growth there is major investment underway in transit. Across the Greater Toronto Hamilton Area, 22 percent of trips are short enough for walking and 56 percent are short enough for cycling, but currently only 11 percent are using these modes. This investment will be the catalyst for much of what Brampton hopes to become as a complete, walkable, healthy, family-friendly transit-oriented community. The city has set an aspirational target of 75 percent of short trips be either on foot or cycle and backed that up by removing parking minimums around the mobility hubs.

A key part of that plan is the Hurontario LRT announced in October 2019 that will run like a spine through the Region of Peel as it experiences rapid population growth and urbanization. The 18km line with 19 stops starts in Mississauga at Port Credit GO Station, ending in Brampton at the Brampton Gateway Terminal.

The Hurontario line will connect commuters with GO Transit on the Milton and Lakeshore West Lines, the Mississauga Transitway, and local transit providers through connections with Brampton Transit, ZUM and MiWay. The line will also have its own dedicated right-of-way lane to ease traffic and congestion on the major roadway it will operate on. The \$4.6 billion project is set to be in service by fall 2024. Cutting across Hurontario in Uptown Brampton is the Steeles Bus Rapid Transit corridor which connects to the Milton GO line in the West and Humber College in the East.

Linked to the transit plans the City of Brampton released its Active Transportation Master Plan to move more people from cars to walking and cycling, and support transit use. The plans derive from the city's Vision 2040 which has seven targets, including "safe, integrated transport choices and new modes, contributing to civic sustainability, and emphasizing walking, cycling and transit." The goals of the Active Transportation Master Plan are to improve the safety of walking and cycling, provide options for all residents, maximize the value of existing infrastructure, invest efficiently in an expanding network, improve access to transit and viable active first/last mile options.

VISION 2040

“Brampton will be a city ‘By-Design’, where design excellence is led by City Hall to ensure public interests, completed in a studio setting through co-design with developers and citizens, and made a prime factor in all approvals and decisions for change.”

The City of Brampton adopted Vision 2040 which is guiding the shift from car-dependence to a transit-oriented community to shape what Brampton will become over the next 25 years. The goal is to position Uptown Brampton as the new transit-oriented gateway and beating heart of the city.

Since its adoption of Vision 2040, the city has received over 13 million square feet of development proposals to transform the community. The City of Brampton is leading the way with innovative design thinking with the end-user in mind to drive a sustainable economic recovery, focusing on education, walkability, and attracting residents and investments. Upon completion, Uptown Brampton is expected to attract 100,000 people working and living within a 20-minute distance from Hurontario-Steeles.

Brampton 2040 Vision

The goal for the 2040 Vision is to re-imagine a future Brampton that grows not only in population size, but diversity across people, jobs, and opportunities by 2040. The vision rests upon seven aspirational values to help drive its future planning. The new Brampton Core is the focal point of the vision surrounding Uptown to become the corporate “hotspot and tourist destination”. Brampton expects by 2040 to add over 136,000 dwelling units, 385,000 residents and over 185,000 jobs.

1. Host sustainable urban places with an interconnected green park network.
2. A vibrant centre with quality jobs, rich activities and integrated living.
3. Have characterful and complete neighbourhoods.
4. Have safe, integrated transportation choices and new modes that contribute to civic sustainability that emphasize and encourage walking, cycling and transit.
5. Be a place that drives social responsibility, respectfulness and justice.
6. Have healthy citizens that can easily enjoy physical and mental wellness, fitness and sports.
7. Provide a place for artistic expression and production.

The Hurontario-Main Corridor Secondary Plan outlines objectives and criteria including promoting complete streets and attractive places, mixed use neighbourhoods, and transit-oriented growth. Land use is also geared towards higher urban density and a move away from car-oriented and single use development.

Credit: BDP Quadrangle



WORKSHOPS

Over the course of 2022, the ULI Toronto and the Future of Infrastructure Group held five sessions to explore the case of Uptown Brampton. The sessions provided an in-depth exploration of topics that create holistic city by-design. The goal of these sessions was to look at how to improve the way in which transit-oriented communities are delivered by learning from Uptown Brampton while elevating innovation and synergies.

1

SHARED VISION DELIVERING MORE THAN THE SUM OF ITS PARTS

Looked at the value of a living plan in driving better coordination and continuity across different developments



2

SOCIAL EQUITY BUILDING INTEGRATED SERVICES AND A STRONG COMMUNITY

Explored the role of a community hub in providing integrated public services targeted at the local community



3

UNLOCKING TRANSIT DEVELOPING THE ARTERIES FOR GROWTH

Mapped out what is needed to encourage more transit use, walking and cycling to enable greater density



4

CATALYST FOR CLIMATE REDUCING EMISSIONS, BUILDING RESILIENCE, SAVING MONEY

Examined the benefits of green space in enabling greater density, protecting against flooding, and attracting people and investment

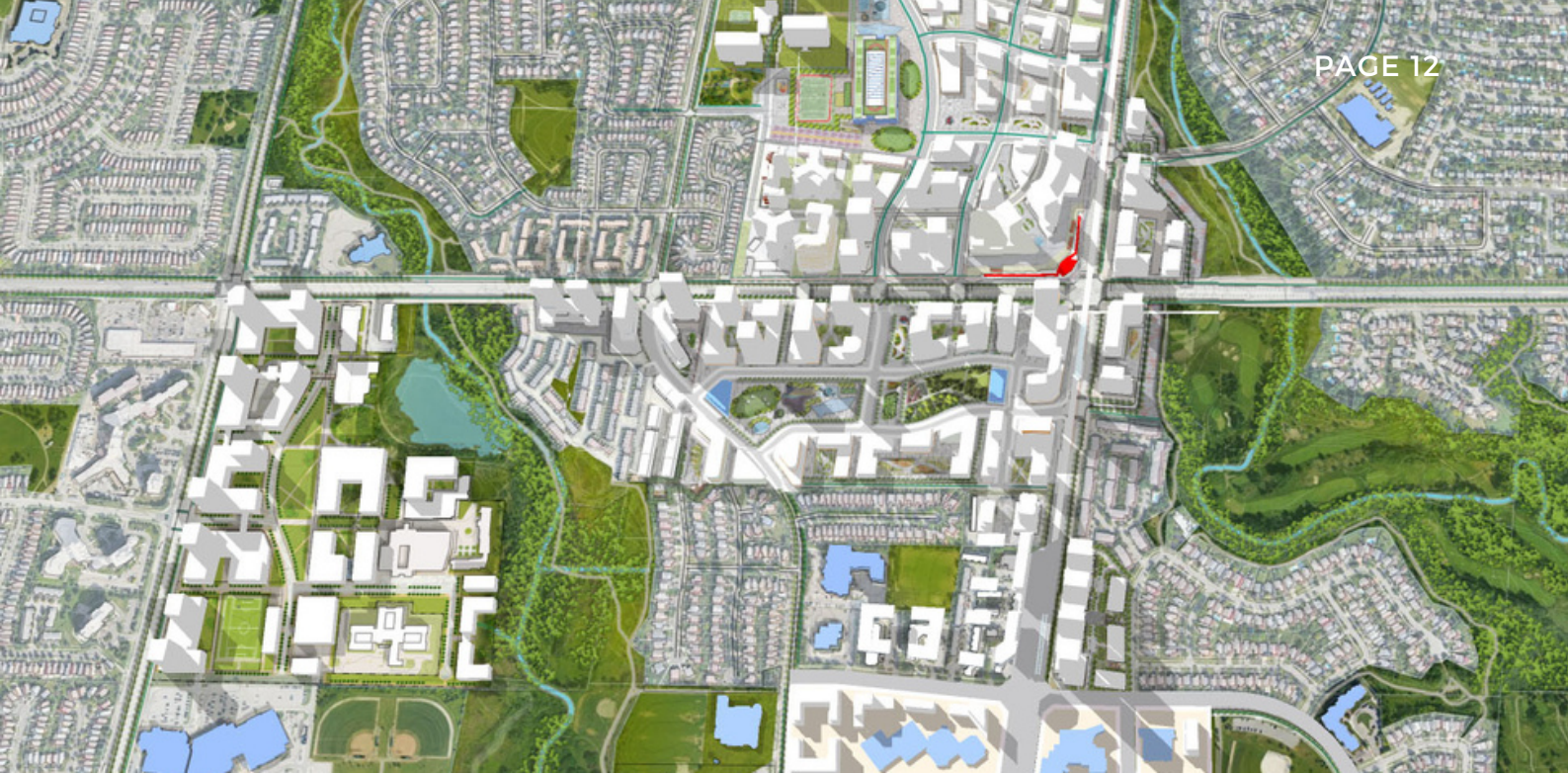


5

CREATING JOBS & LEGACY ATTRACTING PEOPLE AND INVESTMENT WITH MIXED USE

Discussed the importance of attracting people into the community through good quality jobs and vibrant local businesses





1

SHARED VISION & LIVING PLAN CHALLENGE: DELIVERING MORE THAN THE SUM OF ITS PARTS

Overview: In all projects, there are complicated relationships between different orders of government and private sector stakeholders to deliver well integrated public and private spaces. Development of infrastructure, particularly transit, happens at a different pace to real estate development. A lack of visibility of the bigger picture reduces opportunities for collaboration and can cause friction which ultimately prevents the community from reaching its potential. The process in Brampton has remained constructive throughout by working from a dynamic living plan which provides visibility of all the development happening and helps to reduce siloed thinking to drive better outcomes for the local community.

The Challenge: Planning communities is complex with many moving parts and multiple landowners and stakeholders. Brampton continues to grow at three times the provincial average and is building over 115km of rapid transit. There are more than 13 sites under development concurrently, while the design of six rapid transit stations is underway. Ultimately Uptown Brampton will be home to 40,000 new residents and 27,000 new jobs. All developments are in some way interrelated, but the challenge is the huge number of fragmented parcels of land with different landowners. Changes are occurring across multiple jurisdictions, and each have their own set of technical review tools. Credit Valley Conservation, the Region of Peel, Brampton Transit, the City of Brampton, Metrolinx and the Toronto and Region Conservation Authority all have a role in planning and approvals.

Statutory planning tools are essential and mandated by the Planning Act, but they are siloed, static and work sequentially. The tools are not dynamic enough to capture all the actors at the same time and how their actions work together. This leads to statutory planning tools becoming protected and set up to work within rigid contract lines, jurisdictional lines, and the regulatory process focuses on limiting potential harm. The major drawback is the missed opportunity around collaboration that can amplify how successful a transit-oriented community could be.

The Solution: The acceleration in development of Transit-Oriented Communities has created a need for a holistic place-based plan with more dynamic tools operating alongside the planning process. A clear overarching vision and the use of these tools better guides the review of formal submissions and encourages informal partnerships. The vision helps to shape secondary plans, zoning by-laws, design guidelines, and environmental assessments.

In Brampton this is being achieved through a living plan which provides a two-dimensional plan and a three-dimensional model of development that gives the government and developers greater visibility of all the development happening in the area beyond their own contractual boundaries. This can help to ensure that there is a good mix of density, design, and diversity as all parties involved can get a true sense of the scale of developments and where there may be gaps.

A living plan is regularly updated and brings together the development planning with traffic and transit planning, parks and open spaces, recreation, and public services like schools and libraries. The visibility enables the City to knit the community together providing more walkable communities and public spaces that tie in well with the developments. For developers the benefit is that the community is much more attractive for new residents and there is an opportunity to work together with other partners to identify win-wins and move beyond the typical adversarial approach.

A tangible example of the benefits of the living plan was the development of a community hub which brought together different public services under one roof to help provide more integrated services and reduce capital costs. The main street also benefited as the city was able to bring neighbouring properties together to deliver an integrated tree lined street design which helps keep streets cool in summer and reduce water runoff.

KEY TAKEAWAYS

DENSITY	DIVERSITY	DESIGN
Coordinated vision and planning creates more win-wins and trade offs that enable greater density	Visibility of what is being built highlights gaps and opportunities to find space and the best location for amenities and public services	Provides clarity between property and contract lines to enable better connections and coordination and a better end product for all

- Overarching Vision:** The vision provides a clear direction that guides more tactical elements. Mayor and Council support goes a long way in embedding the vision into the planning process and how municipal departments work together and their interactions with external stakeholders.
- Iterative Process:** The Living Plan provides a single point of truth across all parties that can help ensure everybody is on the same page. Consistent check-ins with all parties are required to confirm that the vision is unfolding as planned and that adjustments are made as necessary and to assess where there might be opportunities for greater collaboration. This ensures that a holistic discussion is being held so that the development knits itself into the community right from the start.
- Speed of Process:** The Living Plan must not slow down the process in terms of development applications, otherwise it would risk becoming a source of frustration. It is a useful tool to focus discussions on the bigger picture in real time as a complement to official processes and drive opportunities for collaboration that would otherwise be missed.



2

DESIGNING FOR SOCIAL EQUITY CHALLENGE: BUILDING INTEGRATED SERVICES AND A STRONG COMMUNITY

Overview: Since 2020, the City of Brampton has experienced a high level of growth of high-density mixed-use development proposals along rapid transit served areas. This has presented an opportunity for the City to take a proactive role to deliver a complete, walkable, healthy, family and transit-oriented community to increase Brampton's competitiveness while providing a space to attract and welcome new residents. The growth in population requires good local public services, and the coordinated approach and clear vision laid the groundwork for a Community Hub that houses health, social, library, education, recreation, arts and culture services under one roof. The colocation of public facilities enables greater service integration, enhances health and wellbeing, and provides a liveable, walkable community. The other clear benefit is the reduced cost of building and operations, and reduced emissions from construction.

The Challenge: The 2021 Census showed Brampton's growth represented 90.2% of the net population growth within the Region of Peel between 2016 and 2021. The city has also had to wrestle with providing appropriate services for a very diverse community. COVID-19 demonstrated how difficult it is to rely on single-use facilities to deliver services to residents and businesses effectively along with the psychological impact of social isolation.

The Solution: The community hub in Uptown's Core is intended to be a multi-purpose facility which will include a school, community recreation centre, a library and several wrap-around services including a day-care, arts and culture spaces and other community offerings. The colocation of services is critical as it removes the need for residents to move between places that may be a barrier to them getting the support they need. Recreation facilities are a catalyst to bring people into use the variety of programs targeted different segments of the local community. The multi-purpose community hub can allow for the design of programs to accommodate a variety of users throughout the day and evening. The key is to ensure that services are integrated and targeted for those who are the most vulnerable and need support.

Additionally, there is a link between health equity and the built environment. The way we plan our built environment can improve health, or it can reinforce local disparities if health is not accounted for. Community design must be looked at through the lens and understanding of to make healthier choices in their daily lives. This includes everything from being able to access healthy and affordable food, the location of food outlets near transit and other community services and the incorporation of community gardens. It also includes walkability and social cohesion factors such as reducing car dependency, the design and feel of the streetscape, and lighting at night. It also includes enhancing road safety and injury prevention through creating safer intersections and protecting pedestrians and cyclists. All these pieces together create communities, enhance social equity, and enhance interaction that is fundamental to achieving diversity and cohesion.

KEY TAKEAWAYS

DENSITY	DIVERSITY	DESIGN
Co-locating services under one roof ensures public facilities are used round the clock and saves space and operating and maintenance costs	Variety of services delivered under one roof provides more integrated services and better outcomes for users of public services	Better design enables people to integrate better into their communities, provides more access to jobs and amenities, and encourages healthy choices

- Assess Community Needs:** Cities need to engage a representative cross section of the community to assess their needs on the ground. This includes those who are racialized, to youth to seniors, from small businesses to large businesses and new entrepreneurs. Undertaking this research can help shape programs and design hubs that serve everyone and have a more positive, long-lasting impact
- Co-locate Services:** Ensuring that services are integrated, seamless, and include wrap-around supports is an excellent way to tackle inequity. When all these services combine programming and space it benefits the people who rely on them most, while achieving operating and cost savings. Building design has a massive impact on effective public service delivery and end user experience and smart up-front investments provide a payback from delivering better outcomes and reducing the strain of other public services.
- Health Equity and the Built Environment:** Make it easier for people to make unconscious healthy decisions based on the design of their built environment, such as incorporating walking and cycling infrastructure, providing easy access to affordable food choices close to transportation and housing, develop spaces where people can socialize, and designing safer streets to reduce car dependency and stifle aggressive driving.



3

UNLOCKING TRANSIT'S POTENTIAL CHALLENGE: DEVELOPING THE ARTERIES FOR GROWTH

Overview: The Gateway Terminal in Brampton Uptown has been identified by the 2018 Regional Transportation Plan as a mobility hub which will connect two rapid transit networks along Steeles and Hurontario-Main Streets. This intersection is meant to accommodate various modes of transportation along a route where thousands will live, work, and play. The terminal is the busiest in Brampton and provides connections to Sheridan College, Humber College and GO buses in the surrounding Greater Toronto Area. Critical to the overall success of the transit-oriented community at Uptown is the accessibility to transit and walkability of the community.

The Challenge: The 1970s and 1980s designed walking out of lives, with the development of car dependent communities driving sprawl. As of 2016, 82.5% of journeys in Brampton were made by car. The challenge is to develop more walkable, transit-friendly streets. With the population growth anticipated the area would quickly become congested by traffic. The current intersection is broad with nine lanes along Steeles with a 70 km speed limit and heavily used by trucks, with Hurontario at nine lanes with a 50 km speed limit. The intersection often sees collisions. The survival of a pedestrian hit by a car travelling at 50km is 20%, for 70km that rate drops to zero, which makes this intersection an important one to make safer to meet the region of Peel's Vision Zero goals. The development of the Hurontario light rail is bringing density to the community and will connect with bus rapid transit at this junction. The gateway bus terminal exceeded capacity in 2017 and its position creates a barrier to the LRT on Hurontario and Main Street.

The Solution: The Brampton Uptown neighbourhood will be a grid of complete streets with broad sidewalks with space for cycling, street landscaping and active ground floors. In the future, four major redevelopment projects at the junction will frame all four corners that will link into the transit network and be much more friendly for pedestrians. 40% of the population in Uptown are seniors, children or youth, many of whom cannot drive, along with the growing student population.

The City of Brampton has been collaborating with stakeholders to ensure that the terminal expansion is designed with users in mind, will integrate the surrounding area into a mixed-use development to create a vibrant retail, office and commercial space at the terminal. There is a need to create a space that maximizes the new frontages while safely and efficiently moving people, which requires the public and private sector to work closely together closely to maximize the value created for investors and the community around the shared common vision.

To help solve the issue of the dangerous environment and location of the current gateway, the City of Brampton and related stakeholders have looked to implement best practices in street design to keep pedestrians and cyclists safe. This includes constructing separated infrastructure like protected bike lanes, eliminating left turn lanes, creating a wide pedestrian realm and protected intersections. This aligns with the goals of the Active Transportation Master Plan. The plan aims to improve the safety of walking and cycling, provide options for all residents, maximize the value of existing infrastructure, invest efficiently in an expanding network, improve access to transit and viable active first/last mile options.

KEY TAKEAWAYS

DENSITY	DIVERSITY	DESIGN
<p>Transit acts as a catalyst for density as more people can walk and take transit, and less space needs to be dedicated to roads and parking</p>	<p>Mixed land use ensures that travel on transit is two way at peak times, reducing strain on the system and ensuring it takes longer to reach capacity</p>	<p>Safer street design encourages pedestrians, cyclists and transit users. Reducing barriers between transport modes drives more transit ridership</p>
<ol style="list-style-type: none"> Coordinate Land-Use Plans: It is critical to coordinate Regional Transportation Plans with Municipal Land Use Plans and establish a mechanism to align the plans. Infrastructure development and real estate development work on different timelines and have different abilities to adapt their plans. A collaborative approach will help ensure that the community design encourages transit use, cycling, and walking. Safety Creates Pedestrians: Transforming what was a previously suburban, arterial environment into a growing, and thriving urban community is difficult. Developing safe, active infrastructure like protected bike lanes, raised intersection, and widening sidewalks can transform hostile realms into safe accessible spaces. Brampton has focused on improving safety with a human-centred roads design. Measures include reducing crossing distances, creating a connecting to transportation hubs, prioritizing pedestrian movement and promoting accessibility, and building in pedestrian friendly crossing features such as lead pedestrian intervals at crossings. Design for End Users: The experience of people using transit has a telling impact on ridership year-round. The layout and access of the transit stations and stops, and the amenities located on site or nearby help encourage greater use. Integration between different transport modes must also be easy and stress free. That includes integrating physical infrastructure across different networks, aligning timetables, providing easy to follow signage, and simple payment options. 		



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CATALYST FOR CLIMATE ACTION CHALLENGE: REDUCING EMISSIONS, BUILDING RESILIENCE, SAVING MONEY

Overview: Canada has experienced temperature increases at twice the global average, and a frequency increase of extreme temperatures and precipitation events costing an estimated \$21-43 billion on average. Within Brampton, transportation accounted for 28% of greenhouse gas emissions, the second most. Local governments may only be responsible for around 10% of emissions through their operations but have an indirect impact on over 40% of emissions in the community. As of 2016, 82.5% of journeys in Brampton were made by car, with the investment in transit, there is a major opportunity to cut emissions by making more walkable communities, and to use Brampton's natural assets to build resilience, offset infrastructure costs, and attract residents.

The Challenge: In 2022, Brampton experienced extreme rainfall during the winter which cost over \$15 million in damages and clean up. Within Ontario, Peel and Brampton have experienced extreme storms, floods, winds, severe heat and drought, which result in increased costs in building operation, healthcare, infrastructure upgrades, disaster relief and food supply. The City ultimately must design for climate adaptation.

Canada has set a goal of reaching net zero emissions by 2050 and The City of Brampton aims to meet or exceed this target. In Peel's 2018 Climate Change Discussion Paper and Brampton's 2018 Community Energy and Emission Reduction Plan, the following challenges were identified:

- Extreme Heat: It is expected there will be an increased annual average of temperature by 2°C, and two times the increase in extreme heat days over 30°C.
- Extreme Rainfall: It is expected there will be an 8% increase of extreme rainfall events by 2050.
- High Energy Cost: The City of Brampton can expect an \$1.8 billion annual energy cost with 60% of energy stemming from buildings.
- High GHG Emissions: Nearly 59% of GHG emissions are from transportation in Brampton.

The Solution: Brampton's high car dependence contributes to 59% of local greenhouse gas emissions. The Hurontario light rail line is expected to attract almost 32 million rides per year by 2031, equivalent to over 100,00 per day, and will link into regional rail and local bus services. Enhanced transit connections enable greater density. Brampton Uptown is planned as a walkable, decarbonized community with walkable access to shops, offices, and public services. Brampton has also been designated by the UN-Habitat for achieving Sustainable Development Goals and the World Health Organization as a designated Age-Friendly City thanks to its innovative practices and solutions in making the city accessible to older residents.

Increased density elevates the importance of natural infrastructure to reduce the risk of flooding and reducing the cost of hard infrastructure like drains and sewers. Parks are designed to act as sponges with an aspirational target of setting aside 20% of the overall site as park space. These systems connect creeks and open space systems to mitigate extreme weather events while supporting natural habitats, urban agriculture, and community connections. Open natural spaces can serve multiple purposes including sports and recreation, festivals, providing natural drainage, as well as protecting habitats and biodiversity.

The transit investment can also act as a catalyst for further change. High-quality buildings provide benefits through using materials such as mass-timber, reduce energy consumption, improves physical and mental wellbeing, and provides a more innovative workplace community with local live, work, learn, play. The opportunities to explore mass timber buildings allow for 25% faster construction with renewable materials. Mass timber buildings weigh six times less than traditional building materials, so use smaller foundations which allows for quick construction speeds using prefabricated wall cladding systems. Proximity also enables properties to benefit from district energy systems, with the plan to serve 80% of new growth areas and 70% of existing high growth areas through district energy. Through these proactive planning steps, Brampton could save \$26 billion in potential cumulative energy savings by 2040.

KEY TAKEAWAYS

DENSITY	DIVERSITY	DESIGN
Density enables services to be concentrated, reduces the need for travel and reduces cost of delivering services, it also provides opportunities for shared facilities and energy systems	Green spaces attract people into the community and offset the extremes of heat and flooding, more diverse local activities reduce the need to travel	Integrating nature into the community provides a natural defence against extreme weather, smart design encourages active travel and transit use

- Transit as a Catalyst:** As transport makes up the biggest share of Brampton's emissions the investment in light rail and connections into the wider network helps to break with car-centric policies of the past that may have become entrenched. To drive behavioural change and encourage more people to take transit requires a wider focus to tie transit in with walking and cycling in the community.
- Density Brings Opportunity:** The enhanced density brings opportunities to co-locate public services in buildings to reduce emissions and running costs, set up local energy networks, and reduces costs around waste collection and road maintenance. Encouraging smart design and innovative materials can also help reduce energy usage over the lifetime of buildings and can help attract both companies and residents.
- Resilience and Nature:** In flood prone areas like Brampton the natural environment often provides the most effective mitigation against the impact of climate such as heat or flooding. Climate adaptive infrastructure needs to be designed with the natural topography in mind in a way that enhances the natural biodiversity. It protects cities and saves cleanup costs in the long run in the case of increasing extreme weather events and is also an asset in attracting people and jobs to the area.



Credit: BDP Quadrangle

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CREATING JOBS & LOCAL LEGACY CHALLENGE: ATTRACTING PEOPLE AND INVESTMENT WITH MIXED USES

Overview: Brampton is the fastest growing large city in Canada and boasts both the youngest and most ethnically diverse population. Brampton is harnessing the investment in transit as a key plank of its drive to attract companies to set up locally and create jobs. According to the [Centre for Cities](#), the key factors investors value most highly when looking to locate are a strong city with a highly skilled workforce and growth potential, excellent transport connections within the city and beyond, pro-investment city leadership, and a focus on delivery which includes a responsive planning system.

The Challenge: The transit network in the Greater Toronto Area has long served as a commuter service with people travelling into Toronto from places like Brampton to work. Successful transit-oriented communities should create jobs to develop a vibrant, strong community, and ensure people also stay in or travel into the community over the course of the day. Located halfway between Toronto, Canada's leading business centre, and Waterloo, Canada's leading technology centre, Brampton needs a strong economic development strategy and to provide the right facilities to attract investment and local jobs. Under Brampton's Vision 2040 the city has set the target of switching the outside/local jobs ratio from 60/40 to 40/60 by attracting businesses to the area. To attract and keep young talent cities need amenities like post-secondary education, culture and arts, bars and restaurants, and outdoor space and recreation.

The Solution: Brampton has put its location and transport connections at the heart of its value to companies looking to set up or grow. Rather than seeing its location between the two major employment centres of Toronto and Waterloo it focuses on that being a strength. It also emphasizes its proximity to Toronto Pearson Airport and expanding network of local transit connections.

Brampton's young, diverse population is a major asset in attracting companies to set up in the city. As part of the transformation in Uptown Brampton there is an Innovation District covering multiple city blocks, centred around the Centre for Innovation, and easily accessible by walking, cycling, or public transit. This district brings together an ecosystem including Toronto Metropolitan University, Sheridan College, Algoma University, Rogers, and other organizations to support and nurture innovation and entrepreneurship. Brampton is also working hard to invest in the types of assets that attract young people to live in a city, including transit. In 2018 Brampton launched its [Culture Master Plan](#) recognizing the value of a singular identity in a multicultural city and unlocking space for arts hubs, festivals, and other programming.

Brampton Economic Development leads a coordinated strategy that has focused on attracting life science companies, which requires lab space. The City will also get the first new medical school in Canada for 40 years when Toronto Metropolitan University opens doors to medical students in 2025. Another focus in the Innovation District is cyber security with the Rogers Cybersecure Catalyst, an accelerator for cutting edge technology at the heart of an ecosystem of academic institutions, business, and government.

Brampton has put its diverse culture at the heart of its Vision 2040. [My Main Street](#) is a local business accelerator across Southern Ontario to help revitalize main streets with a healthy mix of retail that makes each location unique. Local businesses in Uptown Brampton get access to market research and advice, as well as a \$10,000 grant to put recommendations into action. By supporting local businesses tied to the diverse local population plays to Brampton's strengths as a unique location.

KEY TAKEAWAYS

DENSITY	DIVERSITY	DESIGN
Walkable and transit access to employment attracts more people into the community, and attracts more businesses to invest	Attracting local jobs helps break a cycle of municipalities around Toronto sending workers into the city during the day, local jobs support local businesses	A unique location is attractive to businesses and skilled workers looking to choose where to locate

- 1. Attract Talent:** Virtually every survey of companies cites availability of talent as being the main factor in their decision making on where to set up. Young people also look at a variety of factors when deciding to settle in a community which includes a combination of [live, work, and play](#) considerations.
- 2. Clear Plan:** By focusing on local assets such as post-secondary educational institutions and key sectors to attract it helps to develop clusters that become self reinforcing. There is also an opportunity to work with the real estate sector to ensure that there is an availability of the types of facilities required to attract companies in target sectors, and that they encourage partnership and collaboration with research and academic institutions.
- 3. Vibrant Communities:** Support for small local businesses provides unique character and attracts people to the area. Brampton has focused on its diversity and large immigrant community as a key strength. By supporting local entrepreneurs from these communities, it provides a unique sense of place that differentiates it from other municipalities.

SUMMARY: OVERALL KEY LEARNINGS

Brampton has demonstrated the key interrelationship between density, diversity, and design. The city's approach is mutually reinforcing across a number of layers. The focus on parkland and the natural environment enables greater density in other areas and is a key feature in attracting people to the local community, while providing protection against extreme weather. The drive to make the streets safe builds a vibrant community and encourages people to walk, cycle and take transit and spend their money locally. The key to success is balance and local partners working together to deliver the best for the community, now and in the future.



DENSITY	DIVERSITY	DESIGN
<p>Dense communities built within 10-15 minutes walking distance of rapid transit</p>	<p>Diverse land use that encourages high transit ridership into the community and a vibrant neighbourhood</p>	<p>High quality urban design and green space that draws people to public spaces</p>
<p>Diversity: Provides mix of residents, students, workers, and visitors to support more diverse mix of amenities, and variety of people needing different public services</p>	<p>Density: Parks, ravines and public spaces enable more density for housing, mixture of local amenities and jobs reduces need to travel by car and attracts people</p>	<p>Density: Smart design of streets and buildings attracts more people and businesses, and encourages walking that reduces space needed for cars</p>
<p>Design: Density requires smart design solutions to provide easier access to transit, public services and local amenities and encourage the right behaviour</p>	<p>Design: Mixture of live, work, and play needs to be brought together in a smart way to create unique local identity and integrate buildings and public spaces</p>	<p>Diversity: Enables public services to be co-located to deliver better outcomes, creates multi-purpose spaces that can be used year-round, reinforces local identity</p>

IMPLEMENTATION

While the benefits of transit-oriented communities are widely accepted, especially in fast growing regions such as the Greater Toronto Area, the idea often runs into challenges during implementation. The main strength of Brampton's approach is the steps they have taken to help get everybody focused towards shared goals, and providing visibility and opportunities to work together.

The clarity created through the development of the city's Vision 2040 helps to provide a shared destination for where Brampton wants to go and lines up with other plans developed by the city. Brampton has also created a virtual space to coordinate development with infrastructure delivery through a living plan, as well as providing physical venues that encourage coordination through both the Community Hub and Innovation District. One question to solve relates to the contribution all parties make to pay for the upfront costs to deliver the best possible outcome for all. By putting a wider value on the infrastructure investments and natural assets on property values it creates the basis for a reasonable discussion on what a fair contribution would be. The workshops and report did not explore this area in any detail, but it is a key element of successful implementation and a transit-oriented community that stands the test of time.

CLARITY	COORDINATION	CONTRIBUTION
<p>Build a clear vision and ensure all municipal plans and processes work together to deliver a vibrant community</p>	<p>Provide visibility of local infrastructure and development plans, and create opportunities to partner</p>	<p>Develop a fair approach to paying for the development infrastructure and amenities that demonstrates value uplift</p>
<ul style="list-style-type: none"> • Brampton's Vision 2040 sets clear overall vision around growth, jobs, and urban design, providing clear direction to all municipal departments • Ancillary plans including the Hurontario-Main Corridor Secondary Plan, the Regional Transportation Plan, the Active Transportation Plan, Community Energy and Emission Reduction Plan, Culture Master Plan all support the delivery of the overall vision 	<ul style="list-style-type: none"> • The developing of a living plan provides an opportunity to see what is happening in neighbouring areas and encourage coordination • The Community Hub brings a variety of public services and amenities under one roof • Slightly outside the area the city is developing an Innovation District, to bring post secondary institutions, businesses, and support services in a cluster 	<ul style="list-style-type: none"> • What value uplift does increased access to transit, quality parks and public spaces, public services and amenities, and entertainment and culture bring to the area? • How to cover the upfront investment for necessary infrastructure to unlock the full potential of the site? • How do different landowners work together to provide even greater value?



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