



APPENDIX A

Public Consultation





City Hall
100 Wellington Square
P.O. Box 818
Brantford ON N3T 5R7

October 19, 2017

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

**RE: Notice of Study Commencement:
City of Brantford Master Servicing Plan Update and
Transportation Master Plan Update**

Dear [REDACTED]

The City of Brantford is undertaking three studies to guide the City's future development to the year 2041. This work will update the City's Master Servicing Plan, Transportation Master Plan and Official Plan, and account for the Boundary Expansion Lands that were transferred from Brant County to the City on January 1, 2017.

Water, Wastewater and Stormwater Master Servicing Plan Update

The City of Brantford has retained GM BluePlan Engineering Limited to complete a Master Servicing Plan Update. The objective of the study is to develop a comprehensive plan addressing all facets of the management, expansion and funding of the water, wastewater and stormwater system for the entire City. It will build on the Master Servicing Plan completed in 2014, to include the Boundary Expansion Lands, and to integrate with the latest Provincial Growth Plan and related City of Brantford Official Plan Review process.

Transportation Master Plan Update

Dillon Consulting Limited has been retained by the City of Brantford to complete an update of the 2014 Transportation Master Plan. The updated Plan will reconfirm the City's investments in transportation infrastructure in the coming years in consideration of the updated growth areas to 2041 and continued focus on sustainable transportation solutions. The goal of this Plan is to make sure that the transportation system can accommodate growth and meet the needs of pedestrians, cyclists, transit users, goods movement and automobiles.

The Water, Wastewater and Stormwater Master Servicing Plan Update and the Transportation Master Plan Update are being completed as separate Class EA studies in accordance with the requirements of the Municipal Engineers Association (MEA) Class Environmental Assessment (EA) process for master planning (MEA, June 2000, as amended in 2007 and 2011). The studies are being undertaken based on Phases 1 and 2 of the Class EA process for Master Plans.

As part of the EA consultation program you are currently included in the Study Contact List. If you wish to be removed from the List or would like to suggest an alternative representative please contact the undersigned. Should we not hear from you, your details will remain on the Study Contact List and you will be notified of all future consultation opportunities during the undertaking of the Class EA studies.

Attached is the Notice of Study Commencement and Public Information Centre to be held on Thursday, November 16, 2017, 6:00 pm, at North Park Collegiate and Vocational School. As part of an integrated planning process, this meeting will introduce the Master Servicing Plan Update and Transportation Master Plan Update studies, and also address the Official Plan Review as outlined in the Notice.

Should you have any comments or questions, please contact the undersigned regarding the respective studies.

Yours truly,

Master Servicing Plan Update
www.brantford.ca/MasterServicingPlan

Transportation Master Plan Update
www.brantford.ca/TransportationMasterPlan



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Attach.



NOTICE OF STUDY COMMENCEMENT: TRANSPORTATION MASTER PLAN UPDATE

The City of Brantford has commenced work on an update of the 2014 Transportation Master Plan. The updated Plan will reconfirm the Town's investments in transportation infrastructure in the coming years in consideration of update growth projections for a longer time horizon and continued focus on sustainable transportation solutions. The goal of this Plan is to make sure that the transportation system can accommodate growth and meet the needs of automobiles, transit users, cyclists, and pedestrians in the short and long term.

The initial phases of the Transportation Master Plan will run concurrently with, and build on, the ongoing Official Plan Update and Municipal Comprehensive Review undertakings. The Transportation Master Plan Update is being conducted in accordance with the requirements of Phases 1 and 2 of the Municipal Class Environmental Assessment which is an approved process under the Environmental Assessment Act.

WE NEED YOUR HELP!

What are the important transportation issues facing this community? How well are cyclists, pedestrians, and vehicles sharing the road? What role should transit have in the future of the community? What do you want the transportation network to be like in 20 years? What role does technology play in the travel behaviour of your community?

We want to hear your thoughts on these issues! More information will be available in early 2018, when we will be hosting a number of public open house events to gather your feedback. Check the City of Brantford website at www.brantford.ca in the coming months to find out how you can participate.

CONTACT US

For more information or to provide your comments, please contact:

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Manager of Transportation and Parking Services
City of Brantford, Engineering Services
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Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

ENVISIONING OUR CITY: 2041

WHAT WE HEARD

Public Information Centre #2

November 16, 2017

The Planning Partnership

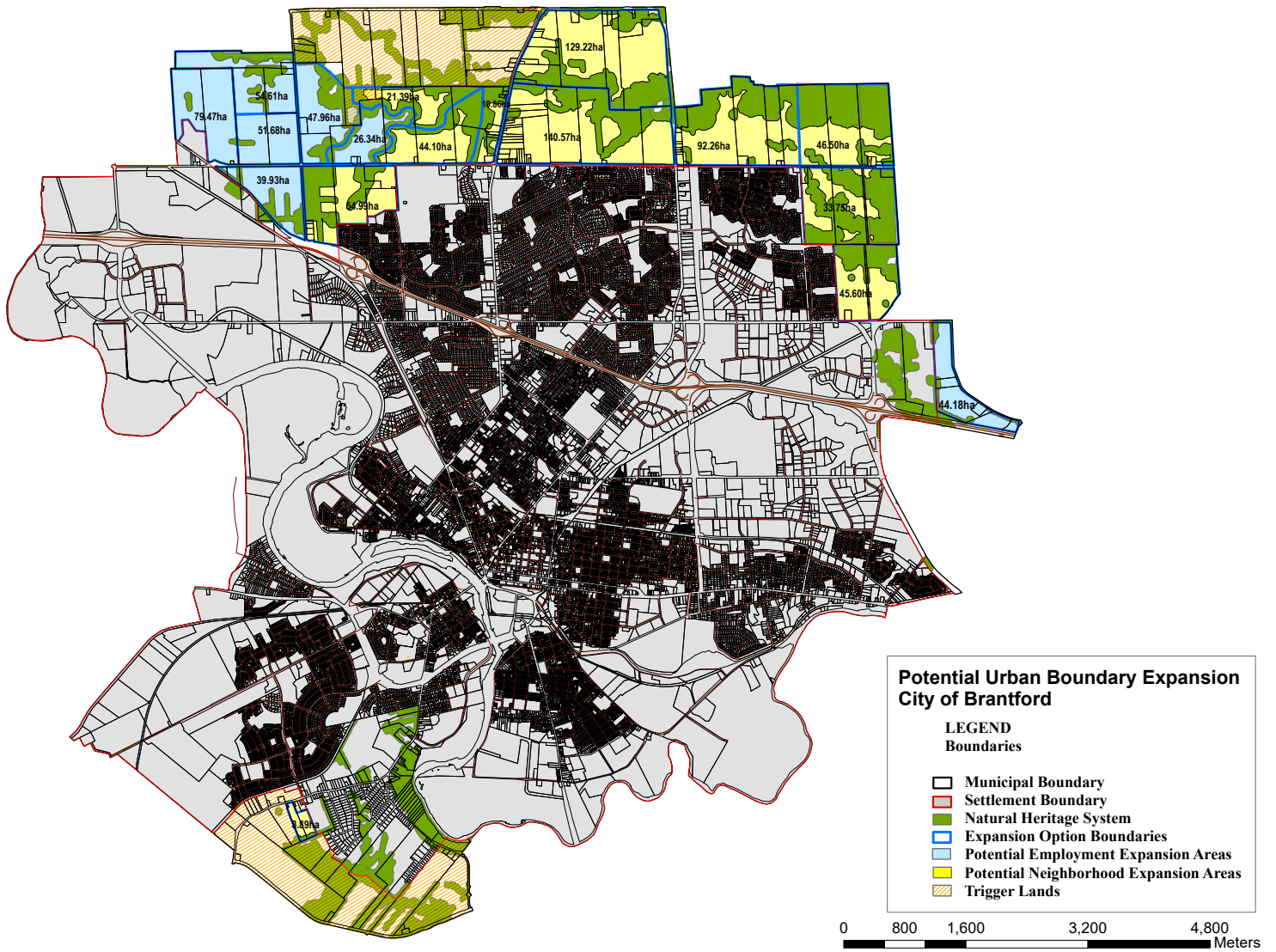




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Study Area



Introduction

The City of Brantford is undertaking three studies to guide future development to 2041 and to take into account the Boundary Expansion Lands transferred from Brant County to the City in January 2017:

1. Official Plan Review
2. Master Servicing Plan Update
3. Transportation Master Plan Update

The second Public Information Centre took place on Thursday, November 16, 2017 from 6:00-8:30 p.m. at the North Park Collegiate & Vocational School. **Approximately 80 people attended.**

The purpose of Public Information Centre #2 was to provide information about the Official Plan Review, Master Servicing Plan, and Transportation Master Plan. Input and feedback was received from the public on the growth options under consideration through the Municipal Comprehensive Review, and issues and ideas relating to the City's servicing and transportation systems.

After an informative presentation, workshop participants were asked to join one of five Discussion Groups (and to move among them), each with a different focus:

1. Official Plan
2. Housing, Intensification & Growth Options
3. Employment
4. Transportation Master Plan Update
5. Master Servicing Plan Update

Input was recorded at each Discussion Group and is listed in this report.

Notice of Public Information Centre

CITY OF BRANTFORD OFFICIAL PLAN MASTER SERVICING PLAN TRANSPORTATION MASTER PLAN ENVISIONING OUR CITY: 2041



Notice of Study Commencement and Public Information Centre

Official Plan Review

Water, Wastewater and Stormwater Master Servicing Plan Update Transportation Master Plan Update

Thursday November 16, 2017

6:00 – 8:30 pm (presentation at 6:30 pm)

North Park Collegiate & Vocational School, 280 North Park Street (at Fairview Drive)

The City of Brantford is undertaking three studies to guide the City's future development to the year 2041. This work will update the City's Official Plan, Master Servicing Plan, and Transportation Master Plan, and account for the Boundary Expansion Lands that were transferred from Brant County to the City on January 1 2017.

Official Plan Review



The Draft Official Plan prepared in 2016 will be revised to incorporate the Boundary Expansion Lands and to ensure the new Official Plan conforms to the Province of Ontario's 2017 Growth Plan for the Greater Golden Horseshoe. The process includes a Municipal Comprehensive Review to determine how much of the Boundary Expansion Lands are to be included within the City's urban settlement area. A Master Plan will establish land uses, environmental management and design guidance for those lands, as well as the infrastructure requirements through an integrated Environmental Assessment process.

Master Servicing Plan Update (MSP)



The objective of the MSP study is to develop a comprehensive plan that will incorporate all facets of the management, expansion and funding of the water, wastewater, and stormwater system for the entire city, including servicing of the Boundary Expansion Lands, to the year 2041 and beyond.

Transportation Master Plan Update (TMP)



The TMP study will provide a balanced strategy for the servicing and operation of important transportation infrastructure within the entire City, including the Boundary Expansion Lands, for the next 25 years. The goal of this Plan is to ensure that the transportation system can accommodate growth and meet the needs of pedestrians, cyclists, transit users, goods movement and automobiles.

The Transportation Master Plan and Water, Wastewater, and Stormwater Master Servicing Plan Updates are being completed as separate Class EA studies in accordance with the requirements of the Municipal Engineers Association (MEA) Class Environmental Assessment (EA) process for master planning (MEA, June 2000, as amended in 2007 and 2011). The studies are being undertaken based on Phases 1 and 2 of the Class EA processes for Master Plans.

We Want to Hear from You!

What kind of City will Brantford be in 25 years? The decisions we make as a community today will shape our City's future tomorrow.

A series of meetings (Public Information Centres) will be held to provide information about the three studies, gather input and receive feedback from the public. The next meeting will be held on **Thursday November 16, 2017, 6:00 pm, at North Park Collegiate and Vocational School.**

As part of the integrated planning process, this meeting will address the Official Plan Review, Master Servicing Plan Update, and Transportation Master Plan Update studies.

We will be asking for your input to discussions about the City's growth options under consideration through the Municipal Comprehensive Review. We will introduce the Master Servicing Plan Update and Transportation Master Plan Update studies, and seek input from the public on issues and ideas relating to the city's existing water, wastewater, stormwater, and transportation systems.

What are the important transportation issues facing the community? How well are cyclists, pedestrians, and vehicles sharing the road? What role should transit have in the future of the community? What role does technology play in the travel behaviour of your community? We want to hear your thoughts on these issues!

This notice is also available on the City website where future project updates will also be posted. If you wish to submit comments or would like to be added to the project mailing list, please contact:

Master Servicing Plan Update

www.brantford.ca/govt/projects/MasterServicingPlan

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Transportation Master Plan Update

www.brantford.ca/govt/projects/TransportationMasterPlan

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Official Plan Review

www.brantford.ca/officialplan

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JOIN THE CONVERSATION



facebook.com/CityofBrantford



[@CityofBrantford](https://twitter.com/CityofBrantford)

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Public Information Centre Comments

November 16, 2017

1 Official Plan

Need the community to define and achieve the Vision

Intensification of “central areas”, promoting transit, walking, cycling

North area: more like it is today, with cars

Pedestrian corridors with dedicated and green street design

Federal money is available for active transportation (does the City know about this?)

There is currently no active transportation specialist at the City

“Share the Road” cycling plan. Encourage cyclists to become stewards (Brant Cycle Club)

Different demographics have different behaviours (fewer millennials are buying cars)

Simplest technology, signal control system – progression is required to achieve this (Colborne Street and Dalhousie Street)

Electric vehicles are coming and people are okay about it, little reaction to autonomous vehicles

What will Brantford be in 2041?

2 Housing, Intensification & Growth Options

Apply development charge on land and allow developers to build to max

Plans should speak to greater mixed use development

High rise development concerns

- Over height of trees is too high – except when high rise has a podium/ pedestal and high rise is set back (e.g. development at Burlington Go Station)
- This provides better human scale/relation to pedestrians at the street level

How do you force the market? Is there a market for apartments?

How can we control the size of homes?

- Size of new large single dwelling development not good long term

50 persons and jobs/ha is hard to achieve now

Transportation is a problem – transit currently doesn't exist because it doesn't need to exist

Two different growth areas in the south-west and the north

Veterans Memorial Parkway needs to be completed

How to reconcile the targets with the low rise character of the existing neighbourhoods

- Can't look at Tutela Heights the same way as newer urban areas
- Maintain Tutela Heights village character

Lack of land supply

- Apartments being built on small infill sites are mostly assisted living/affordable housing
- Very few infill pockets left to develop – most of available stock is constrained and needs environmental remediation

If we look at the development, we see that the amount of infill housing remained constant but percentage of infill housing has gone up because of a lack of greenfield supply

Need to get the intensification number correct because we are going to be at it for a long time

- Can't apply annual percentage targets, need to look at past number of years
- Need to invest in infrastructure but don't overspend in the built-up area (BUA) when units may not come

Townhouses may be a challenge on intensification corridors – configuration of the lots

Provincial density targets are not realistic for Brantford

- Brantford residents don't envision a city like Mississauga in terms of density and housing form

Make sure zoning and incentives are available to make the corridors work

People move here for single detached homes

The numbers now are twisted – the intensification is occurring because there is no longer any greenfield land supply

The target has to be decided by input from the people

Numbers should consider smaller houses on smaller properties

If apartments were more affordable and more attractive they might be more successful

Low rise apartments may be appropriate

Need walkable communities

Can't do underground parking and make it work financially

People move to the city for singles and standard towns

3 Employment

How have the future Employment (ELE) lands been identified? There are two locations in the boundary lands

Expansion of car dealership onto industrial lands: Volkswagen dealership site on Lynden Park Road wants to expand to adjacent lands (employment area versus employment lands)

Concept of Agriculture Preserve lands to secure long-term lands for agriculture uses (also rural craft enterprises). Used to be a 'green belt' around the city

Will we be looking at "Prime Employment" Lands?

Would like to see higher density (80 p+j/ha) and more intensification (60%). Be denser faster

4 Transportation

Rural areas used to have public transit to downtown/urban area, but don't have it now. It is needed and wanted

Need the transportation system solutions to be cognizant of Regional needs

Brantford Southern Access Road (25 year plan) is still not implemented, plans need to be implemented

There is poor network performance now.
Consider how to address future issues

Traffic on West Brant Avenue and Colborne Street. Consider access to hospital

Nobody is using the bike routes

Have Grand River crossing at Oak Street and St. Paul Avenue

Show the Brantford Southern Access Road extending east to the Glebe Lands, into the southern terminus of Wayne Gretzky Parkway

Extend Conklin Road

Consider the form of development, role and function of the street and ability to achieve intensification

Does walking and cycling fit with the idea of the 'suburban dream'? Which is why people move to Brantford

City structure is not conducive to street oriented development

Some benefit to the bulk of the growth occurring to the north

People drive because they commute to work in Toronto, Hamilton and Cambridge

Transportation Master Plan must look at trends and future impacts of distribution

5 Servicing

Will water and wastewater services be extended to the expansion lands? When will that be?

Will the City ensure that new infrastructure will have enough capacity to support later expansion of the growth boundary within the new City limits?

Servicing in the north must be challenging due to all the natural features and creeks

Will the City integrate existing septic serviced properties into the City's wastewater system?

When will the City integrate the existing Tuttela Heights water system into the City system? Are additional upgrades needed to support the integration or growth? How will that impact the existing County water system?

When can we start extending water and wastewater services to adjacent lands? What process is needed?

How will the new area effect the existing system? Will we need all new pipes, pumps, and reservoirs?

Timing for extending trunk water and wastewater services to the boundary lands? Which areas will get it first?

How will the City protect the existing creeks in the expansion lands?



Participants at Public Information Centre #2



Presentation



ENVISIONING OUR CITY: 2041 PUBLIC INFORMATION CENTRE #2

November 16, 2017

Purpose of the Public Information Centre

The City of Brantford is undertaking three studies to guide future development to 2041 and to take into account the Boundary Expansion Lands transferred from Brant County to the City in January 2017:

Official Plan Update

Master Servicing Plan

Transportation Master Plan

This Public Information Centre seeks input to growth options, and issues and ideas relating to the City's servicing and transportation systems.

2

Consultants

SGL Planning & Design Inc.

Urban Boundary Expansion, Secondary Plan

The Planning Partnership

Official Plan, Consultation

Cushman & Wakefield

Real Estate

AgPlan

Agricultural Consultants

GM BluePlan Engineering Ltd.

Municipal Servicing

Plan B Natural Heritage

Landscape Ecology and Natural Heritage Planning

ASI

Heritage Culture, Archaeology, Indigenous Engagement

Ecosystem Recovery Inc.

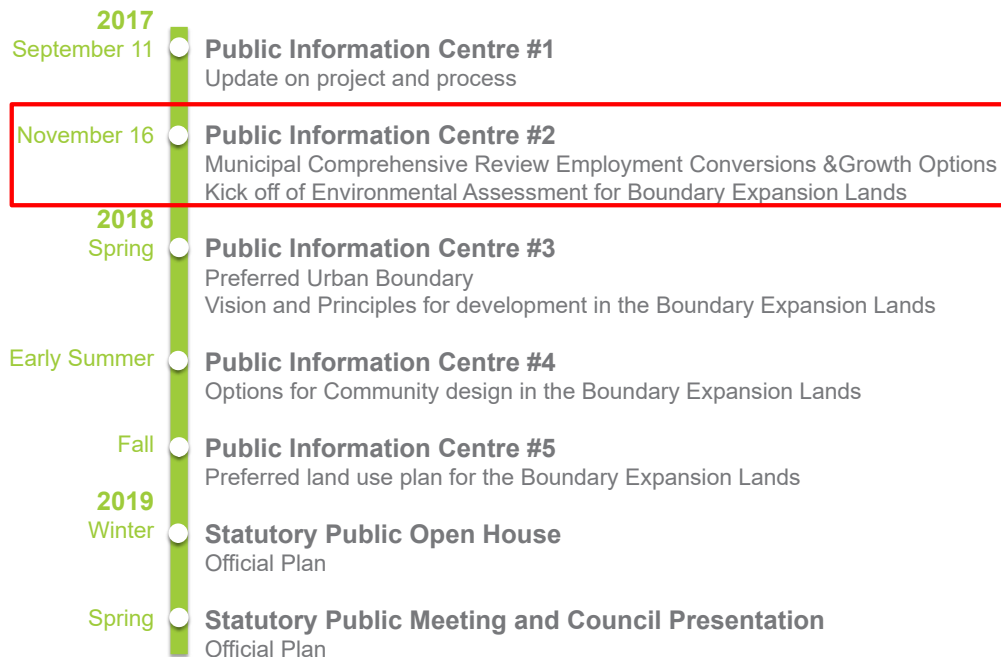
Natural Resources Engineering, Stormwater Management

Dillon

Transportation

3

Opportunities to be Involved in the Process



4

Indigenous Consultation Strategy

- The history of Brantford is tied to the history of the First Nations people in Brant County
- Brantford is in the traditional and treaty territory of Six Nations of the Grand River First Nation and the Mississaugas of the New Credit First Nation
- According to 2011 Census data, off-reserve Indigenous peoples constitute the fastest growing segment of Canadian society, with most living in urban centres.

Meetings are being scheduled with:

- Six Nations of the Grand River First Nation
- Haudenosaunee Confederacy Chiefs' Council
- Mississaugas of the New Credit First Nation

There is an interest in the project and its impact on their treaty rights.

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Presentation



New Official Plan



Municipal Comprehensive Review



Boundary Expansion Lands



Master Servicing Plan



Transportation Master Plan

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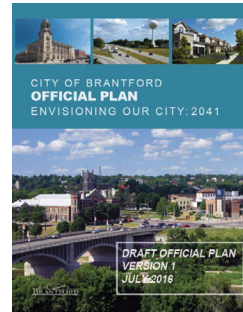
New Official Plan

The City of Brantford has been involved in an Official Plan Review process since 2013.

- Between 2013 and 2016, much work has been accomplished, including the hosting of visioning sessions, the preparation of technical background papers, and the creation of a new Draft Official Plan.

The process was put on hold in 2016:

- The Province announced changes to the Provincial Growth Plan which affect the City's Official Plan.
- The municipal boundary between Brant County and the City of Brantford was adjusted to secure lands in the City for future growth. These lands are known as the **Boundary Expansion Lands**.



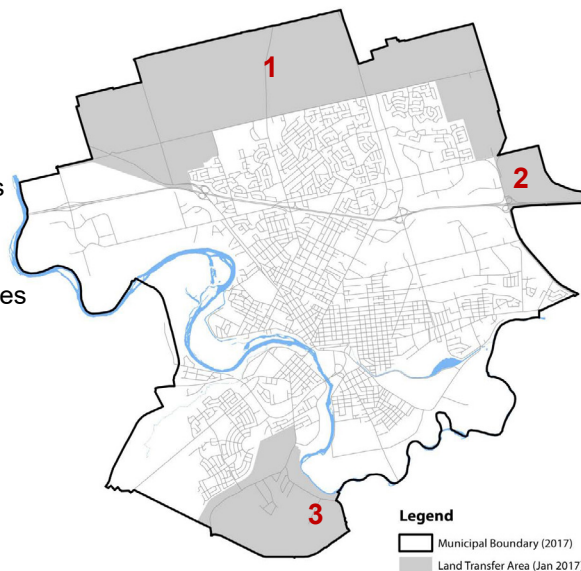
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New Official Plan

Boundary Expansion Lands – 2,700 hectares

1. **North Area** = 1,966 hectares
2. **East Area** = 174 hectares
3. **Tutela Heights** = 580 hectares



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New Official Plan

Vision Statement – Draft Official Plan 2016

*Brantford has grown to become a **unique urban community** that has retained connections to its small town origins. It is defined by the **Grand River**, which is cherished for its natural features, historic legacy, and recreational amenities.*

*The people of Brantford are healthy and prosperous. They live in **complete communities** that are inclusive, accessible, compact, and well connected for all modes of travel. Residents have access to a **range of community services and recreational amenities** to support their well-being. The **local economy** thrives because it is diverse and adaptable to changing trends, just as it has been over the course of Brantford's history.*

*The entire community comes together in the **Downtown**, which is recognized as the heart of the community with a mix of activities, and the **highest quality public realm to present a distinct image** of the City. As Brantford grows, the success of existing communities is strengthened, and the features that make the City unique remain as valued assets for future generations to enjoy.*

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New Official Plan

Ten Guiding Principles– Draft Official Plan 2016

1. Protect the Grand River
2. Provide access to recreation and leisure amenities
3. Focus new development in the Downtown, intensification corridors and defined greenfield areas
4. Create a vibrant City Centre in Downtown Brantford
5. Achieve healthy communities
6. Protect the City's cultural heritage
7. Create a flexible approach to local economic development
8. Integrate transit planning with land use planning and create a local transit network
9. Enhance options to walk and cycle
10. Demonstrate environmental leadership

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New Official Plan

Key Sections of the Official Plan

- Growth Management
- Sense of Place
- Healthy Neighbourhoods & Communities
- Land Use Designations
- Housing, Economy & Creative Culture
- Public Health & Safety
- Integrated Transportation System
- Servicing
- Implementation
- Interpretation & Definitions

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Presentation



New Official Plan



Municipal Comprehensive Review



Boundary Expansion Lands



Master Servicing Plan



Transportation Master Plan

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New Official Plan



Municipal Comprehensive Review Employment

Conversion

- **Re-examine** existing employment sites in the City to determine whether any of these sites warrant conversion from employment to non-employment uses.
- The Growth Plan requires any conversion of employment land to be considered on a **City-wide comprehensive basis** rather than on a site-by-site basis as requests are made.
- The review of potential employment conversions through a Municipal Comprehensive Review ensures that the City is not compromising its ability to provide a **sufficient amount of land for employment to accommodate growth.**

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New Official Plan

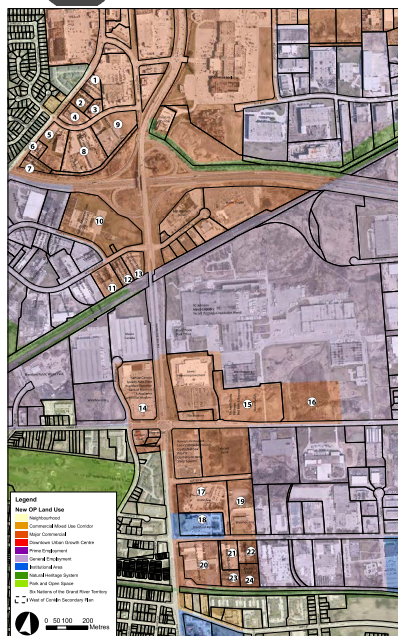


Municipal Comprehensive Review

Employment Conversion Sites

Current analysis confirms the analysis done in 2015

Focus on Wayne Gretzky Parkway as a mixed use intensification corridor



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New Official Plan



Municipal Comprehensive Review

For Boundary Expansion Lands need to determine:

1. how much to include within the City's urban boundary through **Municipal Comprehensive Review**
2. the land uses through a **master plan**
3. required transportation and servicing infrastructure

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New Official Plan



Municipal Comprehensive Review

Targets for employment and population growth

	2016	2016 Expansion Lands	2041	Total 2016- 2041 Growth
Population	100,300	1,080	163,000	61,620
Employment	46,913	-	79,000	32,087

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New Official Plan



Municipal Comprehensive Review

Projections and recommendations are preliminary until the Province releases a standard Growth Management/Land Needs Assessment Methodology later this year or early 2018.

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New Official Plan



Municipal Comprehensive Review

Employment

Three Categories of Employment:

1. Employment Lands Employment (ELE)
 2. Population-Related Employment (PRE)
 3. Major Office Employment (MOE)
- Proportion expected to remain constant
 - But Major Office Employment to take slightly larger share at the expense of Population-Related Employment

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New Official Plan



Municipal Comprehensive Review Employment

2041 Employment Growth Forecast

Employment Category	2016-2041	% Share
ELE	15,926	53%
PRE	11,602	39%
MOE	2,252	8%
Total	29,779	100%

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New Official Plan



Municipal Comprehensive Review Employment

Location of Employment Growth

Employment Lands Employment:

100% to Employment Lands

Population-Related Employment:

- 10% to Employment Lands
- 30% to existing Built-up Area
- 60% to the Location of Population Growth

Major Office Employment:

100% to Downtown & Intensification Corridors

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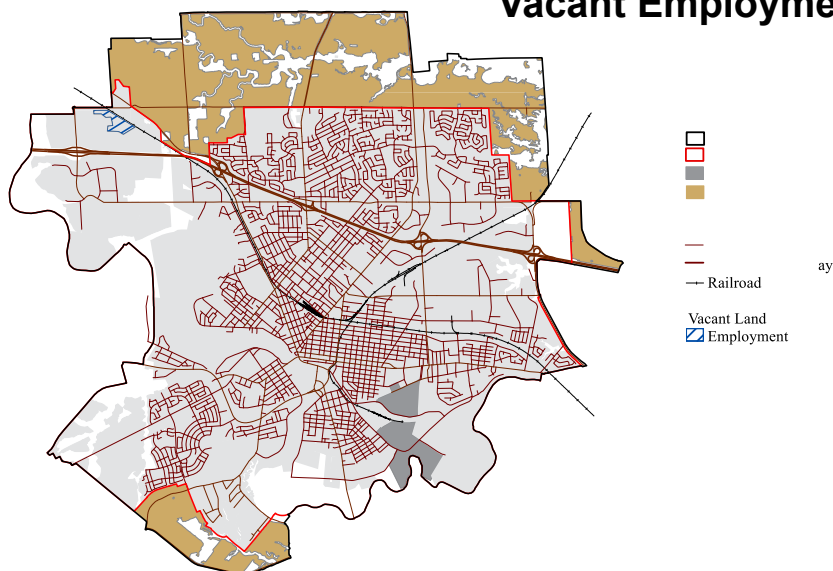


New Official Plan



Municipal Comprehensive Review

Vacant Employment Lands



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New Official Plan



Municipal Comprehensive Review

Employment

Current Vacant Employment Land	
Location	Gross Hectares
Northwest Industrial Area	288.3
Braneida Industrial Area (South of 403)	58.2
Braneida Industrial Area (North of 403)	23.9
Hopewell Lands	43.6
Total	414
Longterm Vacancy	21
Vacant Land to be Occupied by 2041	393

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New Official Plan



Municipal Comprehensive Review

Employment

Employment density determined by reviewing current job density and nature of future employment

23 jobs/gross hectare Employment lands Employment = **690 ha**

64 jobs/gross hectare Population related Employment = **18 ha**

Subtract vacant land of **393 ha**

Urban Boundary Expansion for Employment Lands

= approximately 300 ha

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New Official Plan



Municipal Comprehensive Review

Residential intensification potential – 4 steps

1. Assessed supply capacity.
2. Analyzed past and current market dynamics to compare to the available supply by housing type.
3. Prepared four different intensification scenarios based on the supply and market dynamics and recognizing the targets set out in the Growth Plan (2017).
4. Will recommend intensification target for Brantford.
 - Based on the intensification target, will determine DGA growth and appropriate density target.

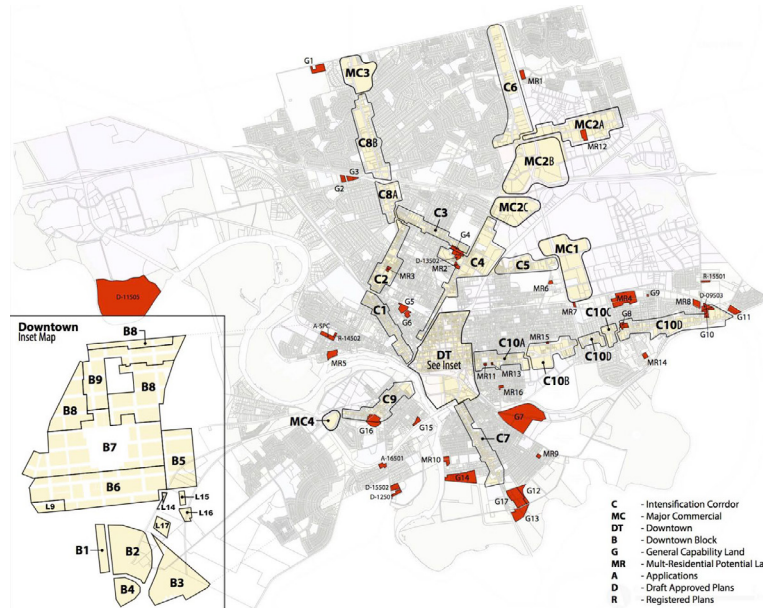
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New Official Plan



Municipal Comprehensive Review Intensification



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New Official Plan



Municipal Comprehensive Review Intensification

Intensification Opportunities and Capacity Assessment

- Downtown Urban Growth Centre
- Major Commercial Centres
- Intensification Corridors
- Existing Neighbourhoods
- Second Units

Dwellings by Type and Density

	Singles + Semis		Townhouses		Apartments		Second Units		Total Units	
	Low	High	Low	High	Low	High	Low	High	Low	High
Downtown	-	-	-	-	614	1,972	-	-	614	1,972
Major Commercial	-	-	-	-	1,723	6,451	-	-	1,723	6,451
Intensification Corridor	-	-	165	383	1,455	3,415	-	-	1,620	3,798
Existing Neighbourhood	651	651	329	329	-	737	1,294	2,588	2,274	4,305
TOTAL	651	651	494	712	3,793	12,561	1,294	2,601	6,232	16,525

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New Official Plan



Municipal Comprehensive Review

Intensification

Residential Intensification Demand - Baseline

- Based on historical index but pushes index in recognition of changing boundary policy

	Singles & Semi	Townhouses	Apartments	Total Units
Units in BUA	651	712	5,482	6,845
Units in DGA	13,055	7,512	0	20,567
Total Units	13,706	8,224	5,482	27,412
% of Total Units	50%	30%	20%	100%

- Achieves only 25% intensification

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New Official Plan



Municipal Comprehensive Review

Intensification

Past Intensification Rates

- 2007 – 2016 = 44%

Singles & Semi	Townhouses	Apartments	Total Units
24%	26%	50%	100%

- Growth Plan requires intensification to meet 40% by 2015 and thereafter
- Based on building permits to date in 2017
 - 2015 – 2017 Intensification = 47%

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New Official Plan



Municipal Comprehensive Review Intensification

Previous Provincial Policy

- 40% intensification

New Provincial Policy

- 50% intensification before 2031
- 60% intensification 2031-2041

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New Official Plan



Municipal Comprehensive Review Intensification

- Growth Plan allows Brantford to ask for alternative targets.
- Exploring alternative targets:

Alternative 1:

- 40% to 2021
- 45% 2021 – 2031
- 50% 2031 – 2041

Alternative 2:

- 45% to 2021
- 50% 2021 – 2031
- 55% 2031 – 2041

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New Official Plan



Municipal Comprehensive Review

Intensification

To determine appropriate target need to consider:

- How many apartments appropriate in Brantford?
 - Currently only 8,000 apartment units in the city
 - No higher order transit like inner GTA
- How many townhouses could be accommodated in Intensification Corridors?
- What is the appropriate housing mix for Brantford?

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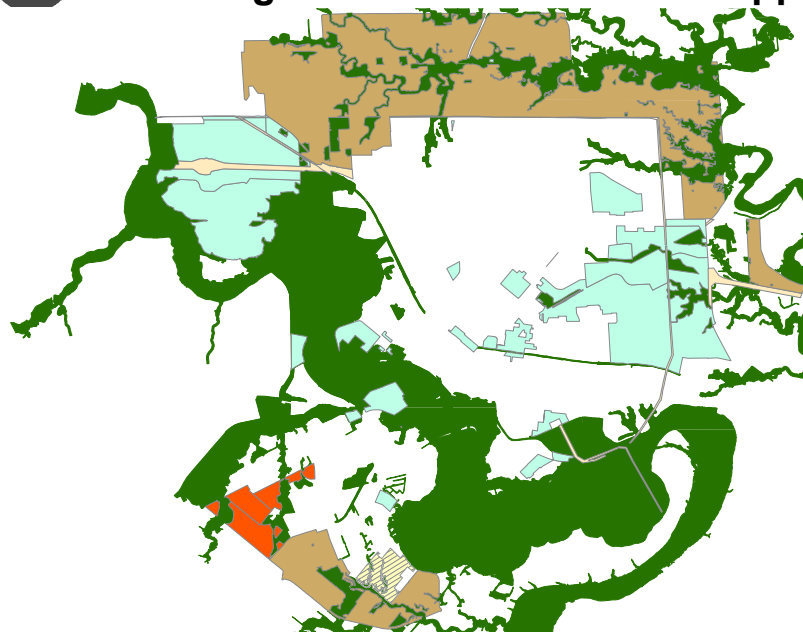
New Official Plan



Municipal Comprehensive Review

Designated Greenfield Area Supply

EGEND



32



New Official Plan



Municipal Comprehensive Review

Designated Greenfield Area Supply

Existing supply includes:

- Vacant lots in registered plans
- Draft plans of subdivision
- Applications
- Vacant land without application

Singles & Semi	Townhouses	Apartments	Total Units
4,005	2,690	644	7,339
54%	37%	9%	100%

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New Official Plan



Municipal Comprehensive Review

Designated Greenfield Area Demand

Subtracting Supply from Residential Demand of 17,700 units

- Requires an Urban Boundary Expansion to accommodate:
 - **9,750 units**
 - **26,000 people**

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New Official Plan



Municipal Comprehensive Review

Designated Greenfield Area Supply

Convert to land needs:

apply urban density by housing type ie. units per hectare



commercial land needs approximately **20 ha**



Population Related Employment needs approximately **34 ha**

- Requires an urban boundary expansion of **approximately 500 ha** for residential, commercial and institutional uses
- Results in density of **55 persons and jobs/hectare**

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Presentation



New Official Plan



Municipal Comprehensive Review



Boundary Expansion Lands



Master Servicing Plan



Transportation Master Plan

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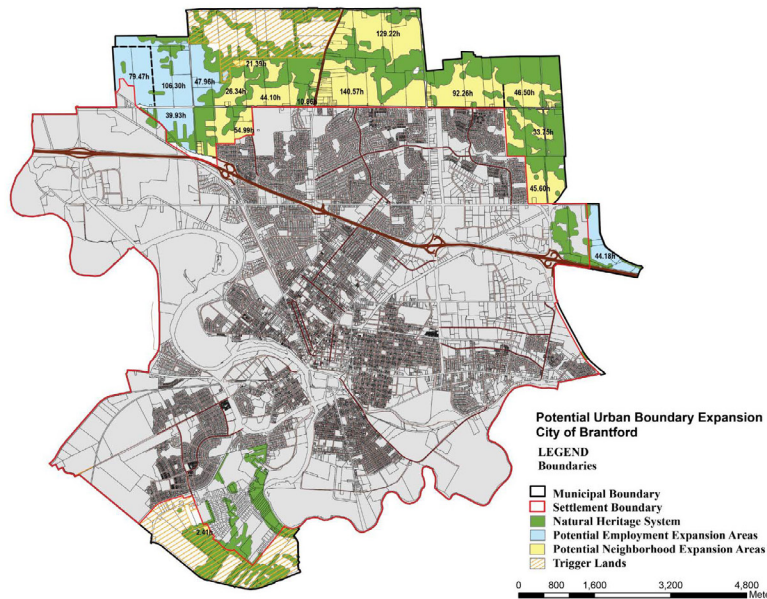


New Official Plan



Boundary Expansion Lands

Potential Expansion Options



New Official Plan



Boundary Expansion Lands

Boundary Expansion Land Area

Total = 2,700 ha

Natural Heritage System (NHS) = 980 ha

In 2017 Urban Boundary = 270 ha

Lands Available for Urban Expansion:

Trigger Lands = 360 ha

Developable Lands = 1,090 ha

Potential Urban Boundary Expansion:

Employment Land Needs = 300 ha

Neighbourhood Land Needs = 500 ha



New Official Plan



Boundary Expansion Lands

Growth options will be evaluated through high-level reviews of:

- Agriculture;
- Transportation;
- Water and wastewater servicing;
- Water resource system;
- Key hydrologic area and natural heritage system; and
- Archaeological resources

Based on the results of the evaluation, preferred locations for growth will be selected.

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New Official Plan



Municipal Comprehensive Review



Boundary Expansion Lands

Next Steps

- Finalize Growth Management Report once Provincial methodology is released
- Multi-disciplinary high-level evaluation of growth options
- Selection of preferred growth option
- Prepare report summarizing Options and Evaluation
- Presentation to Council
- PIC #3 (preferred growth option and master plan visioning)
- Prepare revised Official Plan based on the new Growth Plan, bring expansion lands into the urban boundary
- Update servicing and transportation policies and mapping based on updated Transportation and Master Servicing studies

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Presentation



New Official Plan



Municipal Comprehensive Review



Expansion Lands



Master Servicing Plan



Transportation Master Plan

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Master Servicing Plan

Municipal Class Environmental Assessment Process

The Water, Wastewater, and Stormwater Master Servicing Plan Update and Transportation Master Plan involve the completion of Phases 1 and 2 of the MEA Municipal Class EA process.

EA Planning Process



The study follows the Master Plan process as outlined in Section A.2.7 of the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (Oct 2000, as amended in 2007, 2011 and 2015).

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Master Servicing Plan

Drivers of the Update

2014 Water, Wastewater, and Stormwater Master Plan (MSP) looks at planned growth to 2031 within the City's previous boundary.



The update is needed to integrate:

- City-wide servicing issues with review of the boundary adjustment lands
- Planning for growth to 2041 and new density and intensification targets

Will develop a long-term servicing strategy and capital forecast to:

- ensure the maintenance of services for existing residents and business
- support future growth of the community

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Master Servicing Plan

Vision Statement

Supporting a Strong and Growing Brantford

Establish a preferred servicing plan for the City's water, wastewater, and stormwater systems that:

- Meets **current needs**
- **Supports growth and expansion** of the City's urban boundary
- Maintains or improves **service levels**
- Considers **priority areas** of climate change, infrastructure optimization and renewal, and system resiliency

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Master Servicing Plan

Servicing of Boundary Expansion Lands

For settlement areas that receive their water from rivers or groundwater and discharge treated sewage to rivers, the completion of **Phases 1 and 2 of a Class Environmental Assessment (EA)** is required to determine:

- **capacity** requirements of the existing water and wastewater treatment facilities
- required **upgrades** to those facilities to accommodate forecast growth.

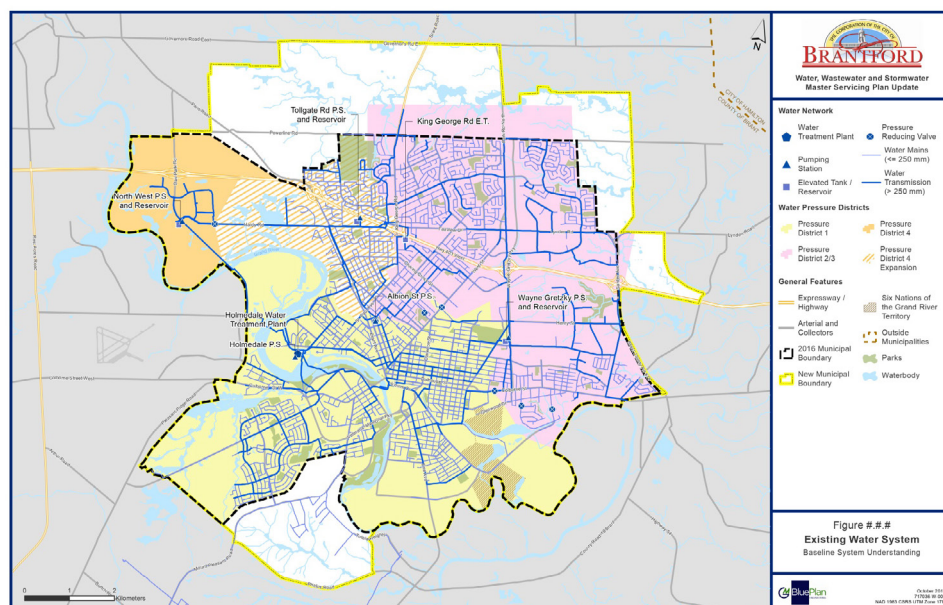
The Master Servicing Plan will review treatment needs for growth to 2041, including Boundary Expansion Lands, and will provide upgrade recommendations.

45



Master Servicing Plan

Existing Water System

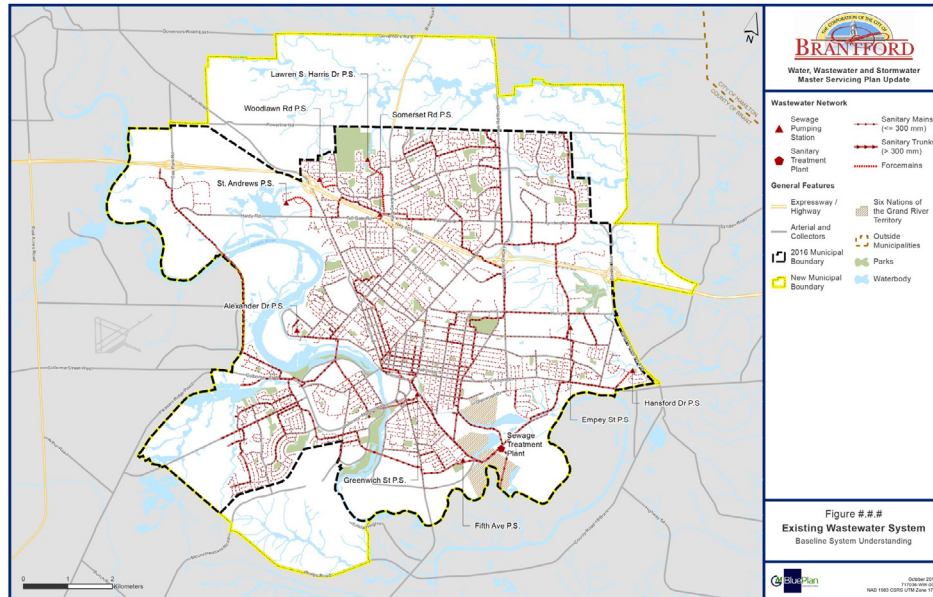


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Master Servicing Plan

Existing Wastewater System

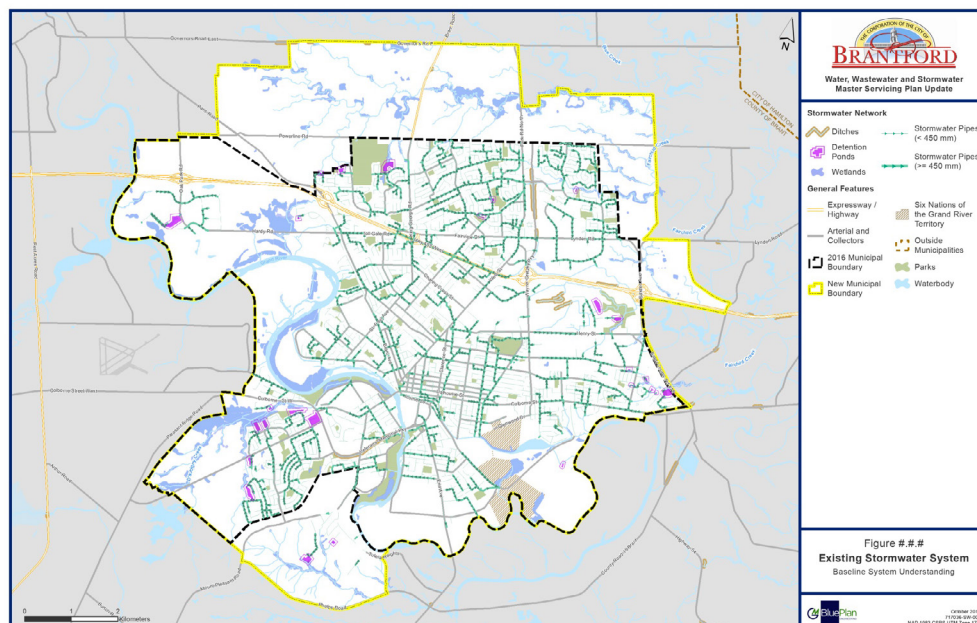


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Master Servicing Plan

Existing Stormwater System



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Master Servicing Plan

Key Servicing Issues and Considerations

Water System

- Treatment Plant Capacity
- New Water Storage
- Water Needs in Northwest
- Extending Service to North and Tutela Heights
- Facility Optimization
- Local Pressure and Flow Capacity Upgrades

Wastewater System

- Treatment Plant Capacity
- Conveying Flows from North and Tutela Heights
- Existing Pump Station Capacity
- Wet Weather Flow
- River Siphons
- Wastewater Quality

Stormwater System

- Level of Service – Pipe vs. Overland Flow
- Stormwater Management Options
- Stream and Creek Erosion
- Grand River Interaction
- Retrofits within Existing Build Areas

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Presentation



New Official Plan



Municipal Comprehensive Review



Boundary Expansion Lands



Master Servicing Plan



Transportation Master Plan

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Transportation Master Plan

Urban Boundary Expansion Lands

As part of determining where the urban boundary should be expanded, the Transportation Master Plan will determine:

- high level transportation principles
- transportation network options
- transportation demand

As a component of the Master for Urban Boundary Expansion Lands, the Transportation Master Plan will include:

- detailed transportation network options
- an Active Transportation Plan, Transit Plan, Road Classifications Plan
- infrastructure staging and a phasing plan

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Transportation Master Plan

Urban Boundary Expansion Lands

Guiding Principles for Transportation Assessment

Healthy Communities – *support a healthy and active lifestyle*

- Promote cycling and walking and support transit services in residential neighbourhoods and employment areas
- Provide a transportation system that addresses user safety and security
- Support a compact urban form with land use intensification and transit

Sustainability – *balance economic, social and environmental goals*

- Protect the environment by minimizing impacts on air, water, land and natural resources
- Provide a transportation system that gives access to sustainable transportation options
- Identify a monitoring system to measure and manage the successful implementation of a sustainable transportation system

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Transportation Master Plan

Urban Boundary Expansion Lands

Guiding Principles for Transportation Assessment

Balanced Needs – *provide choice for the travel needs of residents*

- Provide high-quality services for transit, cycling/walking, road users and goods movement
- Offer a safe, convenient, accessible, affordable and efficient system to meet the daily needs of all residents
- Offer a choice of integrated travel modes, emphasizing cycling, walking, public transit and carpooling

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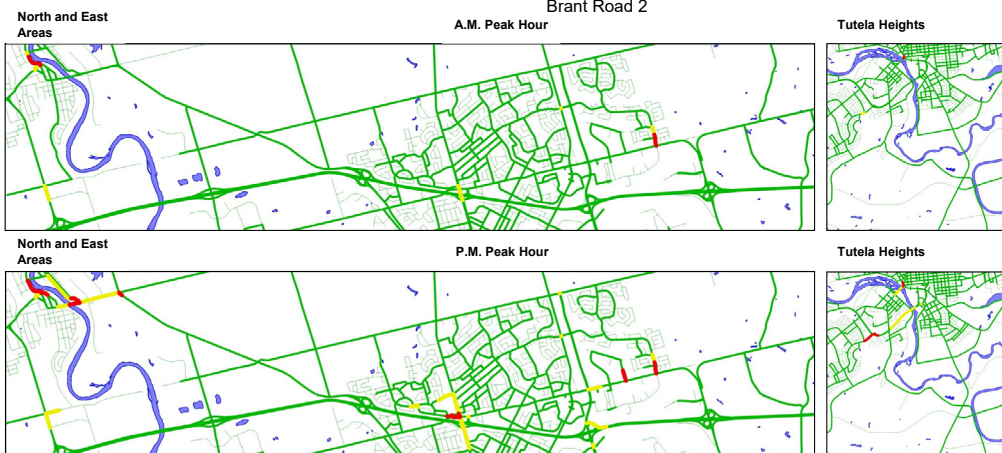
Transportation Master Plan

Existing Conditions

- Networks serving expansion areas providing acceptable levels of service

- Key corridors experiencing periods of congestion:

Downtown River Crossings
King George Rd / St. Paul Ave
Wayne Gretzky Parkway
Brant Road 2



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Transportation Master Plan

Urban Boundary Expansion Lands

Problems, Opportunities, and Constraints

The current road system and scheduled improvements will not be able to accommodate growth planned beyond 2041

Without action, commuters will experience:

- Increased congestion
- Longer travel times and delays
- Safety concerns
- Impact on quality of life
- Deterioration of air quality

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Transportation Master Plan

Urban Boundary Expansion Lands

Problems, Opportunities, and Constraints

Opportunities

- Support land use planning objectives
- Provide transportation choice (transit, active modes, travel demand management)
- Provide improved inter and intra regional connections
- Increase travel reliability for commuters and goods movement
- Optimize existing transportation infrastructure

Constraints

- Minimize impacts to the natural, social, economic and cultural environments
- Understand funding options and alternatives to deliver a sustainable transportation system
- Define a sustainable transportation system that aligns with Provincial Policy and Metrolinx RTP

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Transportation Master Plan

City-wide Transportation Master Plan

- In 2014, the City of Brantford completed a Transportation Master Plan Update identifying transportation improvements for a long-range planning horizon (20 years)
- The TMP recommended new or expanded infrastructure and service to address increasing congestion levels within the City
- An update is required to assess impacts of new policy positions related to land use and transit, to assess a longer planning horizon and to assess the boundary expansion lands

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Transportation Master Plan

City-wide Transportation Master Plan

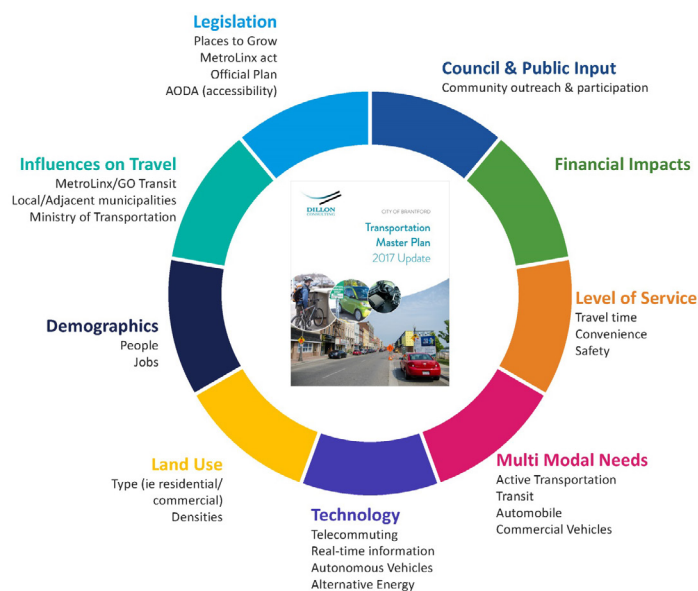
The Transportation Master Plan will follow the Municipal Class Environmental Assessment Process for Master Plans for Phases 1 and 2.





Transportation Master Plan

City-wide Transportation Master Plan Influences



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Transportation Master Plan

City-wide Transportation Master Plan Vision

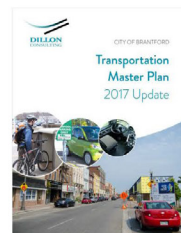
- Safe
- Convenient
- Environmentally Sound
- Multi-modal
- Efficient
- Accessible
- Affordable
- Energy efficient

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Transportation Master Plan

City-wide Transportation Master Plan Next Steps



Tonight's discussion groups
please join a table of your interest and move
to other tables of interest to you

1. Official Plan
2. Housing, intensification and growth options
3. Employment
4. Transportation Master Plan Update
5. Master Servicing Plan Update

For more information

Master Servicing Plan

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Official Plan Update

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Transportation Master Plan

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ENVISIONING OUR CITY: 2041

WHAT WE HEARD

Public Information Centre #3

May 17, 2018

The Planning Partnership





Geological

N11

11

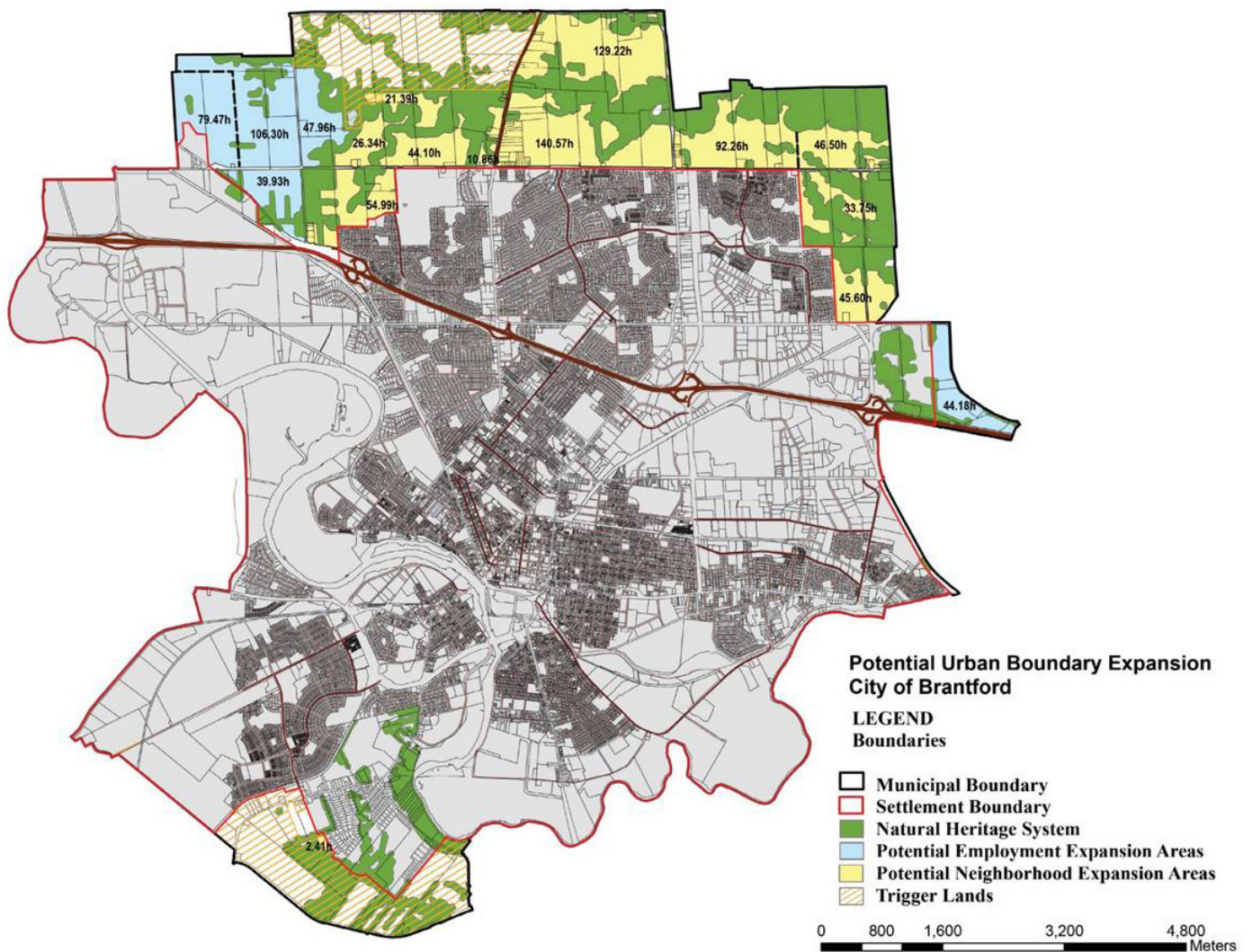
E7

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Display Boards	08
Presentation	27

Study Area



Introduction

The City of Brantford is undertaking three studies to guide future development to 2041 and to take into account the Boundary Expansion Lands transferred from Brant County to the City in January 2017:

1. Official Plan Review
2. Master Servicing Plan Update
3. Transportation Master Plan Update

The third Public Information Centre took place on Thursday, May 17 from 6:00-8:30 p.m. at the Brantford & District Civic Centre.

Approximately 80 people attended.

The purpose of Public Information Centre #3 was to present:

- The results of the draft Land Needs Assessment which will determine the amount of land to be added to the City's urban settlement area;
- The potential location of the future urban lands in the Boundary Expansion Lands, also referred to as Boundary Adjustment Lands, based on the draft land needs;
- Proposed alternative targets for intensification in the City's Built-up Area;
- Proposed alternative density target in the City's Designated Greenfield Area; and,
- Updates on the Master Servicing Plan and the Transportation Master Plan.

After a presentation, attendees were invited to speak with a member of the consulting team in an open house format on the following topics:

1. Land Use Planning
2. Transportation Master Plan Update
3. Master Servicing Plan Update
4. Natural Features
5. Agriculture
6. Archaeology

Input was recorded and is summarized in this report.

Notice of Public Information Centre

CITY OF BRANTFORD OFFICIAL PLAN MASTER SERVICING PLAN TRANSPORTATION MASTER PLAN ENVISIONING OUR CITY: 2041



Notice of Public Information Centre

Official Plan Review

Water, Wastewater and Stormwater Master Servicing Plan Update Transportation Master Plan Update

Thursday May 17th, 2018

6:00 – 8:30 pm (presentation at 6:30 pm)

Brantford & District Civic Centre - Auditorium, 69 Market Street South

The City of Brantford is undertaking three studies to guide the City's future development to the year 2041. This work will update the City's Official Plan, Master Servicing Plan, and Transportation Master Plan, and account for the Boundary Expansion Lands that were transferred from Brant County to the City on January 1, 2017.

We Want to Hear from You!

What kind of City will Brantford be in 25 years? The decisions we make as a community today will shape our City's future tomorrow. As part of the integrated planning process, a series of meetings (Public Information Centres) will be held to provide information about the three studies, gather input, and receive feedback from the public. The next meeting will be held on **Thursday May 17, 2018, 6:00 pm, at the Brantford & District Civic Centre – Auditorium.**

We will present the results of the Land Needs Assessment, which has determined the amount of land to be added to the City's urban settlement area, and the preferred location of those future urban lands in the Boundary Expansion Lands. We will also present proposed alternative targets for intensification in the City's Built-up Area and for density in the City's Designated Greenfield Area. Lastly, we will provide updates on the progress of Master Servicing Plan Update and Transportation Master Plan Update studies, and seek input from the public on issues and ideas relating to the City's existing Water, Wastewater, Stormwater, and Transportation Systems.

Background

Official Plan Review



The Draft Official Plan prepared in 2016 will be revised to incorporate the Boundary Expansion Lands and to ensure the new Official Plan conforms to the Province of Ontario's 2017 Growth Plan for the Greater Golden Horseshoe. The process includes a Municipal Comprehensive Review to determine where and how the City will grow and how much of the Boundary Expansion Lands are to be included within the City's urban settlement area. A Master Plan will establish land uses, environmental management and design guidance for those lands, as well as the infrastructure requirements through an integrated Environmental Assessment process.

Master Servicing Plan Update (MSP)



The objective of the MSP study is to develop a comprehensive plan that will incorporate all facets of the management, expansion and funding of the water, wastewater, and stormwater system for the entire City, including servicing of the Boundary Expansion Lands, to the year 2041 and beyond.

Transportation Master Plan Update (TMP)



The TMP study will provide a balanced strategy for the servicing and operation of important transportation infrastructure within the entire City, including the Boundary Expansion Lands, for the next 25 years. The goal of this Plan is to ensure that the transportation system can accommodate growth and meet the needs of pedestrians, cyclists, transit users, goods movement and automobiles.

The Transportation Master Plan and Water, Wastewater, and Stormwater Master Servicing Plan Updates are being completed as separate Class EA studies in accordance with the requirements of the Municipal Engineers Association (MEA) Class Environmental Assessment (EA) process for master planning (MEA, June 2000, as amended in 2007 and 2011). The studies are being undertaken based on Phases 1 and 2 of the Class EA processes for Master Plans.

For More Information

This notice is also available on the City website where future project updates will also be posted. If you wish to submit comments, or would like to be added to the project mailing list, please contact:

Master Servicing Plan Update

www.brantford.ca/govt/projects/MasterServicingPlan

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Transportation Master Plan Update

www.brantford.ca/govt/projects/TransportationMasterPlan

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Official Plan Review

www.brantford.ca/officialplan

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Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

Public Information Centre Comments

May 17, 2018

The following is a summary of the comments made during the table group discussions as recorded by the team member representing the topic.

Questions raised will be addressed in finalizing the Part 2 MCR Report and other components of the Official Plan Review.

1 Land Use Planning

Why is Tutela Heights not on the options? Will it be serviced?

What do you mean when you say higher densities?

The Hopewell Development area should be included in the options

How can the current intensification targets be so high when historical trends are so low? Can we actually achieve the density targets?

Will we take the 'field of dreams' approach of 'build it and they will come' or develop when there is demand? It's best to have a mixture

2 Transportation Master Plan Update

Cycling

There are lots of north/south bike routes, need more east/west routes

Need an east/west bike route in the north end

Like North Park Street

The transportation hierarchy should be pedestrians, active transportation and then transit

Sharrows are not effective. Need to have separate bike lanes. Green corridors would be even better

Need to have secure bike parking (lockers, bike cage/room with secure entry)

What percentage of the capital budget will be designated to active modes of transportation?

Active transportation needs to be encouraged to help fight climate change

Transit

Need transit in Tutela Heights

Connect transit to Six Nations Reserve

Downtown Transit Station

Coordinate with VIA Rail

Connect inter-city transit and create a hub

Encourage transit connections (BIA shuttle between the VIA/GO hub and downtown)

Intensification

Like intensification projects

Implementation timelines need to be accelerated

Columbia Street in Waterloo is a good example for intensification

Other

Like that the Transportation Master Plan is building on land use

Make sure to coordinate with the Master Servicing Plan

There should be a connection between the Official Plan work and the Transportation Master Plan

Traffic signal at Mount Pleasant and Conklin Roads

Consider timing for improvements

Do not support the two way conversion. Need to meet with EMS regarding requirements. Keep one way, reduce to one lane and add bike lanes and wider sidewalks

Scatter the intersection

Country Road 18 should be seen as a ring road. Avoid a single point of failure (flooding).

Wayne Gretzky Parkway needs alignment north of Powerline Road

Support the extension of Conklin Road

3 Master Servicing Plan Update

Where is the sustainable development? Why not focus efforts on repairing infrastructure in the city?

Sustaining infrastructure and allowing growth is not possible simultaneously

What is the timing for the north-east wastewater capacity solutions?

Create wetlands as part of the storm water management plan and to recharge groundwater

A pipeline from the Great Lakes is unfavourable

Storm water management to control runoff (climate change)

Have questions regarding infrastructure capacity and upgrades needed for the expansion areas

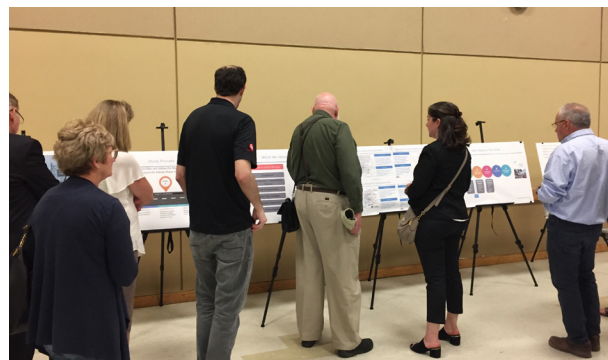
How is new infrastructure going to be paid for when it's already a struggle to update the infrastructure that is at capacity?

Employment land (E1-6) is located on top of an aquifer with high permeability. What is going to protect them? What if the government decides to designate them as a protected area? Where will the employment lands go? Where would residential lands go? Can we swap the residential for employment lands if it becomes a protected aquifer?

How and when will Tutela Heights be serviced (sanitary system)?



Participants at Public Information Centre #3



4 Natural Features

What is the forest cover now? What is the target and timeline?

Do you recognize the value of wetlands and the value of wetland creation and restoration?

What is the current wetland area and the target for the future?

What options are available for woodland/wetland creation?

How will climate change be addressed in policies?

How will the carbon footprint be addressed?

Consider the impact of urban growth on flooding. How will property and the environment be protected?

Do Source Water Protection Areas exist within the study area?

Natural Heritage Features are not accurately mapped in N9

What are the implications of creek blocks on developable land?

Natural heritage features have changed in N6 and N5

Access for farm equipment to cross Jones Creek



Participants at Public Information Centre #3

5 Agriculture

Detailed maps of the options are required

Leave out detailed minimum distance separation (MDS) until numbers are approved by the Province and the actual area slated for development is known

Barn information is already out of date (a barn and house are removed and other barn locations are imprecise)

Capability maps do not always match 'on the ground' experience

6 Archaeology

Is there an Archaeological Master Plan in place for the expansion lands, and if not, what is the City doing to protect the archaeological resources and artifacts in these lands?

Will the City require archaeological assessments on these lands prior to any development?

How did the consultant determine where the archaeological sites and areas of archaeological potential are in the mapping? Did this include any field studies?

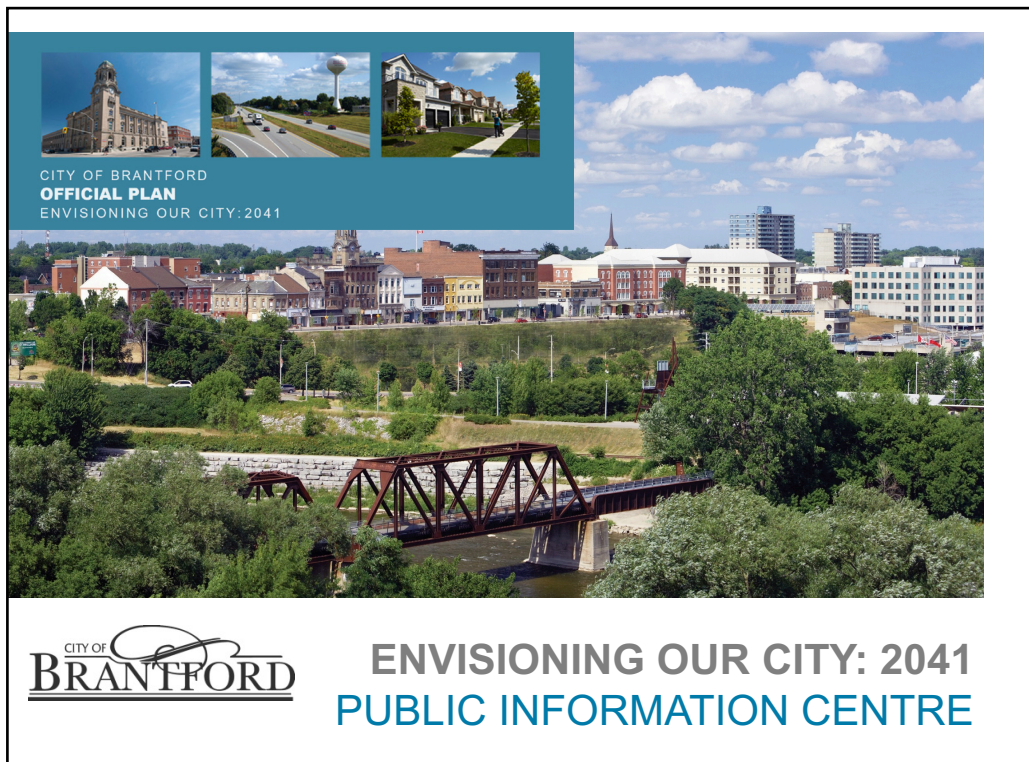
Why would a landowner share information on archaeology if this might make their property less desirable from an expansion point of view?

Can you clarify the methodology for determining or evaluating the specific evaluation score for each area?

Why did certain areas receive such high scores while adjacent parcels did not?



Display Boards



Study Process

The City of Brantford is undertaking three studies to guide future development to 2041 and to take into account the Boundary Expansion Lands transferred from Brant County to the City in January 2017:

Official Plan Review

Master Servicing Plan Update

Transportation Master Plan Update

Purpose of this PIC

- 1) Outline key outputs from Municipal Comprehensive Review:
 - Alternative Intensification Target
 - Alternative Greenfield Density Target
 - Amount of Employment Land Needs
 - Amount of Community Land Needs
 - Where new growth should be located
- 2) Municipal Servicing Plan Update
- 3) Transportation Master Plan update
- 4) Next steps

3



Municipal Comprehensive Review

Land Needs

Targets for employment and population growth

	Brantford 2016	2016 Expansion Lands	2041	Total 2016- 2041 Growth
Population	100,525	1,185	163,000	61,290
Employment	44,375	515	79,000	34,110



Municipal Comprehensive Review

Employment Land Needs

Employment density determined by reviewing current job density and nature of future employment

24 jobs/gross hectare Employment Lands Employment = **732 ha**

64 jobs/gross hectare Population Related Employment = **20 ha**

Subtract vacant land of **– 414 ha**

Urban Boundary Expansion for Employment Lands = 338 ha



Municipal Comprehensive Review

Intensification Strategy

- The Growth Plan has set an intensification target of 60%
- Requires 16,000 units over 25 years
- Substantial shift in the housing market required
Recommend to continue shift towards medium and higher density housing
- Slowly increase intensification target:

40% to 2021

45% 2021 to 2031 = 12,500 units

50% 2031 to 2041



Municipal Comprehensive Review

Intensification Strategy

- A reasonable distribution of units by type to the various geographical components of the Built-up Area would entail:
 - 650 single and semi-detached units in the existing neighbourhoods;
 - 1,250 second units in the existing neighbourhoods;
 - 800 townhouses in the existing neighbourhoods;
 - 1,000 student housing units;
 - 3,500 townhouse in the Intensification Corridors and major mixed use commercial sites;
 - 1,500 apartments in the Intensification Corridors and major mixed use commercial sites; and
 - 3,800 apartments in the Downtown Urban Growth Centre.



Municipal Comprehensive Review

DGA Targets

Growth Plan set a DGA density target of 80%

Recommended graduated DGA density targets:

- 2016 to 2021 – 50 persons and jobs/hectare
 - Based on existing registered and draft application plan
- 2021 to 2031 – 57 persons and jobs/hectare
- After 2031 – 60 persons and jobs/hectare
 - Achieve mix of 55% Singles/Semis / 40% Townhouse / 5% Apartment



Municipal Comprehensive Review

Community Area Land Needs

- Based on the 3 graduated densities:

DGA LAND REQUIREMENTS BY PLANNING PERIOD

Time period	% DGA Growth	Units	Pop & Jobs	Density	Area (ha)
2016-2021	8%	1,125	4,100	50	82
2021-2031	55%	7,930	28,186	57	495
2031-2041	37%	5,315	18,962	60	316
Total	100%	14,370	51,248	-	893

Subtract existing vacant land supply in DGA

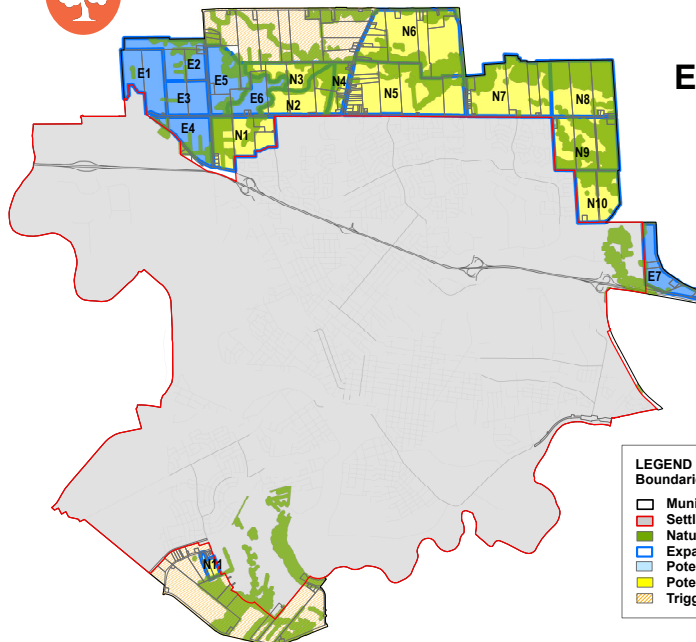
– 430 ha

Land deficit

= 462 ha



Boundary Expansion Lands



Potential Expansion Lands

LEGEND	
Boundaries	
	Municipal Boundary
	Settlement Area Boundary
	Natural Heritage System
	Expansion Option Boundaries
	Potential Employment Expansion Areas
	Potential Neighborhood Expansion Areas
	Trigger Lands



Boundary Expansion Lands

Boundary Expansion Lands

Neighbourhood Evaluation Matrix Summary

Principles	Neighbourhood Options										
	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
Agriculture											
A1	10	3	6	2	9	6	11	6	3	3	1
A2	10	7	11	6	1	2	4	9	7	5	2
A3	1	1	1	1	1	1	11	1	1	1	1
Archaeology											
B1	1	2	7	8	5	2	2	6	8	10	11
Transportation											
C1	3	1	10	3	3	3	3	3	10	1	9
C2	1	1	10	10	1	7	1	1	9	1	7
C3	1	1	10	8	1	9	1	1	10	1	1
C4	1	1	10	1	1	9	1	1	10	1	1
Environment											
D1	1	4	7	4	4	4	7	7	1	1	1
D2	1	3	6	3	6	6	6	6	6	3	1
D3	6	3	6	6	3	6	6	6	6	3	1
D4	1	6	2	6	2	2	6	6	6	2	6
Water & Wastewater											
E1 W	1	1	9	1	1	7	1	6	11	9	7
E1 WW	2	4	10	4	4	9	1	4	10	2	4
E2 W	6	3	11	1	3	8	1	3	8	3	3
E2 WW	1	4	4	4	4	10	2	4	4	2	11
E3 W	3	3	11	7	3	9	1	7	9	3	1
E3 WW	6	7	11	9	7	10	1	1	1	1	1
E4 W	1	1	10	6	6	6	1	6	11	1	1
E4 WW	1	5	11	5	5	8	2	2	8	2	10
Stormwater											
F1	11	6	6	1	5	1	6	6	1	1	6
F2	3	3	10	7	11	7	3	3	7	2	1
F3	3	2	6	6	11	6	3	6	6	3	1
F4	1	1	10	1	1	10	1	1	7	7	7
F5	5	4	6	3	11	7	10	8	9	1	2
Land Use											
G1	1	6	11	1	1	10	1	8	8	6	1
G2	6	4	6	1	1	4	1	6	6	6	6



Boundary Expansion Lands

Boundary Expansion Lands

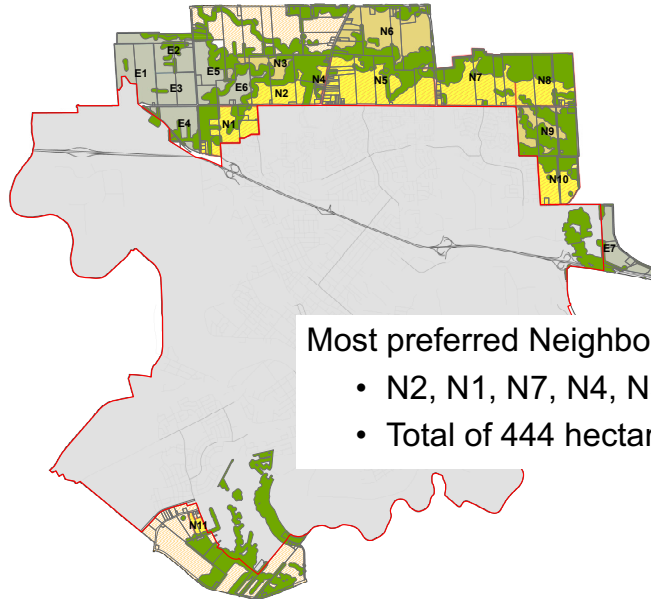
Employment Evaluation Matrix Summary

Principles	Employment Options						
	E1	E2	E3	E4	E5	E6	E7
Agriculture							
A1	6	4	6	3	2	1	4
A2	7	4	5	5	1	2	2
A3	1	1	1	1	1	1	1
Archaeology							
B1	2	4	3	1	5	6	7
Transportation							
C1	4	6	1	1	4	6	1
C2	7	1	1	1	1	1	6
C3	7	1	1	1	1	1	1
C4	6	7	1	1	1	1	1
Environment							
D1	1	7	1	3	5	5	3
D2	1	7	1	1	5	5	4
D3	1	7	1	5	5	1	1
D4	1	6	3	1	6	5	3
Water & Wastewater							
E1 W	2	5	5	5	2	2	1
E1 WW	1	1	1	1	6	6	1
E2 W	1	1	1	1	5	5	5
E2 WW	1	1	1	1	1	1	1
E3 W	2	4	3	4	7	4	1
E3 WW	2	4	4	2	4	4	1
E4 W	4	4	4	4	1	1	1
E4 WW	1	1	1	1	6	6	1
Stormwater							
F1	4	6	2	7	3	4	1
F2	1	6	1	1	7	1	5
F3	7	4	4	2	2	1	4
F4	7	5	6	4	2	1	3
F5	7	5	3	6	2	4	1
Land Use							
G1	1	6	4	1	4	6	1
G3	3	6	4	1	4	6	1



Boundary Expansion Lands

Most Preferred Neighbourhood Options



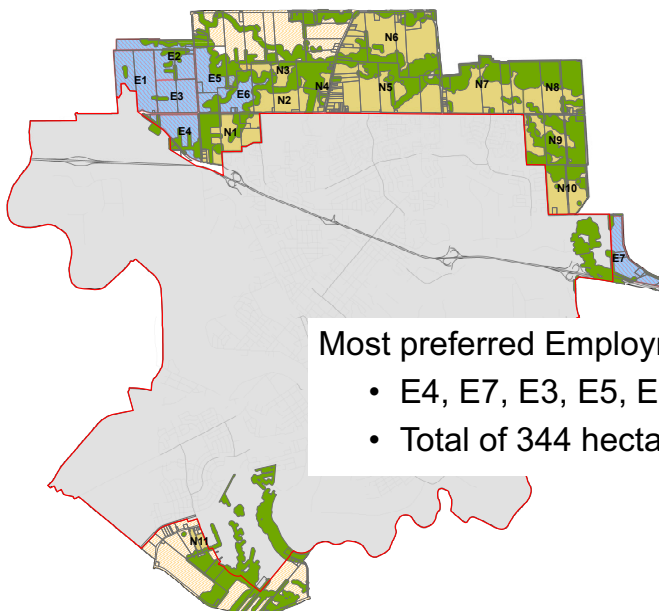
Most preferred Neighbourhood Options

- N2, N1, N7, N4, N5, N10, N11 and N8
- Total of 444 hectares



Boundary Expansion Lands

Most Preferred Employment Options



Most preferred Employment Options

- E4, E7, E3, E5, E1, and E2
- Total of 344 hectares

Settlement Area Boundary Expansion Evaluation – Agriculture

Principle A1: To identify the better versus the poorer agricultural areas within each Option and to retain those better areas in agriculture as long as possible.

Principle A2: To identify the better versus the poorer agricultural areas adjacent or near to the Options and to minimize impacts of non-agricultural uses proposed in the expansion area on the better agricultural areas identified.

Principle A3: To avoid impacts on the agri-food network or if not possible, to minimize and mitigate impacts.

Agriculture - Neighbourhood Evaluation Summary											
Principle	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
A1	10	3	6	2	9	6	11	6	3	3	1
A2	10	7	11	6	1	2	4	9	7	5	2
A3	1	1	1	1	1	1	11	1	1	1	1

Agriculture - Employment Evaluation Summary							
Principle	E1	E2	E3	E4	E5	E6	E7
A1	6	4	6	3	2	1	4
A2	7	4	5	5	1	2	2
A3	1	1	1	1	1	1	1

 Most Preferred
  Least Preferred
  Medium Preferred

Settlement Area Boundary Expansion Evaluation – Archaeology

Principle B1: To protect and avoid archaeological resources and areas of potential for the presence of archaeological resources, and where avoidance is not possible, to assess and mitigate the archaeological resources.

Archaeology - Overall Neighbourhood Evaluation											
Principles	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
B1	1	2	7	8	5	2	2	6	8	10	11

Archaeology - Overall Employment Evaluation							
Principles	E1	E2	E3	E4	E5	E6	E7
B1	2	4	3	1	5	6	7

 Most Preferred
  Least Preferred
  Medium Preferred

Settlement Area Boundary Expansion Evaluation – Transportation

Principle C1: To ensure appropriate access and connectivity to new urban areas.

Principle C2: To ensure appropriate transportation capacity is maintained.

Principle C3: To balance transportation needs and provide choice for the travel needs of residents.

Principle C4: To ensure transportation network continuity between existing and new areas.

Transportation - Overall Neighbourhood Evaluation

Principle	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
C1	3	1	10	3	3	3	3	3	10	1	9
C2	1	1	10	10	1	7	1	1	9	1	7
C3	1	1	10	8	1	9	1	1	10	1	1
C4	1	1	10	1	1	9	1	1	10	1	1

Transportation - Overall Employment Evaluation

Principle	E1	E2	E3	E4	E5	E6	E7
C1	4	6	1	1	4	6	1
C2	7	1	1	1	1	1	6
C3	7	1	1	1	1	1	1
C4	6	7	1	1	1	1	1

 Most Preferred
  Least Preferred
  Medium Preferred

Settlement Area Boundary Expansion Evaluation – Environment

Principle D1: To protect, enhance and restore the Natural Heritage System (NHS) for the long-term along with existing linkage connections between the NHS and NHS features within the County of Brant and the existing urban area.

Principle D2: To protect and enhance surface water quality/quantity including fish habitat.

Principle D3: To protect and enhance the groundwater regime.

Principle D4: To protect significant wildlife habitat features and functions including the habitat of species-at-risk.

Principle D5: To protect stream channel and valleyland integrity, particularly in erosion prone systems.

Environment - Overall Neighbourhood Evaluation

Principle	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
D1	1	4	7	4	4	4	7	7	7	1	1
D2	1	3	6	3	6	6	6	6	6	3	1
D3	6	3	6	6	3	6	6	6	6	3	1
D4	1	6	2	6	2	2	6	6	6	2	6

Environment - Overall Employment Evaluation

Principle	E1	E2	E3	E4	E5	E6	E7
D1	1	7	1	3	5	5	3
D2	1	7	1	1	5	5	4
D3	1	7	1	5	5	1	1
D4	1	6	3	1	6	5	3

 Most Preferred
  Least Preferred
  Medium Preferred

Settlement Area Boundary Expansion Evaluation – Water System

Principle E1: To efficiently use existing and planned infrastructure and to minimize the complexity of extending the existing water and wastewater system to the expansion areas.

Principle E2: To align future infrastructure with the Master Servicing Plan.

Principle E3: To phase water and wastewater infrastructure logically and consecutively.

Principle E4: To ensure the infrastructure is financially viable over the full life-cycle and the preferred serving solution considers the best life-cycle Options when considering overall operational efficiency, operational resiliency to climate change and/or major component failure, operational and maintenance cost, existing renewal needs of the system, post period servicing, and greenhouse gas emissions.

Water Servicing - Overall Neighbourhood Evaluation

Principles	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
E1 W	1	1	9	1	1	7	1	6	11	9	7
E2 W	8	3	11	1	3	8	1	3	8	3	3
E3 W	3	3	11	7	3	9	1	7	9	3	1
E4 W	1	1	10	6	6	6	1	6	11	1	1

Water Servicing - Overall Employment Evaluation

Principles	E1	E2	E3	E4	E5	E6	E7
E1 W	2	5	5	5	2	2	1
E2 W	1	1	1	1	5	5	5
E3 W	2	4	3	4	7	4	1
E4 W	4	4	4	4	1	1	1

● Most Preferred
 ● Least Preferred
 ● Medium Preferred

Settlement Area Boundary Expansion Evaluation – Wastewater System

Principle E1: To efficiently use existing and planned infrastructure and to minimize the complexity of extending the existing water and wastewater system to the expansion areas.

Principle E2: To align future infrastructure with the Master Servicing Plan.

Principle E3: To phase water and wastewater infrastructure logically and consecutively.

Principle E4: To ensure the infrastructure is financially viable over the full life-cycle and the preferred serving solution considers the best life-cycle Options when considering overall operational efficiency, operational resiliency to climate change and/or major component failure, operational and maintenance cost, existing renewal needs of the system, post period servicing, and greenhouse gas emissions.

Wastewater Servicing - Overall Neighbourhood Evaluation

Principles	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
E1 WW	2	4	10	4	4	9	1	4	10	2	4
E2 WW	1	4	4	4	4	10	2	4	4	2	11
E3 WW	6	7	11	9	7	10	1	1	1	1	1
E4 WW	1	5	11	5	5	8	2	2	8	2	10

Wastewater Servicing - Overall Employment Evaluation

Principles	E1	E2	E3	E4	E5	E6	E7
E1 WW	1	1	1	1	6	6	1
E2 WW	1	1	1	1	1	1	1
E3 WW	2	4	4	2	4	4	1
E4 WW	1	1	1	1	6	6	1

● Most Preferred
 ● Least Preferred
 ● Medium Preferred

Settlement Area Boundary Expansion Evaluation – Stormwater

Principle F1: To avoid key hydrologic areas where possible when determining the most appropriate location for settlement area boundary expansion. Key hydrologic areas are defined as significant groundwater recharge areas (SGRAs), highly vulnerable aquifers (HVAs), and significant surface water contribution areas that are necessary for the ecological and hydrologic integrity of a watershed.

Principle F2: To minimize the impact on the water resource system by minimizing the relative complexity needed to complete local stormwater servicing.


Principle F3: To minimize the impact on the water resource system by evaluating the existing downstream system capacity.

Principle F4: To phase stormwater management infrastructure logically and consecutively.

Principle F5: To ensure that the stormwater infrastructure is financially viability by minimizing the total project life-cycle cost to service the expansion areas.

Stormwater - Overall Neighbourhood Evaluation											
Principles	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
F1	11	6	6	1	5	1	6	6	1	1	6
F2	3	3	10	7	11	7	3	3	7	2	1
F3	3	2	6	6	11	6	3	6	6	3	1
F4	1	1	10	1	1	10	1	1	7	7	7
F5	5	4	6	3	11	7	10	8	9	1	2

Stormwater - Overall Employment Evaluation							
Principles	E1	E2	E3	E4	E5	E6	E7
F1	4	6	2	7	3	4	1
F2	1	6	1	1	7	1	5
F3	7	4	4	2	2	1	4
F4	7	5	6	4	2	1	3
F5	7	5	3	6	2	4	1

 Most Preferred
  Least Preferred
  Medium Preferred

Settlement Area Boundary Expansion Evaluation – Land Use

Principle G1: To ensure development occurs adjacent to existing built areas.

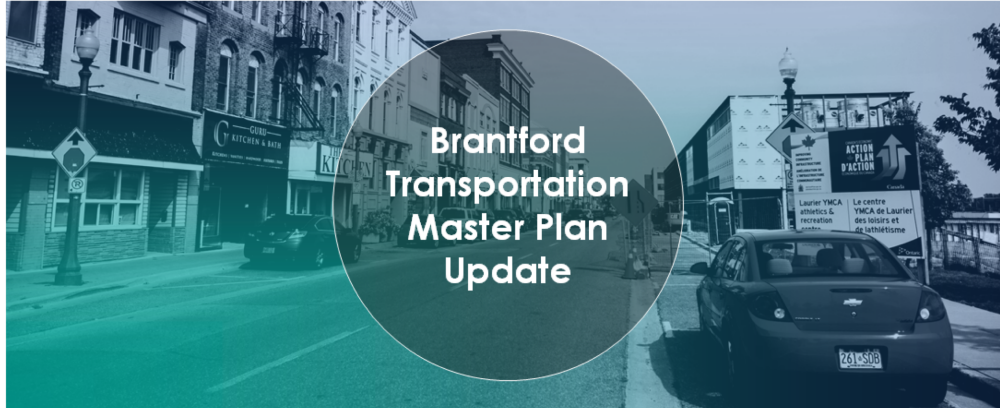
Principle G2: To create compact new urban areas with a mix of uses and densities.

Principle G3: To direct employment areas to locations in proximity to major goods movement facilities.

Land Use - Overall Neighbourhood Evaluation											
Principles	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
G1	1	6	11	1	1	10	1	8	8	6	1
G2	6	4	6	1	1	4	1	6	6	6	6

Land Use - Overall Employment Evaluation							
Principles	E1	E2	E3	E4	E5	E6	E7
G1	1	6	4	1	4	6	1
G3	3	6	4	1	4	6	1

 Most Preferred
  Least Preferred
  Medium Preferred



Brantford Transportation Master Plan Update

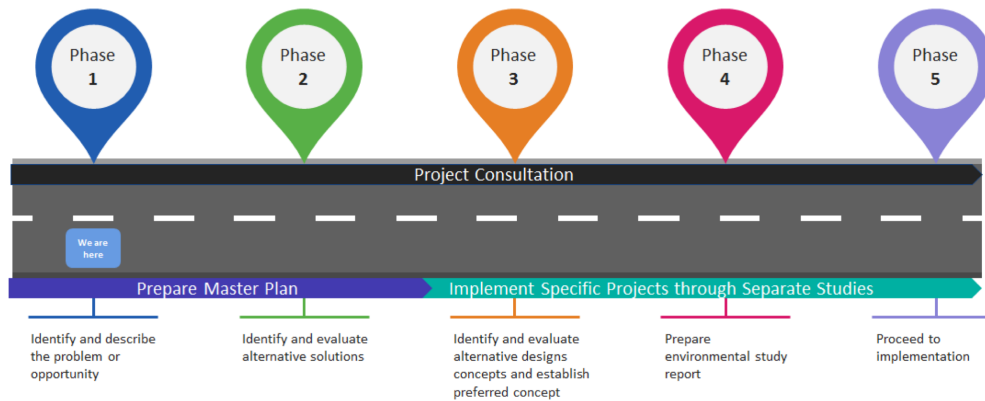
TMP Foundations and Strategies PIC #3

May 17, 2018



Study Process

The Transportation Master Plan will follow the Municipal Class Environmental Assessment Process for Master Plans for Phases 1 and 2.



Brantford Transportation Master Plan Update

What We Heard at Study Initiation

Problems and Challenges

- Congestion
- Connections / Accessibility (Transit)
- Safe Environment
- Pedestrian Linkages
- Regional Integration
- Form of Development

Opportunities and Priorities

- Public Transit
- Active Transportation
- Street Design
- Complete Community
- Implementable Strategy
- Connect Infrastructure



Brantford Transportation Master Plan Update

Active Transportation Opportunities



Opportunity

Promote increased use of alternative modes by providing an integrated pedestrian and bicycle network that enhances user experience through increased safety and efficiency.

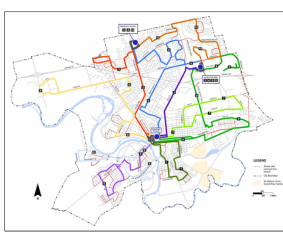
Objective

Realize increase in active modes for utilitarian purposes (work and school) which supports character of a complete community.



Brantford Transportation Master Plan Update

Regional and Local Transit Service Opportunities



Opportunity

Provide mobility choice for wider range of users and destinations through more access, better connections, increased frequency, and enhanced experience.

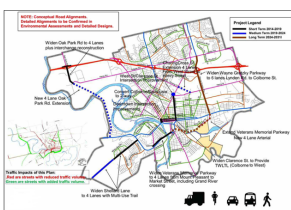
Objective

Increase transit service coverage to compete with single auto mode, to increase number of non-auto trips and encourage transit oriented development.



Brantford Transportation Master Plan Update

Inter and Intra Regional Corridor Opportunities



Opportunity

Provide a balanced road system that is accessible for local, intra-municipal and inter-regional travel while enhancing user travel experience

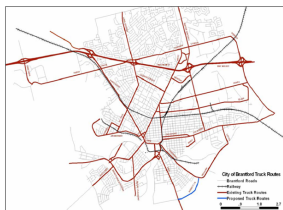
Objective

Maximize efficiency of existing roadway infrastructure and identify new transportation corridors to address gaps in service



Brantford Transportation Master Plan Update

Commercial Vehicle Traffic



Opportunity

Identify network alternatives that encourage efficient movement of goods through and around the city that protect and enhance the community experience for other users.

Objective

Maintain access to industry and support economic prosperity of the City.



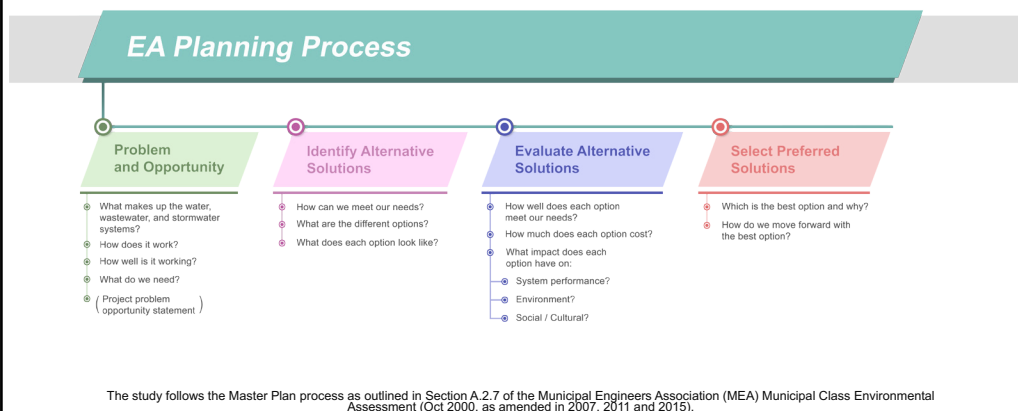
Brantford Transportation Master Plan Update

Next Steps in the Study



Municipal Class EA Process

The Water, Wastewater, and Stormwater Master Servicing Plan Update and Transportation Master Plan involve the completion of Phases 1 and 2 of the MEA Municipal Class EA process.



Master Servicing Plan Vision Statement

Supporting a Strong and Growing Brantford

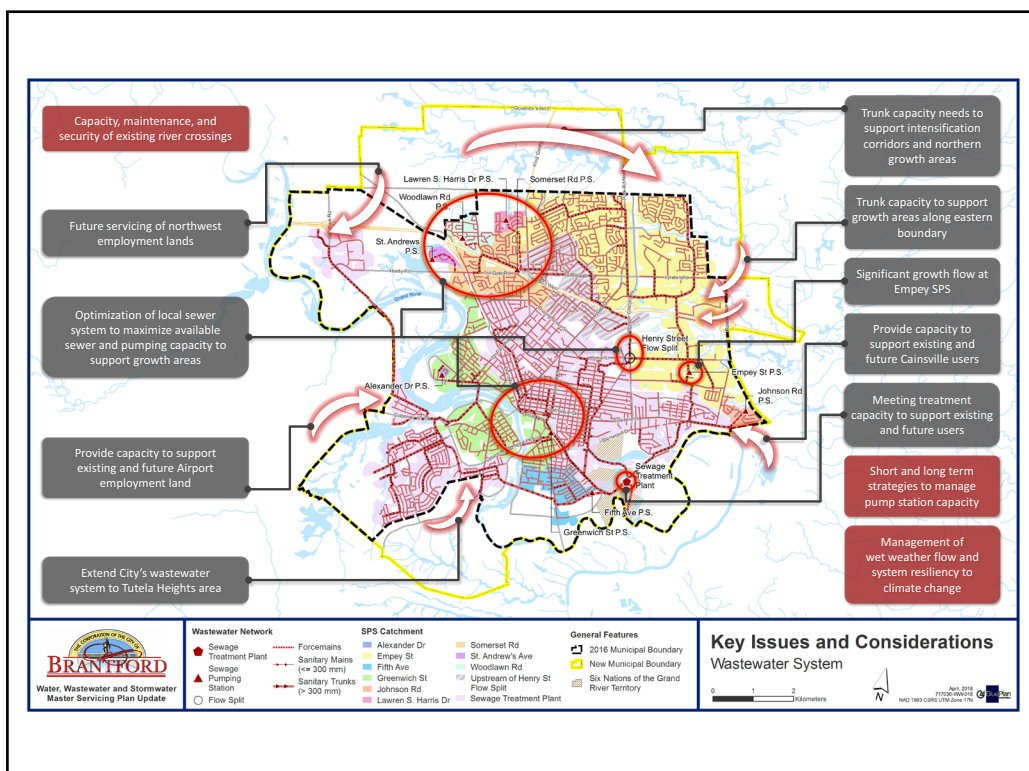
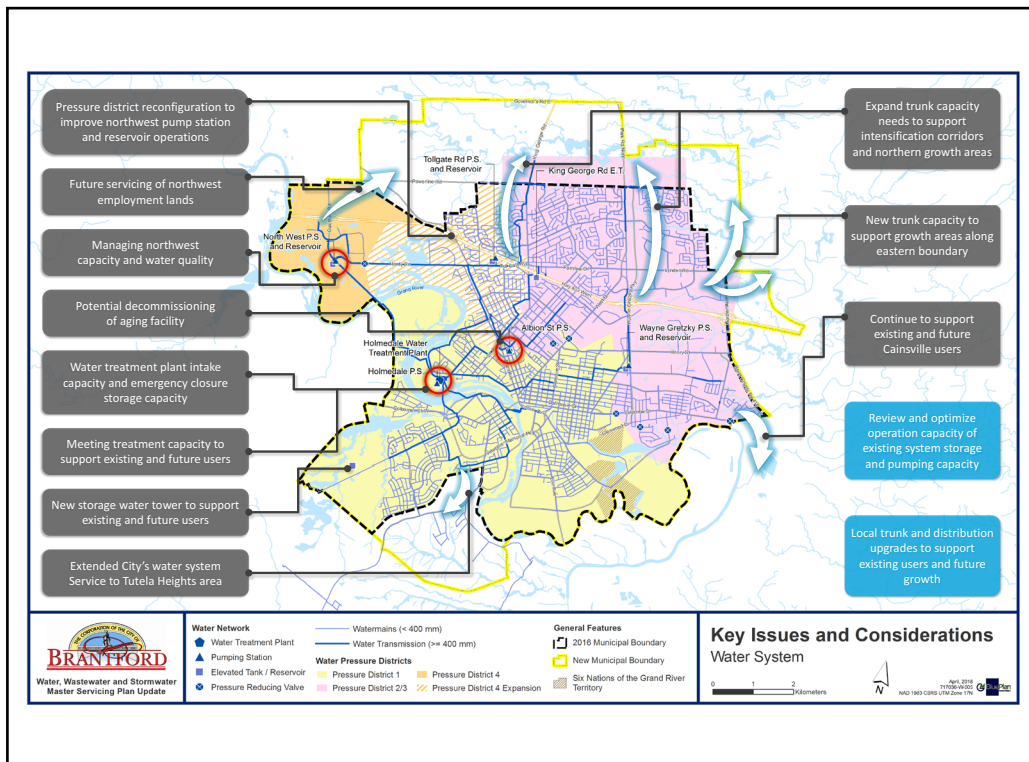
To establish a preferred servicing plan for the City's water, wastewater, and stormwater systems that:

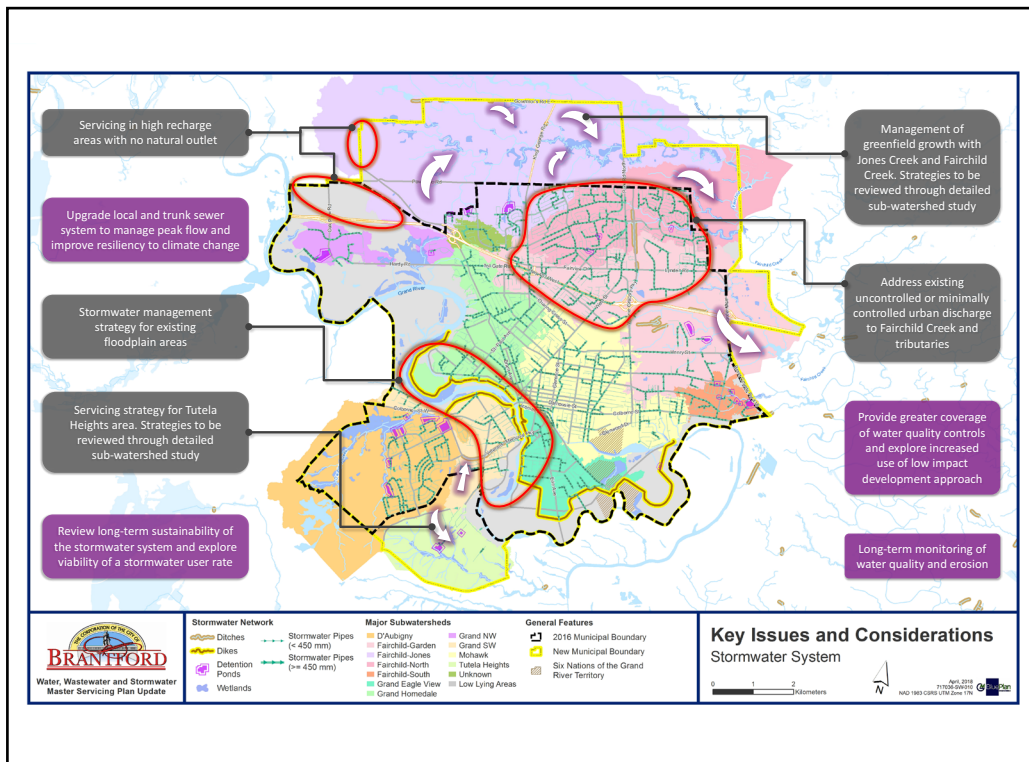
- Meets current needs
- Supports growth and expansion of the City's urban boundary
- Maintains or improves service levels
- Considers priority areas of climate change, infrastructure optimization and renewal, and system resiliency

What is Driving the Master Servicing Plan Update



- In 2014, the City completed the Water, wastewater, and stormwater master plan (MSP) that looked at planned growth to 2031, within the City's previous boundary.
- The MSP update is needed to integrate:
 - City-wide servicing issues with review of the boundary adjustment lands
 - Planning for growth to 2041 and new density and intensification targets
- The MSP will develop a long-term servicing strategy and capital forecast to ensure the maintenance of services for existing residents and business as well as support future growth of the community

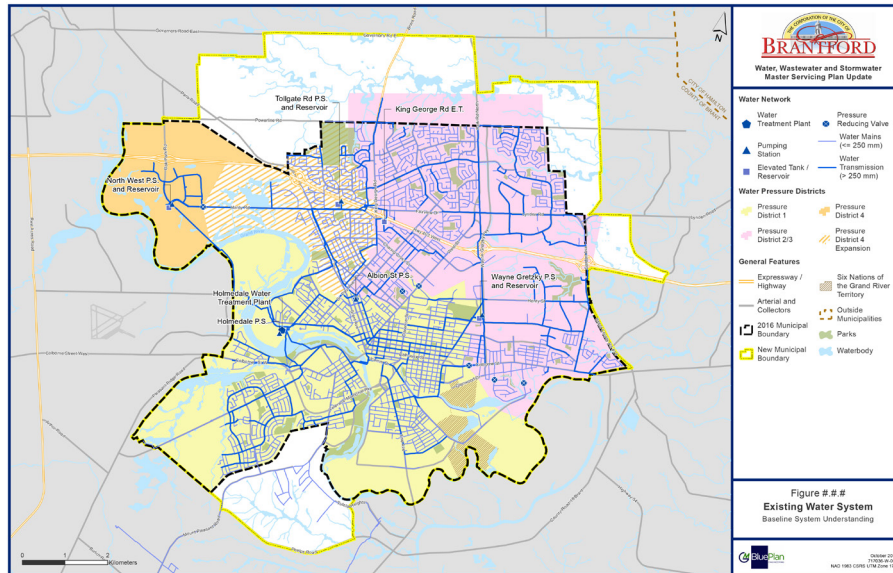




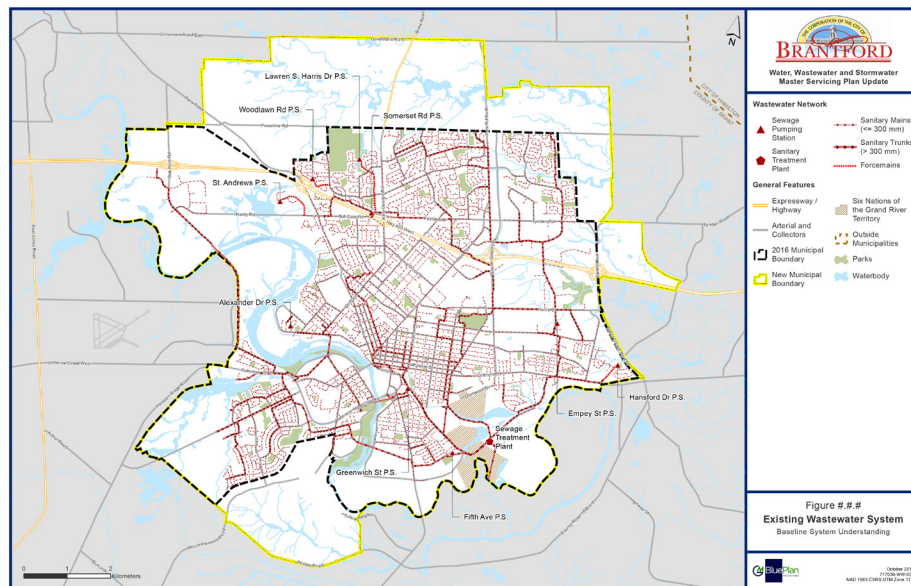
Key Servicing Issues and Considerations

Water System	Wastewater System	Stormwater System
<ul style="list-style-type: none"> •Treatment Plant Capacity •New Water Storage •Water Needs in Northwest •Extending Service to North and Tutela Heights •Facility Optimization •Local Pressure and Flow Capacity Upgrades 	<ul style="list-style-type: none"> •Treatment Plant Capacity •Conveying Flows from North and Tutela Heights •Existing Pump Station Capacity •Wet Weather Flow •River Siphons •Wastewater Quality 	<ul style="list-style-type: none"> •Level of Service – Pipe vs. Overland Flow •Stormwater Management Options •Stream and Creek Erosion •Grand River Interaction •Retrofits within Existing Build Areas

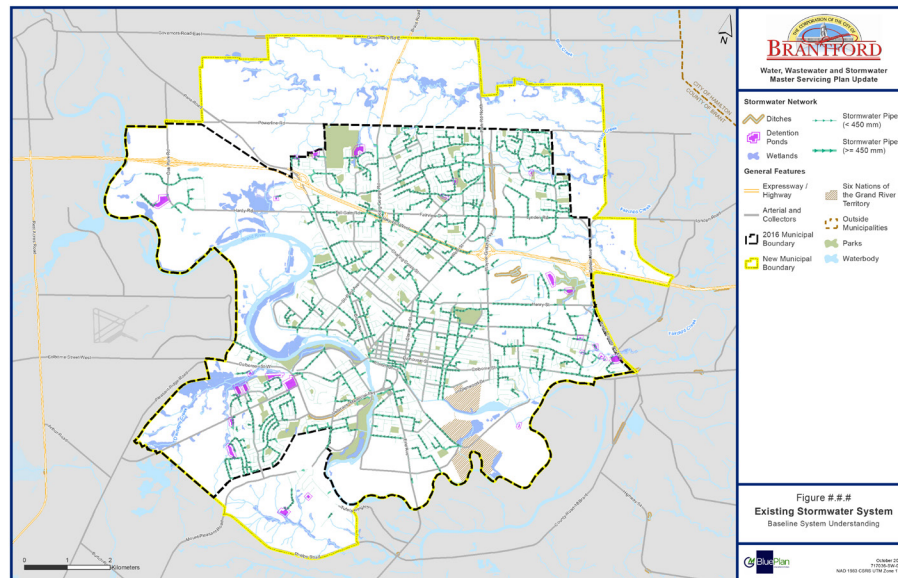
Existing Water System




Existing Wastewater System




Existing Stormwater System



Presentation



CITY OF BRANTFORD
OFFICIAL PLAN
ENVISIONING OUR CITY: 2041

 **ENVISIONING OUR CITY: 2041**
PUBLIC INFORMATION CENTRE #3
May 17, 2018

Study Process

The City of Brantford is undertaking three studies to guide future development to 2041 and to take into account the Boundary Expansion Lands transferred from Brant County to the City in January 2017:

Official Plan Review

Master Servicing Plan Update

Transportation Master Plan Update

Purpose of this PIC

- 1) Outline key outputs from Municipal Comprehensive Review:
 - Alternative Intensification Target
 - Alternative Greenfield Density Target
 - Amount of Employment Land Needs
 - Amount of Community Land Needs
 - Where new growth should be located
- 2) Municipal Servicing Plan Update
- 3) Transportation Master Plan update
- 4) Next steps

3

Consultants

SGL Planning & Design Inc.

Urban Boundary Expansion, Secondary Plan

The Planning Partnership

Official Plan, Consultation

Cushman & Wakefield

Real Estate

AgPlan

Agricultural Consultants

GM BluePlan Engineering Ltd.

Municipal Servicing

Plan B Natural Heritage

Landscape Ecology and Natural Heritage Planning

ASI

Heritage Culture, Archaeology, Indigenous Engagement

Ecosystem Recovery Inc.

Natural Resources Engineering, Stormwater Management

Dillon

Transportation

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Opportunities to be Involved in the Process

2017	
September 11	Public Information Centre #1 Update on project and process
November 16	Public Information Centre #2 Municipal Comprehensive Review, Employment Conversions & Growth Options Kick off of Environmental Assessment for Boundary Expansion Lands
2018	
May 17	Public Information Centre #3 Municipal Comprehensive Review, Land Needs Assessment, Preferred Urban Boundary
June	Public Information Centre #4 Vision and Principles for Development in the Boundary Expansion Lands
Fall	Public Information Centre #5 Options for Community Design in the Boundary Expansion Lands
2019	
Winter	Public Information Centre #6 Preferred Land Use Plan for the Boundary Expansion Lands
Spring	Statutory Public Open House Draft Official Plan
Fall	Statutory Public Meeting and Council Presentation Official Plan

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Indigenous Consultation Strategy

- The history of Brantford is tied to the history of the First Nations people in Brant County
- Brantford is in the traditional and treaty territory of Six Nations of the Grand River First Nation and the Mississaugas of the New Credit First Nation

Meetings have occurred with:

- Six Nations of the Grand River First Nation
- Mississaugas of the New Credit First Nation

City staff will be attending First Nations community awareness events:

- Six Nations of the Grand River – May 18
- Mississaugas of the New Credit First Nation – June 15

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Presentation



Municipal Comprehensive Review

- Employment Land Needs to Accommodate 2041 forecast
- Urban Growth Centre
- Intensification Strategy + Alternative Target
- Designated Greenfield Area Supply + Alternative Target
- Community Land Needs to Accommodate 2041 forecast

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Municipal Comprehensive Review

Land Needs

Targets for employment and population growth

	Brantford 2016	2016 Expansion Lands	2041	Total 2016- 2041 Growth
Population	100,525	1,185	163,000	61,290
Employment	44,375	515	79,000	34,110

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Municipal Comprehensive Review

Employment Land Needs

- Three categorizes of employment:
 1. Employment Lands Employment (ELE)
 - Focused on employment areas
 2. Population-Related Employment (PRE)
 - In existing and new neighbourhoods
 - Small portion to employment areas
 3. Major Office Employment (MOE)
 - Focused on the Downtown

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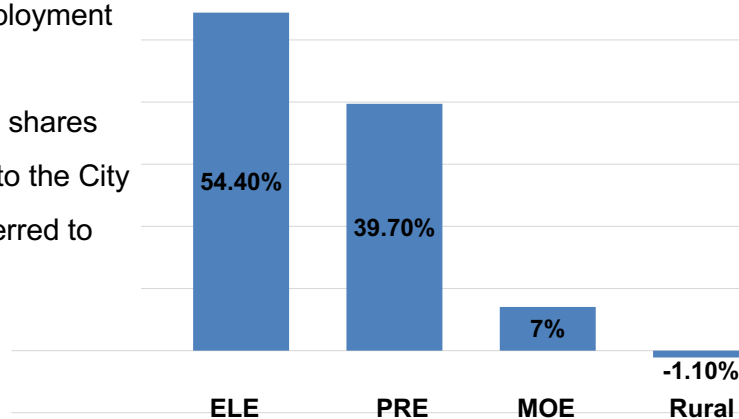


Municipal Comprehensive Review

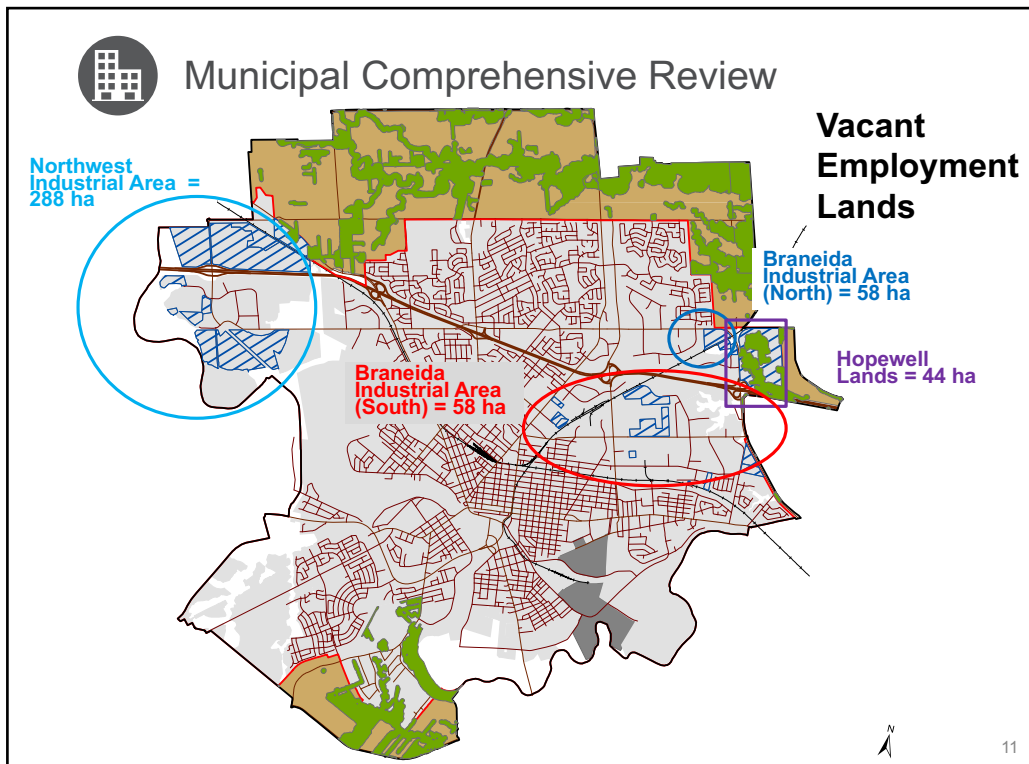
Employment


Employment Growth Forecast - % Share

- Home based employment not included
- Similar to historic shares
- But MOE is new to the City
- Rural jobs transferred to PRE



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 **Municipal Comprehensive Review**

Employment Land Needs

Employment density determined by reviewing current job density and nature of future employment	
24 jobs/gross hectare Employment Lands Employment =	732 ha
64 jobs/gross hectare Population Related Employment =	20 ha
<i>Subtract vacant land of</i>	– 414 ha
Urban Boundary Expansion for Employment Lands =	338 ha

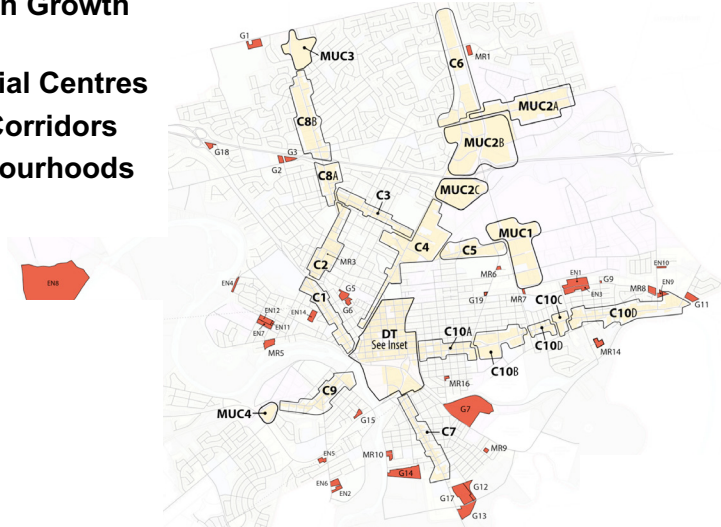
12



Municipal Comprehensive Review

Intensification Strategy

- Downtown Urban Growth Centre
- Major Commercial Centres
- Intensification Corridors
- Existing Neighbourhoods
- Second Units



Municipal Comprehensive Review

Intensification Strategy

- Considers three scenarios within the Built-up Area
- Range from:
 - low of 4,517 to high of 15,616



Municipal Comprehensive Review

Intensification Strategy

Built Up Area:

- Since 2007: 4,158 units built, of which 1,922 (46%) in the BUA
- Of 1,922 units in the BUA:
 - Single and semi detached dwellings (30%)
 - Townhouse dwellings (22%)
 - Apartment units (49%)
- Apartment construction has been limited
 - Only 2 new buildings constructed with more than 100 units
 - Most new buildings contain less than 50 units

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Municipal Comprehensive Review

Urban Growth Centre

Intensification Strategy

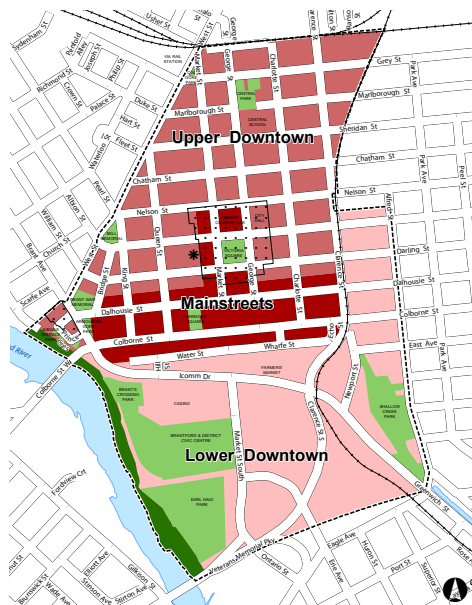
Size = 130 ha

Population = 2,644 people

Employment = 4,565 jobs

**Density = 55 persons +
jobs per hectare**

- But only 232 units developed over the last 10 years
- Need an additional 12,291 persons and jobs/ha to achieve target by 2031



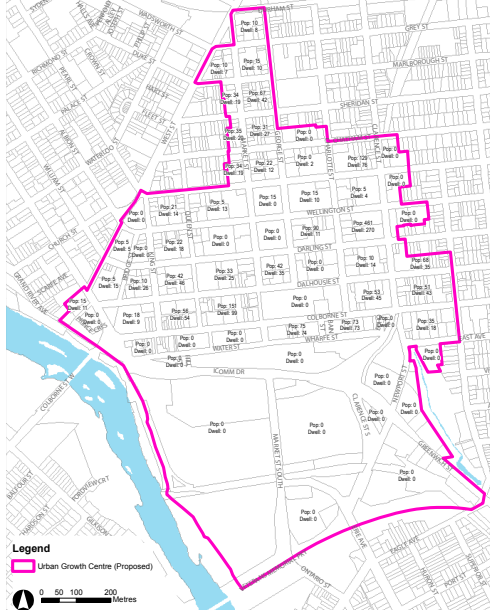
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Municipal Comprehensive Review

Intensification Strategy

Revised Urban Growth Centre Boundary



Size = 104 ha

Population = 1,779 people

Employment = 4,300 jobs

Density = 58 persons +
jobs per hectare

- Need additional 9,539 persons and jobs/ha to achieve target by 2031

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Municipal Comprehensive Review

Intensification Strategy

- The Growth Plan has set an intensification target of 60%
- Requires 16,000 units over 25 years
- Substantial shift in the housing market required
- Recommend to continue shift towards medium and higher density housing
- Slowly increase intensification target:

40% to 2021

45% 2021 to 2031 = 12,500 units

50% 2031 to 2041

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Municipal Comprehensive Review

Intensification Strategy

- A reasonable distribution of units by type to the various geographical components of the Built-up Area would entail:
 - 650 single and semi-detached units in the existing neighbourhoods;
 - 1,250 second units in the existing neighbourhoods;
 - 800 townhouses in the existing neighbourhoods;
 - 1,000 student housing units;
 - 3,500 townhouse in the Intensification Corridors and major mixed use commercial sites;
 - 1,500 apartments in the Intensification Corridors and major mixed use commercial sites; and
 - 3,800 apartments in the Downtown Urban Growth Centre.

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Municipal Comprehensive Review

Designated Greenfield Area Targets

Figure 6 - DGA Mapping Analysis

City of Brantford

LEGEND

Boundaries

- Municipal Boundary
- Settlement Boundary
- Delineated Built-Up Area
- Six Nation Lands
- Rural Lands Outside of Urban Boundary

Designated Greenfield Area

- Residential Built
- Residential Registered Plan
- Residential Draft Plan Approved
- Residential Application
- Residential Vacant
- Commercial Built
- Commercial Vacant
- Tutela Heights Built
- Tutela Heights Vacant

Take Outs

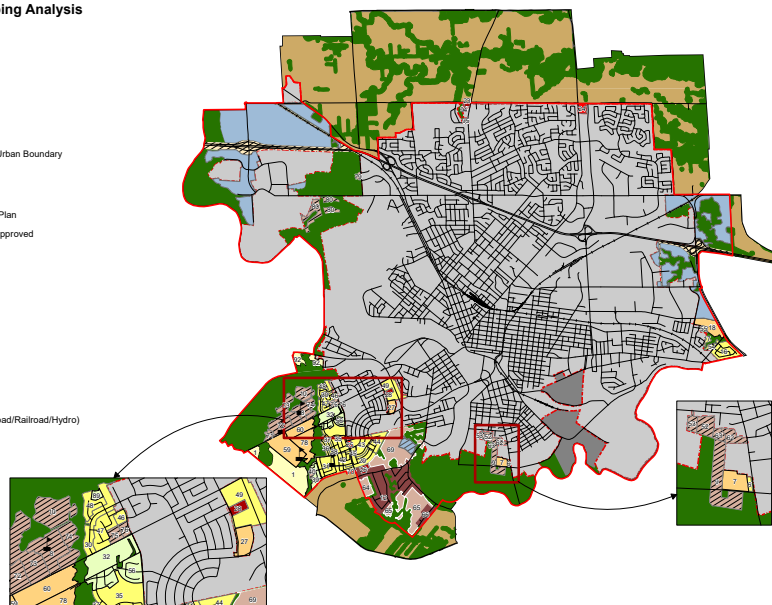
- Environmental
- Major Infrastructure (Road/Railroad/Hydro)
- Employment
- Cemetery

Roads & Railroads

- Road
- Provincial Highway
- Railroad

Schools

- School Site



0 850 1,700 3,400 5,100 Meters 20



Municipal Comprehensive Review

Intensification DGA Targets

- Existing DGA Density is only 40 persons and jobs per ha
- Current Approvals and Designations result in density of 45 persons and jobs/hectares
 - Based on mix of 73% Single/Semi / 25% Townhouse / 2% Apartment
- Increasing density on low density and requiring broader unit mix:
 - Increases density to 54 persons and jobs/hectare
 - Based on mix of 64% Single/Semi / 35% Townhouse / 1% Apartment
 - Increases supply by nearly 800 units
 - Total supply 7,815 units in current Settlement Boundary
 - BUT significant infrastructure constraints

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Municipal Comprehensive Review

DGA Targets

Growth Plan set a DGA density target of 80%

Recommended graduated DGA density targets:

- 2016 to 2021 – 50 persons and jobs/hectare
 - Based on existing registered and draft application plan
- 2021 to 2031 – 57 persons and jobs/hectare
- After 2031 – 60 persons and jobs/hectare
 - Achieve mix of 55% Singles/Semis / 40% Townhouse / 5% Apartment

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Municipal Comprehensive Review

Community Area Land Needs

- Based on the 3 graduated densities:

DGA LAND REQUIREMENTS BY PLANNING PERIOD					
Time period	% DGA Growth	Units	Pop & Jobs	Density	Area (ha)
2016-2021	8%	1,125	4,100	50	82
2021-2031	55%	7,930	28,186	57	495
2031-2041	37%	5,315	18,962	60	316
Total	100%	14,370	51,248	-	893

Subtract existing vacant land supply in DGA – 430 ha

Land deficit = 462 ha

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Presentation



Municipal Comprehensive Review
– Boundary Expansion Lands

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Boundary Expansion Lands

Boundary Expansion

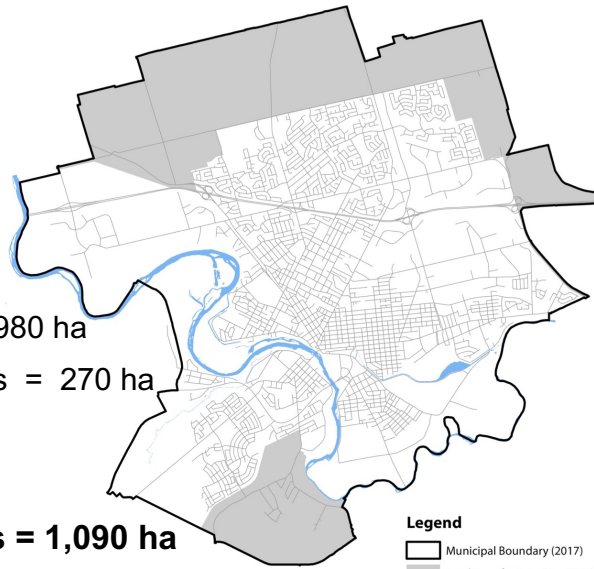
Total Area = 2,700 ha

Natural Heritage System = 980 ha

2017 Urban Boundary Lands = 270 ha

Trigger Lands = 360 ha

Total Developable Lands = 1,090 ha



Legend
Municipal Boundary (2017)
Land Transfer Area (Jan 2017)

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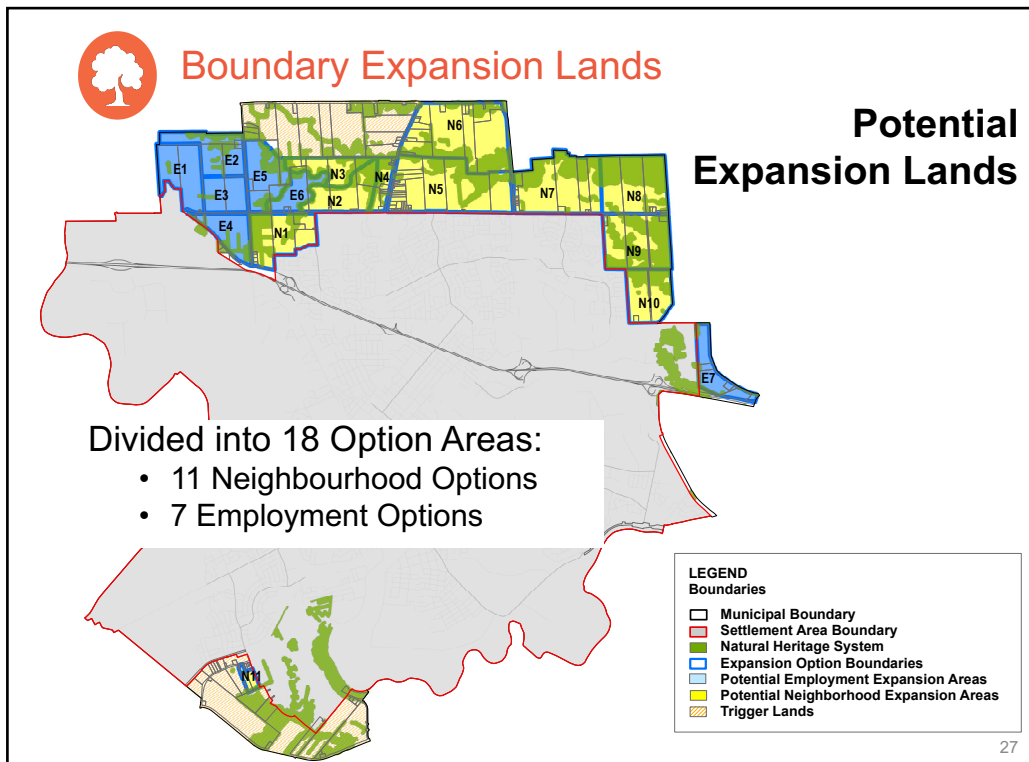


Boundary Expansion Lands

Boundary Expansion

- To accommodate 2041 population and employment forecasts, need:
 - 338 hectares Employment lands
 - 462 hectares Community/Neighbourhood lands

26



- Boundary Expansion Lands**
- Boundary Expansion Lands**
- Study team developed a series of Principles and criteria to evaluate the 18 Options
 - Each Option was analyzed and ranked from Most Preferred to Least Preferred for each principle.
- 28



Boundary Expansion Lands

Boundary Expansion Lands

Agriculture

- Principle 1: To identify the better versus the poorer agricultural areas within each Option and to retain those better areas in agriculture as long as possible.
- Principle 2: To identify the better versus the poorer agricultural areas adjacent or near to the Options and to minimize impacts of non-agricultural uses proposed in the expansion area on the better agricultural areas identified.
- Principle 3: To avoid impacts on the agri-food network or if not possible, to minimize and mitigate impacts.

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Boundary Expansion Lands

Boundary Expansion Lands

Archaeology

- Principle 1: To protect and avoid archaeological resources and areas of potential for the presence of archaeological resources, and where avoidance is not possible, to assess and mitigate the archaeological resources.

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Boundary Expansion Lands

Boundary Expansion Lands

Transportation

- Principle 1: To ensure appropriate access and connectivity to new urban areas.
- Principle 2: To ensure appropriate transportation capacity is maintained.
- Principle 3: To balance transportation needs and provide choice for the travel needs of residents.
- Principle 4: To ensure transportation network continuity between existing and new areas.

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Boundary Expansion Lands

Boundary Expansion Lands

Environment

- Principle 1: To protect, enhance and restore the Natural Heritage System (NHS) for the long-term along with existing linkage connections between the NHS and NHS features within the County of Brant and the existing urban area.
- Principle 2: To protect and enhance surface water quality/quantity including fish habitat.
- Principle 3: To protect and enhance the groundwater regime.
- Principle 4: To protect significant wildlife habitat features and functions including the habitat of species-at-risk.
- Principle 5: To protect stream channel and valleyland integrity, particularly in erosion prone systems.

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Boundary Expansion Lands

Boundary Expansion Lands

Water/Wastewater Servicing

- Principle 1: To efficiently use existing and planned infrastructure and to minimize the complexity of extending the existing water and wastewater system to the expansion areas.
- Principle 2: To align future infrastructure with the Master Servicing Plan.
- Principle 3: To phase water and wastewater infrastructure logically and consecutively.
- Principle 4: To ensure the infrastructure is financially viable over the full life-cycle and the preferred serving solution considers the best life-cycle Options

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Boundary Expansion Lands

Boundary Expansion Lands

Stormwater

- Principle 1: To avoid key hydrologic areas where possible when determining the most appropriate location for settlement area boundary expansion.
- Principle 2: To minimize the impact on the water resource system by minimizing the relative complexity needed to complete local stormwater servicing.
- Principle 3: To minimize the impact on the water resource system by evaluating the existing downstream system capacity.
- Principle 4: To phase stormwater management infrastructure logically and consecutively.
- Principle 5: To ensure that the stormwater infrastructure is financially viability by minimizing the total project life-cycle cost to service the expansion areas.

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Boundary Expansion Lands

Boundary Expansion Lands

Land Use

- Principle 1: To ensure development occurs adjacent to existing built areas.
- Principle 2: To create compact new urban areas with a mix of uses and densities.
- Principle 3: To direct employment areas to locations in proximity to major goods movement facilities.

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Boundary Expansion Lands

Boundary Expansion Lands

Neighbourhood Evaluation Matrix Summary

Principles	Neighbourhood Options										
	N1	N2	N3	N4	N5	N6	N7	N8	N9	N10	N11
Agriculture											
A1	10	3	6	2	9	6	11	6	3	3	1
A2	10	7	11	6	1	2	4	9	7	5	2
A3	1	1	1	1	1	1	11	1	1	1	1
Archaeology											
B1	1	2	7	8	5	2	2	6	8	10	11
Transportation											
C1	3	1	10	3	3	3	3	3	10	1	9
C2	1	1	10	10	1	7	1	1	9	1	7
C3	1	1	10	8	1	9	1	1	10	1	1
C4	1	1	10	1	1	9	1	1	10	1	1
Environment											
D1	1	4	7	4	4	4	7	7	7	1	1
D2	1	3	6	3	6	6	6	6	6	3	1
D3	6	3	6	3	6	6	6	6	6	3	1
D4	1	6	2	6	2	2	6	6	6	2	6
Water & Wastewater											
E1 W	1	1	9	1	1	7	1	6	11	9	7
E1 WW	2	4	10	4	4	9	1	4	10	2	4
E2 W	8	3	11	1	3	8	1	3	8	3	3
E2 WW	1	4	4	4	4	10	2	4	4	2	11
E3 W	3	3	11	7	3	9	1	7	9	3	1
E3 WW	6	7	11	9	7	10	1	1	1	1	1
E4 W	1	1	10	6	6	6	1	6	11	1	1
E4 WW	1	5	11	5	5	8	2	2	8	2	10
Stormwater											
F1	11	6	6	1	5	1	6	6	1	1	6
F2	3	3	10	7	11	7	3	3	7	2	1
F3	3	2	6	6	11	6	3	6	6	3	1
F4	1	1	10	1	1	10	1	1	7	7	7
F5	5	4	6	3	11	7	10	8	9	1	2
Land Use											
G1	1	6	11	1	1	10	1	8	8	6	1
G2	6	4	6	1	1	4	1	6	6	6	6

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Boundary Expansion Lands

Boundary Expansion Lands

Employment Evaluation Matrix Summary

Principles	Employment Options						
	E1	E2	E3	E4	E5	E6	E7
Agriculture							
A1	6	4	6	3	2	1	4
A2	7	4	5	5	1	2	2
A3	1	1	1	1	1	1	1
Archaeology							
B1	2	4	3	1	5	6	7
Transportation							
C1	4	6	1	1	4	6	1
C2	7	1	1	1	1	1	6
C3	7	1	1	1	1	1	1
C4	6	7	1	1	1	1	1
Environment							
D1	1	7	1	3	5	5	3
D2	1	7	1	1	5	5	4
D3	1	7	1	5	5	1	1
D4	1	6	3	1	6	5	3
Water & Wastewater							
E1 W	2	5	5	5	2	2	1
E1 WW	1	1	1	1	6	6	1
E2 W	1	1	1	1	5	5	5
E2 WW	1	1	1	1	1	1	1
E3 W	2	4	3	4	7	4	1
E3 WW	2	4	4	2	4	4	1
E4 W	4	4	4	4	1	1	1
E4 WW	1	1	1	1	6	6	1
Stormwater							
F1	4	6	2	7	3	4	1
F2	1	6	1	7	1	1	5
F3	7	4	4	2	2	1	4
F4	7	5	6	4	2	1	3
F5	7	5	3	6	2	4	1
Land Use							
G1	1	6	4	1	4	6	1
G3	3	6	4	1	4	6	1

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Boundary Expansion Lands

Boundary Expansion Lands

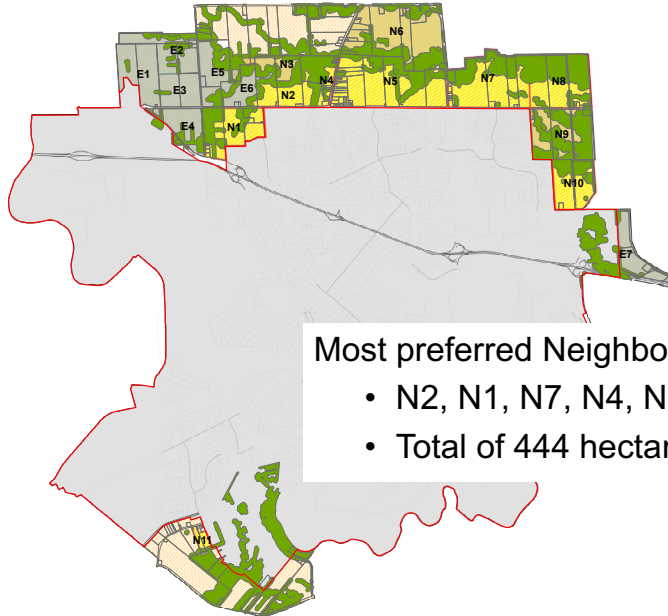
- Identified specific constraints and trade-offs for each Option
- Identified potential for mitigation, management or phasing measures to address constraints for each Option

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Boundary Expansion Lands

Most Preferred Neighbourhood Options



Most preferred Neighbourhood Options

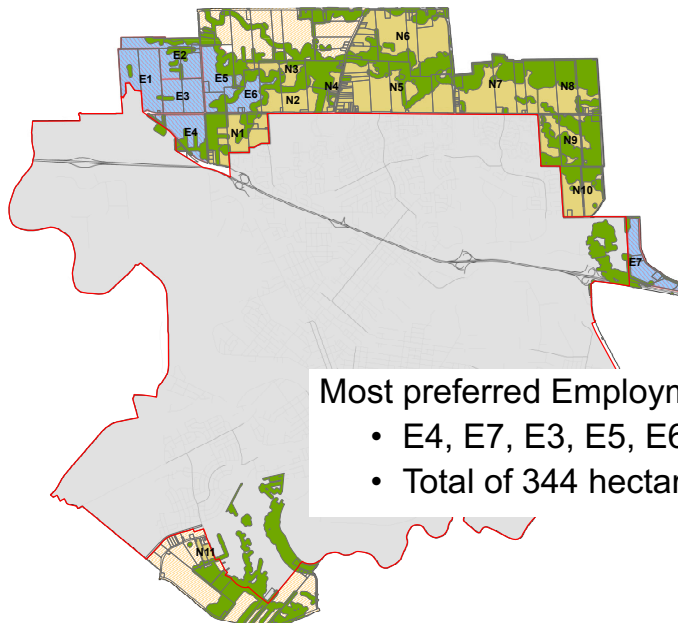
- N2, N1, N7, N4, N5, N10, N11 and N8
- Total of 444 hectares

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Boundary Expansion Lands

Most Preferred Employment Options



Most preferred Employment Options

- E4, E7, E3, E5, E6, E1, and E2
- Total of 344 hectares

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Boundary Expansion Lands

Next Steps

- Committee Meeting – June 5th
- Preparation of the preferred plan and master plan study for the settlement area boundary expansion lands
 - More detailed evaluation of constraints and developable potential
 - Detailed Land Uses
 - Detailed Transportation Network
 - Servicing Solutions
- PIC 4: Visioning Workshop – June 21st
- PIC 5: Land Use Options – September 2018

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Presentation



Municipal Comprehensive Review
– Land Needs



Municipal Comprehensive Review
– Boundary Expansion Lands



Master Servicing Plan - Update



Transportation Master Plan

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Master Servicing Plan

Master Servicing Plan Introduction

Water, Wastewater, and Stormwater Master Servicing Plan to Support a Strong and Growing Brantford

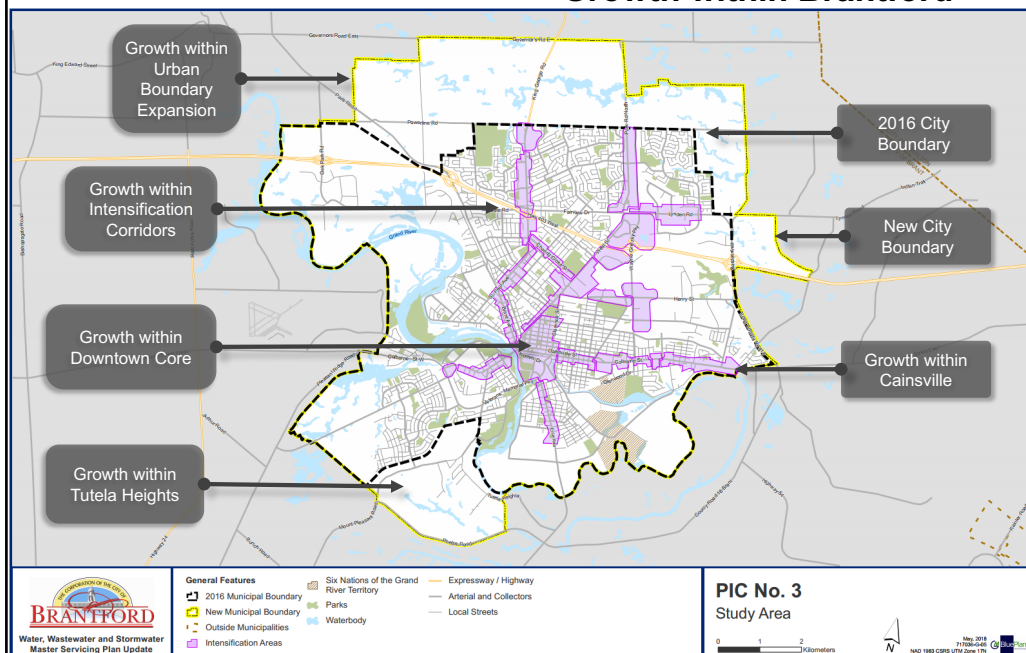
- In 2014, the City completed the Water, Wastewater, and Stormwater master servicing plan (MSP) that looked at planned growth to 2031, within the approved 2031 City boundary at that time.
- This MSP update is needed to integrate:
 - City-wide servicing issues with review of the boundary adjustment lands
 - Planning for growth to 2041 and new density and intensification targets
- This MSP will develop a long-term servicing strategy and capital forecast that will support future growth of the community as well as ensure level of service for existing residents and businesses
- Completed under the MEA Municipal Class EA process

EA Planning Process



Master Servicing Plan

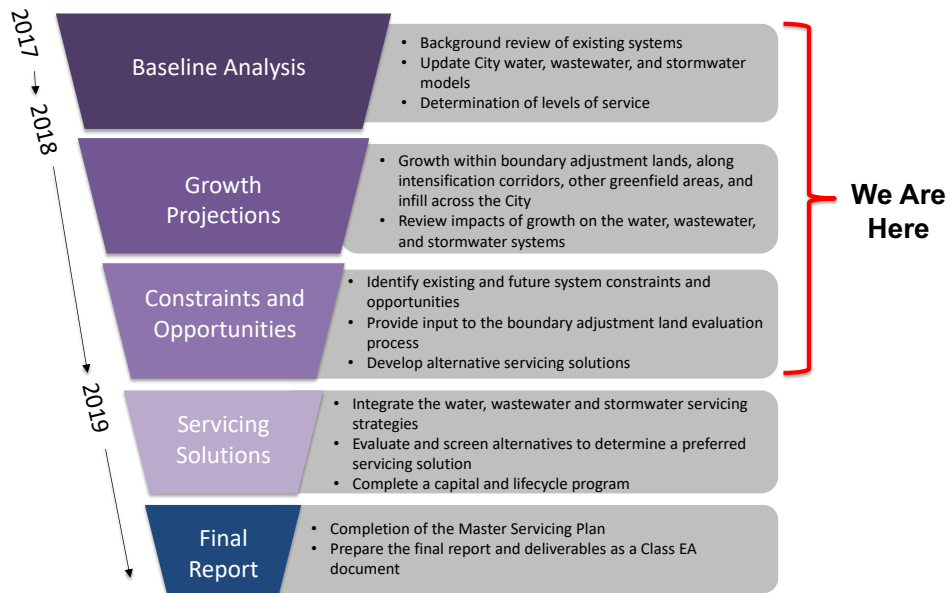
Growth within Brantford





Master Servicing Plan

Key Tasks and Timelines



Presentation



New Official Plan



Municipal Comprehensive Review



Boundary Expansion Lands



Master Servicing Plan



Transportation Master Plan - Update

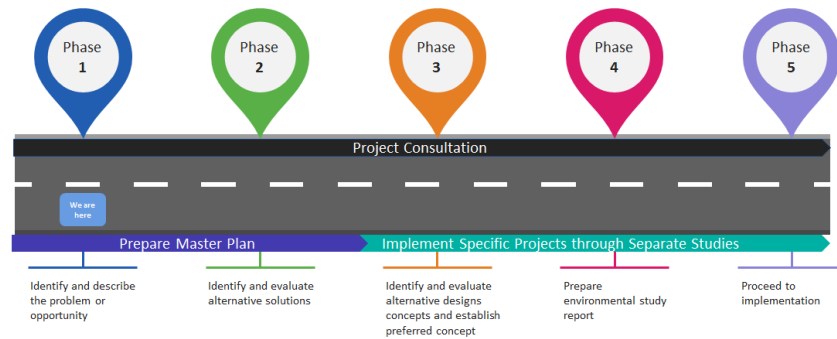


Transportation Master Plan

Transportation Master Plan and Future Development Planning

Study Process

The Transportation Master Plan will follow the Municipal Class Environmental Assessment Process for Master Plans for Phases 1 and 2.



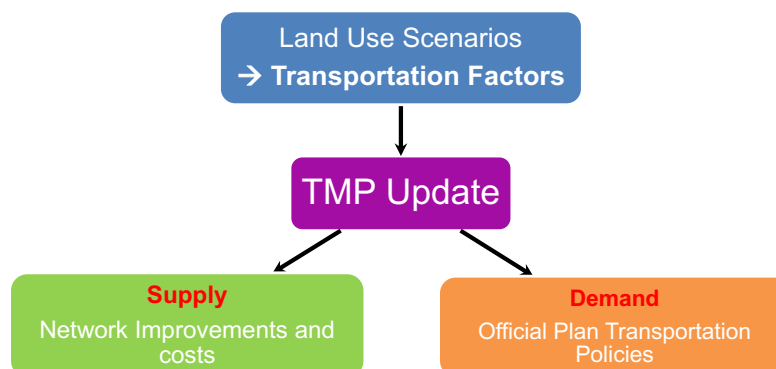
Brantford Transportation Master Plan Update

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Transportation Master Plan

Transportation Master Plan and Future Development Planning



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Transportation Master Plan

Next Steps in the Study



Brantford Transportation Master Plan Update

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For more information

Master Servicing Plan

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City of Brantford

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Official Plan Update

City of Brantford

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Transportation Master Plan

Consulting Team

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JOIN THE CONVERSATION



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City of Brantford

March 16 at 7:11am · 🌐

Calling all cycling enthusiasts! The City of #Brantford is pleased to be working with the Share the Road Cycling Coalition to host an interactive Bicycle Friendly Communities World Cafe on Thursday, April 5th, 6:30 - 8:30 pm at the Civic Centre Auditorium 69-79 Market St. South. Register today at bit.ly/2tRR8ER #BicycleFriendlyBrantford



City of Brantford

Government Organization

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CITY OF BRANTFORD MASTER SERVICING PLAN TRANSPORTATION MASTER PLAN ENVISIONING OUR CITY: 2041

Notice of Public Information Centre Water, Wastewater, and Stormwater Master Servicing Plan and Transportation Master Plan Updates

The City of Brantford is undertaking three studies to guide the City's future development through to 2041. The City's Official Plan, Master Servicing Plan, and Transportation Master Plan are being updated, and account for the Boundary Expansion Lands that were transferred from Brant County to the City on January 1, 2017.

Master Servicing Plan Update (MSP)



The objective of the MSP study is to develop a comprehensive plan that will incorporate all facets of the management, expansion, and funding of the water, wastewater, and stormwater systems for the entire city, including servicing of the Boundary Expansion Lands, to the year 2041 and beyond.

Transportation Master Plan Update (TMP)



The TMP study will provide a balanced strategy for the servicing and operation of important transportation infrastructure within the entire City, including the Boundary Expansion Lands, for the next 25 years. The goal of this TMP is to ensure that the transportation system can accommodate growth and meet the needs of pedestrians, cyclists, transit users, goods movement, and automobiles.

The Master Servicing Plan and Transportation Master Plan Updates are being completed as separate Class EA studies in accordance with the requirements of the Municipal Engineers Association (MEA) Class Environmental Assessment (EA) process for master planning (MEA, June 2000, as amended in 2007 and 2011). The studies are being undertaken based on Phases 1 and 2 of the Class EA processes for Master Plans.

We Want to Hear From You

What should the City of Brantford look like in 2041? The decisions we make as a community today will shape our City's future tomorrow. At our last Public Information Centre (PIC) in October 2019, we presented how much growth we target to accommodate through intensification and development of remaining vacant land in the existing Settlement Area.

At our next PIC, we will present the opportunities and constraints associated with meeting this growth using existing transportation and servicing infrastructure. Where transportation and servicing constraints are identified, we will identify infrastructure/strategy improvement opportunities to meet these challenges in the future and answer any questions you may have.

Join us on

Monday, February 10, 2020

6:30 p.m. to 8:00 p.m.

Brantford and District Civic Centre Auditorium,
69 Market St. S., Brantford

A series of PICs will be held to provide information about the studies, gather input and receive feedback from the public. If you wish to submit comments or would like to be added to the project mailing list, please contact:

MASTER SERVICING PLAN brantford.ca/MasterServicingPlan

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TRANSPORTATION MASTER PLAN brantford.ca/TransportationMasterPlan

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Join the Conversation



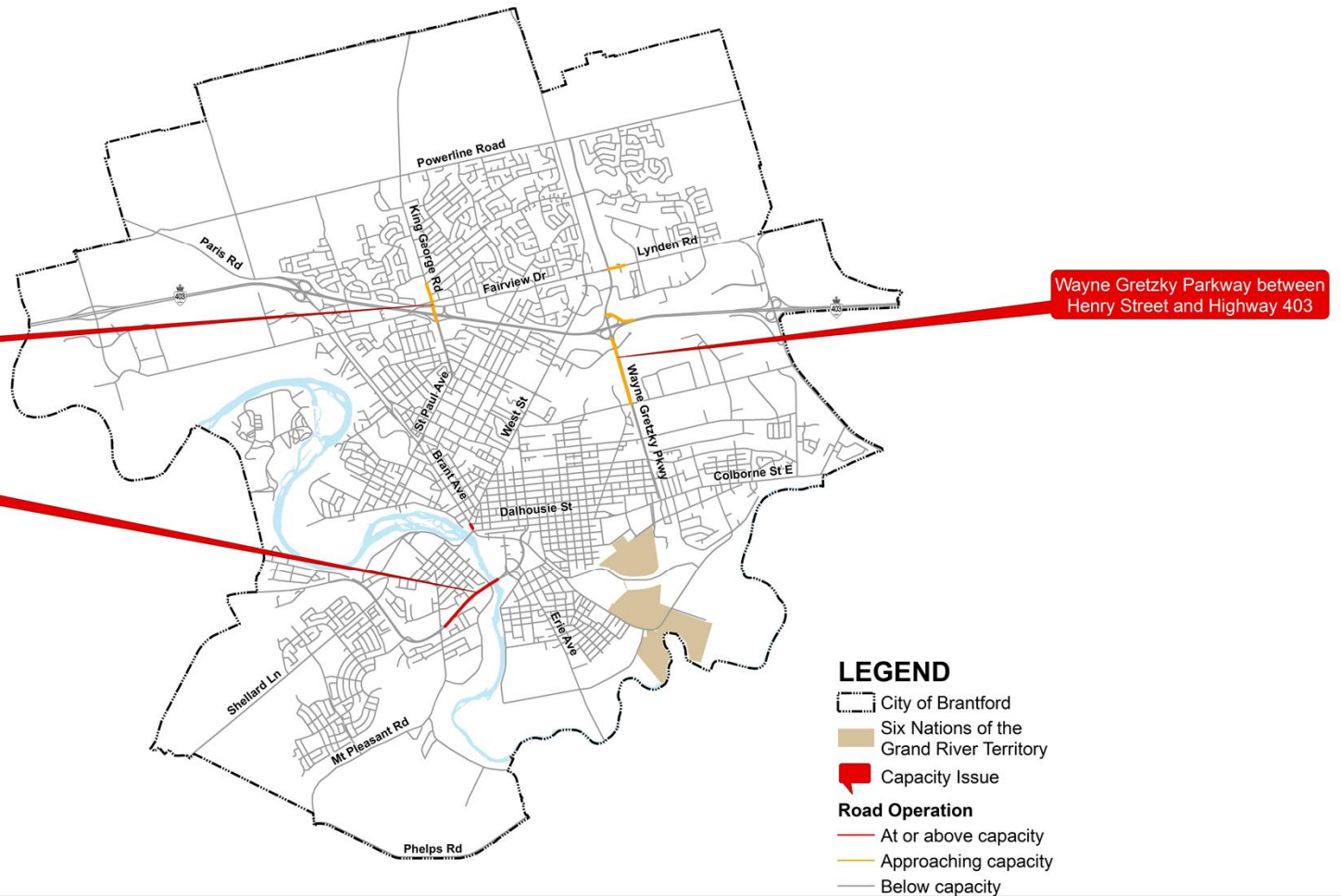
Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.

2018 Network Performance

This map displays Brantford's existing road network and highlights specific areas where the network is experiencing capacity issues (delays) during the PM peak hour.

The colour of the road segment indicates how that segment is operating during the existing PM peak hour. Red segments are congested (at capacity), orange segments are operating with some congestion (approaching capacity), and grey segments are operating well (below capacity).

EXISTING NETWORK



HOW IS THE NETWORK PERFORMING?

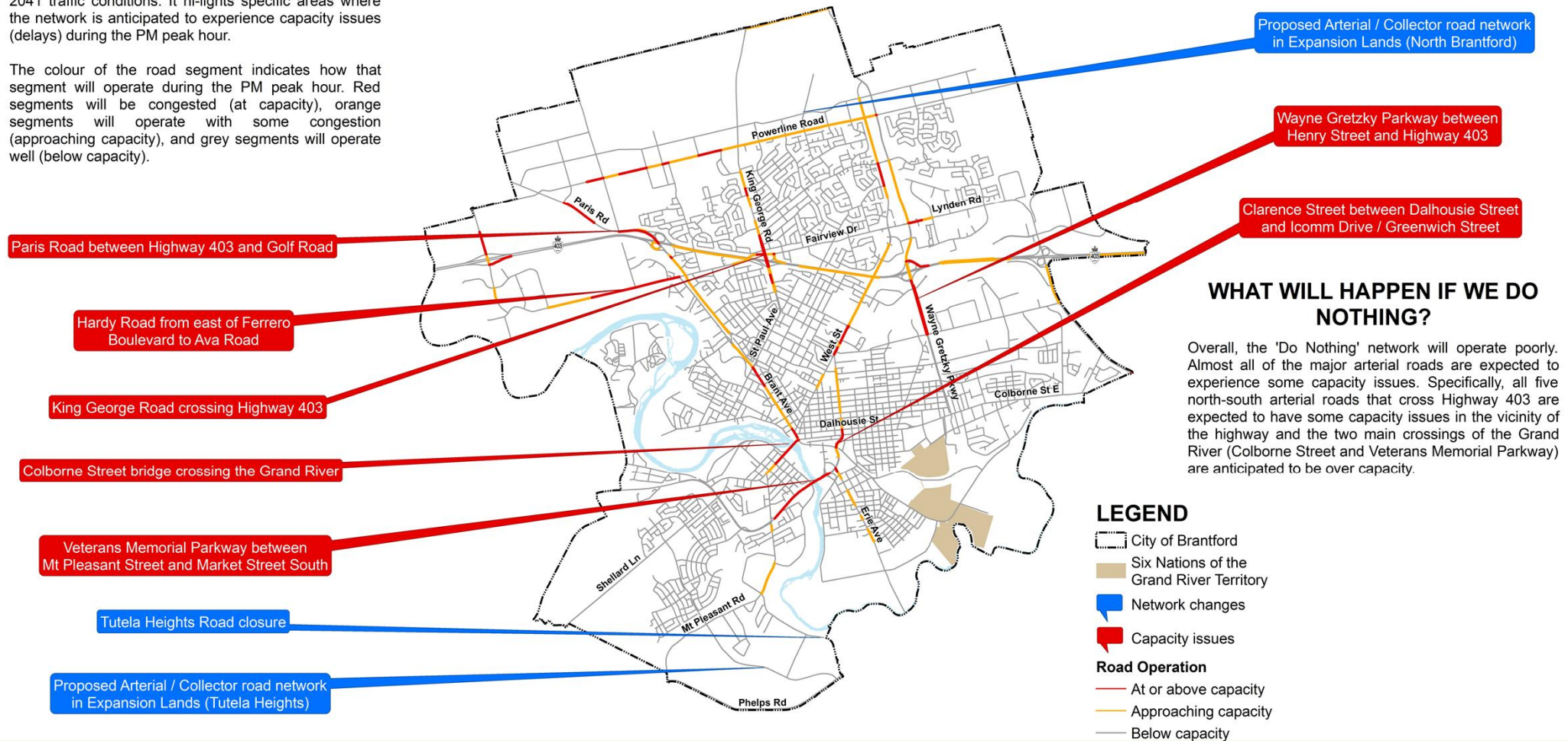
Overall, the existing network is operating well. The three areas of concern are; King George Road and Wayne Gretzky Parkway in the vicinity of Highway 403 and the Veterans Memorial Parkway crossing of the Grand River.

2041 Network Performance

This map displays Brantford's existing road network, including short term committed improvements, under 2041 traffic conditions. It highlights specific areas where the network is anticipated to experience capacity issues (delays) during the PM peak hour.

The colour of the road segment indicates how that segment will operate during the PM peak hour. Red segments will be congested (at capacity), orange segments will operate with some congestion (approaching capacity), and grey segments will operate well (below capacity).

DO NOTHING NETWORK



2041 Network Performance

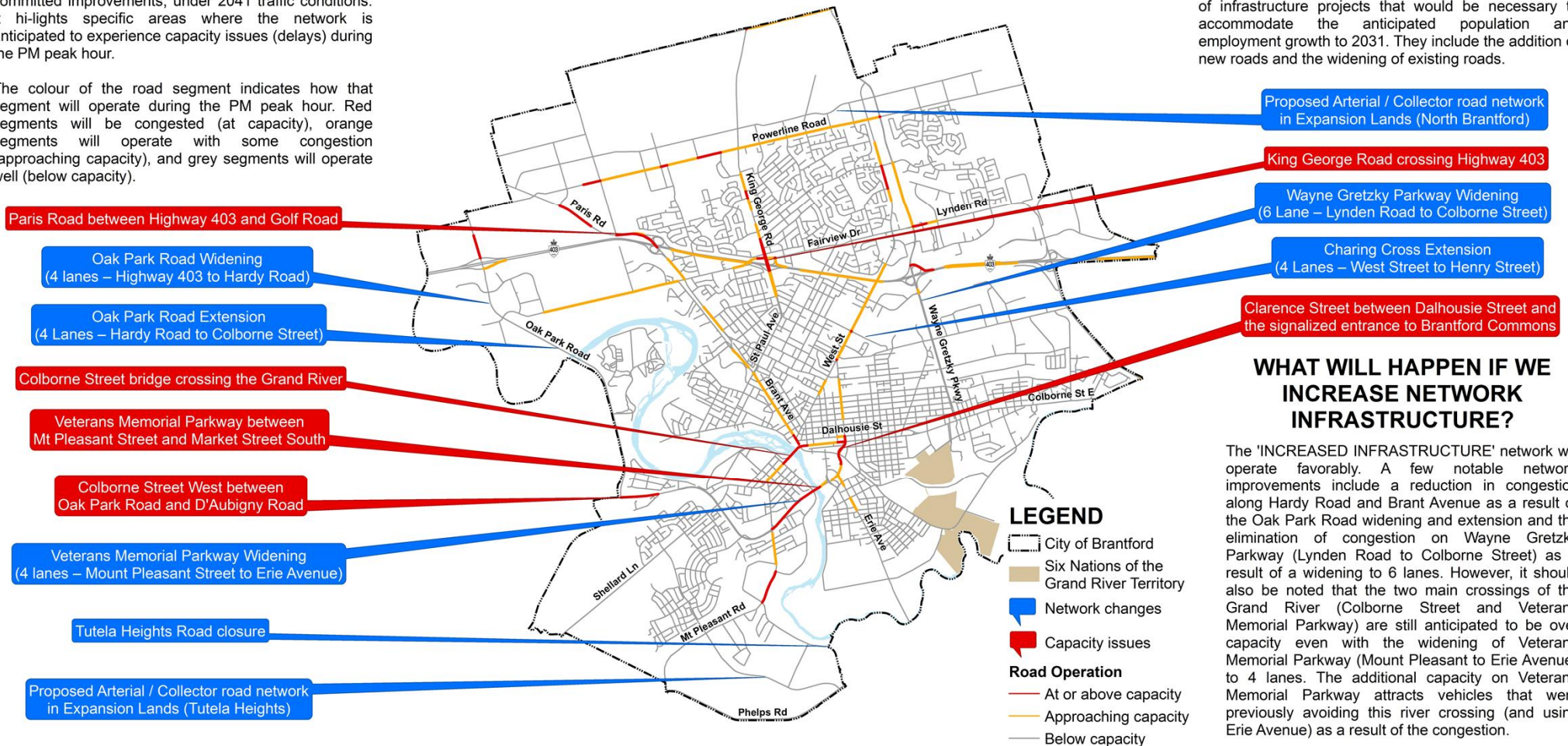
This map displays Brantford's 'INCREASED INFRASTRUCTURE' road network, including short term committed improvements, under 2041 traffic conditions. It highlights specific areas where the network is anticipated to experience capacity issues (delays) during the PM peak hour.

The colour of the road segment indicates how that segment will operate during the PM peak hour. Red segments will be congested (at capacity), orange segments will operate with some congestion (approaching capacity), and grey segments will operate well (below capacity).

INCREASED NETWORK INFRASTRUCTURE

WHAT INFRASTRUCTURE?

The 2014 Transportation Master Plan outlined a series of infrastructure projects that would be necessary to accommodate the anticipated population and employment growth to 2031. They include the addition of new roads and the widening of existing roads.



WHAT WILL HAPPEN IF WE INCREASE NETWORK INFRASTRUCTURE?

The 'INCREASED INFRASTRUCTURE' network will operate favorably. A few notable network improvements include a reduction in congestion along Hardy Road and Brant Avenue as a result of the Oak Park Road widening and extension and the elimination of congestion on Wayne Gretzky Parkway (Lynden Road to Colborne Street) as a result of a widening to 6 lanes. However, it should also be noted that the two main crossings of the Grand River (Colborne Street and Veterans Memorial Parkway) are still anticipated to be over capacity even with the widening of Veterans Memorial Parkway (Mount Pleasant to Erie Avenue) to 4 lanes. The additional capacity on Veterans Memorial Parkway attracts vehicles that were previously avoiding this river crossing (and using Erie Avenue) as a result of the congestion.

2041 Network Performance

This map displays Brantford's 'MANAGE TRAVEL DEMAND' road network, including short term committed improvements, under 2041 traffic conditions. Emphasis has been placed on reducing the number of vehicles using the network. It highlights specific areas where the network is anticipated to experience capacity issues (delays) during the PM peak hour.

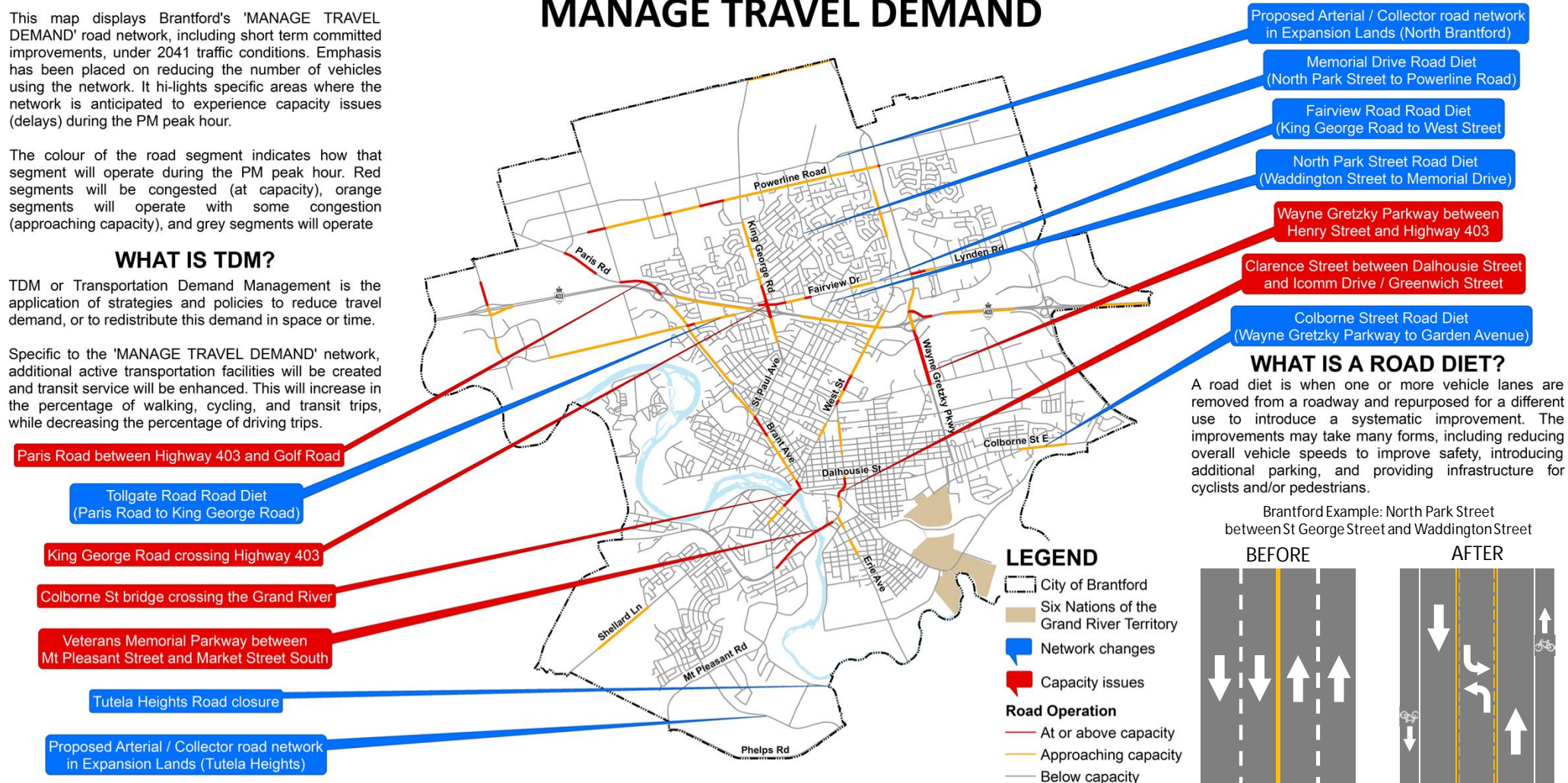
The colour of the road segment indicates how that segment will operate during the PM peak hour. Red segments will be congested (at capacity), orange segments will operate with some congestion (approaching capacity), and grey segments will operate

WHAT IS TDM?

TDM or Transportation Demand Management is the application of strategies and policies to reduce travel demand, or to redistribute this demand in space or time.

Specific to the 'MANAGE TRAVEL DEMAND' network, additional active transportation facilities will be created and transit service will be enhanced. This will increase in the percentage of walking, cycling, and transit trips, while decreasing the percentage of driving trips.

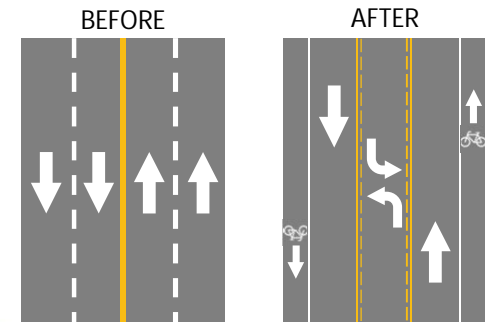
MANAGE TRAVEL DEMAND



WHAT IS A ROAD DIET?

A road diet is when one or more vehicle lanes are removed from a roadway and repurposed for a different use to introduce a systematic improvement. The improvements may take many forms, including reducing overall vehicle speeds to improve safety, introducing additional parking, and providing infrastructure for cyclists and/or pedestrians.

Brantford Example: North Park Street between St George Street and Waddington Street



Network Performance Measures

Scenario	2018 Existing	2041 "Do Nothing"	2041 Increased Network Infrastructure	2041 Manage Travel Demand
VKT (km)	143,900	258,500	260,200	243,700
VHT (hours)	2230	4790	4590	4360
Average Travel Time (minutes:seconds)	04:22	05:56	05:41	05:55
Percent of network at or approaching capacity	0.44%	6.08%	5.16%	5.15%

VEHICLE KILOMETRES TRAVELLED (VKT)
The total kilometers travelled by all vehicles in the network during the PM peak hour.

VEHICLE HOURS TRAVELLED (VHT)
The total time spent travelling by all vehicles in the network during the PM peak hour.

WHAT DOES THIS MEAN?

With population growth, there will be an increase in demand on the road network. This means an increase in VKT, VHT, average travel time, and the percent of the network that is at or approaching capacity. However, increasing network infrastructure and managing travel demand will help accommodate the additional demand.

IF WE...

INCREASE NETWORK INFRASTRUCTURE

- Insignificant change in VKT
- ↓ 4% decrease in VHT
- ↓ 15 sec decrease in average travel time
- ↓ 15% reduction of network at or approaching capacity

MANAGE TRAVEL DEMAND

- ↓ 6% decrease in VKT
- ↓ 9% decrease in VHT
- Insignificant change in average travel time
- ↓ 15% reduction of network at or approaching capacity

Increasing Network Infrastructure (increasing supply) and Managing Travel Demand (decreasing demand) are on the opposite ends of the spectrum when managing the performance of a transportation network. The ultimate solution will likely be a hybrid of the two scenarios.



CITY OF BRANTFORD MASTER SERVICING PLAN TRANSPORTATION MASTER PLAN ENVISIONING OUR CITY:2041

Notice of Public Information Centre

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Master Servicing Plan Update (MSP)



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The Master Servicing Plan and Transportation Master Plan Updates are being completed as separate Class EA studies in accordance with the requirements of the Municipal Engineers Association (MEA) Class Environmental Assessment (EA) process for master planning (MEA, June 2000, as amended in 2007, 2011 and 2015). The studies are being undertaken based on Phases 1 and 2 of the Class EA processes for Master Plans.

We Want to Hear from You!

What should the City of Brantford look like in 2041? The decisions we make as a community today will shape our City's future tomorrow. At our last Public Information Centre (PIC) in February 2020, we presented the opportunities and constraints associated with meeting the growth targeted in the City's Official Plan using existing transportation and servicing infrastructure. Where transportation and servicing constraints were identified, infrastructure/strategy improvement opportunities to meet these challenges in the future were presented.

At our next PIC, we will present the draft preferred short and long term strategy for a multi-modal transportation plan for the TMP and for a city wide master servicing plan for the MSP. It will also present high level cost comparisons and a draft implementation plan for the preferred solution and answer any questions you may have.

In response to the COVID-19 situation, this PIC will be held as a virtual PIC. All content and instructions on how to submit questions will be posted on the project webpages:

www.brantford.ca/MasterServicingPlan
www.brantford.ca/TransportationMasterPlan

PIC Boards and a video walkthrough of their content will be posted on **Tuesday, June 9, 2020 at 3:00 p.m.** This will be followed by a two week question submission period closing June 23, 2020. A question and answers video will be posted on **Tuesday, June 30, 2020 at 3:00 p.m.** This will be followed by a three week question submission period, closing July 21, 2020. A Frequently Asked Questions (FAQ) document being posted on **Tuesday, July 28, 2020 at 3:00 p.m.**

If you wish to submit comments or would like to be added to the project mailing list, please contact:

Master Servicing Plan

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Information will be collected in accordance with the *Municipal Freedom of Information and Protection of Privacy Act*. With the exception of personal information, all comments will become part of the public record.

JOIN THE
CONVERSATION



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Virtual Public Information Center #4

June 9, 2020 & June 30, 2020



Brantford MSP & TMP Updates

1

Welcome

Why Are We Here?

- The City is updating the 2014 Water, Wastewater and Stormwater Master Servicing Plan (MSP) and the 2014 Transportation Master Plan (TMP)
- These updates will develop long term servicing and transportation strategies to ensure the maintenance of services for existing residents and business as well as support future growth of the community
- This Virtual Public Information Centre is presenting the preferred future network recommendations for:
 - Public Transit Strategy
 - Active Transportation System (cycling and walking)
 - Roadway Network Infrastructure
 - Water Servicing
 - Wastewater Servicing
 - Stormwater Servicing

We Need Your Help!

- Review the content
- Ask questions
- Provide comments



Virtual Public Information Centre (PIC)

In response to the advice of public health officials to limit in-person gatherings due to COVID-19, this Virtual Public Information Centre (PIC) has been developed. Through this Virtual PIC, you will be able to learn more about the Master Servicing Plan and Transportation Master Plan projects and provide comments on the study findings.

Virtual PIC Process

- **June 9 at 3:00 p.m.** PIC Boards and a video walkthrough of their content will be posted
- **June 9 – June 23** First question and comment submission period
- **June 30 at 3:00 p.m.** A question and answers video will be posted
- **June 30 – July 21** Second question and comments submission period
- **July 28 at 3:00 p.m.** A Frequently Asked Questions (FAQ) document will be posted

In accordance with the Municipal Freedom of Information and Privacy Protection Act, no personal information will be included with the responses presented on the project website and all comments will become part of the public record.



TMP PIC #4 – June 2020

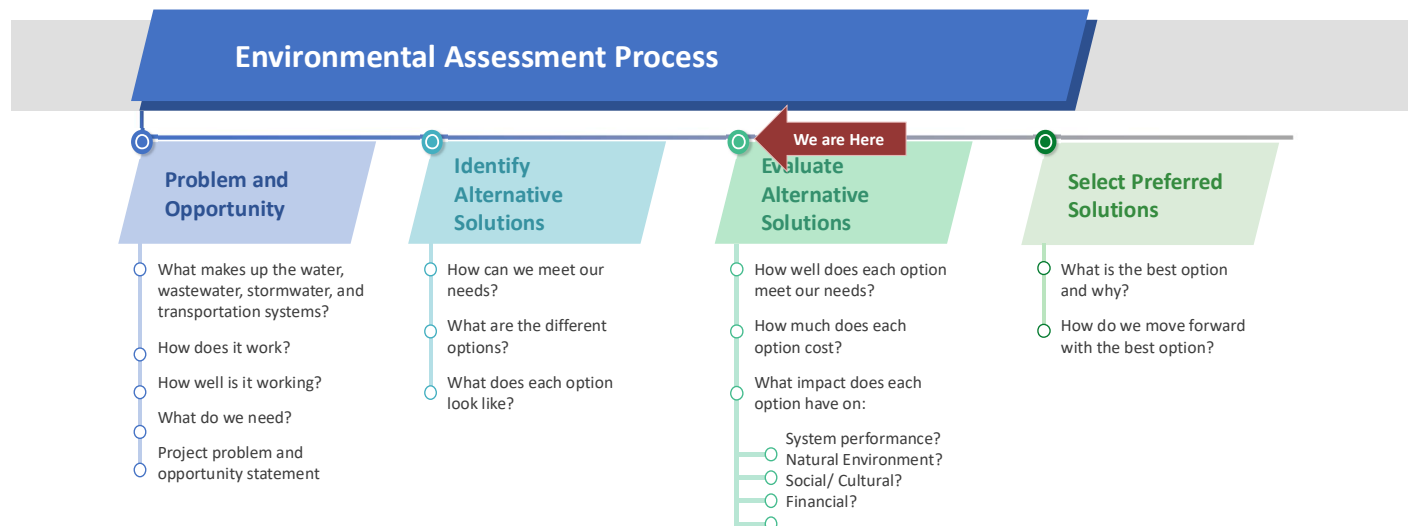
Brantford MSP & TMP Updates

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Municipal Class EA Process

The Water, Wastewater, and Stormwater Master Servicing Plan Update and Transportation Master Plan Update involve the completion of Phases 1 and 2 of the MEA Municipal Class Environmental Assessment (EA) process



The study follows the Master Plan process as outlined in Section A.2.7 of the Municipal Engineers Association (MEA) Municipal Class Environmental Assessment (Oct 2000, as amended in 2007, 2011, and 2015).



TMP PIC #4 – June 2020

Brantford MSP & TMP Updates

4



Consultation Overview - TMP

Public Consultation Centre Purpose

To present preferred future transportation network recommendations for:

- Public Transit Strategy
- Active Transportation System (cycling and walking)
- Roadway Network Infrastructure

Consultation to Date

- Study Commencement - October 19th and 26th, 2017
- Public Meeting #1: Envisioning Our City: 2041 – November 16th, 2017
- Active Transportation Workshop - April 5th, 2018
- Public Meeting #2: Foundations and Strategies - May 17th, 2018
- Public Meeting #3: Constraints and Opportunities - February 10th, 2020



TMP PIC #4 – June 2020

Brantford MSP & TMP Updates

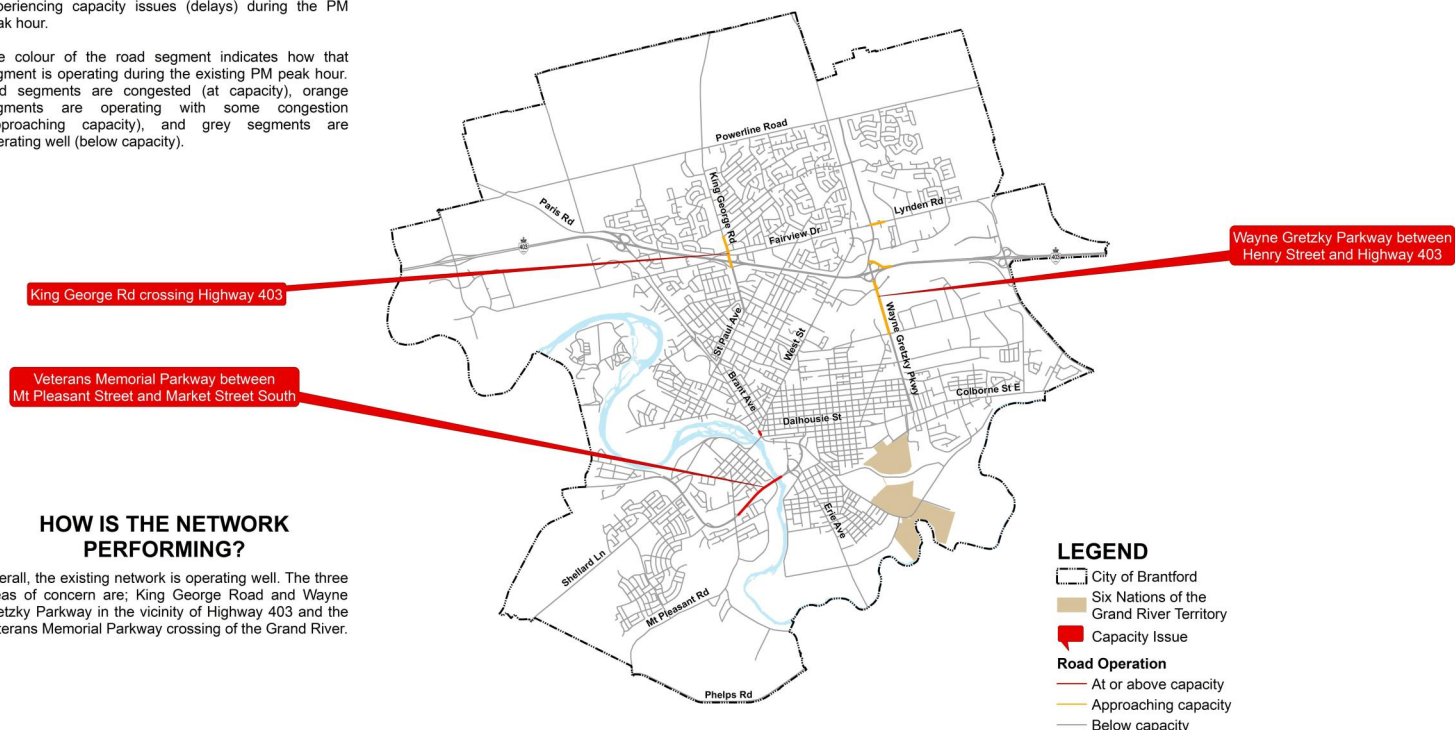
5

2018 Network Performance

This map displays Brantford's existing road network and hi-lights specific areas where the network is experiencing capacity issues (delays) during the PM peak hour.

The colour of the road segment indicates how that segment is operating during the existing PM peak hour. Red segments are congested (at capacity), orange segments are operating with some congestion (approaching capacity), and grey segments are operating well (below capacity).

EXISTING NETWORK



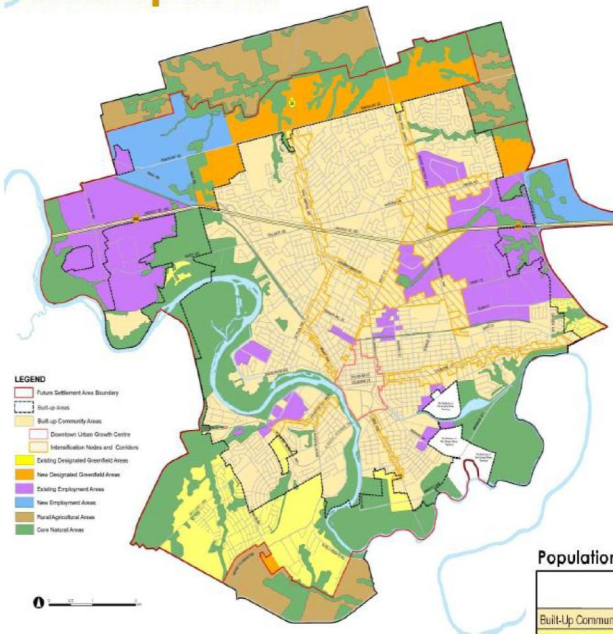
TMP PIC #4 – June 2020

Brantford MSP & TMP Updates

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Growth Management Assumptions

Growth Management Assumptions



Growth management assumptions influence how the City can accommodate forecasted growth and provide a basis for the Urban Structure as well as the development of land use designations and policies.

The Growth Plan for the Greater Golden Horseshoe projects that Brantford's population will reach 163,000 residents, with 79,000 jobs in the City, by the year 2041. As indicated in the table below, it is anticipated that new growth of 61,300 residents and 34,110 jobs will be distributed throughout the City, in a combination of intensification within the Built-up Area and growth in the city's new and existing Designated Greenfield and Employment Areas.

- The City's Built-up Area (shown in the light peach tone on the map at left) will accommodate over 15,000 new residents through intensification.
- Over 23,000 new residents will be added to the existing Designated Greenfield Area (yellow on the map) as it continues to develop.
- Over 22,000 new residents will be accommodated in the boundary expansion lands in the new Designated Greenfield Area (orange on the map).
- 10,450 new jobs will be located in the existing Employment Areas (purple on the map), with 8,400 new jobs in new Employment Areas in the boundary expansion lands (blue on the map). The rest of the employment growth will be located in business, office and commercial developments located in the Downtown and other parts of the City.

Population and Employment Growth, 2016-2041

	Population			Employment		
	2016	2041	Growth	2016	2041	Growth
Built-up Community Area	94,720	110,305	15,585	18,530	28,055	9,525
Existing Designated Greenfield Area	6,485	29,645	23,160	355	1,495	1,140
New Designated Greenfield Area	*	22,620	22,620	*	4,955	4,955
Existing Employment Area				25,575	35,025	10,450
New Employment Area				*	8,400	8,400
Rural Area	465	230	-265	430	70	-360
Total	101,700	163,000	61,300	44,890	79,000	34,110

Note: * Accounted for in the Rural Area in 2016. Most of the 2016 Rural Area population and employment will be absorbed into the New Designated Greenfield Area or New Employment Area.
Source: Invisioning Brantford - MCR Part 1 Report, SCL Planning & Design et al., Chapters 6 and 10

Brantford MSP & TMP Updates



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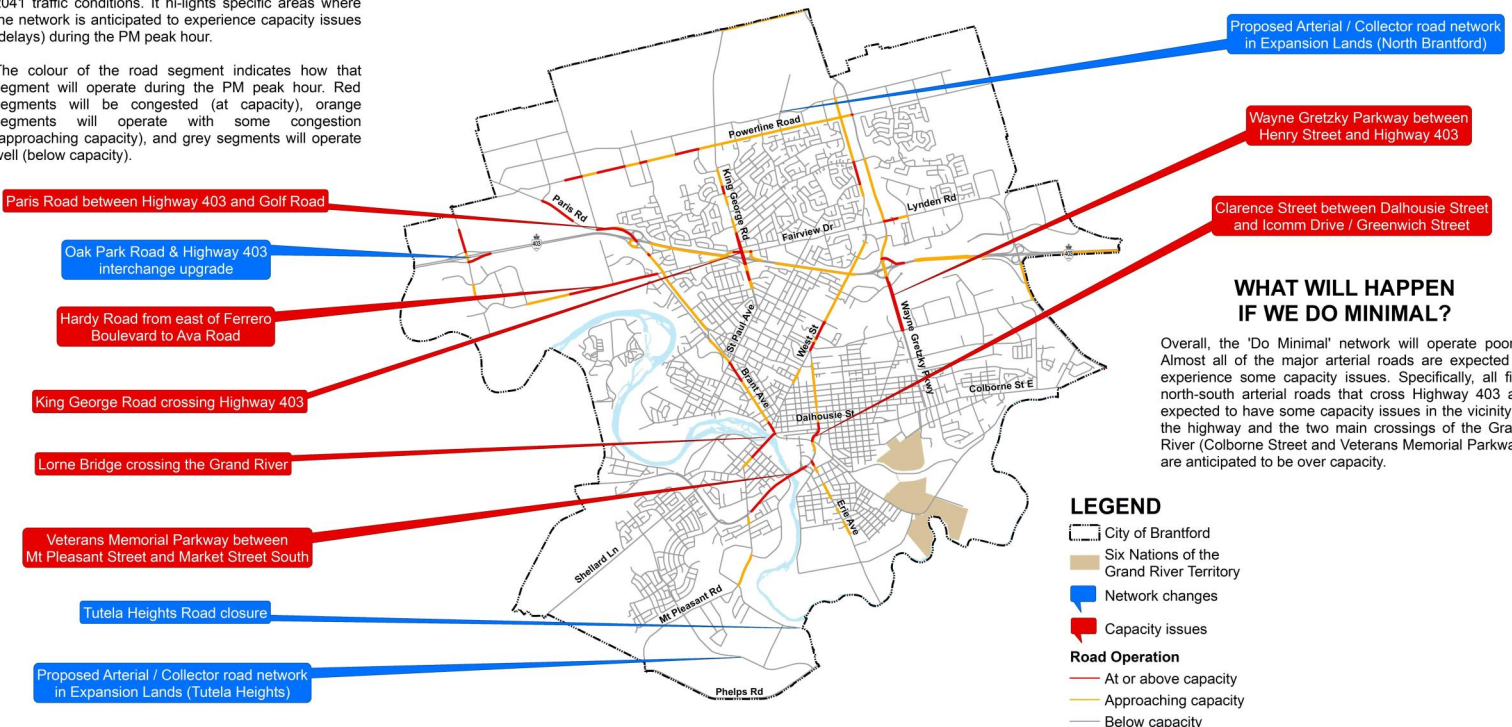
7

2041 Network Performance

This map displays Brantford's existing road network, including short term committed improvements, under 2041 traffic conditions. It highlights specific areas where the network is anticipated to experience capacity issues (delays) during the PM peak hour.

The colour of the road segment indicates how that segment will operate during the PM peak hour. Red segments will be congested (at capacity), orange segments will operate with some congestion (approaching capacity), and grey segments will operate well (below capacity).

DO MINIMAL NETWORK



Alternative Strategies to Address Network Needs

- **Travel Demand Management (TDM)**
 - Modify travel behaviour – time of travel, land use characteristics
 - Reduce vehicle use – provide improved programs, services and facilities for other modes
 - Examples: increased transit, increased cycle, increased walk mode, ride share opportunities
- **Transportation System Management (TSM)**
 - Optimize infrastructure efficiency to improve performance and improve safety for all modes
 - Re-allocation of space within right of way
 - Use of technology
 - Examples: signal coordination, auxiliary turning lanes, turn restrictions
- **Increase the supply of transportation infrastructure**
 - Expand existing infrastructure, e.g. widen road
 - Add new infrastructure, e.g. new road, extend existing road



TMP PIC #4 – June 2020

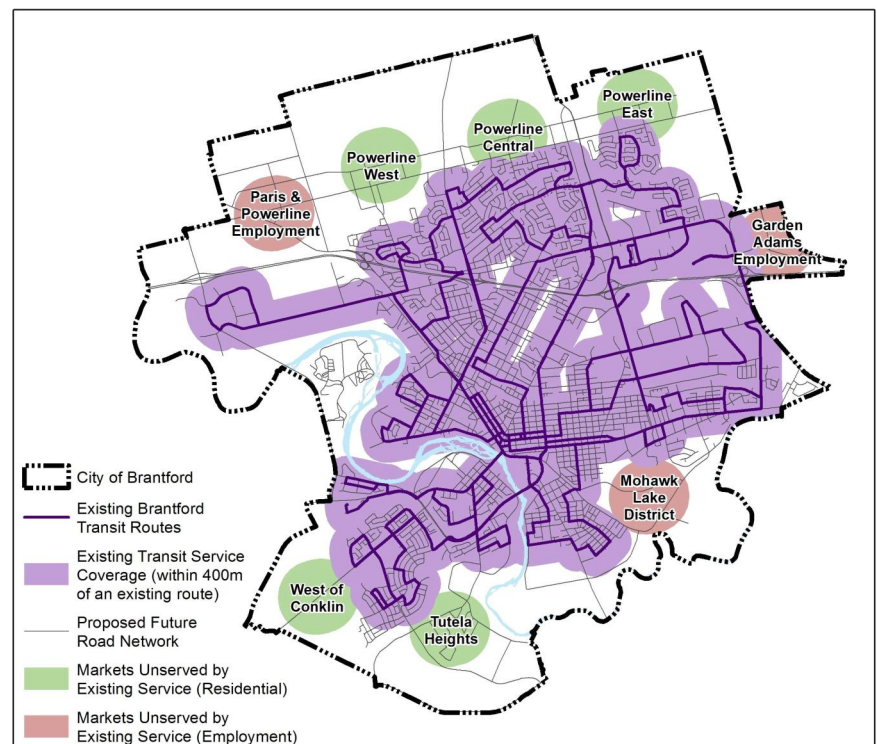
Brantford MSP & TMP Updates

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Transit Opportunities - Approach

- Assess existing transit system coverage
- Review existing mode splits to transit for traffic zones
- Set appropriate targets for land use type and density, and in consideration of available transit
- Apply targets to 2041 trip ends
- Adjust total travel demands for vehicles
- Assign transit trips to enhanced/expanded transit service coverage
- Outcome:
 - Overall system improvement in transit use results in reduction of vehicle trips
 - Corridor transit use increase
- Increase in transit use increase results in auto trip reduction.
- Capacity analysis reassessed using reduced auto demand scenario (TDM).

Existing Transit System Coverage and Future Market Opportunities



TMP PIC #4 – June 2020

Brantford MSP & TMP Updates

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Transit Opportunities

Transit Mode Share – City Wide

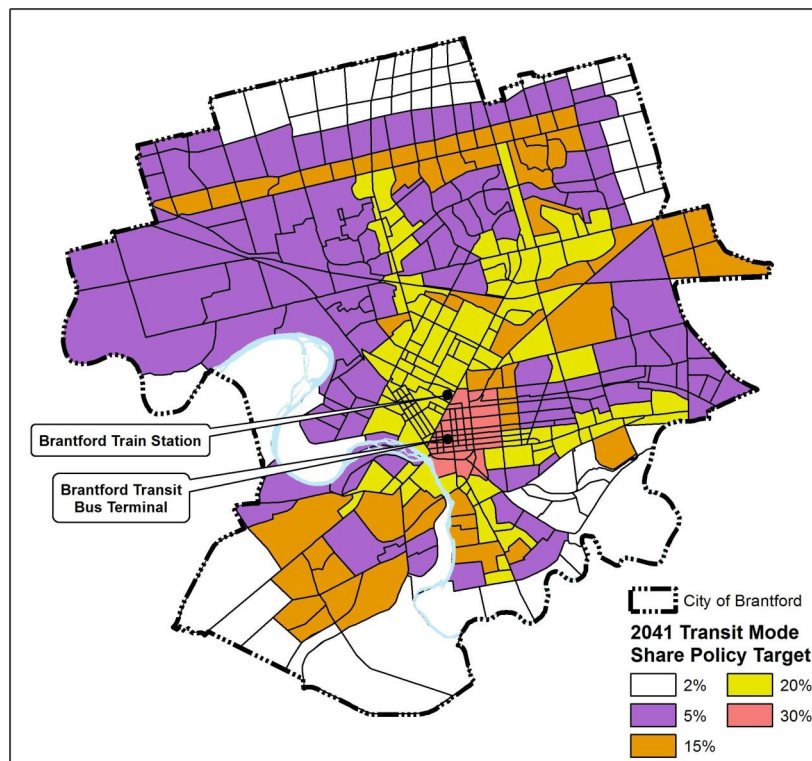
- 2016 – 2.7%
- 2041 Trend – 2.2%
- 2041 TDM Max – 5.9%

Achieving more than doubling of transit mode share requires extension of service into developing areas and increasing service frequency in key corridors.

Significant investment required to achieve target mode split.

	Transit Trips by Route: PM Peak Period	2016	2041 "Do Min"	2041 "TDM Max"
Route 1	Eagle Place	228	357	1,090
Route 2	West Street/Brier Park	409	514	1,338
Route 4	Mall Link (4A)	372	485	1,345
Route 4	Mall Link (4C)	318	426	1,151
Route 5	West Brant/Oakhill	116	152	563
Route 6	West Brant/Shellard	215	433	1,782
Route 7	East Ward/Braneida	280	405	990
Route 8	Holmedale/Mayfair	239	451	1,855
Route 9	Echo Place	349	519	1,811
Route 100	Powerline	-	-	914
	TOTAL	2,526	3,743	12,838

2041 Transit Mode Split – Zone Policy Targets



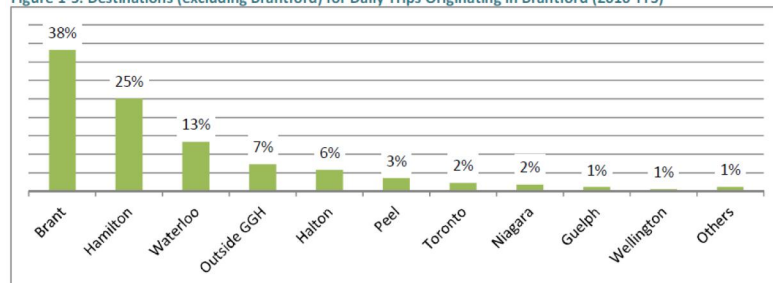
TMP PIC #4 – June 2020

Brantford MSP & TMP Updates

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Transit Opportunities – Partnership Opportunities

Figure 1-5: Destinations (excluding Brantford) for Daily Trips Originating in Brantford (2016 TTS)



- Transit service market potential – 2041 pm peak period person trips from Brantford to Brant:

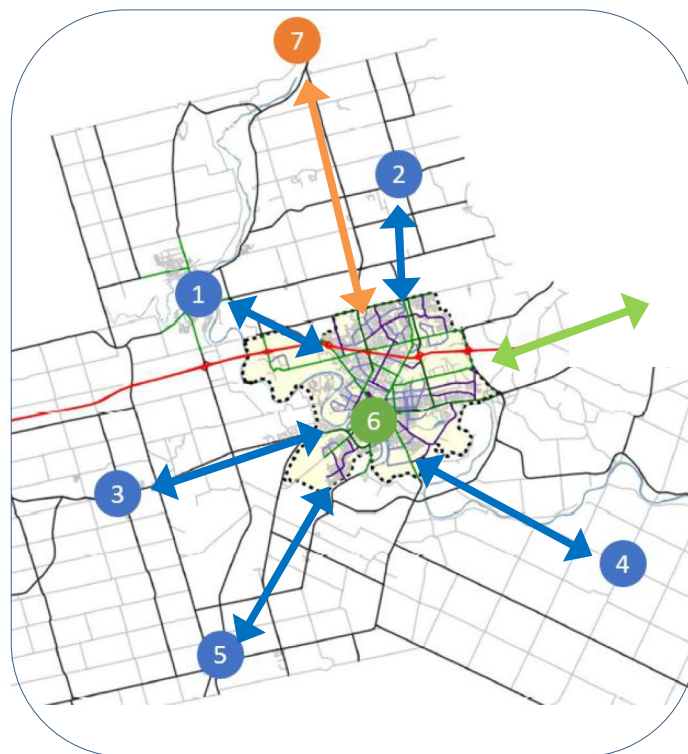
1. Paris - 5,000 person trips (all modes)
2. Saint George - 1,000 person trips (all modes)
3. Burford/Airport - 250 person trips (all modes)
4. Oshwekin area - 200 person trips (all modes)
5. Scotland area - 650 person trips (all modes)

- Transit service market potential – 2041 pm peak period person trips from Brantford to GTA:

6. Via Hwy 403 - 4,500 person trips (all modes)

- Transit service market potential – 2041 pm peak period person trips from Brantford to Cambridge/Kitchener/Waterloo

7. Via Hwy 24 - 1,300 person trips (all modes)



TMP PIC #4 – June 2020

Brantford MSP & TMP Updates

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2041 Network Performance

This map displays Brantford's 'MANAGE TRAVEL DEMAND' road network, including short term committed improvements, under 2041 traffic conditions. Emphasis has been placed on reducing the number of vehicles using the network. It highlights specific areas where the network is anticipated to experience capacity issues (delays) during the PM peak hour.

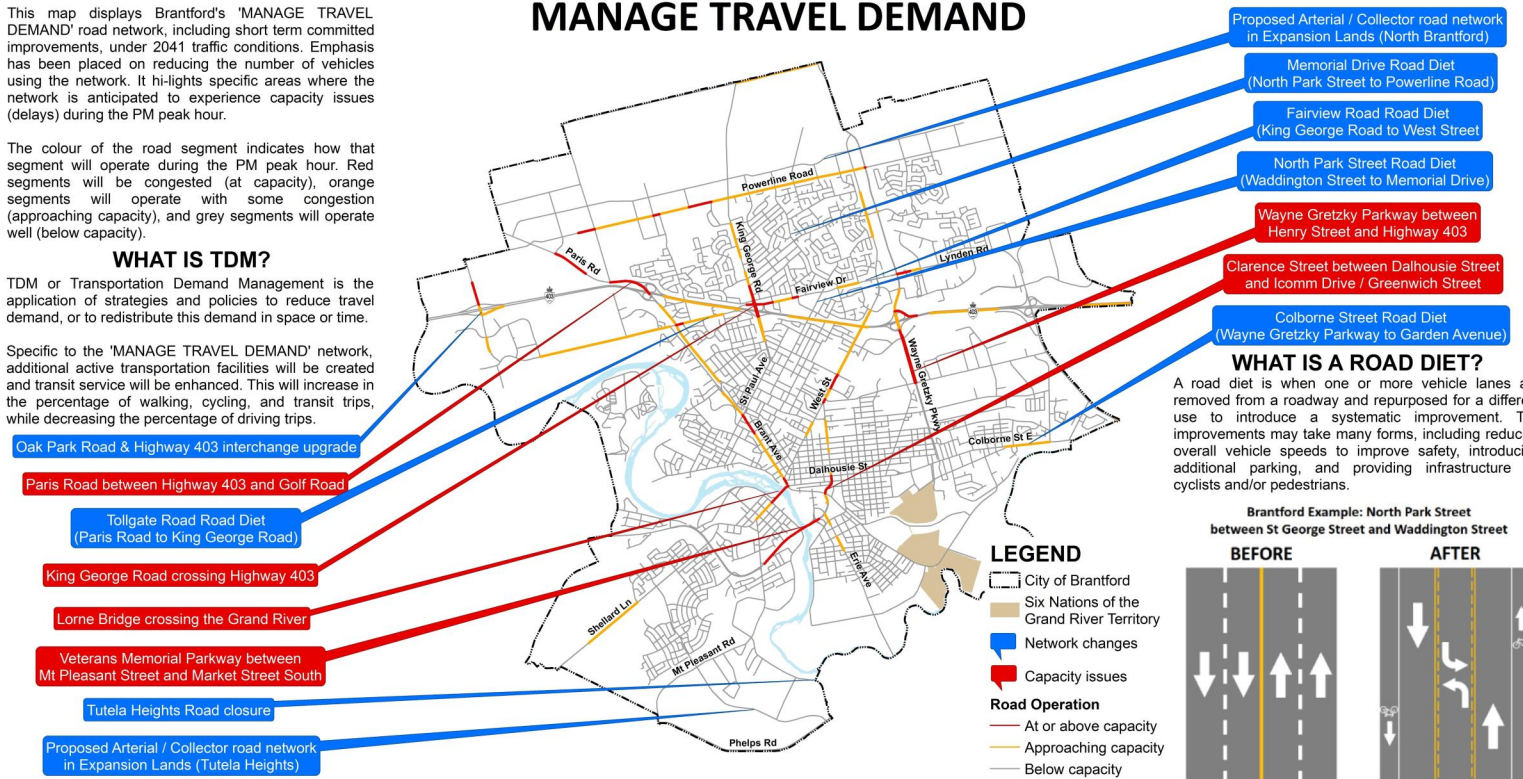
The colour of the road segment indicates how that segment will operate during the PM peak hour. Red segments will be congested (at capacity), orange segments will operate with some congestion (approaching capacity), and grey segments will operate well (below capacity).

WHAT IS TDM?

TDM or Transportation Demand Management is the application of strategies and policies to reduce travel demand, or to redistribute this demand in space or time.

Specific to the 'MANAGE TRAVEL DEMAND' network, additional active transportation facilities will be created and transit service will be enhanced. This will increase in the percentage of walking, cycling, and transit trips, while decreasing the percentage of driving trips.

MANAGE TRAVEL DEMAND



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Brantford MSP & TMP Updates

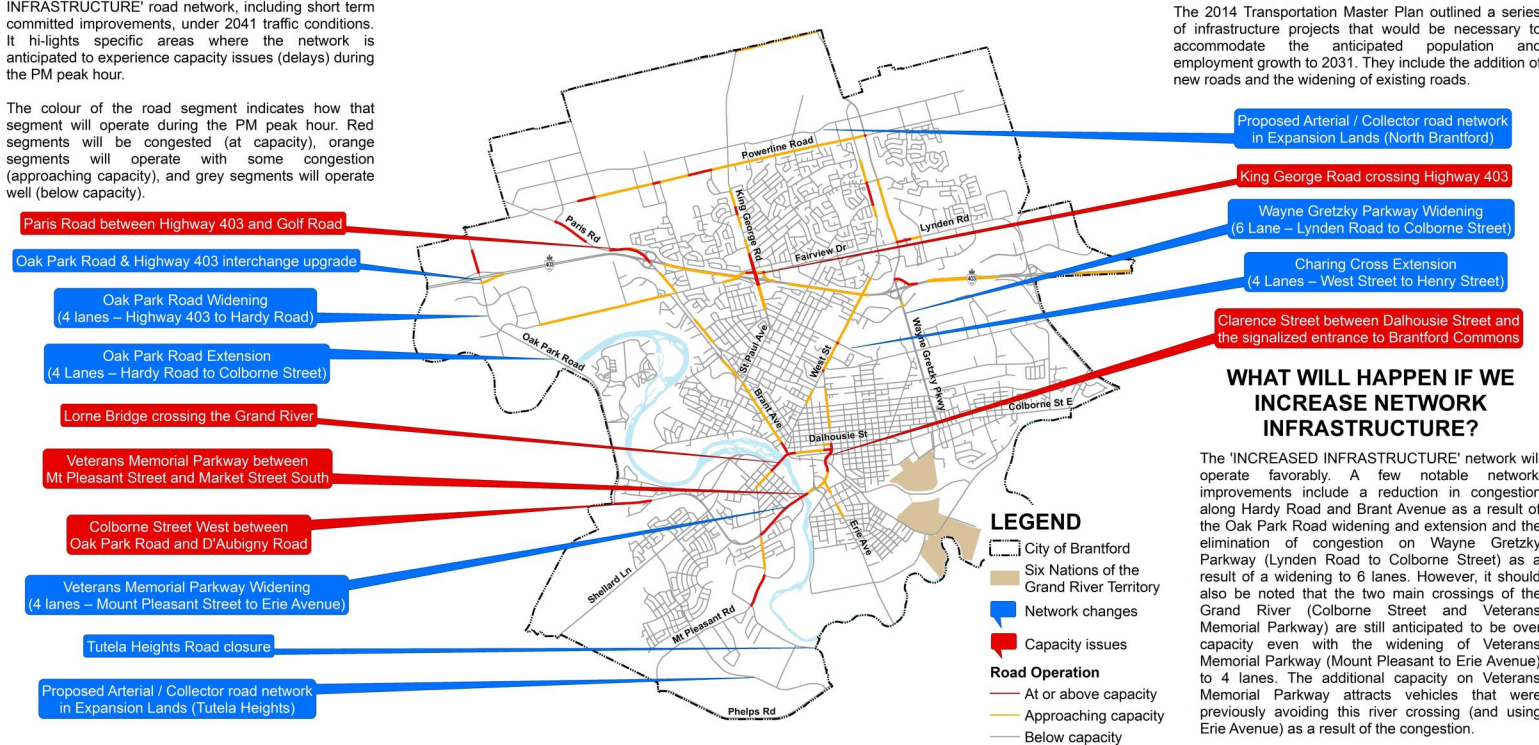
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2041 Network Performance

This map displays Brantford's 'INCREASED INFRASTRUCTURE' road network, including short term committed improvements, under 2041 traffic conditions. It highlights specific areas where the network is anticipated to experience capacity issues (delays) during the PM peak hour.

The colour of the road segment indicates how that segment will operate during the PM peak hour. Red segments will be congested (at capacity), orange segments will operate with some congestion (approaching capacity), and grey segments will operate well (below capacity).

INCREASED NETWORK INFRASTRUCTURE



TMP PIC #4 – June 2020

Brantford MSP & TMP Updates

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Constraints and Opportunities – Assessment Approach

Problem Identification

- Based on 2041 Do Minimal Alternative
- Identify system problems through application of strategic transportation model – demands on network
- Network Performance - Volume to Capacity assessment p.m. peak hour

Assessment

- Assess Travel Patterns - select link analysis to identify origins and destinations for all auto trips using specific links
- Identify impacts of alternative strategies on corridor/link performance
- Identify preferred alternative to address deficiency on link/in corridor
- Assess total system performance once preferred alternative identified for each corridor

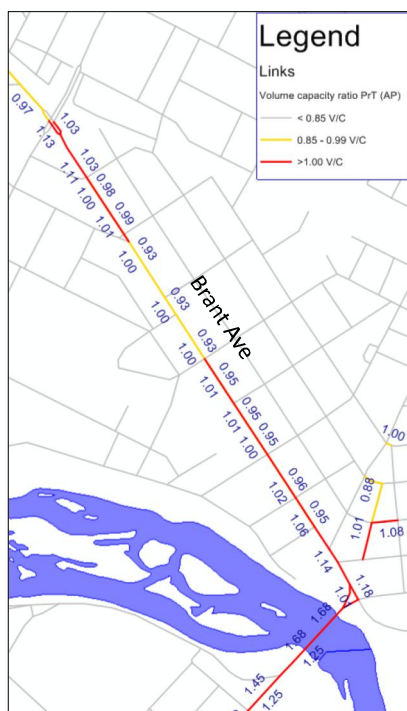
Evaluation

- High level screening of mitigation opportunities to address stated problem.
- Based on impacts on performance (benefits) and impacts of implementation (disadvantages), decision made as to appropriateness for long term plan.
- Example evaluation table:

Travel Demand Management	✓
Transportation System Management	✓
Road Widening	✗
New Road	✓

- ✓ Carry Forward
- ✓ Not Preferred But Protect Long Term
- ✗ Not Carried Forward

Constraints and Opportunities – Inter-Regional



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

Brant Avenue - St Paul Avenue to Colborne Street

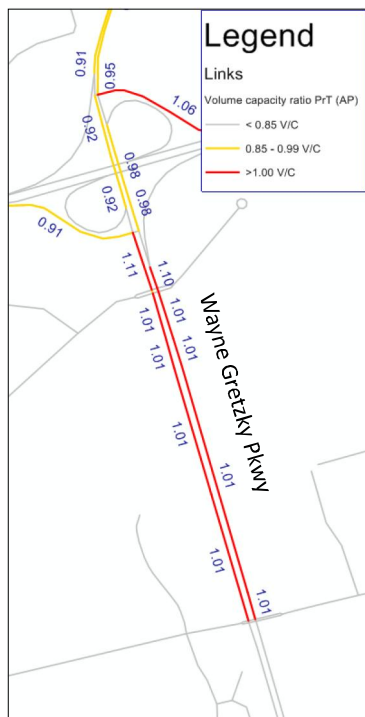
Alternatives

TDM	✓
TSM	✓
Road Widening	✗
New Road	✓

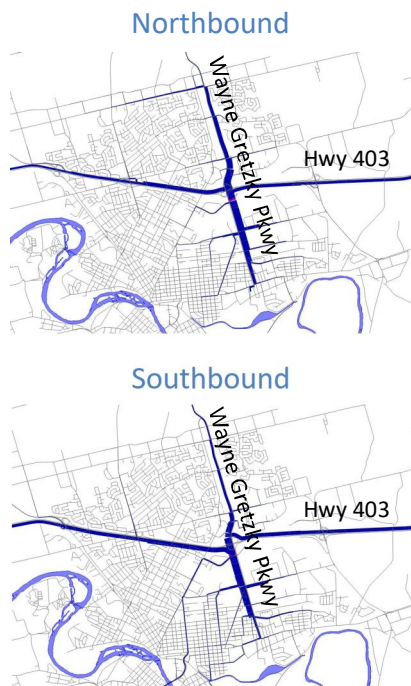
Assessment

- Corridor Transit Mode Split
 - 2016 – 9%
 - 2041 w/ TDM – 26%
- Oak Park Road Extension potential to divert 300-500 peak hour vehicles

Constraints and Opportunities – Inter-Regional



2041 Volume to Capacity –
PM Peak Hour



Origin-Destination Flow –
PM Peak Hour

Wayne Gretzky Parkway - Henry Street to Highway 403

Alternatives

TDM	✓
TSM	✓
Road Widening	✓
New Road	✗

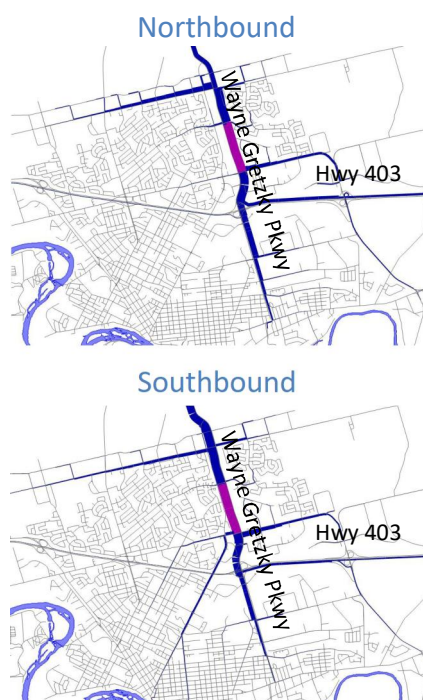
Assessment

- Corridor Transit Mode Split
 - 2016 – 5%
 - 2041 w/ TDM – 14%
- Widen from 4-lanes to 6-lanes to accommodate growth volume, inter- and intra-regional

Constraints and Opportunities – Inter-Regional



2041 Volume to Capacity –
PM Peak Hour



Origin-Destination Flow –
PM Peak Hour

Wayne Gretzky Parkway - North of Highway 403

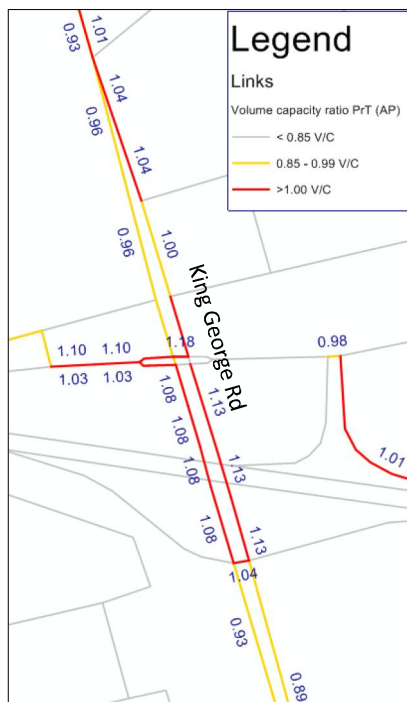
Alternatives

TDM	✓
TSM	✓
Road Widening	✓
New Road	✗

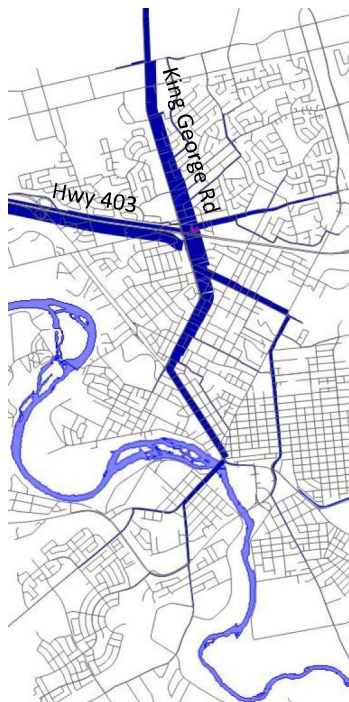
Assessment

- Corridor Transit Mode Split
 - 2016 – 0% (WGP north of Fairview / Lynden)
 - 2041 w/ TDM – 8%
- Provide an additional lane in each direction between Lynden Road and the E-NS ramp terminal and the N-W direct ramp

Constraints and Opportunities – Inter-Regional



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

King George Road - Crossing Highway 403

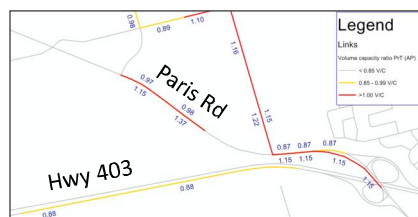
Alternatives

TDM	✓
TSM	✓
Road Widening	✗
New Road	✓

Assessment

- Corridor Transit Mode Split
 - 2016 – 5%
 - 2041 w/ TDM – 12%
- Access Management Plan
- 4-lane extension of WGP Parkway north of Powerline Road as alternative parallel capacity to King George corridor

Constraints and Opportunities – Inter-Regional



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

Paris Road - Highway 403 to Powerline Road

Alternatives

TDM	✓
TSM	✓
Road Widening	✓
New Road	✓

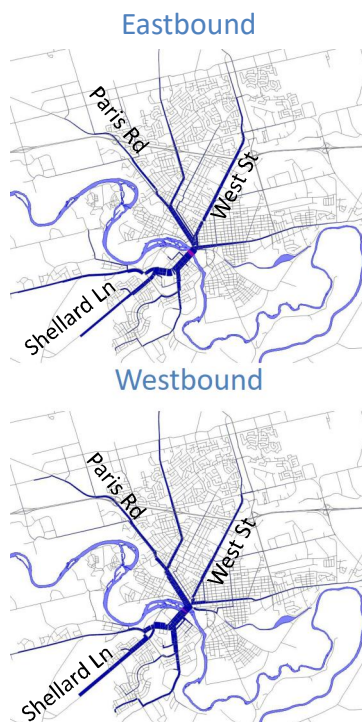
Assessment

- Corridor Transit Mode Split
 - 2016 – 0% (no transit route)
 - 2041 w/ TDM – 25%
- Widen to 4-lanes Golf Road to Oak Park Road to match with the current 4 lane configuration east of Golf Road
- Oak Park Road Extension potential to divert 250-300 peak hour vehicles

Constraints and Opportunities – Intra-Regional



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

Lorne Bridge - Grand River Crossing

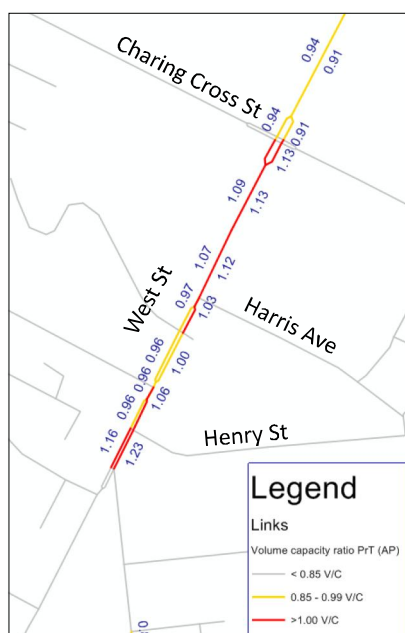
Alternatives

TDM	✓
TSM	✓
Road Widening	✗
New Road	✓

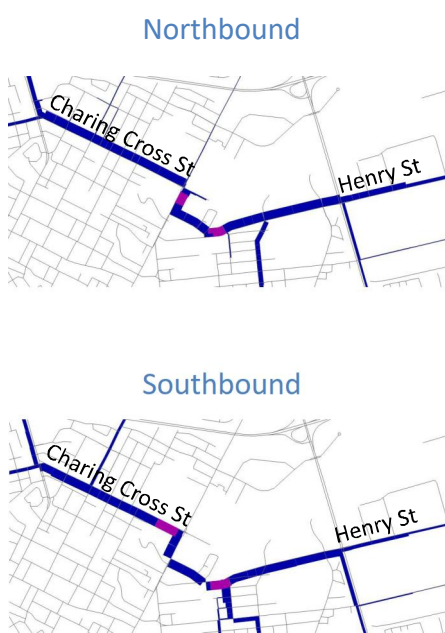
Assessment

- Corridor Transit Mode Split
 - 2016 – 3%
 - 2041 w/ TDM – 16%
- Oak Park Road Extension potential to divert 300-500 peak hour vehicles

Constraints and Opportunities – Intra-Regional



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

West Street - Charing Cross Street to Henry Street

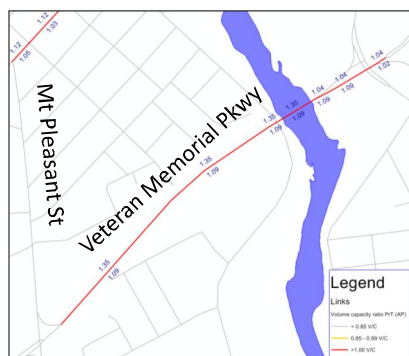
Alternatives

TDM	✓
TSM	✓
Road Widening	✗
New Road	✓

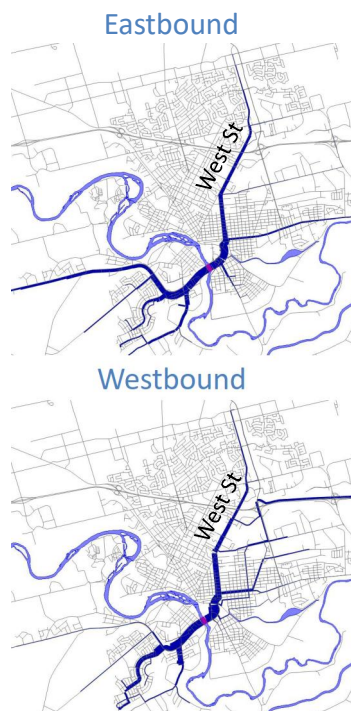
Assessment

- Corridor Transit Mode Split
 - 2016 – 6%
 - 2041 w/ TDM – 14%
- East-West capacity issue using West Street as parallel transfer (i.e. Charing Cross Street to Henry Street).
- Extend Charing Cross Street to Henry Street

Constraints and Opportunities – Intra-Regional



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

Veterans Memorial Parkway - Mt. Pleasant Street to Market Street

Alternatives

TDM	✓
TSM	✓
Road Widening	✓
New Road	✗

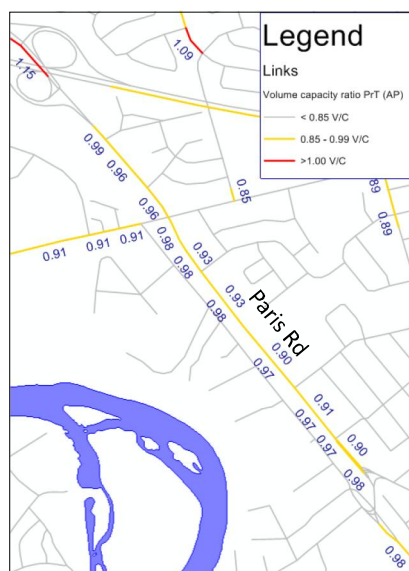
Assessment

- Corridor Transit Mode Split
 - 2016 – 8%
 - 2041 w/ TDM – 23%
- Improve County Road 18 through TSM (signage, shoulder upgrades).
- Widen VMP to provide consistent 4-lane cross section (including bridge, through reallocation of space or widening of bridge deck)

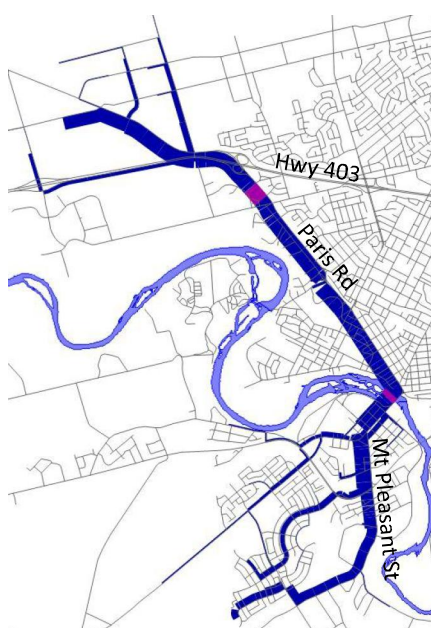
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Constraints and Opportunities – Intra-Regional



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

Paris Road - South of Highway 403

Alternatives

TDM	✓
TSM	✗
Road Widening	✗
New Road	✓

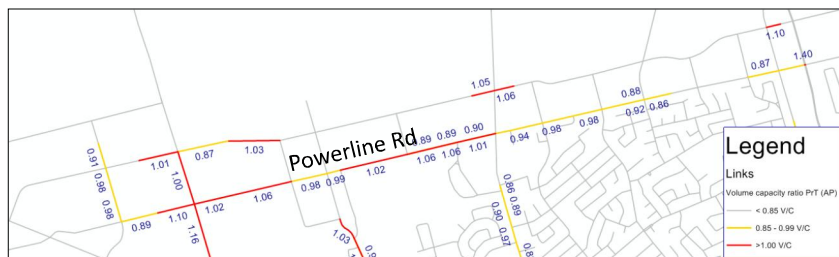
Assessment

- Corridor Transit Mode Split
 - 2016 – 12%
 - 2041 w/ TDM – 40%
- Oak Park Road Extension potential to divert 300-500 peak hour vehicles

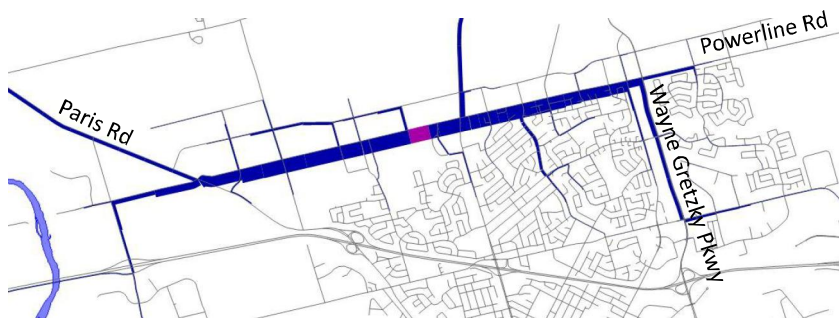
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Constraints and Opportunities – Intra-Regional



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

Powerline Road - Paris Road to Wayne Gretzky Parkway

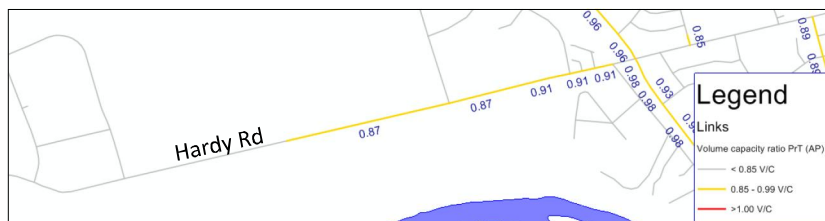
Alternatives

TDM	✓
TSM	✗
Road Widening	✓
New Road	✗

Assessment

- Corridor Transit Mode Split
 - 2016 – 0%
 - 2041 w/ TDM – 25%
- Widen Powerline road to urban 4-lane cross section

Constraints and Opportunities – Intra-Regional



2041 Volume to Capacity – PM Peak Hour



Eastbound



Westbound

Origin-Destination Flow – PM Peak Hour

Hardy Road - Ferrero Boulevard to Paris Road

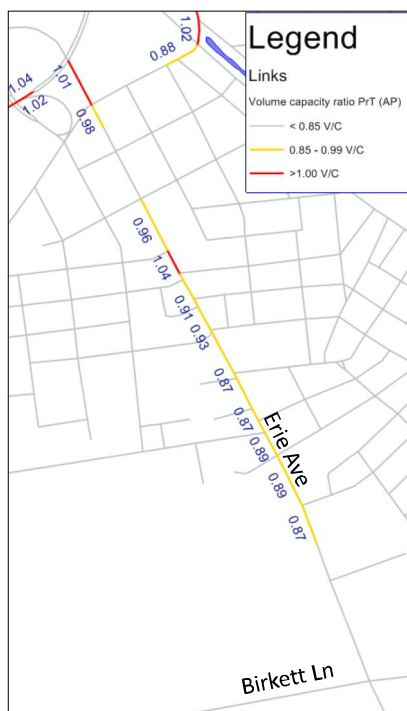
Alternatives

TDM	✓
TSM	✓
Road Widening	✗
New Road	✓

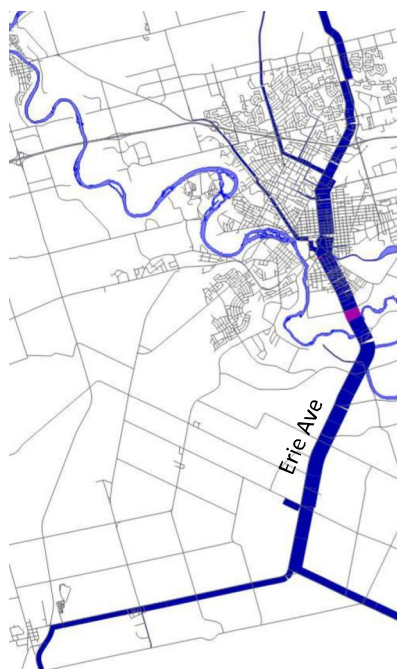
Assessment

- Corridor Transit Mode Split
 - 2016 – 18%
 - 2041 w/ TDM – 55%
- Oak Park Road Extension potential to divert 100 peak hour vehicles

Constraints and Opportunities – Intra-Regional



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

Erie Avenue - Veterans Memorial Parkway to Birkett Lane

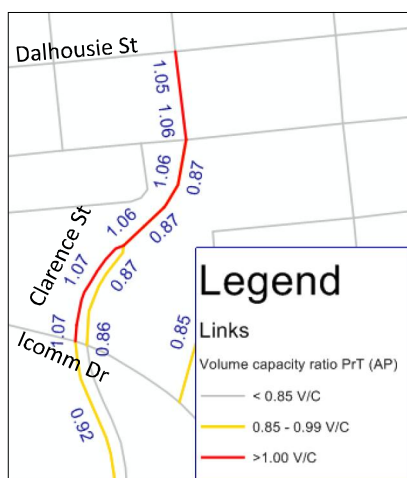
Alternatives

TDM	✓
TSM	✓
Road Widening	✗
New Road	✗

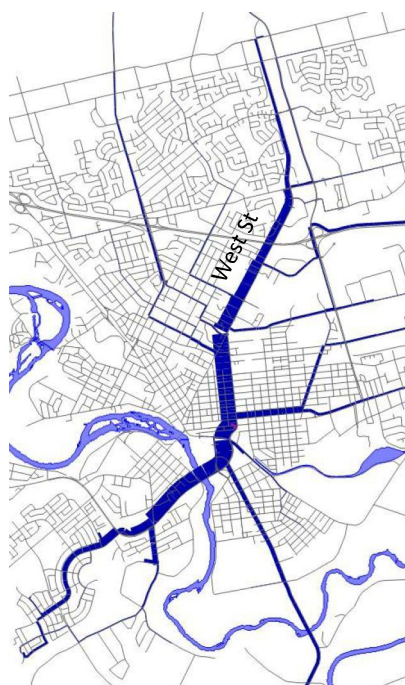
Assessment

- Corridor Transit Mode Split
 - 2016 – 24%
 - 2041 w/ TDM – 52%
- TSM measures (peak turning prohibitions, auxiliary lane provisions) at critical locations

Constraints and Opportunities - Local Systems



2041 Volume to Capacity – PM Peak Hour



Origin-Destination Flow – PM Peak Hour

Clarence Street – Dalhousie Street to Icomm Drive

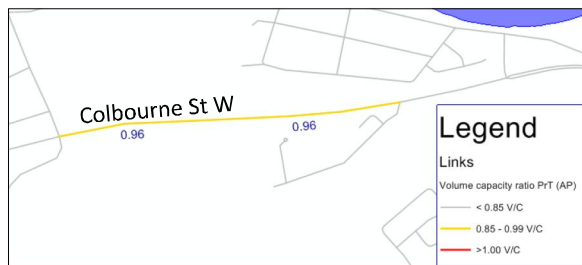
Alternatives

TDM	✓
TSM	✓
Road Widening	✗
New Road	✓

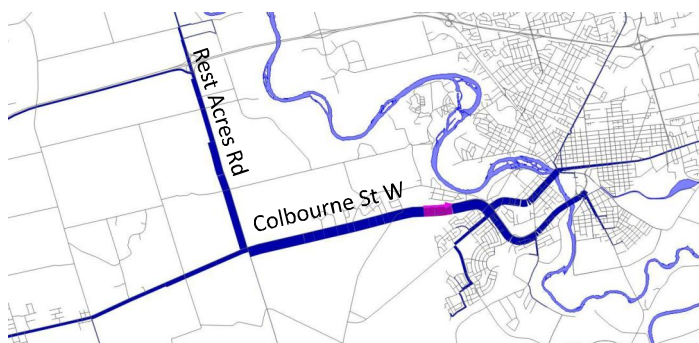
Assessment

- Corridor Transit Mode Split
 - 2016 – 7%
 - 2041 w/ TDM – 22%
- TSM measures (turning prohibitions, auxiliary lanes) at critical locations
- VMP Extension: opportunity to provide alternative route out of downtown via Murray Avenue or WGP

Constraints and Opportunities - Local Systems



2041 Volume to Capacity –
PM Peak Hour



Origin-Destination Flow –
PM Peak Hour



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Colbourne Street West – CR-7 to D'Aubigny Road

Alternatives

TDM	✓
TSM	✓
Road Widening	✓
New Road	✗

Assessment

- Corridor Transit Mode Split
 - 2016 – 0%
 - 2041 w/ TDM – 13%
- Provide additional eastbound lane

Active Transportation Opportunities

Complete Streets - Walking

GOAL: Be a complete, pedestrian-friendly community with networks that integrate with transit, paths and trails, neighbourhood amenities, parks, open space, and schools.

OBJECTIVES:

- Facilities provide a high level of pedestrian connectivity.
- Walking environment is safe for users.
- Pedestrian accessibility, comfort, and mobility levels support walking as a preferred mode.

Complete Streets - Cycling

GOAL: Provide safe and convenient bicycle routes suitable for all user types: utilitarian (commuting), recreational (personal or family discretionary), and sport (advanced, high level recreational).

OBJECTIVES:

- There is a continuous network of safe and direct bicycle routes.
- There is an ability to navigate the bicycle network with ease.
- End-of-trip facilities support cycling as a preferred mode of transportation.
- The bicycling environment is safe.
- Provide unique and specific design environments appropriate for the different types of users

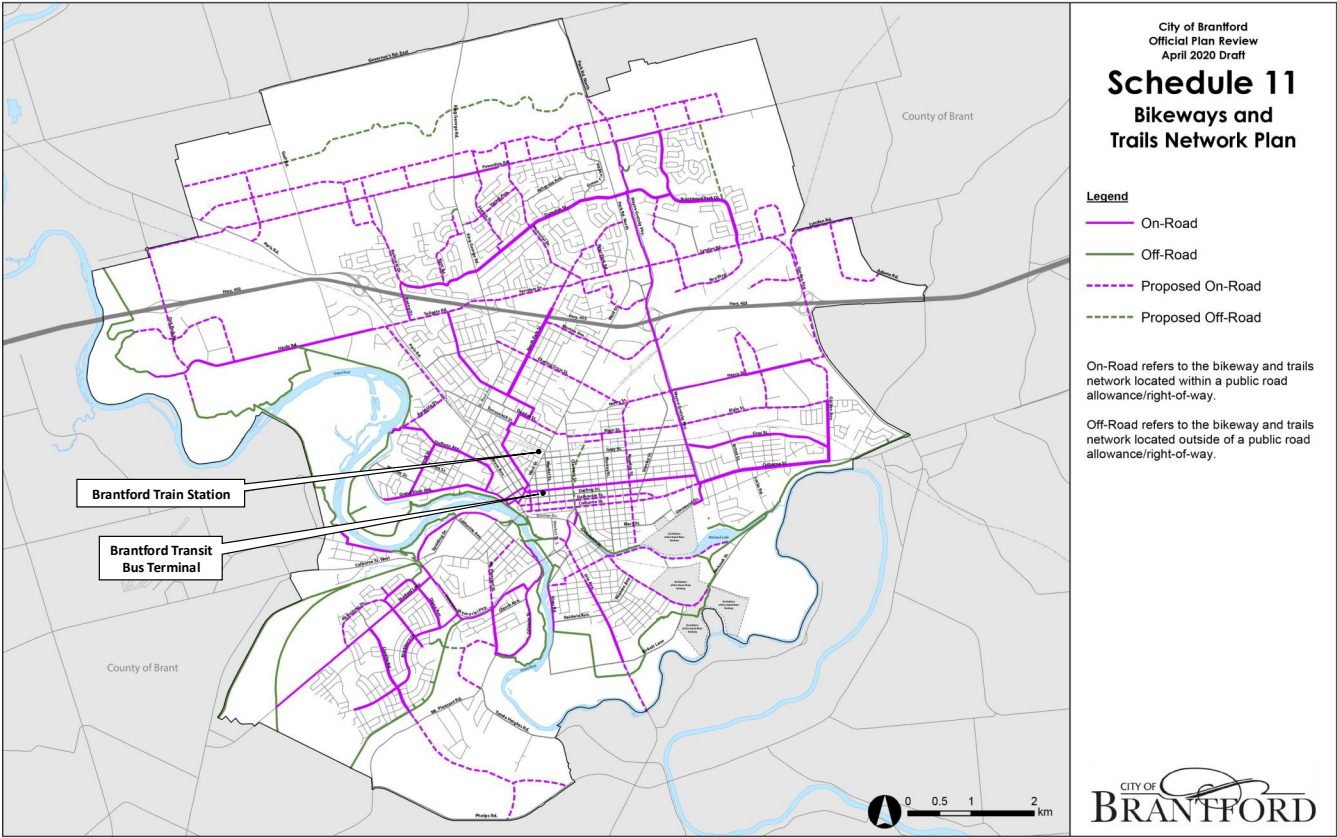


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Active Transportation Opportunities

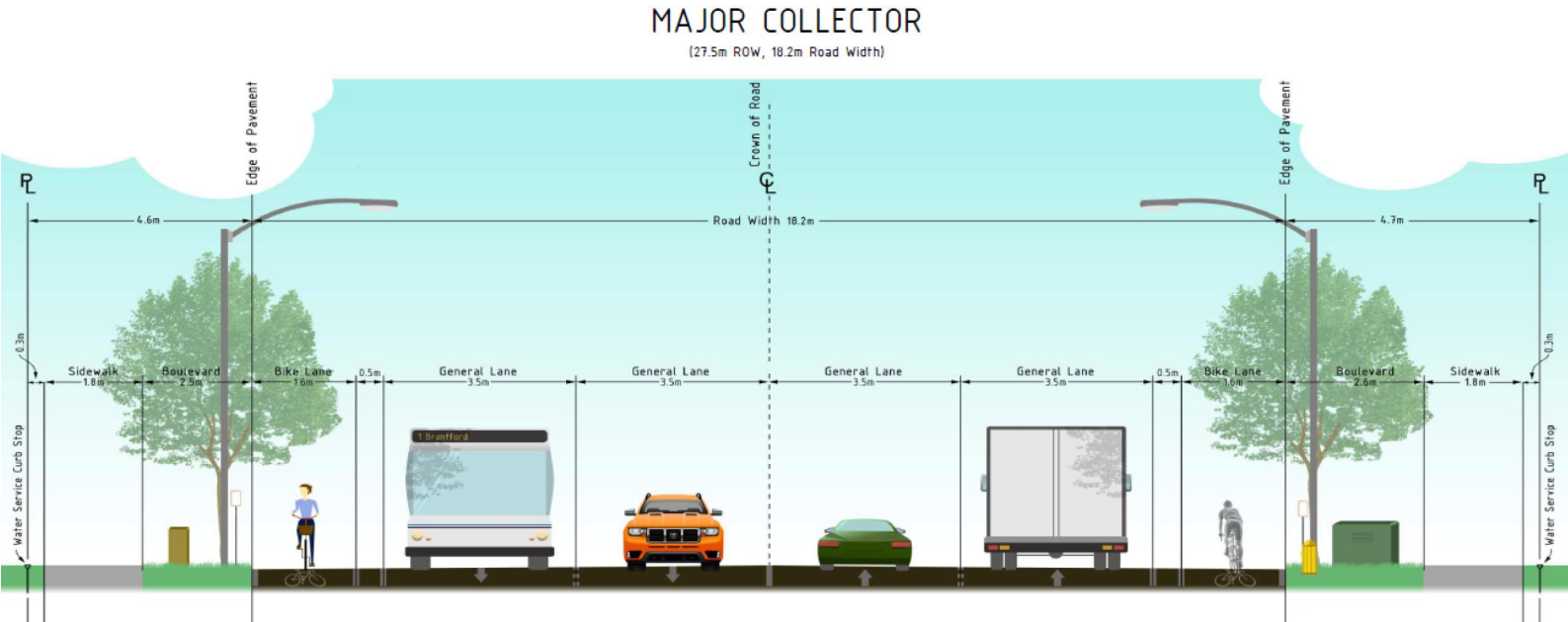


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Active Transportation – Roadway Design - Collector

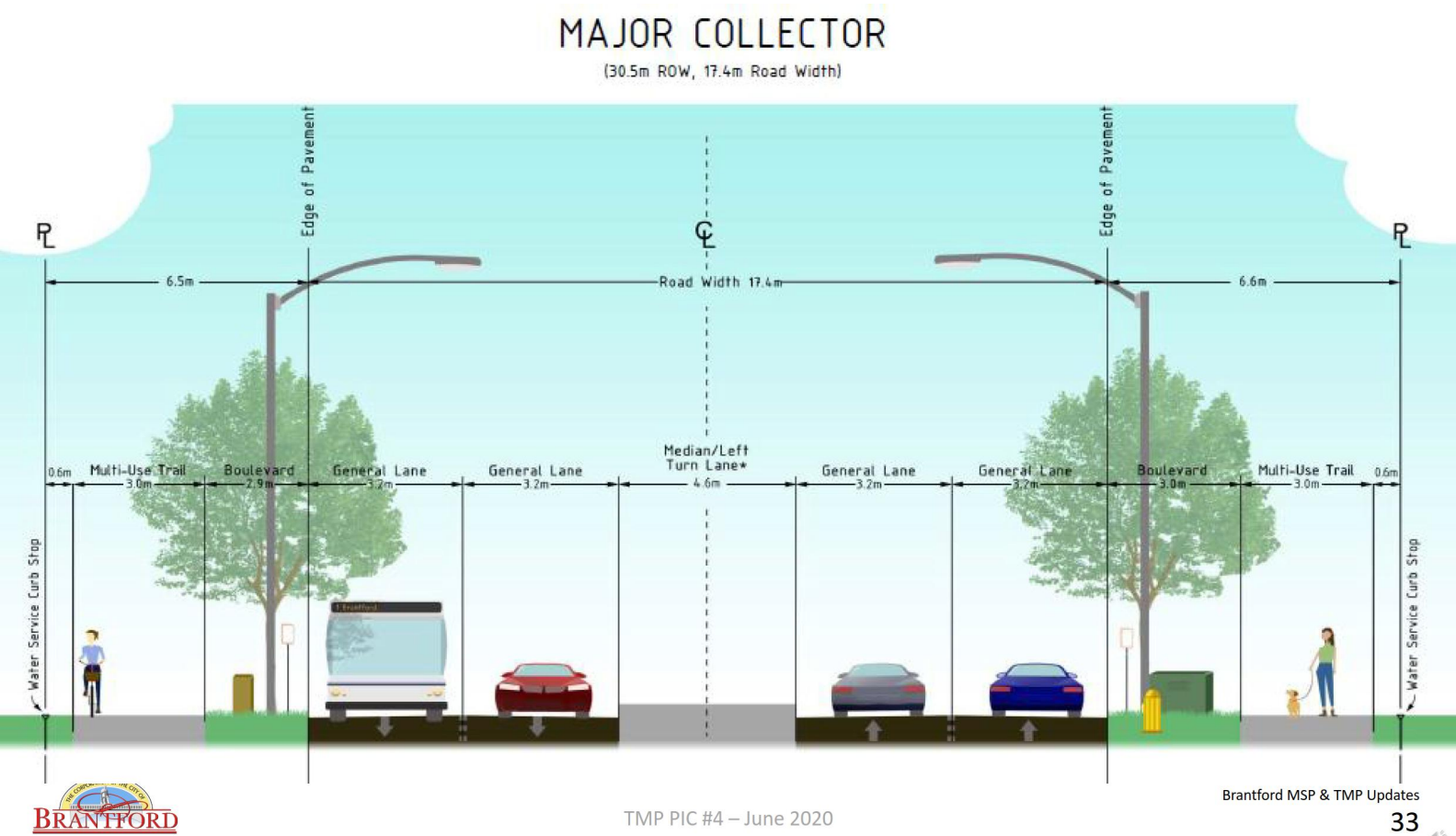


TMP PIC #4 – June 2020

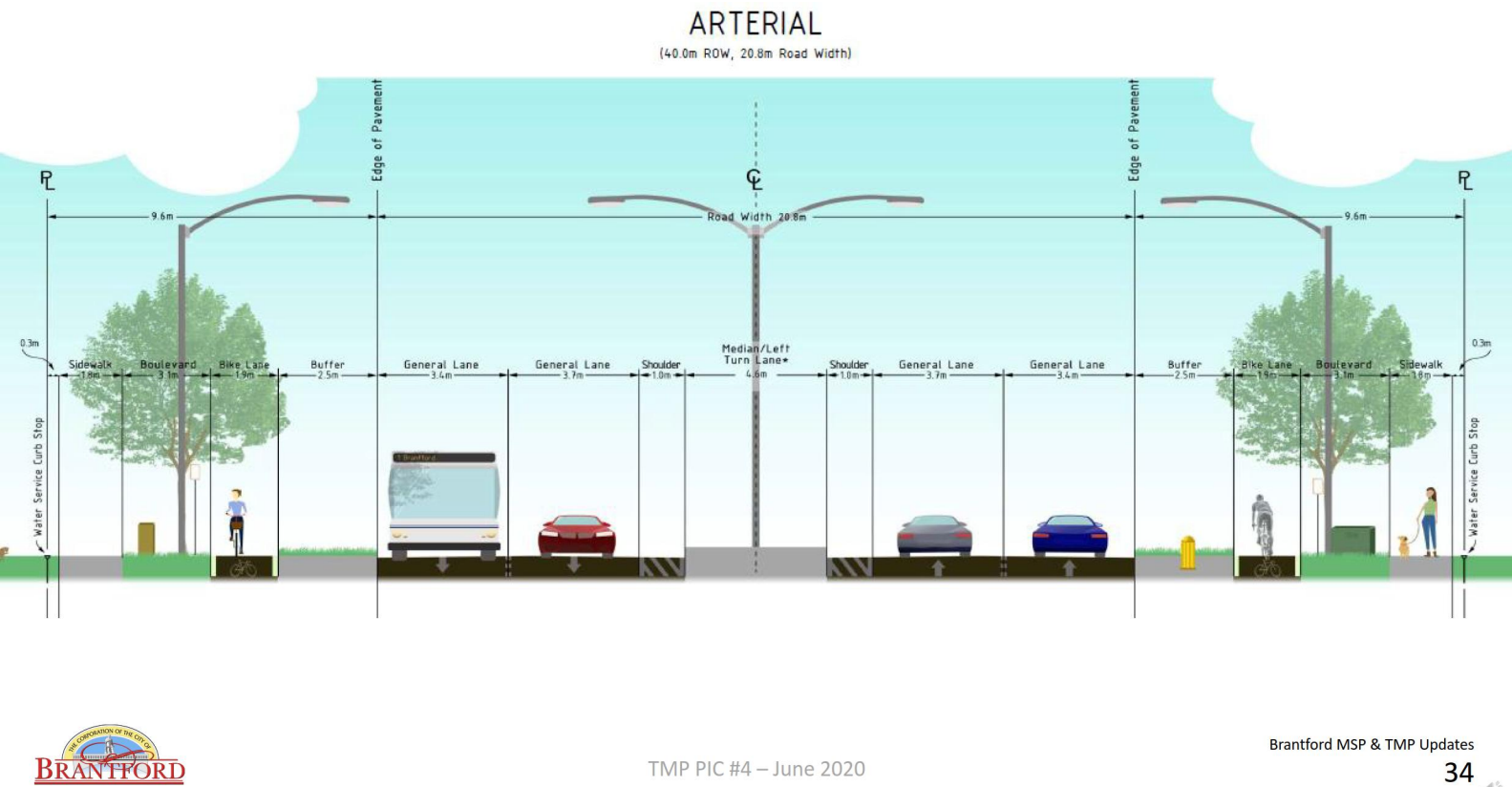
Brantford MSP & TMP Updates

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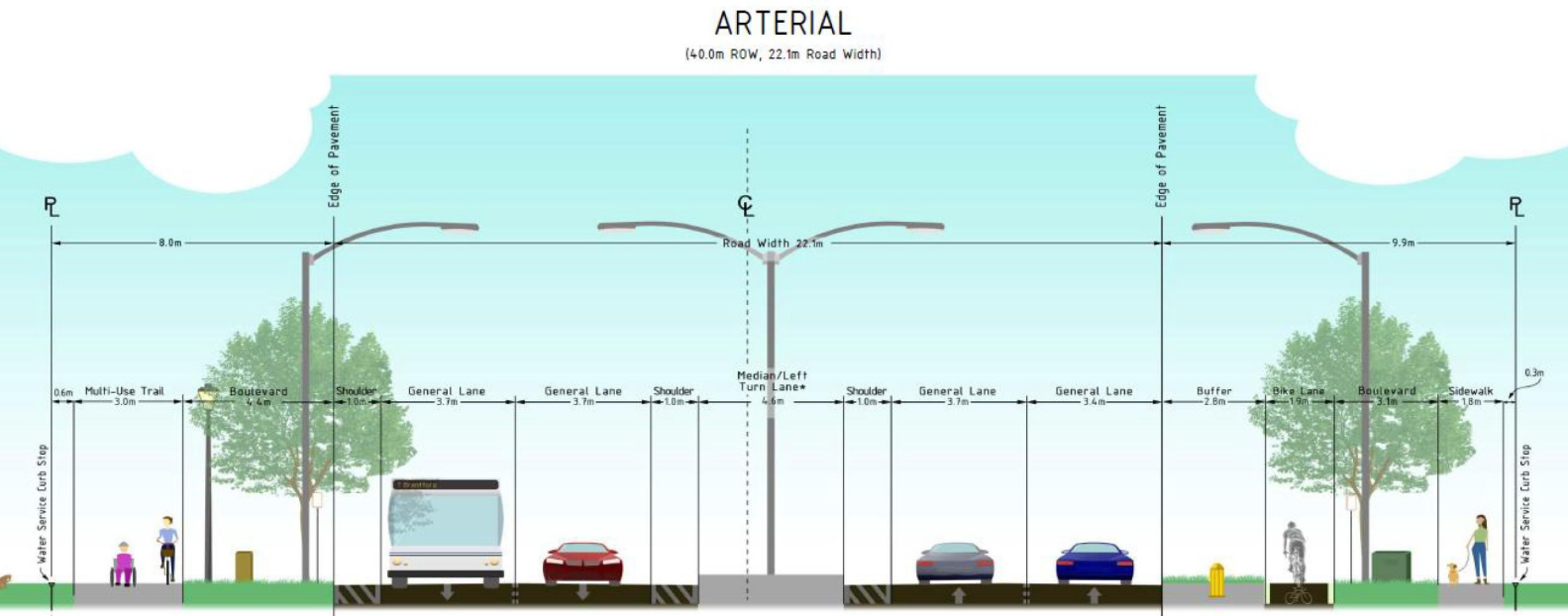
Active Transportation – Roadway Design - Collector



Active Transportation – Roadway Design - Arterial



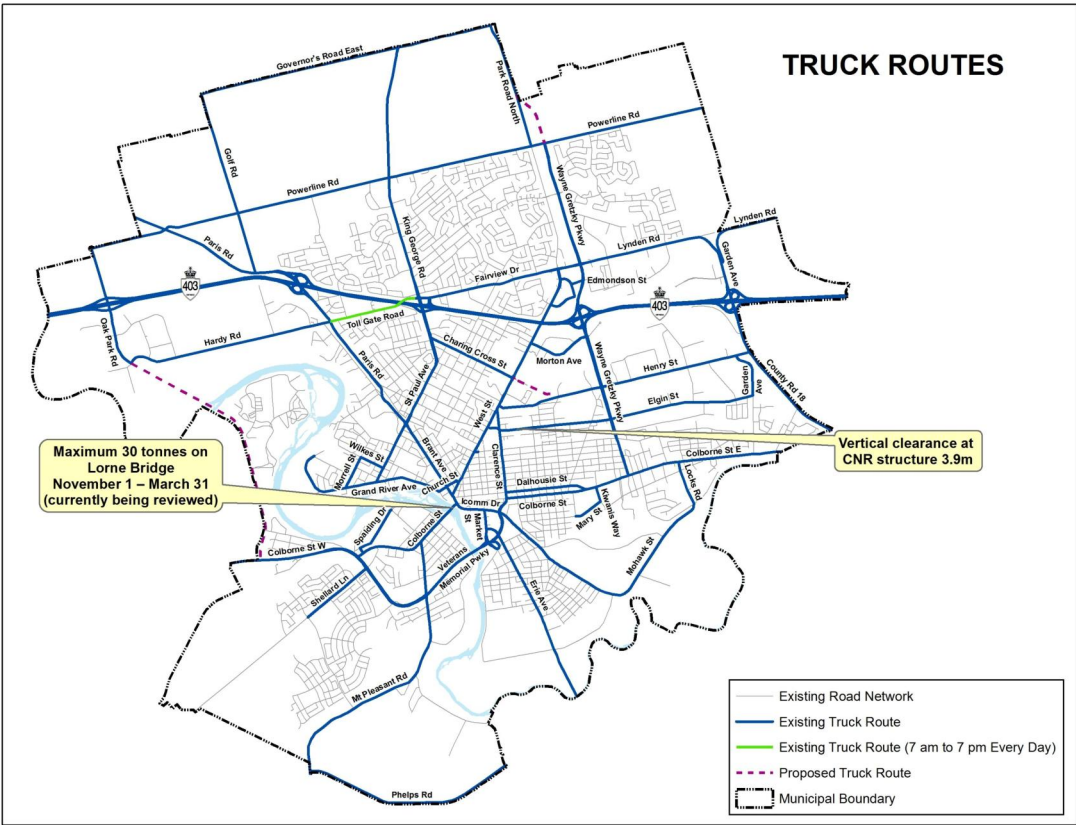
Active Transportation – Roadway Design - Arterial



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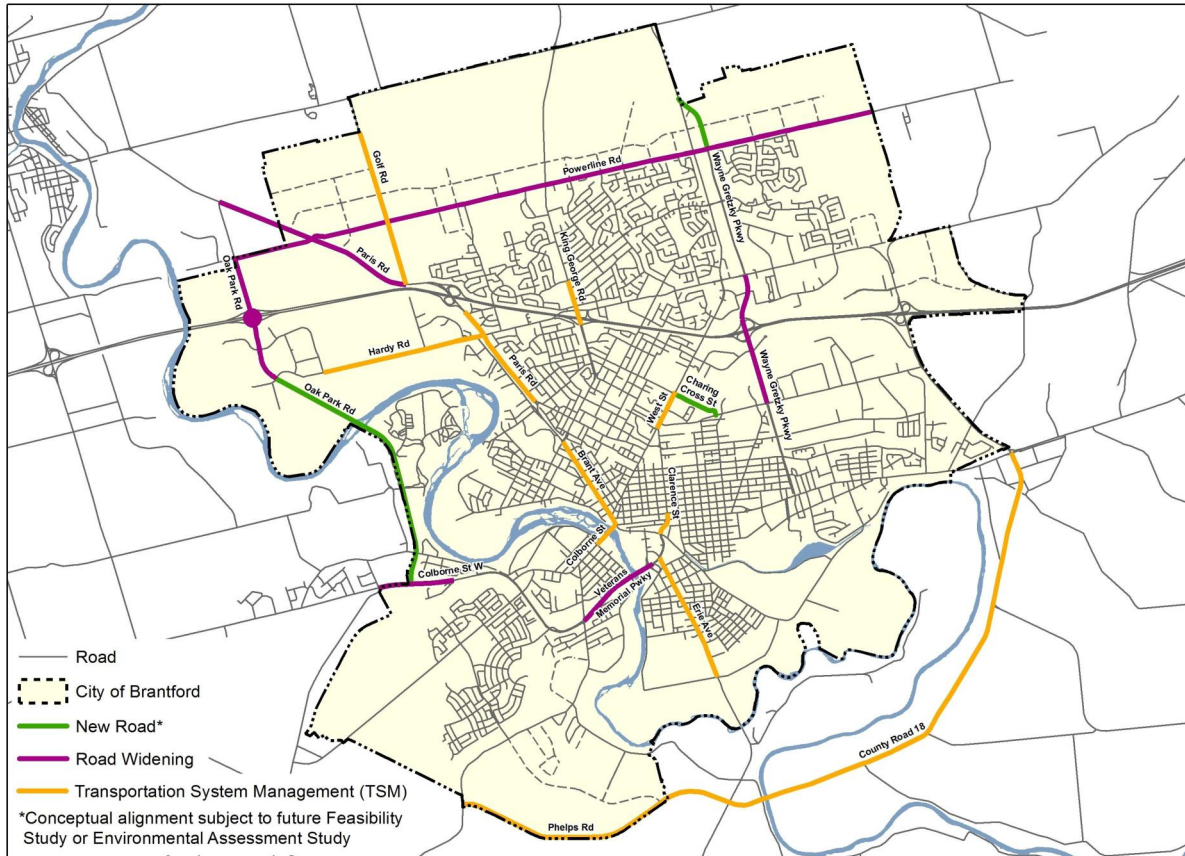
Goods Movement Opportunities



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2041 Preliminary Recommended Plan



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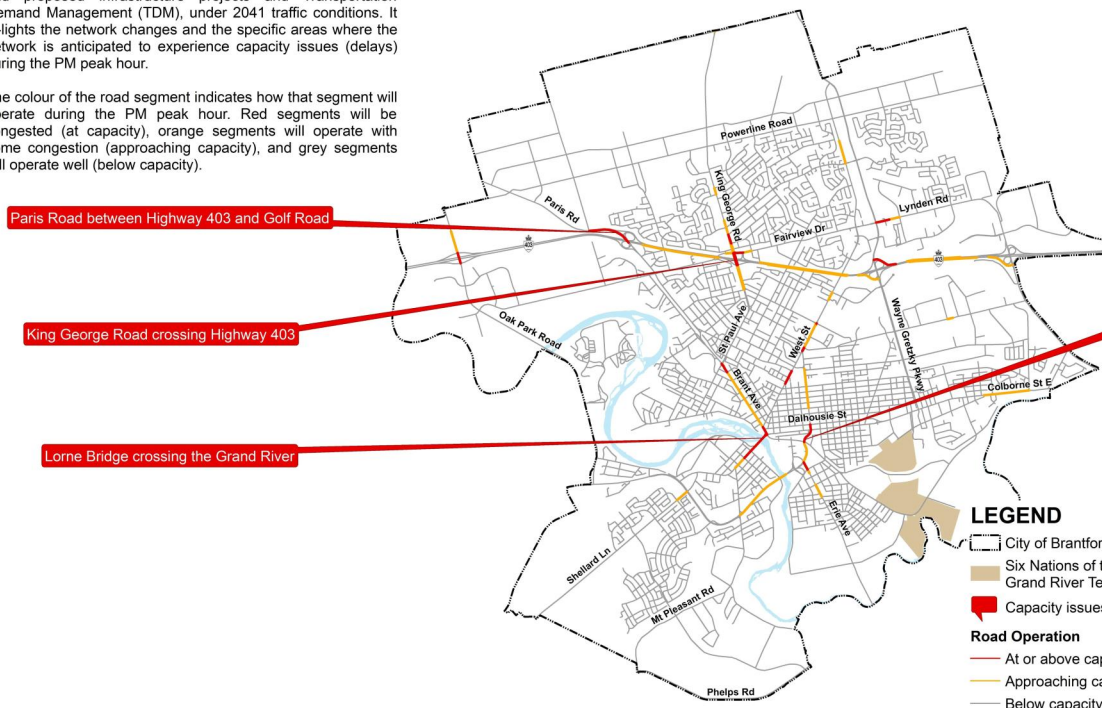
37

2041 Preliminary Recommended Plan - Performance

This map displays Brantford's 'RECOMMENDED' road network. It includes a combination of: committed network improvements, and proposed infrastructure projects and Transportation Demand Management (TDM), under 2041 traffic conditions. It highlights the network changes and the specific areas where the network is anticipated to experience capacity issues (delays) during the PM peak hour.

The colour of the road segment indicates how that segment will operate during the PM peak hour. Red segments will be congested (at capacity), orange segments will operate with some congestion (approaching capacity), and grey segments will operate well (below capacity).

RECOMMENDED PLAN



The recommended infrastructure and TDM will be necessary to accommodate the anticipated population and employment growth to 2041.

The recommended infrastructure includes a series of infrastructure projects that include the addition of new roads and the upgrading and/or widening of existing roads.

The recommended TDM includes a series of strategies and policies that call for additional / upgraded active transportation facilities and enhanced transit service.

HOW WILL THE RECOMMENDED NETWORK PERFORM?

The performance of the 2041 Recommended Plan shows that almost all of the anticipated capacity issues identified for 2041 Do-Minimal condition (where no long term investment was made in transit service or infrastructure) are resolved. A few operational issues remain: Lorne Bridge, Clarence Avenue between Icomm Drive and Colborne Street East, and Paris Road. The transportation assessment suggests that while these locations are identified as capacity constraints in the long term, the magnitude of the issue has been significantly reduced. These issues are now forecast to be marginal issues and can be successfully managed in the near- and mid-term. These locations should continue to be monitored to confirm the significance of any emerging issue.

LEGEND

- City of Brantford
- Six Nations of the Grand River Territory
- Capacity issues
- Road Operation
 - At or above capacity
 - Approaching capacity
 - Below capacity

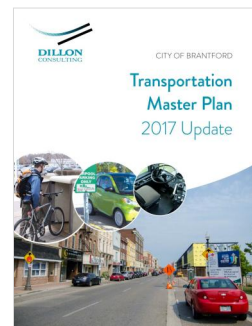
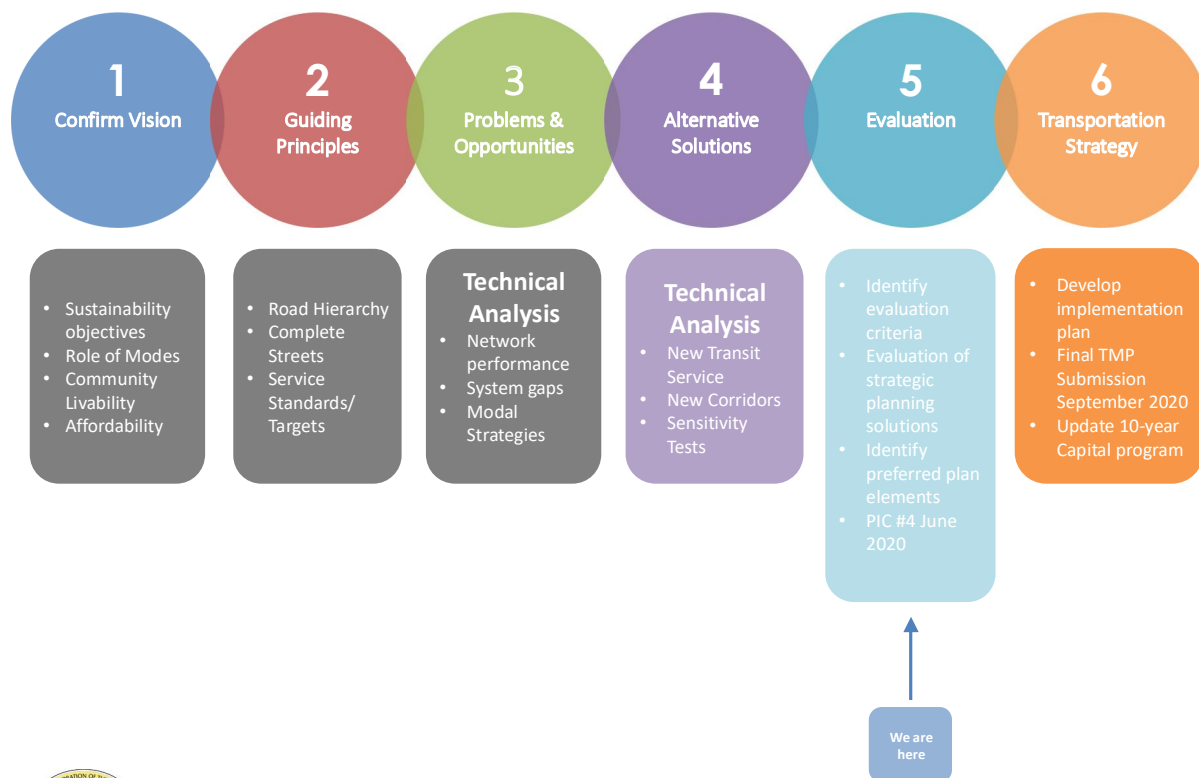


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Status – Next Steps



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Thank You!

If you wish to submit comments or would like to be added to the project mailing list, please contact:

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Information will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act. With the exception of personal information, all comments will become part of the public record.



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CITY OF BRANTFORD MASTER SERVICING PLAN TRANSPORTATION MASTER PLAN ENVISIONING OUR CITY:2041

**June 9, 2020 & June 30, 2020 – Virtual Public Information Centre (PIC)
Frequently Asked Questions (FAQ) Document – Transportation Master Plan (TMP)
Posted on July 28, 2020**

1 Introduction

The Transportation Master Plan (TMP) is one of several studies being undertaken by the City of Brantford to help identify the City's long-term growth needs. The goal of the TMP is to develop strategies for the management of transportation demand, truck route management, transit improvements and the active transportation network, including walking and cycling networks, up to 2041. The Study will also identify the individual projects required to complement these strategies, and prioritize these projects based on need and required timing.

The objective of this document is to answer questions submitted by the public, prior to July 21st, in response to the Virtual PIC originally posted on June 9th, 2020 and Virtual PIC Questions and Answers originally posted July 30th. This document is the third and final step of the Virtual PIC process.

2 Frequently Asked Questions

Numerous questions and comments have been submitted to the Project Team throughout the first Virtual Public Information Centre process. The questions and comments received up to July 21st, 2020 have been responded to and grouped into various themes in the sections below.

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2.3	Methodology.....	9
2.4	Scope	9
2.5	Other	12

2.1 Analysis

2.1.1 Shouldn't widening WGP north of Hwy 403 to Powerline Rd be needed in conjunction with the WGP extension north of Powerline Road?

Slide 38 of the PIC material, entitled “2041 Preliminary Recommended Plan – Performance”, indicates that the 4 lane cross section of WGP will be adequate to the service the forecast demand to 2041. The corridor should be protected for a potential widening to 6-lanes as volume demand may warrant beyond the 2041 horizon of the TMP.

2.1.2 Are any improvements identified for Park Road North?

No lane capacity improvements are proposed for Park Road North south of Powerline Road. Local intersection improvements will be required to optimize travel flow and accommodate changes in other road cross section (example: at Powerline Road and Park Road North). North of Powerline Road, a realignment of Park Road North will be required as it intersects with the future WGP. This realignment and intersection will be subject of a future Environmental Assessment Study for the WGP Extension.

2.1.3 Slide 8: Please explain more thoroughly how the traffic impact of up to 500 cars/hour is taking off the pressure from Brant Ave., Colborne and Clarence. Will it be 4%? 50%? It states a limited number of people will be using this 84 million dollar road.

The statements on Slide 8 do not align with the question posed. Slide 16 summarizes the analysis for Brant Avenue. Traffic forecasts for the 2041 conditions indicate that it will be operating at some 6% over capacity. Analysis of the origins and destination of these peak hour demands suggests that of the vehicles using Brant Avenue in this condition, approximately 500 (approximately 25%) of the corridor volume) of them are traveling from northwest Brantford to southwest Brantford which would be better served by OPRE. These 500 vehicles are not the only vehicles that are forecast to use the OPRE, just this that would divert from Brant Avenue.

2.1.4 TMP Slide 11: Is it too early to consider the effects of COVID-19 or a future pandemic on transit ridership? I assume no effects have been included in the ridership numbers in the TMP.

Yes, it would be premature to speculate on the impacts of future transit ridership as a result of Covid-19. The long term impacts of the pandemic and associated restrictions are not known and will not be known for some time. This analysis was conducted prior to the Covid-19 outbreak in Canada and as such, no potential Covid-19 effects have been included. In looking 20 years into the future, the assumption is that there will always checks and balances, and shifts in outlooks. The goal of the long term analysis is to flatten the impacts of such shifts and set reasonable targets that meet the long term community vision.

2.1.5 TMP Slides 13 & 14 Comparing Slides 13 & 14, the construction of the Oak Park Road Extension does not appear to have any effect on the overcapacity issues on Veterans Memorial Parkway and Clarence Street. Please comment.

The Oak Park Road Extension is expected to divert between 300-500 vehicles from the Paris Rd/ Brant Ave corridor and the Lorne Bridge (slide 16). With respect to the Veterans Memorial Parkway and Clarence Street, based on trip distribution patterns of vehicles using Veterans Memorial Parkway and Clarence Street (shown on slides 23 & 28 of the PIC material), the Oak Park Road Extension will have little to no impact on the future volumes on either Veterans Memorial Parkway or Clarence Street.

2.1.6 TMP Slides 14 & 29: With the construction of the Oak Park Road Extension, a new area of overcapacity appears on Colborne St. W., between County Road 7 (Pleasant Ridge Road) and D'Aubigny Road. Is construction of the OPRE simply going to result in moving traffic congestion from one part of the city to another?

The role of Oak Park Road extension is to serve a specific future demand that would and should be diverted from a current corridor that is not capable of serving that demand. Over capacity demand in the existing corridor (Paris Road and Brant Street, and on Lorne Bridge) results in neighbourhood infiltration that local roads are not designed to accommodate. Yes, the extension results in some additional pressure points but these pressure points can be mitigated. The section of Colborne St. W., between County Road 7 (Pleasant Ridge Road) and D'Aubigny Road currently has a 3 lane cross section (2 lanes westbound and 1 lane eastbound). It will require a road widening to match the existing 4 lane cross section east of D'Aubigny Road. This road widening is included in the 'Recommended Plan'.

2.1.7 TMP Slides 16, 20, 21 24, 26 & 29: The V/C ratios shown on these slides are those of the forecast 2041 “Do Minimal” traffic volumes. Could the consultant include additional V/C ratios using the forecast volumes in which the only alternative strategy is the construction of the Oak Park Road Extension (no TDM, TSM or road widening)? This would directly show the benefit of the OPRE to reducing the overcapacity on these roads. On Slides 20 and 23, the diagrams are very small and the V/C numbers are illegible. Could these numbers be enlarged?

The Do Minimal scenario reflects a 2041 condition with no additional TDM, TSM or road widenings. The aforementioned slides identify the travel demands and patterns of the problem areas and corridors and provide commentary on the potential for various alternatives to address that problem. As we are looking at a system wide plan to address city wide issues, the 2041 network assessment tests the alternatives in a system context. The volumes in the 2041 Preferred Plan assessment show significant demand on the Oak Park Road confirming its significant role in the future network. Testing the extension in isolation would only result in additional demand for the facility. With respect to font sizes, these will be improved and provided in the next steps of the project.

2.1.8 I have read a number of articles recently regarding a phenomenon called “induced demand” which “refers to the idea that increasing roadway capacity encourages more people to drive, thus failing to improve congestion”. With this in mind, is it possible that the construction of the Oak Park Road Extension will only reduce traffic congestion on the city streets in question for a few years after which time we find that congestion reappears on those same streets?

Existing corridors are shown not to be able to accommodate future forecasts. The Oak Park Road Extension is required to serve specific future demands between West Brant and NW Brantford/Highway 403. The need and role of this infrastructure has been determined both on the basis of no TDM, TSM or road widening as well as with target TDM and TSM levels. As the demand has been consciously set to match aggressive policy goals for limiting the demand for automobile infrastructure, there will be limited room for induced growth of auto demand in the future due to the implementation of the Oak Park Road Extension. Even with the addition of the Oak Park Road Extension, very high volume demand is still expected on Brant Ave and the Lorne Bridge and as such induced demand is not considered applicable to this condition.

2.1.9 The TMP makes assumptions about the transportation decision making of residents commuting from the West Brant area to the East (i.e., assuming people will travel West to then go East). Please comment on how this is known.

The transportation analysis relies on existing traffic data (vehicle volume counts), recent travel behaviour survey for the community (2016 Transportation Tomorrow survey which provide trip purpose, origin-destination, and travel mode information for the GTA and surrounding area, including Brantford), and forecast land use information. This information is used in the City's transportation planning tools to forecast travel behaviour and magnitude of trips for the city broken down into discrete traffic analysis zones. This allows the project team to develop an understanding of the origin and destination of trips forecast for 2041.

2.1.10 How can the committee consider the 2016 travel study as current trends and be valid for a 10 year project starting in 2023? By the time the year 2028 the road is to be approximately half done, which will mean the current trends are 11 years old. The Master plan committee and developers need to be realistic and financially transparent about the costs to build the OPRE to avoid the same issue as Gretzky arena. All Builders put in unexpected costs to their budget plans, the City will need to be very clear on their overages budget and ask the constituents for extra funding, not expect we will be ok with just using our taxes to fix an unforeseen expense.

On the issue of the 2016 travel study, it is the most recent travel behaviour information available and has not changed significantly in Brantford over the last several iterations of the data collection.

The 2016 travel behaviour is used as an initial base to understand the travel relationships between areas. As the population and employment forecasts are allocated the 2041 scenario, the trip making is adjusted to reflect new growth levels and new area to area interactions.

On the issue of the capital cost, the TMP team is working with the City to identify reasonable costs for

the strategic plan. These costs will be enhanced and refined as part of the Oak Park Road Extension EA study process.

2.1.11 In the Oak Park Road Extension Feasibility Study Final Report, there is no discussion regarding connections with Brant County that could be more fiscally responsible than the alternatives considered. Could you comment on why the city has not engaged with the Brant County to facilitate mutually beneficial solutions?

The TMP Project Team has engaged with County of Brant regarding the problems and opportunities, and the assessment of the alternatives. The Project Team will continue to engage the County through to the completion of the Study. Further, the City has recently initiated the Oak Park Road Extension Environmental Assessment study which will include the County as a key stakeholder. The EA will confirm the requirements of the project, develop an implementation plan, and prepare preliminary designs for the proposed infrastructure. In addition, the City is working with County on a Joint Strategic Transportation Plan to review cross boundary and joint transportation issues.

The project web site is as follows: <https://www.brantford.ca/en/your-government/oak-park-road-extension.aspx>

2.1.12 The proposed plan discusses how about 900 cars per peak hour will be reduced from Brant Ave, Colborne Street, and VMP combined and that commute time will decrease by about 5 minutes for those commuting. Can you explain how these numbers warrant the expense of the proposed plan?

The specific outcome related to travel time noted here is not a specific TMP outcome. Generally speaking, however, travel time savings of a group of users expanded to annual benefits over many years can be significant. In combination with the environmental benefits of reduced idling (from reduced delay) and shorter travel distances (more direct routes), as well as improving the overall safety of the network (reduced collisions, less neighborhood infiltration) are also key to understanding the benefits of the investment.

2.1.13 When highway 53 is expanded from 3 to 4 lanes from D' Aubigny there will need to be consideration to have separate signals like at Elgin and Clarence to avoid accidents. This major intersection on a hill will turn into West St. as there has been many accidents already, with poor sightlines and speeding traffic.

Comment noted.

2.1.14 The public notice in the Brantford Expositor on June 11 uses ambiguous language regarding the bridge that will be required to complete this proposed plan: "TMP (2014) recommends the extension include a four-lane arterial road with a crossing over the Grand River". Mention of a bridge is also not clear in other editions of the proposed plan. A bridge will impact the cost of the proposed plan substantially. Please comment on how the "crossing" (i.e., bridge) will be accounted for in "today's dollars" (not past projections of the bridge cost). To be transparent with taxpayers, clarification of the cost of BOTH the road and crossing (bridge) is necessary.

In the next phase of the TMP update, costs for the Recommended Plan, including various programs, service, and infrastructure, will be prepared using today's 2020 dollars using current planning and engineering benchmark unit costs. The Recommended Plan will be prioritized into discrete time periods in order to provide guidance to the 10-Year Capital Program. Further more detailed construction costs will be established as part of the on going Environmental Assessment Study. (<https://www.brantford.ca/en/your-government/oak-park-road-extension.aspx>)

2.1.15 Suggest extending CR18 westbound to connect to Shellard Lane. This is intended to facilitate Ward 1 traffic to use CR18 and access Hwy 403 on the northeast.

The proposed Conklin Rd extension to CR18 towards the southeast would provide this connection and role.

2.1.16 How many cars would be eliminated from Brant Ave if no right turn was allowed onto St Paul Ave and no left turn allowed from Palace, Richmond, Henrietta, and St James onto Albion. There are faster ways to access St. Paul now but don't seem apparent to drivers.

The project team will undertake additional analysis to identify the requested numbers.

2.1.17 What is the percentage individually of traffic now on Hardy road from Tollgate, Paris Road and Ava Road?

The project team will undertake additional analysis to identify the requested numbers.

2.1.18 With regard to the Tutela Heights area improvements:

- Will the proposed new road widenings in the Draft OP will be included in the finalized Transportation Master Plan?
- What are the short-term plans for Birkett Lane and Erie Ave regarding traffic flow improvements, turning lane improvements etc.?
- Is the 20.0m ROW widening for Birkett Lane scheduled to still occur or has the City decided that the 24.0m ROW widening is better suited to accommodate the City's needs?
- What are the short-term plans for Conklin Rd?
- Is there a planned ROW road widening in the near future for Conklin Rd?

The Transportation Master Plan does not identify any future improvement requirement for the existing section of Conklin Road. The specific ROWs for the roads are to be identified by the Official Plan. This comment has been provided to O.P. team.

2.2 Clarity

2.2.1 TMP Slide 13: Comparing Slide 8 to Slide 13, the overcapacity on Hardy Road has been eliminated due to TDM. Is this correct?

Yes. TDM does result in reduced volume forecasts on Hardy Rd. The impact of this reduction appears magnified due to the change from 'At or above capacity' to 'Approaching capacity'. In

practice, the effects of TDM on Hardy Road are much more modest as Hardy Road is just over capacity in the 'Do Minimal' network and is just under capacity in the 'TDM' network.

2.2.2 Slide 13-14 If the committee is working with Brant County council to look at other effective transportation flow alternatives such as County Road 18, why build the OPRE, which will make commuters travel West to head East, make a left turn on a one lane road, and travel another 10 minutes to improve the commute time by 5 mins. How do you know the 500 cars/hour commuters from Shellard lane will travel to NW industrial for employment when using a 2016 travel plan? How many people moved to Shellard Lane to work in the North West industrial area as suggested in the recent replies to the master plan input session? The plan is to have the OPRE be developed over many years but with every 4 years possible council changes how can council confirm the OPRE will continue on and not be a road to no where?

The analysis does not suggest that travel demand market for OPRE is primarily to and from the East. The analysis shows that there is a capacity issue on Brant Ave, the order of magnitude of which is primarily driven by trips to/from south-west Brantford from/to the future north-west industrial area and to/from points west of Brantford.

The 2016 travel behaviour is used as an initial base to understand the travel relationships between areas. As the population and employment forecasts are allocated the 2041 scenario, the trip making is adjusted to reflect new growth levels and new area to area interactions.

The network recommendations for 2041 are based on the policy positions outlined in the Official Plan which is endorsed by Council. These plans are reviewed at regular intervals and adjusted to reflect recent or new policy initiatives.

2.2.3 Slide 26 talks about Hardy Rd and removing traffic of 300-500 cars. Would the new interchange at Oak Park and 403 not be considered the best route into the industrial park instead of travelling on Hardy Road? Those traveling now to work in the Industrial Park will probably use the 403 and get off at the new interchange at Oak Park road since the left turn issues will be resolved. The Master Plan is encouraging West Brant including Hardy Road to use public transit to get downtown. By increasing public transit why would a 4 lane over pass road need to be built? Make it the last resort to drive when the residents should be proud to use public transit that is efficient for traffic, environmentally friendly and cost effective to both patrons and city.

The 300-500 vehicles are those vehicles forecast in the Do Minimal conditions, to also be travelling along the congested Brant Avenue corridor. Using Highway 403 does not address the north-south issue connecting southwest area to the northwest area.

The future analysis already assumes a significant improvement in transit ridership. This transit ridership does not address the network deficiencies alone.

2.2.4 There is no indication of the progression of the TMP (i.e., at which end construction will begin). Are we to take the "Oak Park Road & Highway 403 interchange upgrade" as an indication of the intended direction?

The future outcome of the TMP is a Recommended Plan for service and infrastructure. This will include an implementation plan identifying the priorities, timing, and general costs for the individual projects. These steps will be undertaken subsequent to the confirmation of the current Recommended Plan. The upgrades to the Oak Park Road interchange are being conducted as a result of the planned growth in the NW Business Park. This need is independent of the potential future Oak Park Road Extension. The next step for the Oak Park Road Extension, the EA, has been initiated by the City. (<https://www.brantford.ca/en/your-government/oak-park-road-extension.aspx>)

2.2.5 The Plans show an arterial/collector road connection in the Expansion Lands north of Powerline Road (east of King George Road) extending north through the existing natural area. On what land parcel is this road proposed?

The alignment of this connection is conceptual at this time. Specific alignments of these development roadways will be the subject of future development submissions.

2.2.6 Within the Expansion Lands there is a proposed collector road travelling parallel to Powerline Road with proposed connections southerly to Powerline Road. How will this road be funded and, given multiple landowners, how will coordination be addressed to ensure that the road is completed in a timely and complete manner?

The timing and design elements of this roadway, and other connections required to support development, will be the subject of future EA's or Draft Plans of Subdivision as development progresses.

2.2.7 The 2041 Preliminary Recommend Plan shows only one potential connection northerly to extend through the natural area to provide access to future lands located outside of the urban boundary. However, Schedule 11 does not illustrate this same roadway as part of the Bike and Trails Network. There is a proposed off-road trail system within the natural area (east-west), shouldn't this connection also be shown?

This comment is noted. The noted roadway extension northerly is conceptual and the subject of further development related study. At such time as the roadway need and alignment is confirmed, it would be important to provide active transportation in this corridor.

2.2.8 According to Slide 37 "2041 Preliminary Recommended Plan", new roads have a conceptual alignment subject to future Feasibility Study or Environmental Assessment. We trust that 'conceptual alignment' is also true to the new loop road on the Sorbara Lands. We expect that the character, design, and alignment of the new public road is subject to further discussion and will be reviewed as part of any future development application.

This is correct. The alignment of the loop road is conceptual. This road is proposed as a collector road, the character, design, and alignment of the new public road would be subject to further study as part of the development application process.

2.3 Methodology

2.3.1 Will you be modifying your plans now that the Ontario government has lowered the population projections for our area?

With regard to the updated population and employment projections, the TMP team is working with the Official Plan team to understand the implications of the Growth Plan Amendment on the Master Servicing Plan and Transportation Master Plan.

The Technical Report prepared by Hemson Consulting for the Ministry of Municipal Affairs and Housing extends the Brantford forecasts with relatively minor additional growth through to the new planning horizon in 2051. The 2041 TMP horizon reflects a population of 163,000 residents and employment of 79,000 jobs, the new reference forecast for 2051 is now for a population of 165,000 and employment of 80,000. The recommended reference scenario for 2041 in the technical report maintains the 2041 TMP forecasts.

As the 2041 scenario is meant to reflect a long term buildout, the difference between the current 2041 and the new 2051 reference scenario (2,000 pop and 1,000 emp) is not considered significant. Therefore, the long term network conditions and requirements as assessed for the TMP are still considered to be appropriate.

2.4 Scope

2.4.1 What will happen at the entrance to Brant Park?

The City recently initiated an Environmental Assessment study which will assess alternative alignments and designs for the proposed Oak Park Road extension. This will include details related to the entrance to Brant Park. Please monitor the city's website for study notices and information. (<https://www.brantford.ca/en/your-government/environmental-assessment-projects.aspx>)

2.4.2 When this proposed OPRE is started where will the City begin.... we expect you to consider the bridge component of the plan before beginning construction?

The planning, design and construction plan will be developed as part of future works and is not within the scope of the TMP. The OPRE EA study will address most of these issues, while the detailed design will finalize the construction costs and phasing. Please monitor the city's website for study notices and information. (<https://www.brantford.ca/en/your-government/environmental-assessment-projects.aspx>)

2.4.3 To build community engagement regarding this OPRE why would the Ward One councillors not take the time to come and speak with those most effected?

As this is an issue for the OPRE EA study team, these comments have been shared with them.

2.4.4 Please clarify that the new plan has 3 bridges crossing the river in succession, if the walking bridge is kept! Has there been any consideration to the impact this will have when there is another ice jam

As this is an issue for the 3 Bridges EA study team, these comments have been shared with them.

2.4.5 Slide 30 talks about walking trails. Currently, the bridge appears in some plan documents but is not included in all. Which proposal is the City considering from the Parson's report?

A walking trail connection is to be provided across the river. The OPRE EA will identify the appropriate on road infrastructure to accommodate pedestrian and cycling

2.4.6 When the master plan is presented with the proposed budget please take time to break down the cost for the bridge separately.

The capital cost estimates for the TMP will consider and identify the bridge component.

2.4.7 To be financially accountable how can this road proceed when the economic impact from COVID-19 will need to be addressed to build the local economy first.

The effects of COVID (short-term or long-term) cannot be known at this time. The TMP is a long term (20 year plan) based on projections of population and employment and the resulting interactions between them. It is understood that there are ups and downs in any long term economic forecast but the ultimate goal is to achieve and accommodate the policy growth plan.

2.4.8 Is compensation for the residents living along the proposed OPRE to address the variety of impacts this project will have (e.g., environmental damage, noise, etc.) being considered?

The TMP is considering the impacts noted in the evaluation of the alternatives. The specific impacts of the implementation of a project will be the scope of the Environmental Assessment, as will be the identification of any mitigation and compensation potentials.

2.4.9 Are cost estimates available for the recommended alternatives?

As part of the project next steps, cost estimates for the Recommended Plan will be developed using current planning and engineering unit cost benchmarks.

2.4.10 The Master Plans Review identifies a number of improvements with existing infrastructure (roads, water, sanitary), while there is no discussion related to any programs planned either through the 10 Year Capital Program and/or the Development Charge By-law/Development Charge Background Study that would provide for the identified improvements. Can this be provided?

As part of the project next steps, cost estimates for the Recommended Plan will be developed using current planning and engineering unit cost benchmarks. An Implementation Plan identifying the Plan priorities will be developed to inform both the 10-yr Capital Program and the Development Charges process.

2.4.11 Given the impact of COVID-19 and other pressing government cuts and priorities on the city's budget (e.g., cuts to transfers from the Provincial government for healthcare, fulsomely addressing homelessness), how is the proposed plan being funded? Or even the top priority?

The cost and potential funding for the Recommended Plan will be prepared as part of the project's next steps. Ultimately, the decisions related to the spending of fiscal budgets are made by Council on the recommendation of City departments, and not an outcome of the TMP.

2.4.12 The Master Plans Review identifies a significant amount of new infrastructure required; however, it does not discuss how these improvements would be funded? A discussion on funding should be provided.

A high level discussion related to finding will be included as part of the development of the Implementation Plan in the project's next steps.

2.4.13 Would like to see the bikeway on Powerline Road to be extended eastward to WGP, or Memorial Dr at least.

Schedule 11 of the Official Plan identifies an on-road cycling facility along the full length of Powerline road through the future urban area. On-road means within the road right of way, which could take the form of a cycle lane, cycle track, or multi-use path, or a combination thereof. The exact implementation would be subject to future study and detailed design.

2.4.14 Many progressive communities (ROW, Niagara, Hamilton) are choosing to utilize roundabouts extensively. On page 9 of the posted slide presentation you discuss TSM and provide several examples – signal coordination, auxiliary turning lands, turn restrictions. I was very surprised that roundabouts were not highlighted as a major TSM tool. I know you are well aware of the benefits but I think the slide show posted on the city website, a roundabout was only mentioned once as a possibility. In an Oct. 11, 2019 article in the Brantford Expositor, the Transportation Association of Canada indicated that 20 year life cycle cost of a roundabout was \$5.3 million whereas a traditional signalized intersection was 9.3 million. It was mentioned in the Q&A that as a next step you will be putting together costing. For all the benefits of roundabouts, which include improved traffic flow, I think that they should be an important part of the TMP at this time, but from the slide presentation, I really can't say that they are. We don't do TMP's very often and I can't imagine how costing can be put together unless you indicate on your 2041 Preliminary Recommend Plan (slide 37) exactly where roundabouts are an option. As an example, I think that they should be used across the Powerline Rd. from Paris Rd to Wayne Gretzky.

With regard to the implementation of roundabouts as traffic control, the TMP is a strategic network needs assessment. The actual decision related to need for and implementation of traffic control measures is not appropriate at this level. Generally speaking, we agree that roundabouts should and would be considered as TSM measures. The objective of the TMP is to identify the potential strategies and the policies, as well as provide direction to the planning and design process, that would need to be in place to provide the opportunity to implement such TSM measures.

We note that the costs for implementing the network recommendations are strategic benchmark costs. While there is a difference in the capital, construction, and maintenance costs of different measures (i.e. signalization versus roundabouts), more precise costing would be undertaken during subsequent planning and design phases (secondary plan, preliminary design, and detail design phases).

That said, the TMP will be identifying candidate sites for roundabout implementation as part of a strategic assessment based on transportation policy goals and objectives.

2.4.15 If the Oak Park Road extension is constructed, it will be built over a section of the S.C. Johnson Trail, from the Brant Park entrance driveway to the Grand River. Will a temporary trail be constructed adjacent to the new roadway for the duration of the project, allowing people to continue to use the trail, or will the trail simply be cut off and dead ended at each end? Has a traffic count ever been done, counting the number of hikers, runners and cyclists that use this section of the trail?

This detail in the construction and implementation will be undertaken as part of the next level studies, including the Oak Park Road Extension.

2.5 Other

2.5.1 TMP Slide 8: The “Oak Park Road & Highway 403 interchange upgrade” is currently under construction at a cost of \$6.75 million, with completion expected by the end of 2020. One could conclude from this that the City is determined to construct the Oak Park Road Extension regardless of any objections by the citizens of Brantford. Could you please comment?

The upgrades to the Oak Park Road interchange are being conducted as a result of the planned growth in the NW Business Park. This need is independent of the potential future Oak Park Road Extension.

2.5.2 Based on discussions with councillors, the perspectives of residents living in the Ava Road area are being valued over other Brantford residents. Could you comment on this?

The problems, opportunities, and alternatives are being considered in the context of a multi-criteria evaluation and finding the best fit solutions that meet the needs of the entire community and City. No single stakeholder / stakeholder group is being valued above others.

2.5.3 Glad to hear the City is in communication with Brant County, are you speaking with Six Nations and other surrounding communities to help not dump on them a City made problem?

The TMP project team is communication with Six Nations and the County.

2.5.4 Slide 23 How can you say this will affect property values in the county but not consider those 25 plus homes from the Glendale, Kinnard and Kerr Shaver neighbourhood?

No such statement is made in the TMP presentation material.

2.5.5 Where is the money coming from, when the city mayor claiming they may have to increase property taxes and certain services and asking the government for money, which the government is going to be handing out..? Is the city going to use some of this money for this project and waste it on a project going no where ,just to please a few people and make a name for themselves. #2 we the tax payers have a right to oppose such a project which we are not being heard. #3 the cost of the bridge alone will be more then the cost of the road work, and disrupt the wild life etc. #4 It's a big NO to this project disrupting a neighbor hood for a few people who don't live in this area and could care less ,It's not in there back yard and have to contend with all the disruption. and noise. A concerned Oakhill tax payer.

The cost and potential funding for the Recommended Plan will be prepared / identified as part of the project's next steps. Ultimately, the decisions related to the spending of fiscal budgets are made by Council on the recommendation of City departments, and not an outcome of the TMP.

2.5.6 Some of the long term residents of the Glendale Rd and Kinnard Cul de sacs were told that their properties would one day have a two lane roadway running behind their properties. We checked with City Hall a few times over the years to try and stay updated on any news regarding the same. We were told that it likely wouldn't happen in our lifetimes. Now we are seeing in the Parsons report that it may become a four lane elevated roadway overlooking our properties. This will feel like we are living under the Gardiner Expressway in Toronto. We should have never been allowed to build our houses this close to this potential corridor. We feel that this roadway does not belong in the greenbelt space that is behind our homes. There has to be a better solution then building a roadway over top of people's properties. Will we be compensated for reduced property values? Who would ever want to buy our homes? When this goes before the City Council each member should honestly ask themselves that if this was in their backyards would they be in favour of it? My opinion is that no property owner, in any location, would approve this truck route / arterial road abutting their property. It's time to go back to the drawing board and come up with an alternative that doesn't gut one of the nicest green spaces in our beloved City.

These comments have been received and will be forwarded to the Oak Park Road Extension EA project team.