

# Welcome

to this Public  
Information Centre for the **Hagersville  
Master Servicing Plan (MSP)**.

We want to hear from you.

Please fill out the comment sheet provided at today's Public Information Centre and leave it in one of the boxes provided.

Additional information is available on the project website at [www.haldimandcounty.ca](http://www.haldimandcounty.ca)



# HAGERSVILLE MASTER SERVICING PLAN

Public Information Centre

## Problem / Opportunity Statement

The purpose of this Master Servicing Plan Update is to evaluate Hagersville's long-term infrastructure needs to match the growth in Hagersville over the Master Plan Planning Horizon. Four servicing components will be evaluated through this Master Servicing Plan Update:

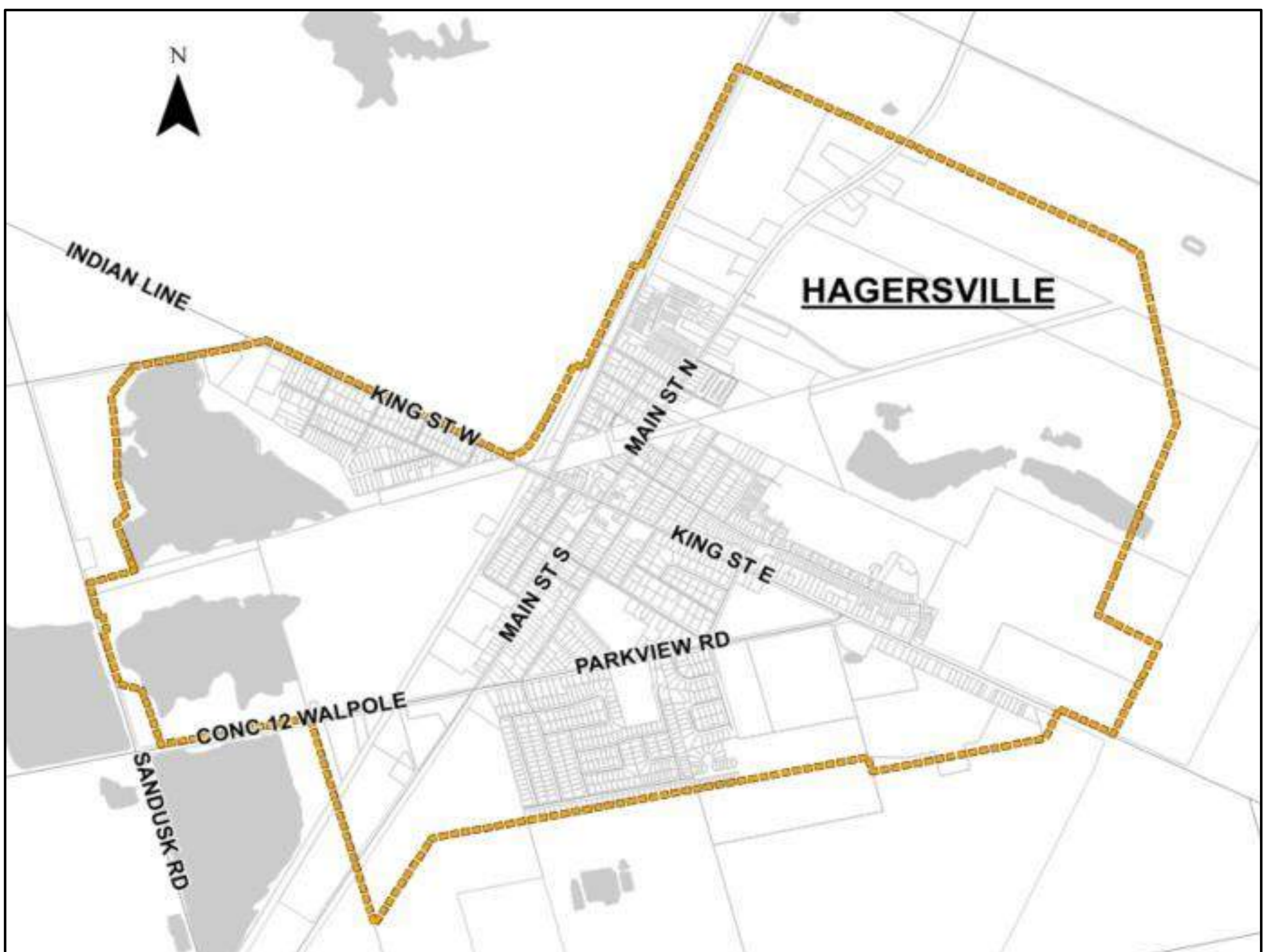
**WATER**

**WASTEWATER**

**STORMWATER**

**TRANSPORTATION**

Through consultation with participating stakeholders and rightsholders, the Municipal Class Environmental Assessment (MCEA) framework will enable the consideration of options and identify preferred infrastructure solutions that are environmentally, socially, and financially responsible and sustainable.

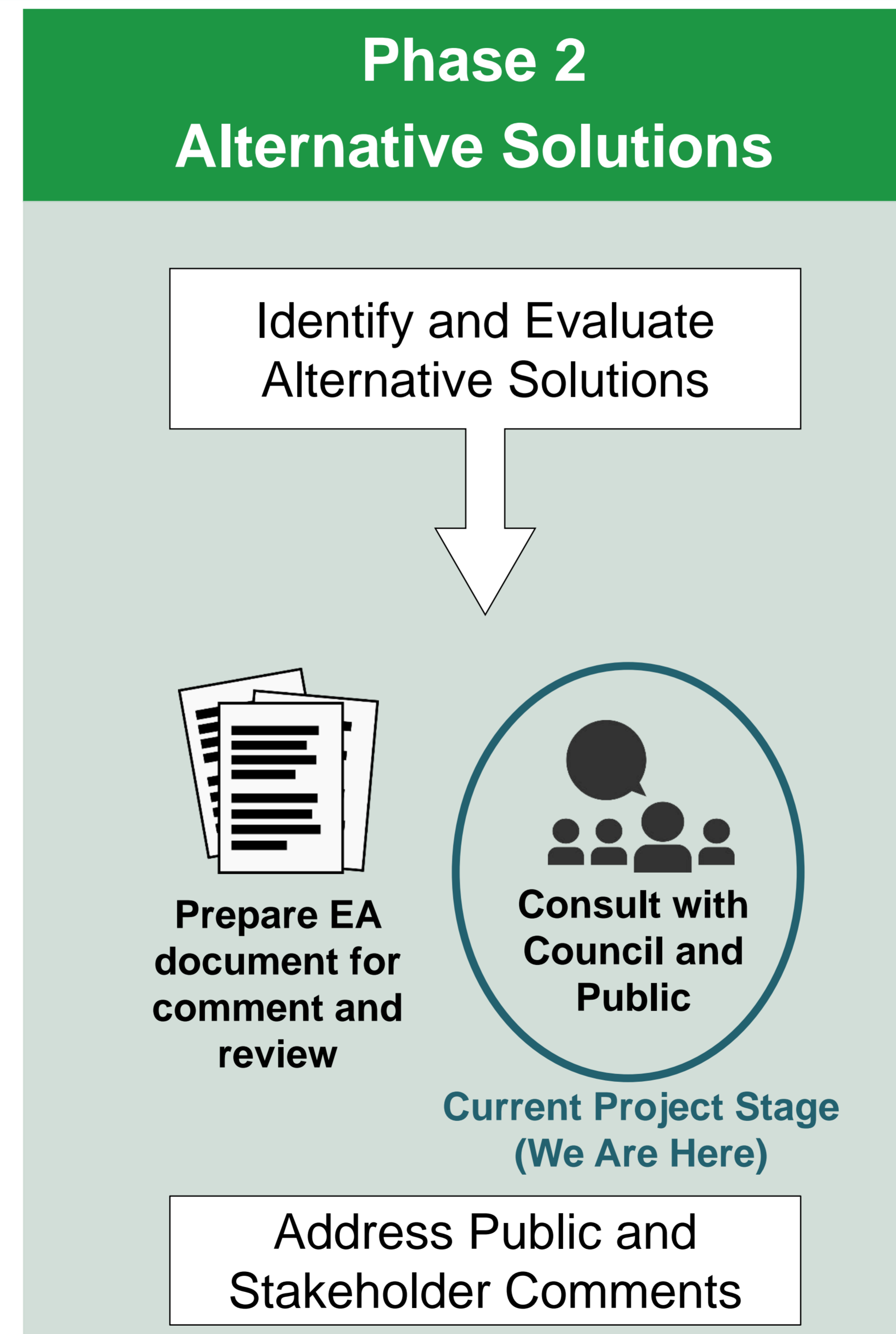
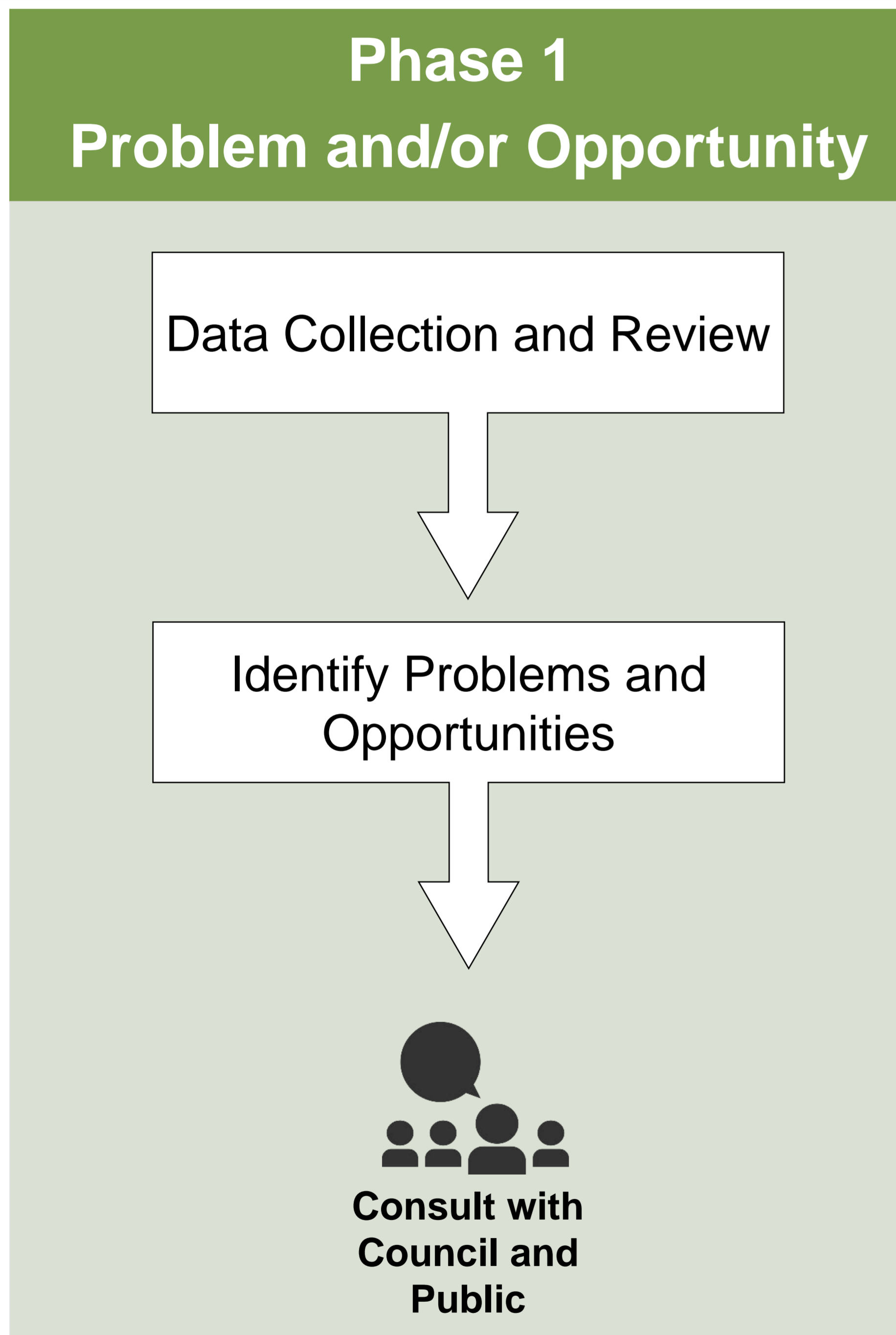




# HAGERSVILLE MASTER SERVICING PLAN

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## Municipal Class Environmental Assessment (MCEA) Process



**Overview**

- Under the Environmental Assessment Act, municipalities must consider potential environmental effects before a potential project begins
- The streamlined MCEA process allows municipalities to consider impacts without having to obtain project specific approval under the Environmental Assessment Act



# HAGERSVILLE MASTER SERVICING PLAN

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## Future Development

Existing and Future Growth in Hagersville:

Existing (2023)

**3,164** units

Future Residential Growth

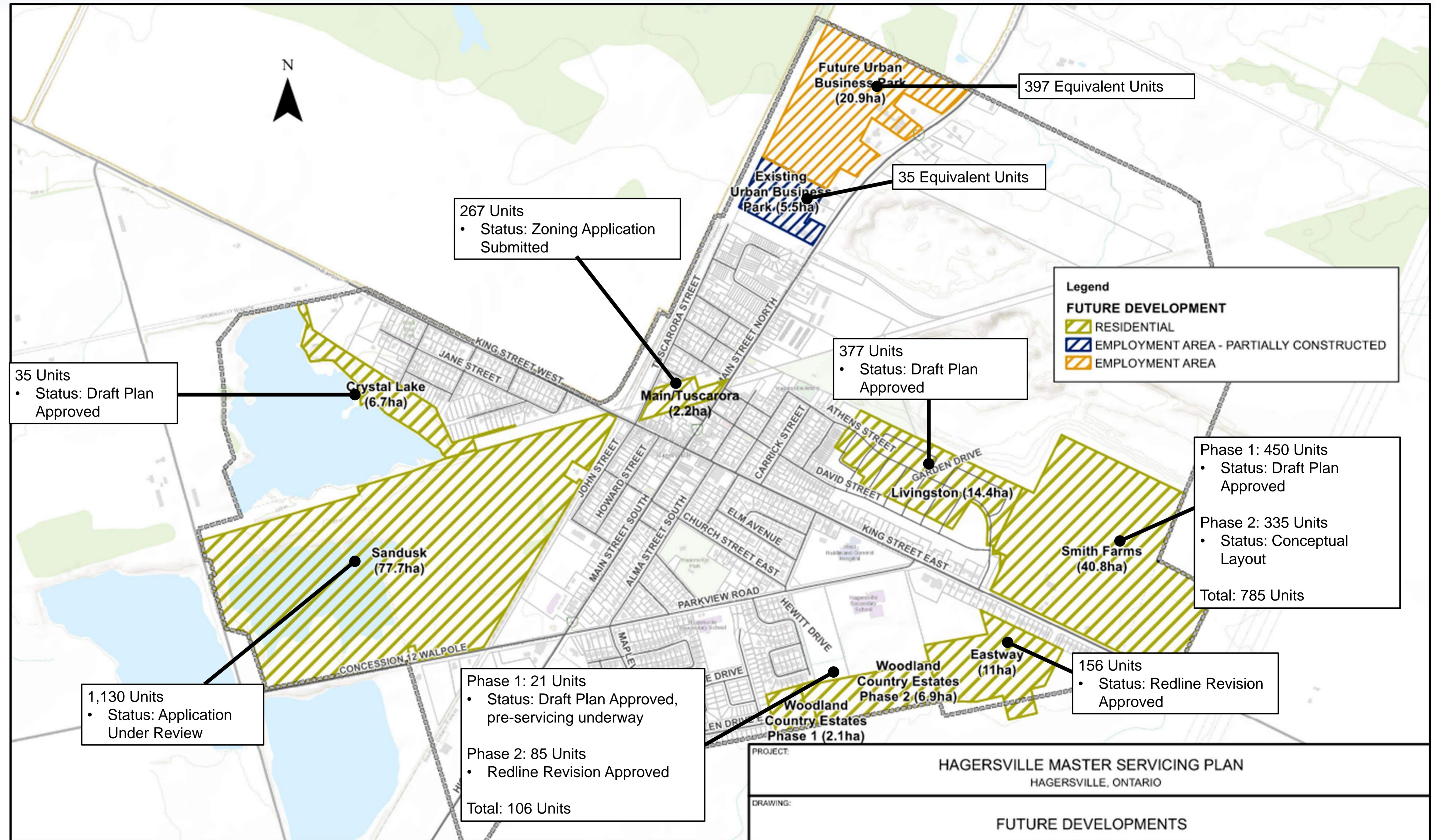
**2,856** units

Future Industrial, Commercial, or Institutional (ICI) Growth

**433** units

Total (Existing + Future)

**6,453** units

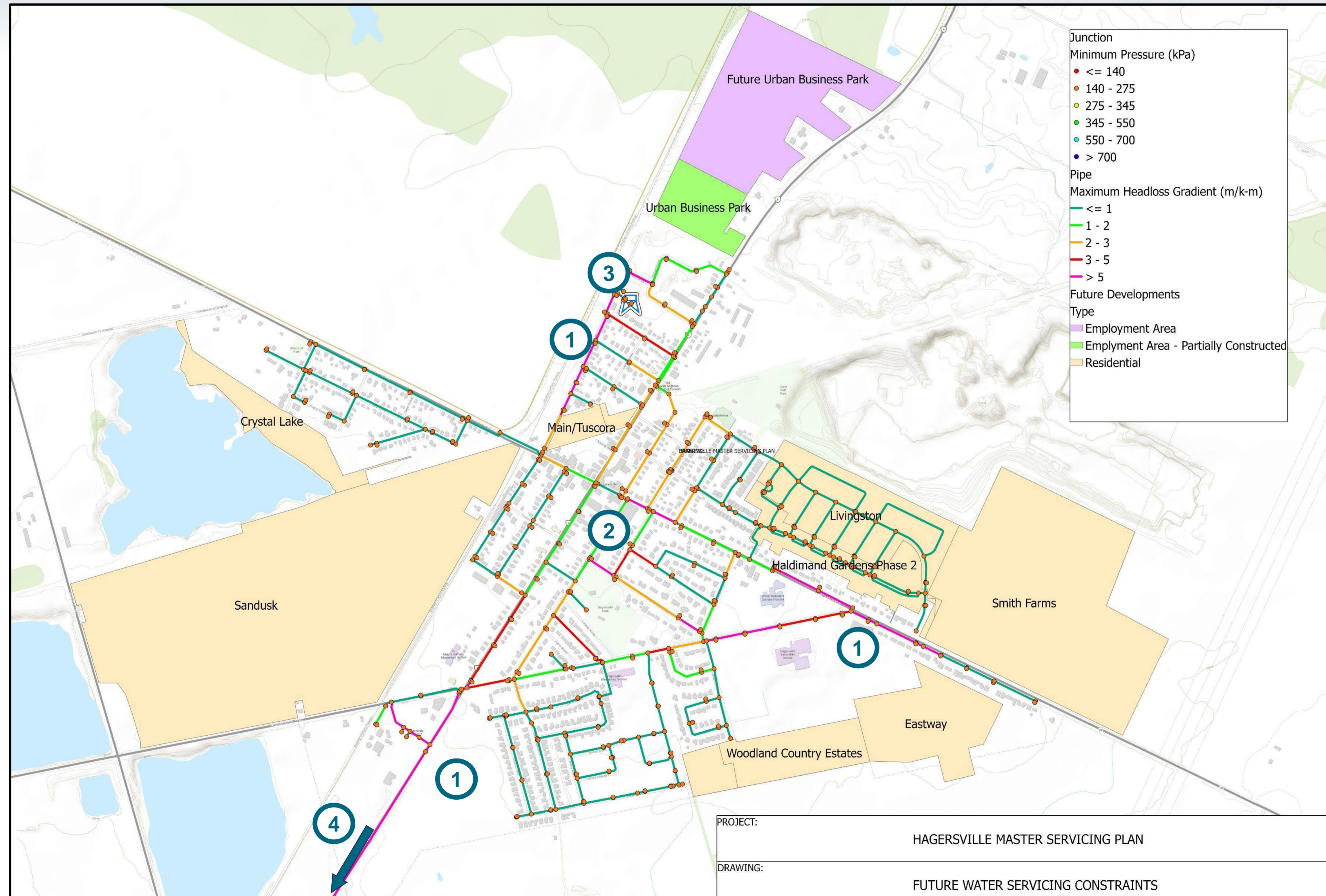




# HAGERSVILLE MASTER SERVICING PLAN

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## Future Water Servicing Issues and Constraints



**1** System constraints result in **high headlosses** greater than 2 m/km in watermains throughout the distribution system. Areas of particular concern are as follows:

- Highway 6
- King St E
- Tuscarora St
- Parkview Rd

**2** High headlosses throughout the system cause a **drop in pressure** as water is carried throughout Hagersville. **Minimum pressures** below the preferred range of 275 kPa are observed.

**3** The Hagersville Standpipe will be at a **storage deficit** under future demands. Additional water storage will be evaluated.

**4** Existing and future water demands are within the rated capacity of the Hagersville Booster Pumping Station, should sufficient storage be provided.




# HAGERSVILLE MASTER SERVICING PLAN


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### Evaluation of Water Servicing Alternatives

#### ALTERNATIVE 1

Do Nothing


 This alternative does not address the identified water storage deficit and distribution capacity issues

 If this alternative is chosen, future growth and storage requirements won't be sufficient for future conditions


#### ALTERNATIVE 2


New Standalone 4.5 ML Elevated Tank

 New ET provides significant floating storage in Hagersville

 No upgrades required at the Hagersville BPS

 Decommission standpipe before end-of-life cycle.


 More challenging to construct than other alternatives.


 Does not provision for future servicing extensions that include First Nations and Caledonia.


**Capital Costs: ~\$26M**  
*Significant impact to existing rate payers*

#### ALTERNATIVE 3

New Additional 1.5 ML Reservoir at Hagersville BPS

 Improvement of system security with new in-ground reservoir storage in addition to standpipe


 Hagersville BPS upgrades required to increase pump sizing


 Does not provision for future servicing extensions that include First Nations and Caledonia.


**Capital Costs: ~\$24M**  
*Little to no impact to existing rate payers*

#### ALTERNATIVE 4

New Additional 1.5 ML Reservoir and BPS at South End of Hagersville

 Greater improvement of system security by placing storage closer to Hagersville with the addition of an in-ground reservoir at the Hagersville BPS

 Infrastructure on greenfield sites is typically less challenging to design and construct.

 Can accommodate for future servicing extensions that include First Nations and Caledonia.

 Decommission Hagersville BPS before end-of-life cycle

**Capital Costs: ~\$24M**  
*Little to no impact to existing rate payers*

Additional minor project upgrades are also recommended to further improve distribution system results such as fire flow supply. These improvements include replacement of existing cast iron watermains within the distribution system located in the area surrounding King St East. These upgrades can be staged and grouped with the upgrades recommended for the future servicing alternatives.

Definitions:

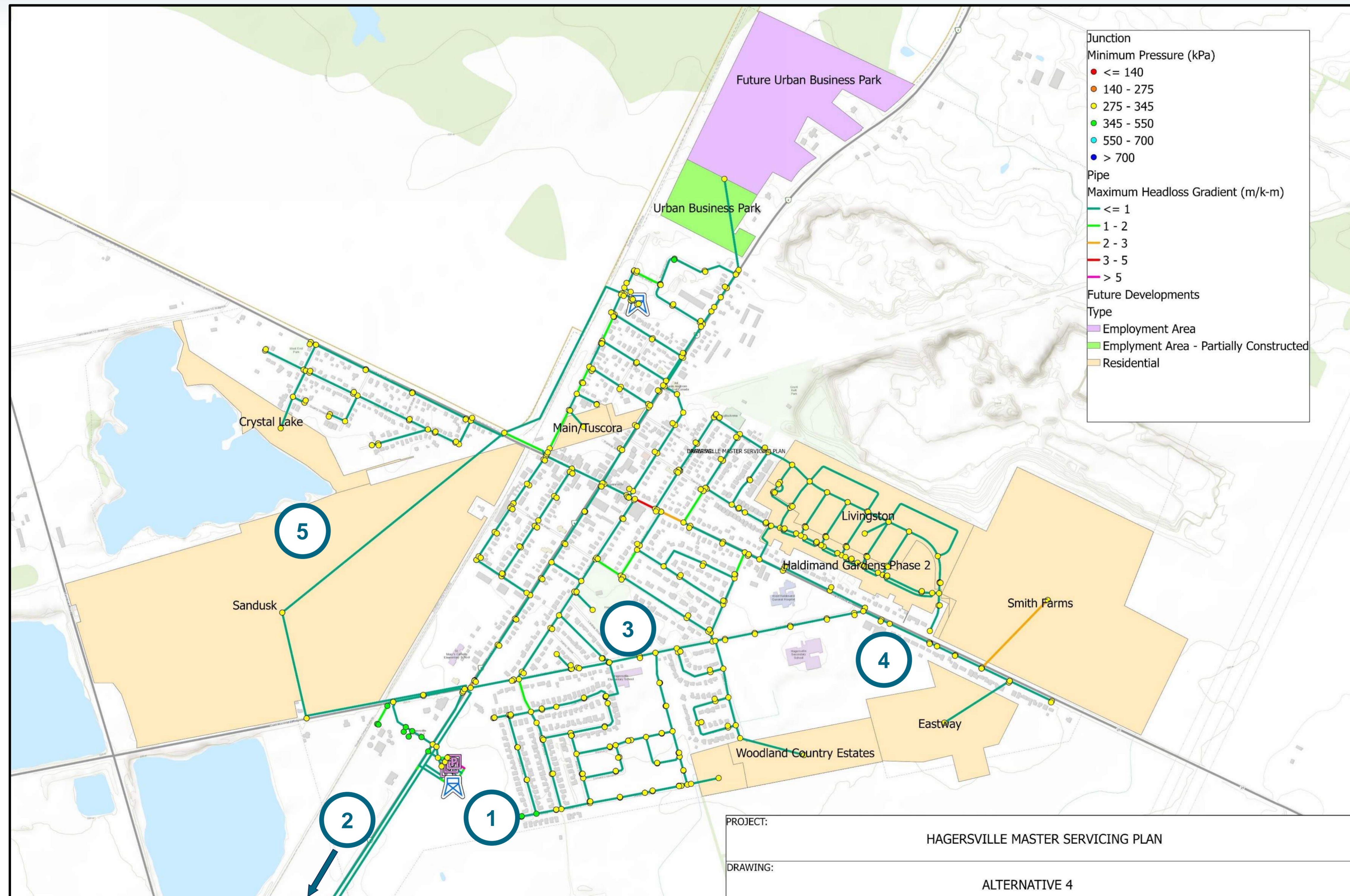
1. BPS: Booster Pump Station
2. ET: Elevated Tank
3. ML: Mega Liters
4. EA: Environmental Assessment



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## Recommended Water Servicing Alternative



### Alternative #4

- 1 New 1.5ML Reservoir and BPS at South End of Hagersville. Decommission existing BPS on Highway 6. **Construction of a dedicated in-line BPS to supply White Oaks community.**
- 2 New 450mm twinned transmission on **Highway 6** connecting to new in-ground reservoir.
- 3 New 300mm watermain replacement on **Parkview Road** from Highway 6 to King St East.
- 4 New 300mm watermain replacement on **King St East** from Parkview Rd to Smith Farms development.
- 5 New 450mm watermain through **Sandusk development**. This loop provides connectivity from Highway 6 to the existing Standpipe.





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## Recommended Water Servicing Alternative

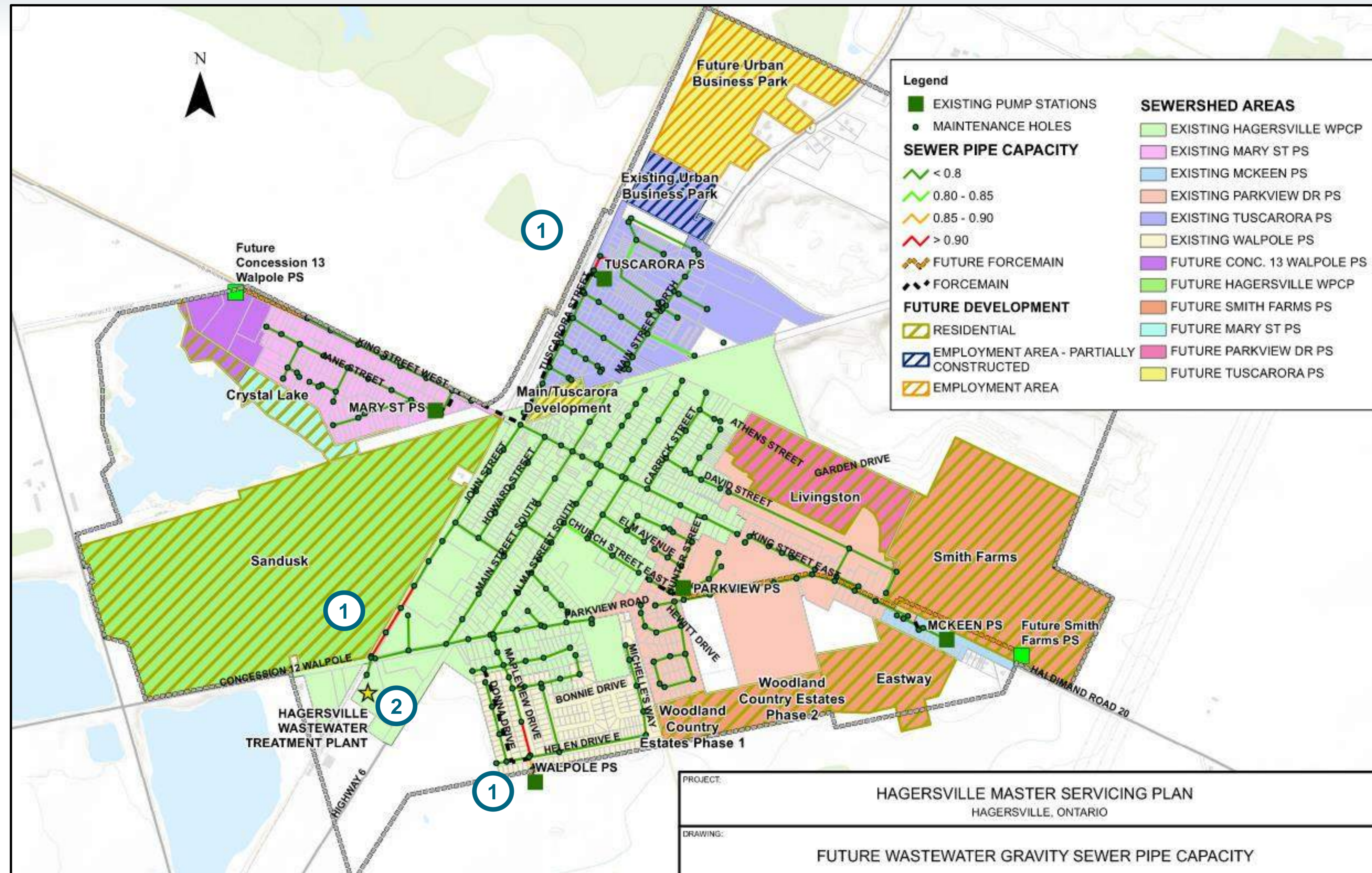
MSP System Component	Description	Cost Estimate
<b>Watermains</b>		
WM-1	New Twinned 450mm Transmission WM along Highway 6	\$9,500,000
WM-2	New 450mm Watermain through Sandusk Development to Existing Standpipe	\$3,900,000
WM-3	New 300mm Watermain Replacement along Parkview Road	\$1,700,000
WM-4	New 300mm Watermain Replacement along King St East	\$600,000
<b>Reservoir and BPS</b>		
W-PS-1	New 1.5ML Reservoir and BPS	\$7,500,000
W-PS-2	Decommission Existing BPS	\$500,000
W-S-1	Environmental Assessment for New Reservoir and BPS	\$300,000
Total Water Cost		<b>\$24,000,000</b>



# HAGERSVILLE MASTER SERVICING PLAN

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## Future Wastewater Servicing Issues and Constraints



**1** Capacity constraints are anticipated under future development conditions for gravity sewers in the following areas:

- Near Tuscarora PS and the Future Urban Business Park
- Near Walpole PS
- Near the future Sandusk development

**2** The WWTP has a rated capacity of 4,200 m<sup>3</sup>/day. Future average day wastewater flows will be approximately 4,900 m<sup>3</sup>/day, therefore **the WWTP has insufficient capacity under future conditions.** It is also anticipated that Hagersville will continue to experience high levels of inflow and infiltration if these issues are not addressed. High inflow and infiltration can impact WWTP performance, causing bypass events and/or high levels of Total Suspended Solids in the wastewater.





# HAGERSVILLE MASTER SERVICING PLAN

## Public Information Centre

### Evaluation of Wastewater Treatment Plant Alternatives






#### ALTERNATIVE 1

Do Nothing

-  This alternative does not address the identified wastewater treatment capacity issues
-  If this alternative is chosen, the WWTP will be unable to treat increased flows from future growth and development in Hagersville will be limited

#### ALTERNATIVE 2

Increase Capacity at the Existing WWTP with Land Acquisition

-  Effective use of existing infrastructure
-  Less potential impacts to archaeology, cultural heritage, and natural environment, as development will primarily be on previously disturbed lands at the existing site
-  Limited space on site to support long term (75+ years) of treatment plant expansions
-  Construction of expansion may be technically challenging
-  Effluent is discharged to an environmentally sensitive receiver

**Capital Costs: ~\$10M**

*Little to no impact to existing rate payers*

#### ALTERNATIVE 3

Build New WWTP at a New Site






-  Infrastructure on greenfield sites is typically less challenging to design and construct
-  The capacity of the new WWTP could be expanded in phases
-  Available space on the site for future expansions beyond the current planning horizon
-  Does not utilize existing treatment infrastructure
-  Potential impacts to archaeology, cultural heritage, and natural environmental features
-  Effluent is discharged to an environmentally sensitive receiver

**Capital Costs: ~\$60M**

*Some impact to existing rate payers*

#### ALTERNATIVE 4

Connect All Hagersville Flows to Nanticoke WWTP






-  Aligns with Highway 6 Corridor servicing strategy that provides for long term wastewater servicing
-  Effluent is not discharged to an environmentally sensitive receiver
-  Potential impacts to archaeology, cultural heritage, and environmental features between Hagersville and Nanticoke
-  Construction of conveyance infrastructure may be disruptive and technically challenging
-  Uncertainty surrounding potential of Nanticoke WWTP construction

**Capital Costs: ~\$50M**

*Significant impact to existing rate payers*

#### ALTERNATIVE 5

Connect Parkview PS Flows to Nanticoke WWTP

-  Partially aligns with Highway 6 Corridor servicing strategy that provides for long term wastewater servicing.
-  Effluent is not discharged to an environmentally sensitive receiver
-  Potential impacts to archaeology, cultural heritage, and environmental features between Hagersville and Nanticoke
-  Construction of conveyance infrastructure may be disruptive and technically challenging
-  Uncertainty surrounding potential of Nanticoke WWTP construction

**Capital Costs: ~\$38M**

*Some impact to existing rate payers*

Further evaluation of the wastewater treatment alternatives is required through a **Schedule C Class Environmental Assessment** to select the preferred alternative. Key considerations include:

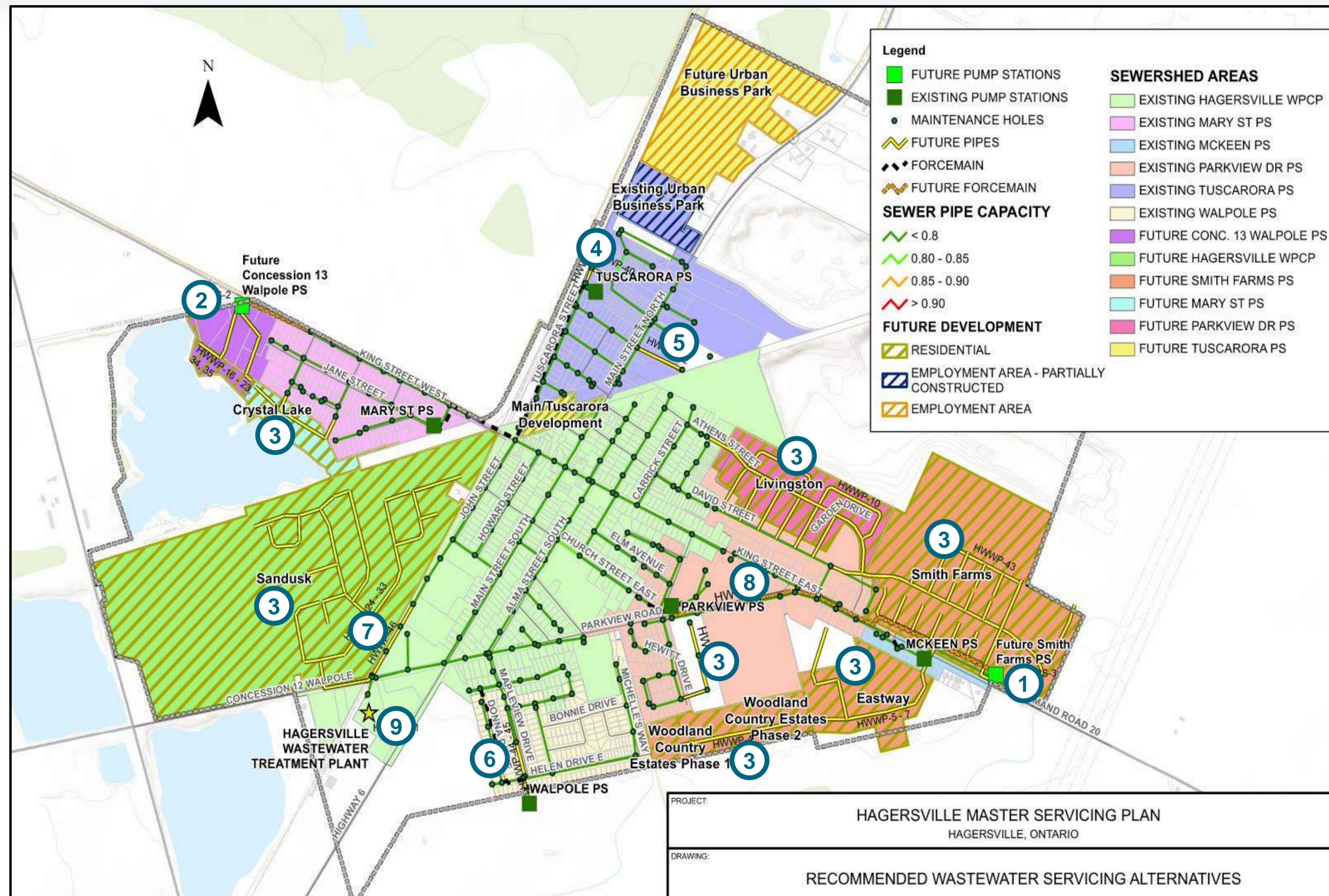
- Timing and magnitude of major lifecycle upgrades of the existing WWTP, and timing of the potential Nanticoke WWTP
- Confirmation of effluent objectives and limits to be met by a new or expanded WWTP
- Review of available technologies
- Revised consideration of capital and lifecycle costs based on the above analyses



# HAGERSVILLE MASTER SERVICING PLAN

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## Recommended Wastewater Servicing Alternatives



- ① New Smith Farms PS
- ② New Concession 13 Walpole PS
- ③ New Sanitary Sewer Networks for:
  - 3.1: Woodland Country Estates
  - 3.2: Eastway
  - 3.3: Livingston
  - 3.4: Crystal Lake
  - 3.5: Sandusk
  - 3.6: Smith Farms
  - 3.7: East of Hewitt Drive
- ④ Pipe Upgrades on Emily Street and Tuscarora Street
- ⑤ Pipe Upgrades on Oneida Street
- ⑥ Pipe Upgrades and slope revisions on Mapleview Drive, upstream of the Walpole PS
- ⑦ Slope revisions for sewer along CN Railway roadway corridor
- ⑧ Slope revision for sewer section on Parkview adjacent to Hagersville secondary school
- ⑨ Schedule C Class EA for New or Expanded WWTP; Construction of a New or Expanded Wastewater Treatment Plant





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## Recommended Wastewater Servicing Alternatives Summary

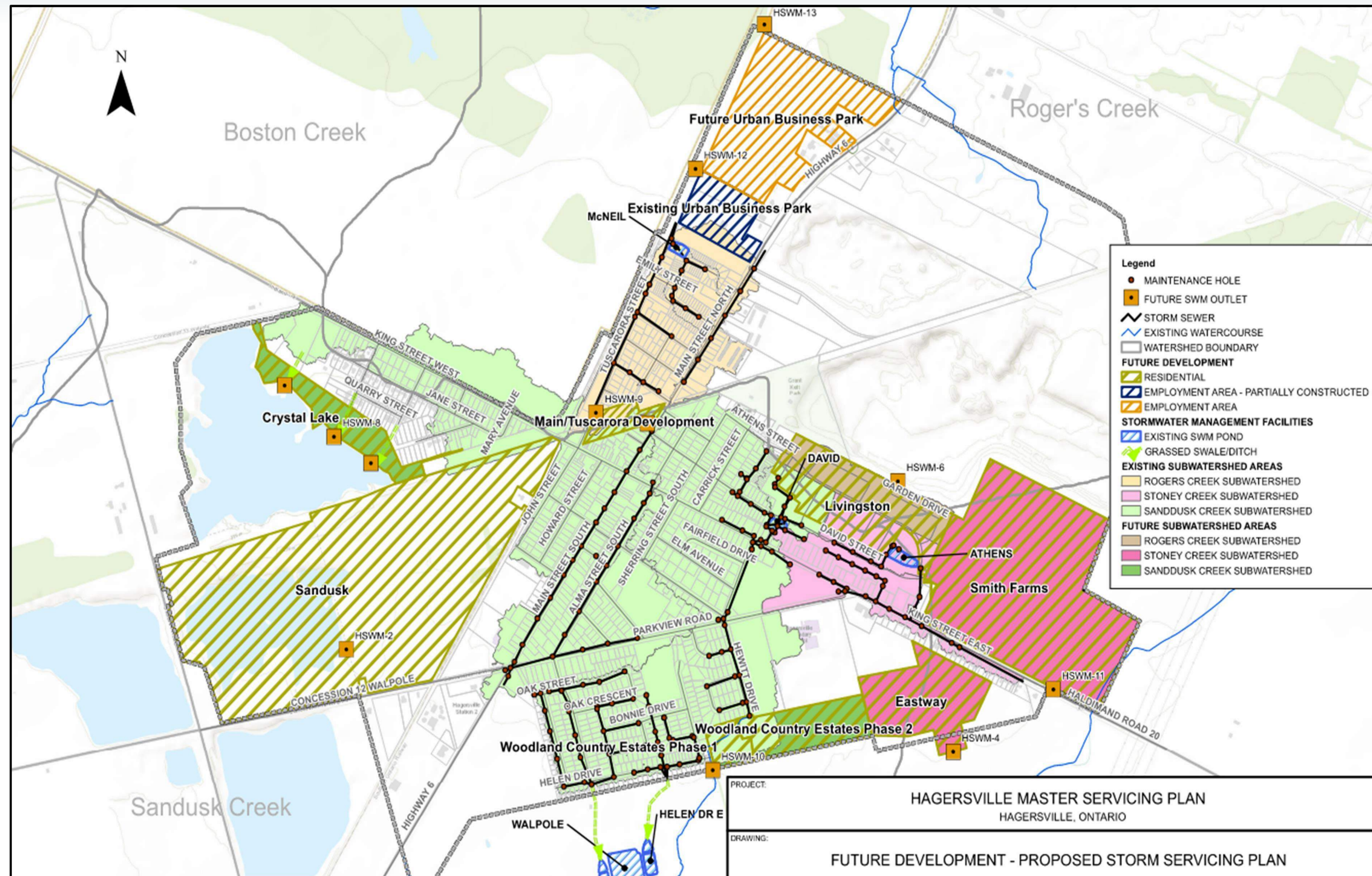
MSP System Component	Description	Cost Estimate
<b>Pumping (Pumping Stations) and Forcemains</b>		
Upgrade 1	Future Concession Road 13 Walpole PS and Forcemain	Funded By Developers
Upgrade 2	Future Smith Farms PS and Forcemain	Funded By Developers
<b>Sanitary Mains</b>		
Upgrade 3	New Pipe Networks for Future Developments	Funded By Developers
Upgrade 4	Pipe Upgrade: Emily Street and Tuscarora Street	\$165,000
Upgrade 5	Pipe Upgrade: Oneida Street (east of Main Street North)	\$260,000
Upgrade 6	Pipe Upgrade and Slope Revision: Maplevue Drive upstream of Walpole PS wet well	\$295,000
Upgrade 7	Pipe Upgrade – Slope Revision: CN railway corridor /Concession 12 Walpole.	\$530,000
Upgrade 8	Pipe Upgrade – Slope Revision: Parkview Drive / Hagersville Secondary School	\$290,000
<b>Wastewater Treatment</b>		
Upgrade 9	Schedule C Class EA for New or Expanded Wastewater Treatment Plant	\$400,000
	New or Expanded Wastewater Treatment Plant (Costs Depend on Preferred Alternative)	\$10,000,000 - \$60,000,000
Total Wastewater Cost		<b>\$11,940,000 - \$61,940,000</b>



# HAGERSVILLE MASTER SERVICING PLAN

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## Future Stormwater Servicing Issues and Constraints



1

All future development in Hagersville is **required to control post-development stormwater flows to existing stormwater flow rates** and satisfy required water quality criteria established by the Ministry of the Environment, Conservation, and Parks (MECP).

2

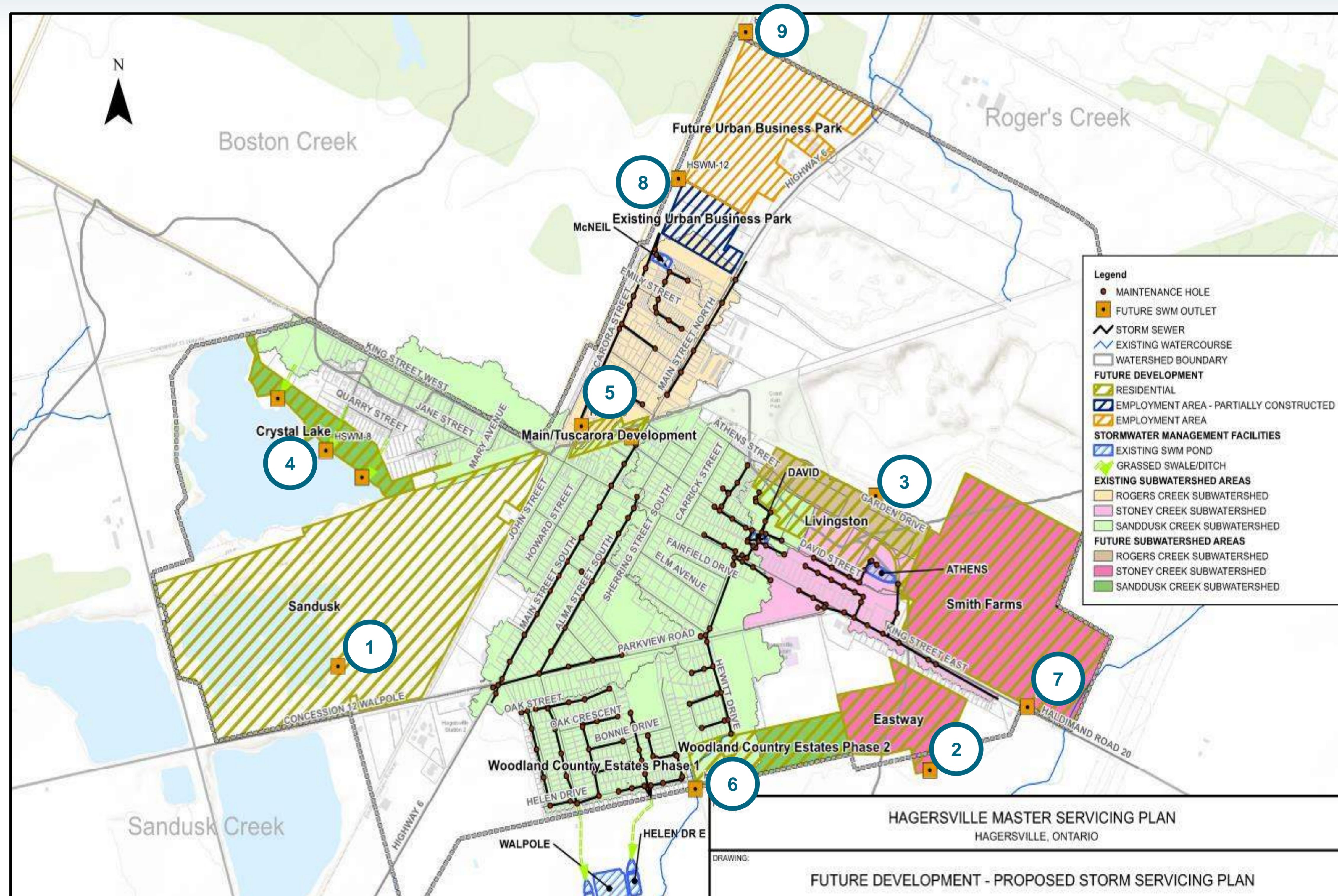
Future developments will need to adhere to all **stormwater management requirements** set by the MECP at the time of approval. The figure to the left shows a proposed storm servicing plan to satisfy these stormwater management requirements



# HAGERSVILLE MASTER SERVICING PLAN

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## Recommended Stormwater Servicing Alternatives



### Stormwater Management Measures for Future Developments:

- Stormwater servicing for future developments must be in compliance with the County's CLI ECA
- Proposed developments must address the following:
  - Water Balance
  - Water Quality
  - Erosion Control
  - Water Quantity
  - Flood Control
  - Construction Erosion and Sediment Control
- Stormwater Management will be required for all future developments:

- |                              |                                |
|------------------------------|--------------------------------|
| 1 Sandusk                    | 6 Woodland Country Estates     |
| 2 Eastway                    | 7 Smith Farms                  |
| 3 Livingston                 | 8 Existing Urban Business Park |
| 4 Crystal Lake               | 9 Future Urban Business Park   |
| 5 Main/Tuscarora Development |                                |





# HAGERSVILLE MASTER SERVICING PLAN

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## Recommended Stormwater Servicing Alternatives Summary

MSP System Component	Description	Cost Estimate
<b>Stormwater Management</b>		
Upgrades 1 through 9	Stormwater management for future developments (Sandusk, Eastway, Livingston, Crystal Lake, Main/Tuscarora, Woodland Country Estates, Smith Farms, and the Existing and Future Urban Business Parks)	Due to the wide range of site-specific constraints and development design solutions to address the CLI ECA requirements, costs are unable to be estimated for stormwater management on a development basis.

**Stormwater Main Upgrades:** Some sections of pipe were identified as having limited capacity under the 2- and 5-year storm, however no surface flooding was experienced, and no significant issues were identified.

Additionally, stormwater main upgrades may be difficult to construct due to:

- Pipes having insufficient cover once they are re-sloped due to Hagersville’s shallow system
- Longer sections requiring upgrades to accommodate shallow system

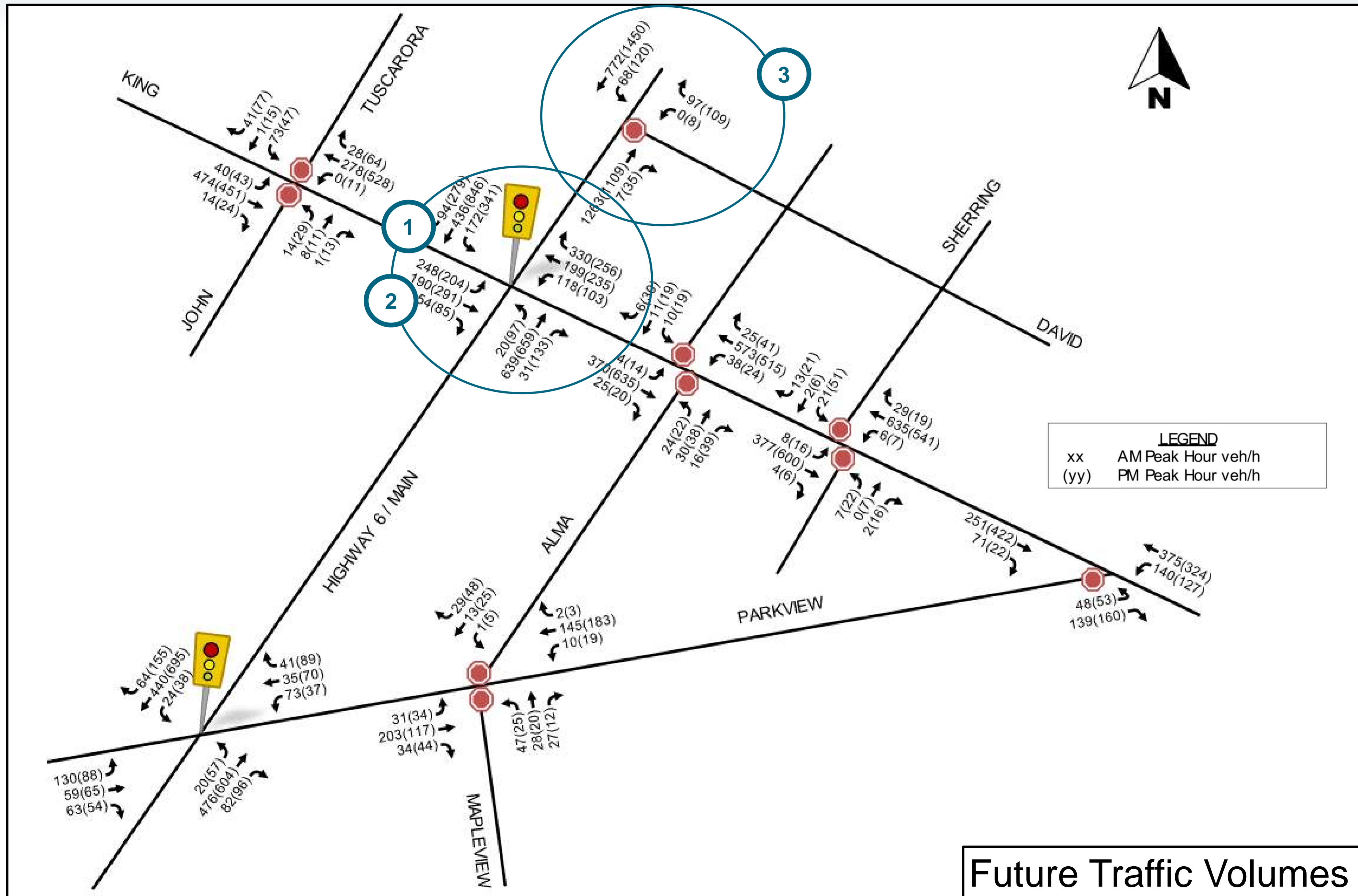
Because of this, no storm mains have been identified for upgrades. Upgrades could be completed if there is an identified flooding issue or if other capital works projects involving excavation are being considered for identified areas.



# HAGERSVILLE MASTER SERVICING PLAN

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## Future Transportation Servicing Issues and Constraints



**1** Under future development conditions, the **Highway 6-Main St/King St intersection experiences high traffic volumes** and is projected to operate near or over capacity during the afternoon peak hour.

**2** Under future development conditions, the northbound left-turn and southbound left-turn movements at the **Highway 6-Main St/King St intersection is projected to exceed available storage capacity** during the afternoon peak hour.

**3** Under future development conditions, the **Highway 6-Main St/David St intersection experiences high traffic volumes** and is projected to operate near or over capacity during the morning and afternoon peak hour.

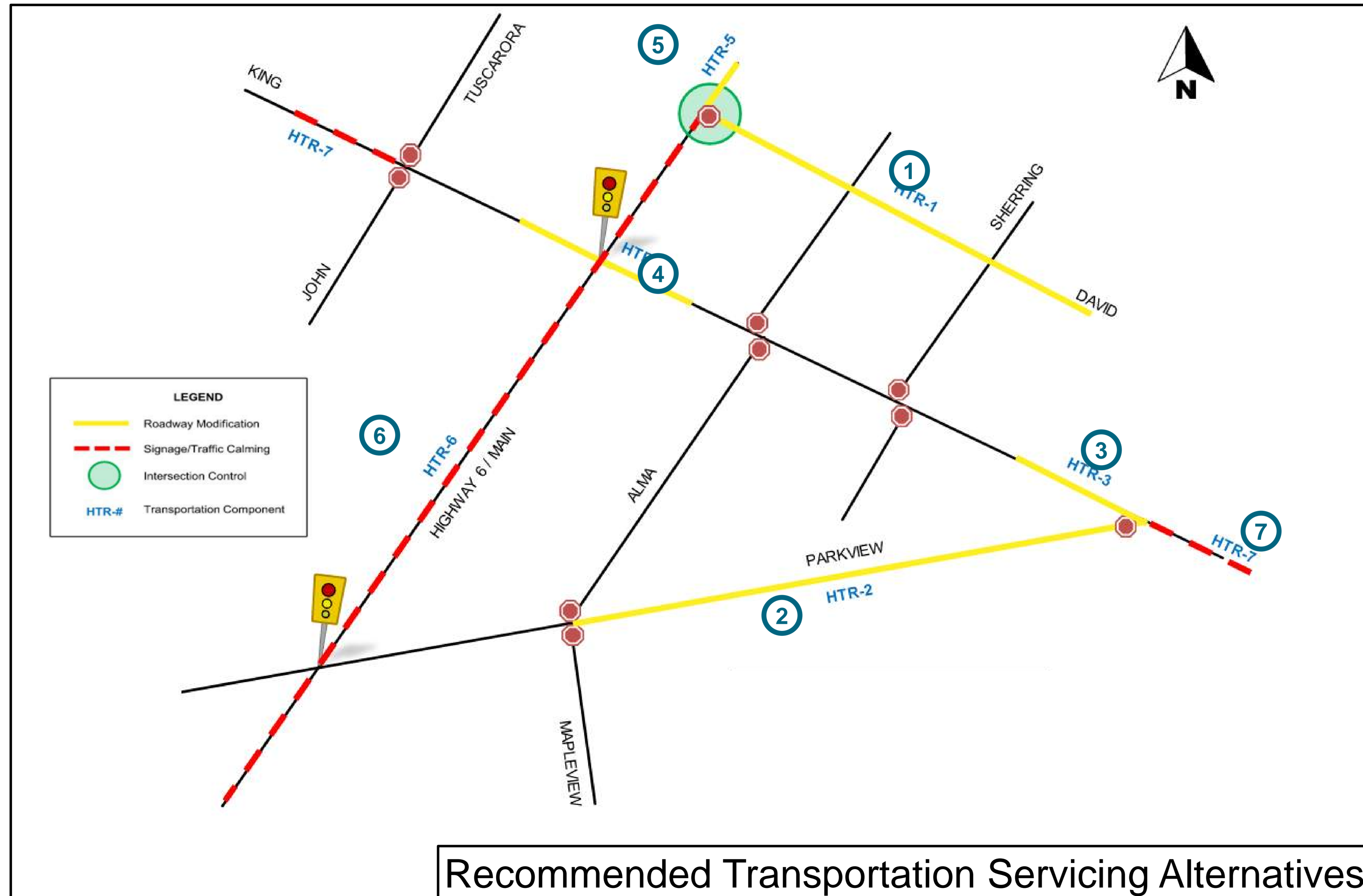
Intersection capacity is assessed based on the Ontario Ministry of Transportation (MTO)'s *General Guidelines for the Preparation of Traffic Studies* to determine if intersections are operating acceptably.



# HAGERSVILLE MASTER SERVICING PLAN

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## Recommended Transportation Servicing Alternatives



- ① **Upgrade David Street (between Main and Cedar) from a local roadway to a two-lane Collector** (planning change; no physical changes made to roadway)
- ② **Upgrade Parkview Road (within urban boundary) to Arterial** (add sidewalk, both sides)
- ③ **Upgrade King Street (within urban boundary) to Arterial** (add sidewalk, both sides)
- ④ **Main/King Intersection Improvement:** Update Pavement Markings to Provide Auxiliary East-bound and West-bound Left-turn Lanes
- ⑤ **Main/David Intersection Improvement:** Signalization, Provide Auxiliary South-bound and Left-turn Lane
- ⑥ **Main/Highway 6 Improvement:** Traffic Calming Measures (County Wide Survey for Traffic Calming Planned for 2024)
- ⑦ **King Street Truck Route Improvement:** Provide Additional Signage; Traffic Calming Measures





# HAGERSVILLE MASTER SERVICING PLAN

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## Recommended Transportation Servicing Alternatives

MSP System Component	Description	Cost Estimate
<b>Transportation Component</b>		
Upgrade 1	Upgrade David Street (Main to Cedar) to two-lane collector (planning change; no physical changes made to roadway)	\$0
Upgrade 2	Upgrade Parkview Road (within urban boundary) to arterial (add sidewalk, both sides)	\$330,000
Upgrade 3	Upgrade King Street (within urban boundary) to arterial (add sidewalk, both sides)	\$200,000
Upgrade 4	Main / King Intersection Improvement: Update pavement markings to provide auxiliary eastbound and westbound left-turn lanes	\$15,000
Upgrade 5	Main / David Intersection Improvement: Signalization, provide auxiliary southbound left-turn lane	\$380,000
Upgrade 6	Main Street / Highway 6 Improvement: Traffic calming measures (County-wide survey for traffic calming planned for 2024)	TBD (Traffic Calming Survey Planned for 2024)
Upgrade 7	King Street Truck Route Improvement: Provide additional signage to make truck route clearer and traffic calming measures	\$50,000
<b>Total Transportation Cost</b>		<b>\$975,000</b>





### Impacts of Climate Change

- **Higher precipitation** from extreme weather
  - Increased **Inflow and Infiltration**, impacting sanitary system and treatment plant performance
  - **Higher flows and runoff**, impacting stormwater system performance
  - **Higher nutrient loading and algal blooms**, impacting drinking water treatment performance
  - **Flooding** of infrastructure
- **Water level fluctuations** in lakes and groundwater table impacting water supply
- **Evaporation** due to extreme heat
- **Energy usage** during extreme weather



### Mitigation and Adaptation

- Once proposed infrastructure alternatives are identified (Phase 2 of the MCEA), climate change mitigation and adaptation measures will be identified and assessed
- **Potential Mitigation and Adaptation Measures:**
  - Working with Conservation Authority, Provincial, and Federal **climate change adaptation initiatives**
  - **Renewable energy generation** and backup power
  - Building **resilient infrastructure**
  - Consideration of **future climate** conditions during the design of infrastructure



# HAGERSVILLE MASTER SERVICING PLAN

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### Cumulative Effects and Potential Impacts to Treaty Rights

Haldimand County is home to many Indigenous peoples, including the Six Nations of the Grand River and the Mississaugas of the Credit First Nation. The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), and Canada’s commitment to implement these rights under the UNDRIP Act (UNDRIPA), was used as reference to determine the potential impacts of this Master Servicing Plan to the rights of Indigenous People within the project study area:

#### Rights Relating to Culture, Traditions, Customs, and Spirituality:

UNDRIP Act Article	Impact Considerations	Impact Mitigation
<ul style="list-style-type: none"> <li>Articles 11.1, 12.1, 15.1, 24.1, 25, 31.1</li> </ul>	<ul style="list-style-type: none"> <li>Several areas within the project study area have been identified as having the potential for archaeological and cultural heritage significance.</li> <li>Natural features of traditional significance (e.g., hardwood trees, medicinal plants, animals) may be present on proposed project sites.</li> </ul>	<ul style="list-style-type: none"> <li>Once preferred project sites are known, a walk-through could be conducted with the affected Indigenous community for further investigation to determine specific concerns and mitigation measures.</li> <li>Knowledge learned from these site walk-throughs could be incorporated into the project.</li> </ul>

#### Rights Relating to Decision Making and Participation in Projects:

UNDRIP Act Article	Impact Considerations	Impact Mitigation
<ul style="list-style-type: none"> <li>Articles 13.2, 18</li> </ul>	<ul style="list-style-type: none"> <li>Indigenous peoples have the right to participate in decision-making for matters that affect their rights.</li> <li>Several types of project information are used to inform interested persons of the project; there may be interested persons who are unable to understand provided information and unable to participate in the project.</li> </ul>	<ul style="list-style-type: none"> <li>By following the MCEA process, the study will meet the intention of meaningful consultation with Indigenous communities, including ensuring all provided project information can be understood by Indigenous peoples.</li> <li>Indigenous peoples can participate in the evaluation and decision-making process of the MCEA by providing comments and concerns on proposed projects.</li> </ul>

#### Rights Relating to Development and Economic & Social Conditions:

UNDRIP Act Article	Impact Considerations	Impact Mitigation
<ul style="list-style-type: none"> <li>Articles 21.1, 21.2, 23</li> </ul>	<ul style="list-style-type: none"> <li>Indigenous peoples living in Hagersville have the right to improvement of their municipal services without discrimination.</li> </ul>	<ul style="list-style-type: none"> <li>By following the MCEA process, areas of Hagersville requiring municipal service improvement will be identified without discrimination against Indigenous communities.</li> <li>Appropriate provincial guidelines will be followed for preferred projects so that members of Indigenous communities will be protected from municipal services in poor condition.</li> </ul>

#### Rights Relating to the Environment and Conservation:

UNDRIP Act Article	Impact Considerations	Impact Mitigation
<ul style="list-style-type: none"> <li>Articles 29.1, 29.2</li> </ul>	<ul style="list-style-type: none"> <li>Development of municipal services will be proposed as part of this MSP, which may have environmental impacts.</li> </ul>	<ul style="list-style-type: none"> <li>By following the MCEA process, potential projects will undergo an evaluation process that considers the protection and conservation of the environment.</li> <li>Through meaningful consultation, particular areas or conditions of concerns held by Indigenous communities can be discussed and incorporated into the project.</li> </ul>





# HAGERSVILLE MASTER SERVICING PLAN

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**Get Involved**

## How Do I Get More Information?

- Complete the sign-in form to join the study mailing list
- Check the website ([www.haldimandcounty.ca](http://www.haldimandcounty.ca)) for study updates
- If you have questions regarding the study, or have any accessibility requirements in order to participate in this project, please contact one of the individuals below at any time:

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