

# *Growing Where We Invest*

*Region of Peel Growth Management Workshop*

## **Developing a Regional Growth Management Strategy to 2041**

**Arvin Prasad**

**Director, Integrated Planning, Region of Peel**

**May 30, 2013**



# Outline

- 2013 ROP Review
- Learning from the Past
  - Post WW II Infrastructure
  - Suburban Growth
  - A Shift in Planning Practice
- Provincial Population and Employment Forecasts
- Growing Where Services Exist
- Next Steps

# 2013 Regional Official Plan Review

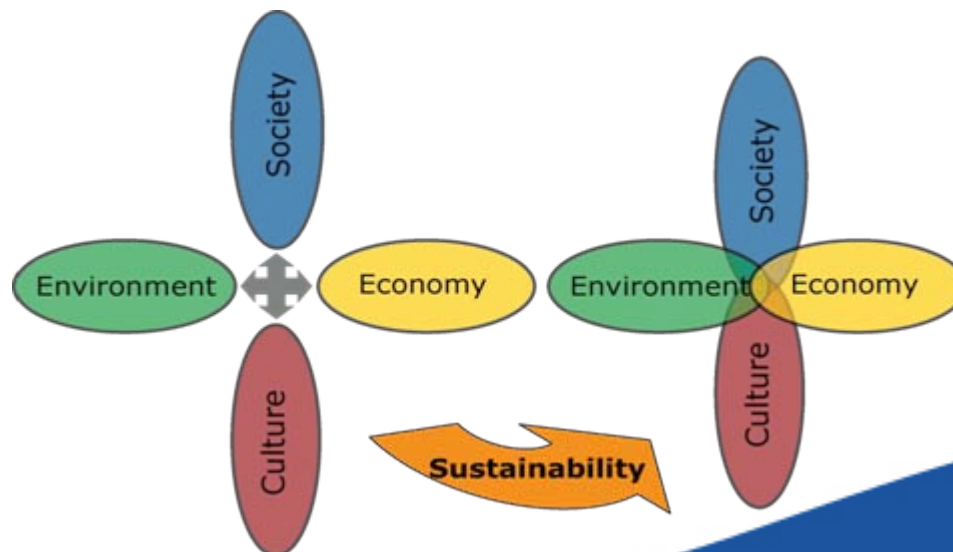
- What is the ROP?
  - Guides growth and development
  - Protects the environment while managing resources
  - Provides input to the planning and implementation of Regional services
- Provincial policy direction
  - New Provincial Policy Statement expected in 2013
  - New forecasts for the Growth Plan expected in 2013
  - Second suites in the *Planning Act*
  - *Clean Water Act*, 2006
- Growth Management will be a component

# Policy Planning Framework

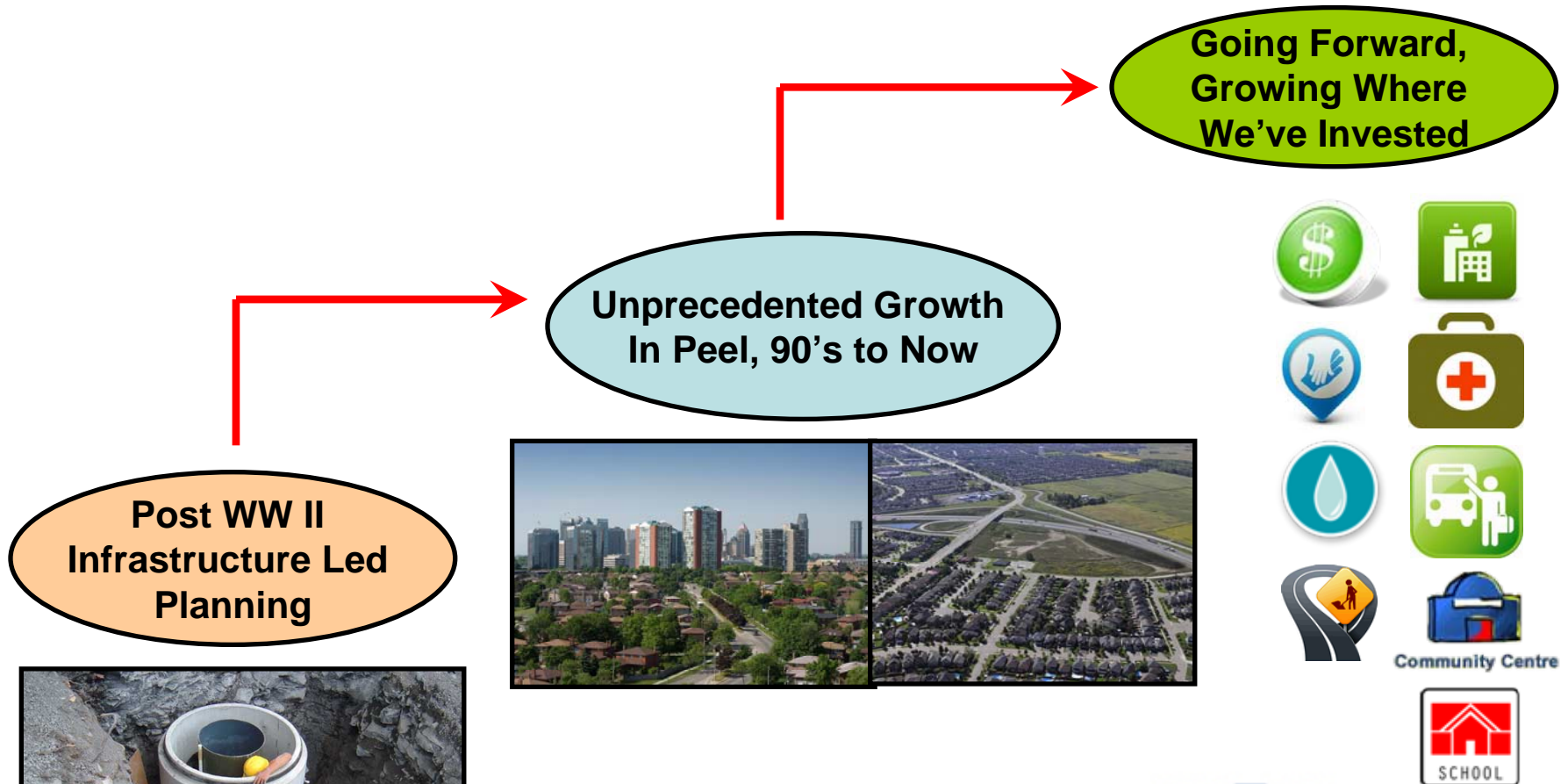


# A Sustainable Vision for Peel

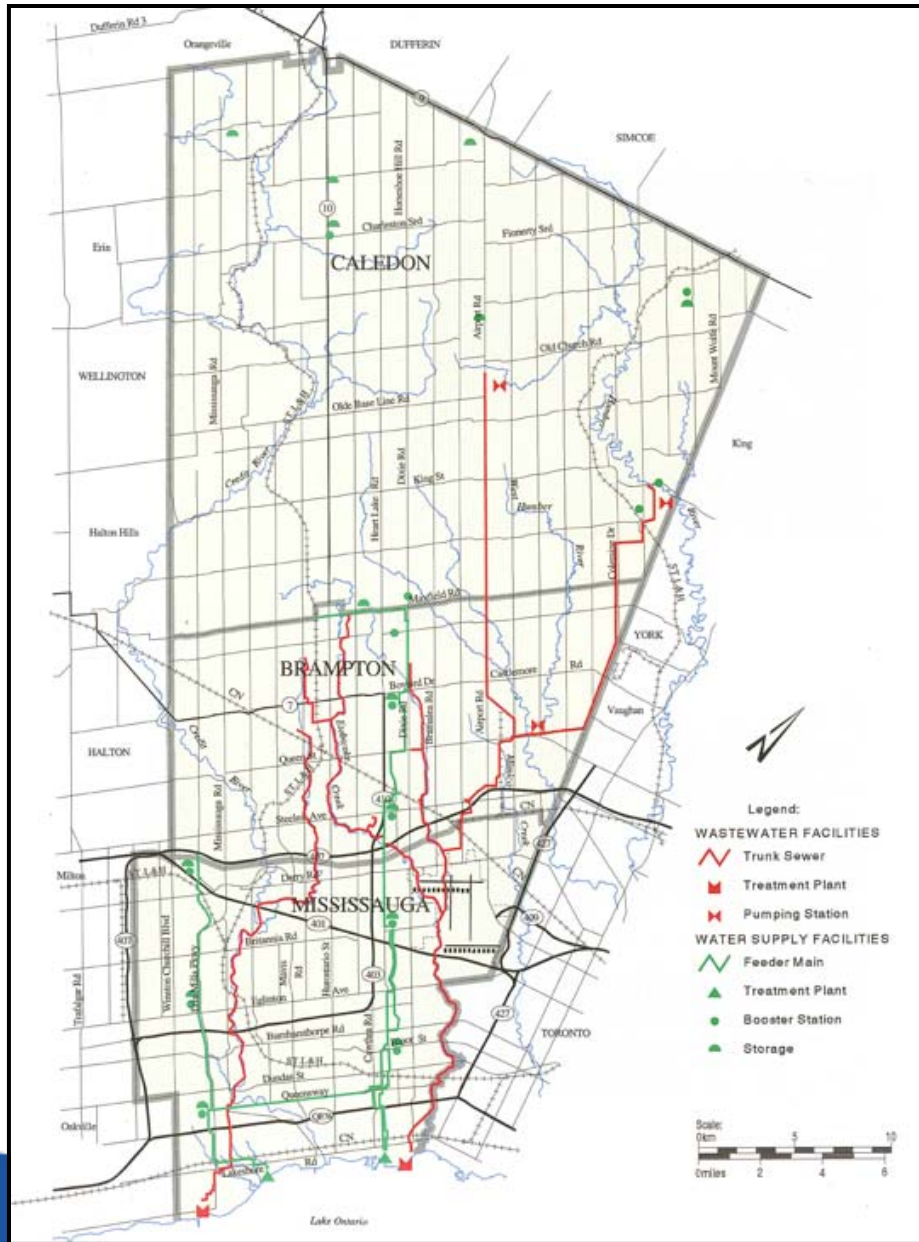
- Sustainability is the overarching ROP theme
- Peel's sustainable development framework provides a holistic approach to planning
- The approach integrates the four pillars of sustainability when making decisions



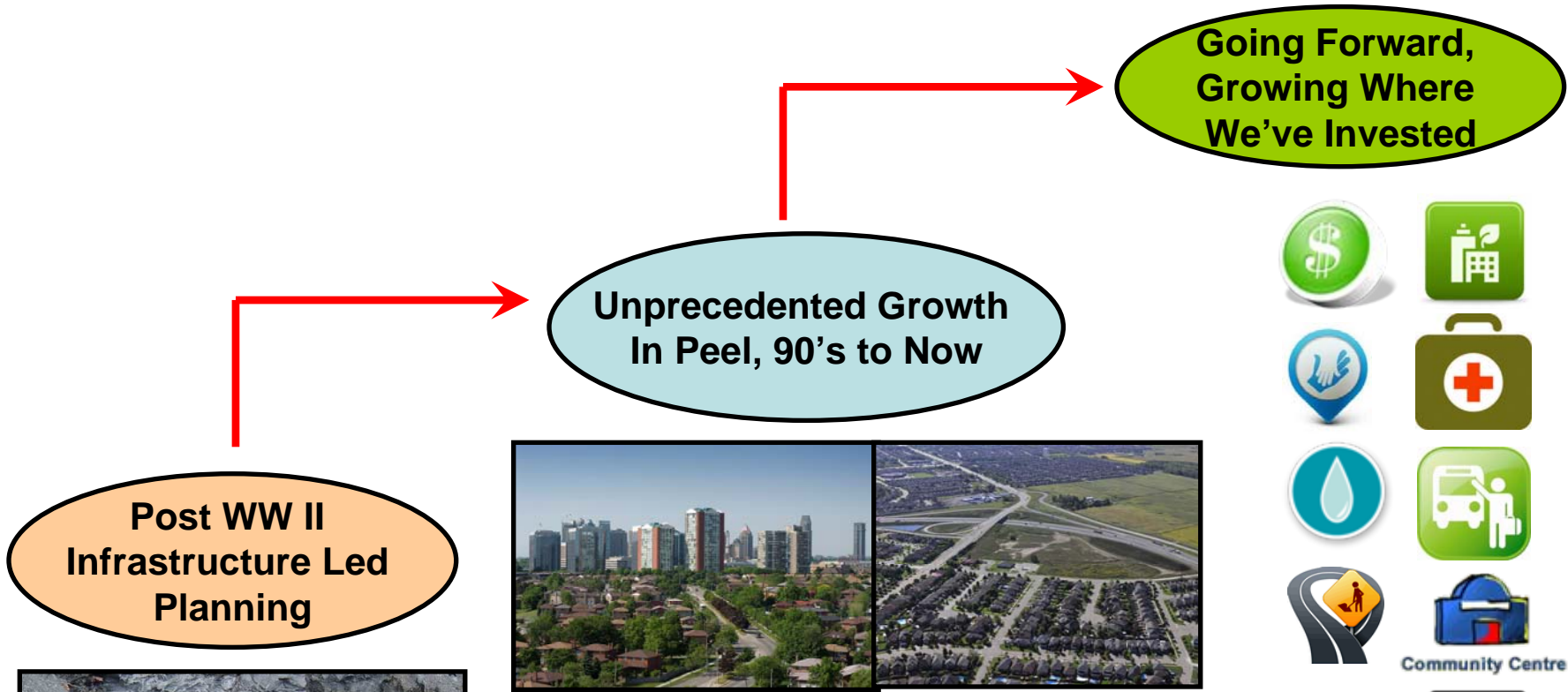
# Learning from the Past



# 1996 Water and Wastewater Services



# Learning from the Past





# Post WW II Infrastructure Led Planning

- Formation of Metro Toronto in 1953
- Created to provide physical infrastructure to the expanding suburbs
- Human services followed: policing, social services, affordable housing, etc
- The four Regional municipalities surrounding Metro formed in the 1970's – Peel in 1974



Region of Peel  
Working for you

# Laying the Foundation for Growth in Peel

- Physical infrastructure eventually supported significant growth in Brampton and Mississauga
- Hwy 401, 1947-1968
- Hwy 403, 1963-1997
- Hwy 407, 1997
- Lakeview treatment plant, 1961
- South Peel Water System, 1969
- Niagara Escarpment Plan Act, 1973
- Parkway Belt West Plan, 1978



# Significant Suburban Growth

- Population growth: baby boomers and immigration
- High levels of growth & predominantly single family
- Conventional suburban development driven by:

Available Physical Infrastructure



Development Industry and Demand for Low-Rise Homes



Auto Dependency and Cheap Gas

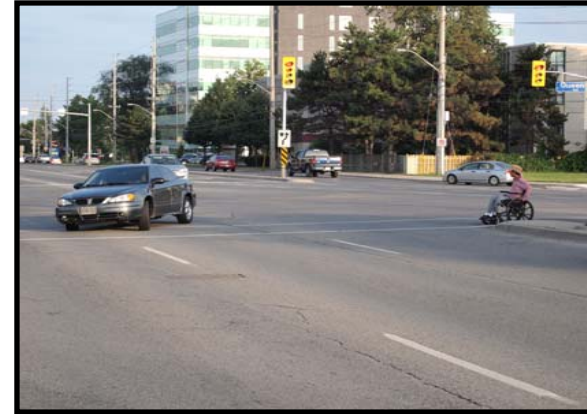


# Led to congestion and less pedestrian friendly environments... ..

Hwy 401, Mississauga



Queen Street, Brampton



# Better planned communities now...

Mount Pleasant, Brampton



Port Credit, Mississauga

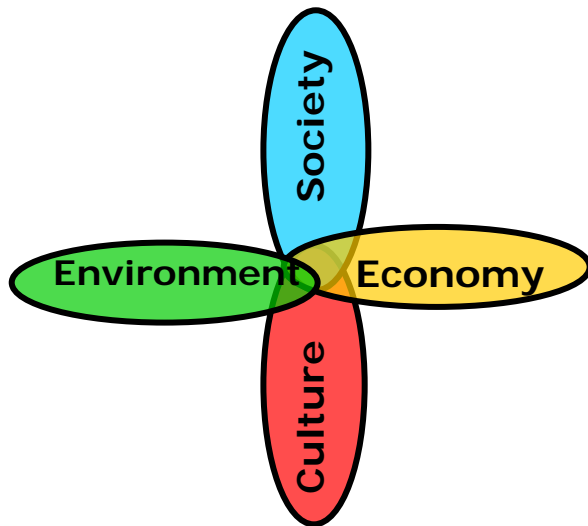


Bolton, Caledon

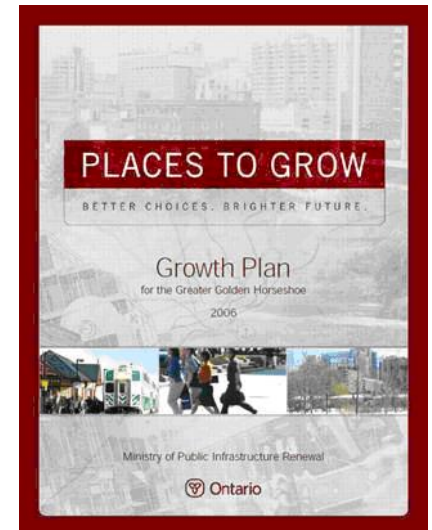
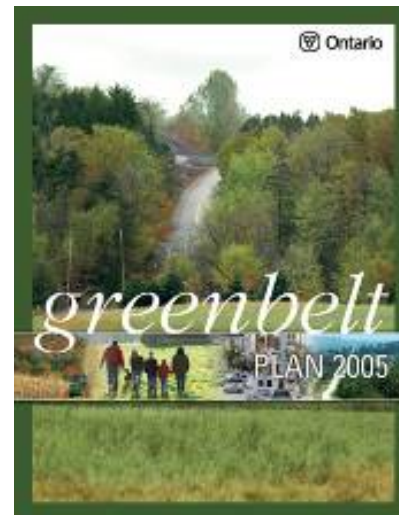
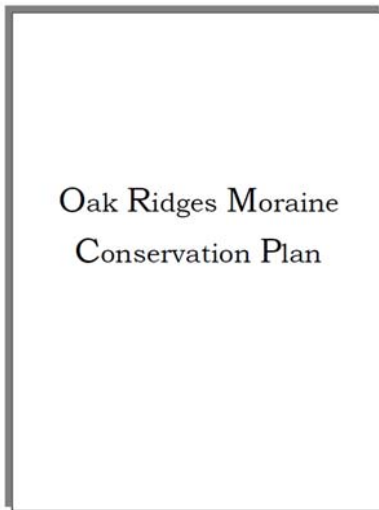


# Alternative Concepts Emerged in the 1980's and 1990's

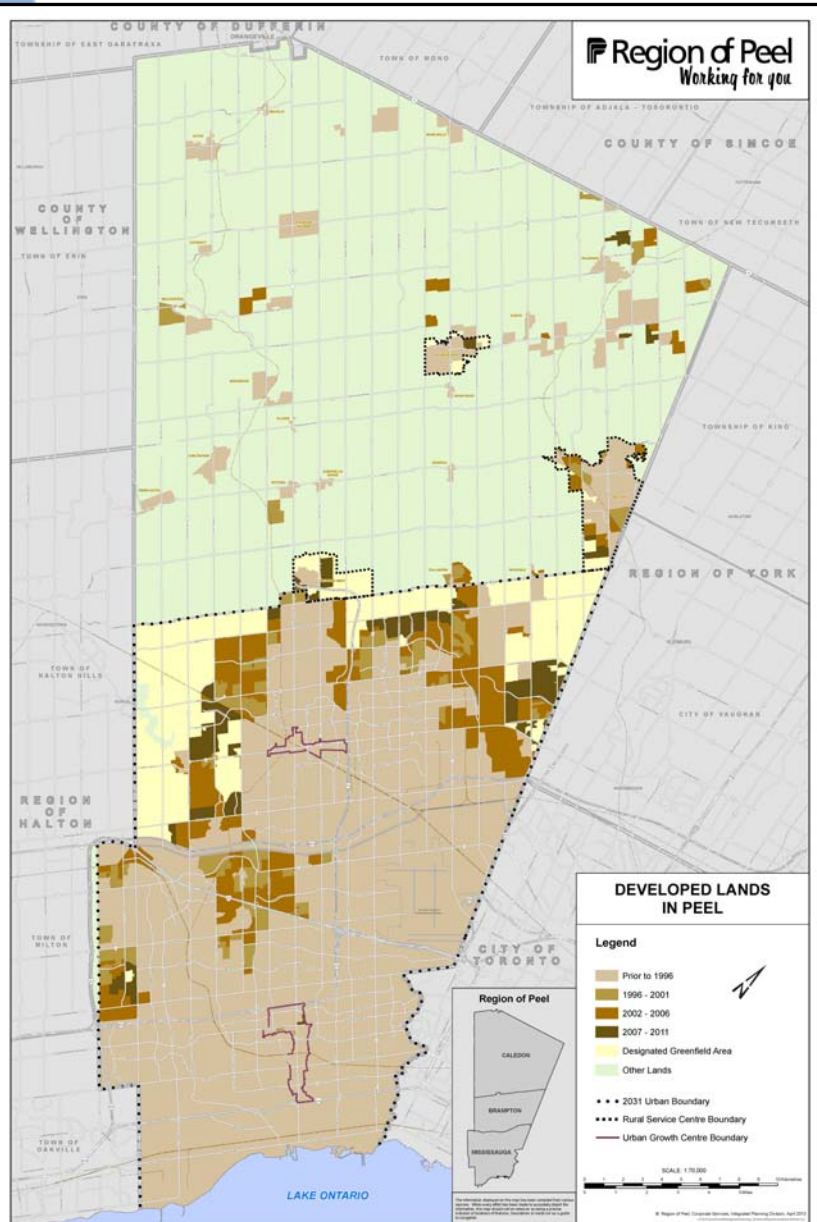
- New Urbanism
- Conservation and Planning
- Smart Growth movement
- Sustainability Approaches



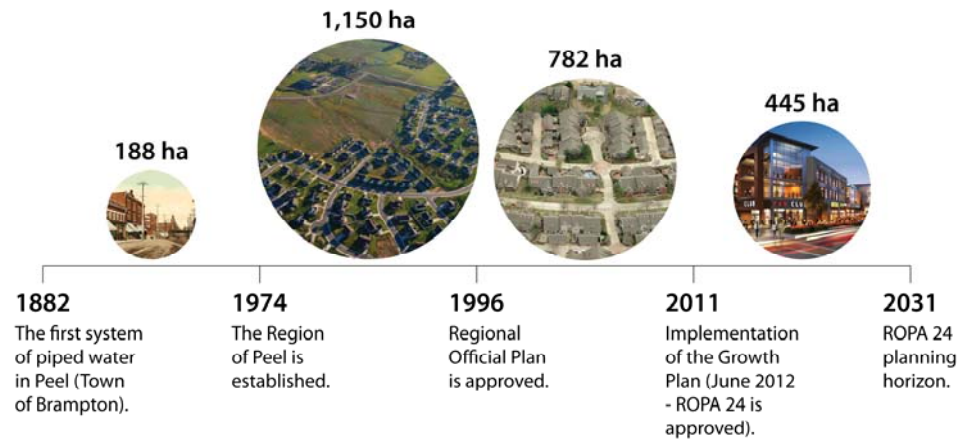
# A Shift in Planning Practice in the 2000's



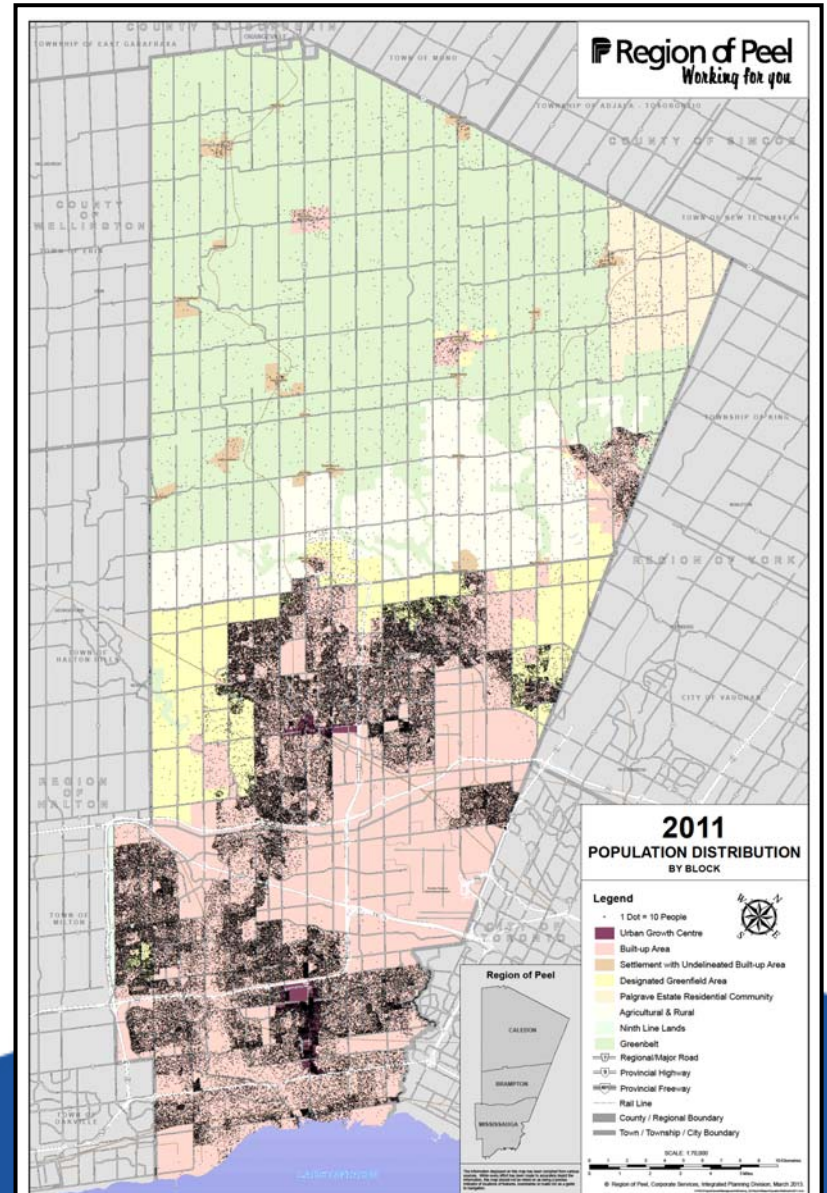
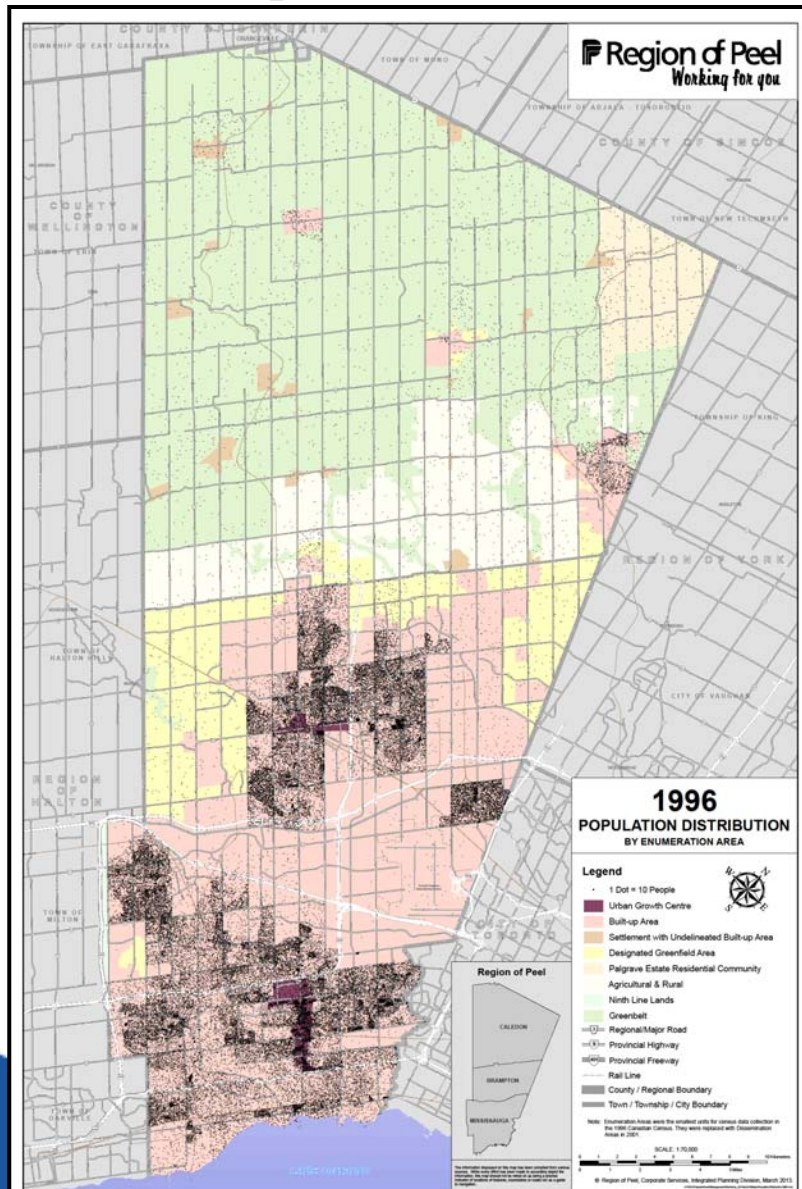
# Developed Lands



## ANNUAL LAND ABSORPTION RATE IN PEEL

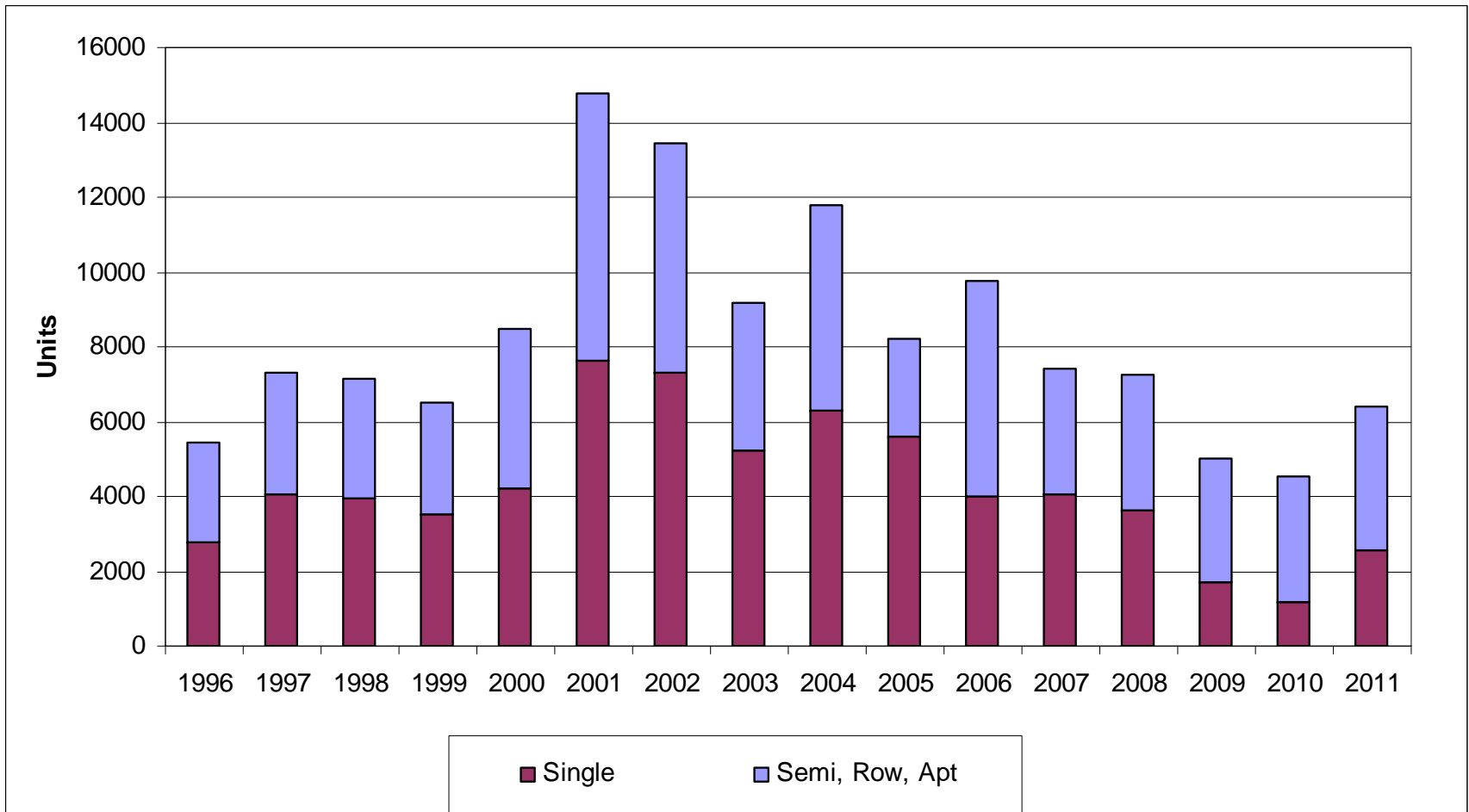


# Population Distribution in Peel

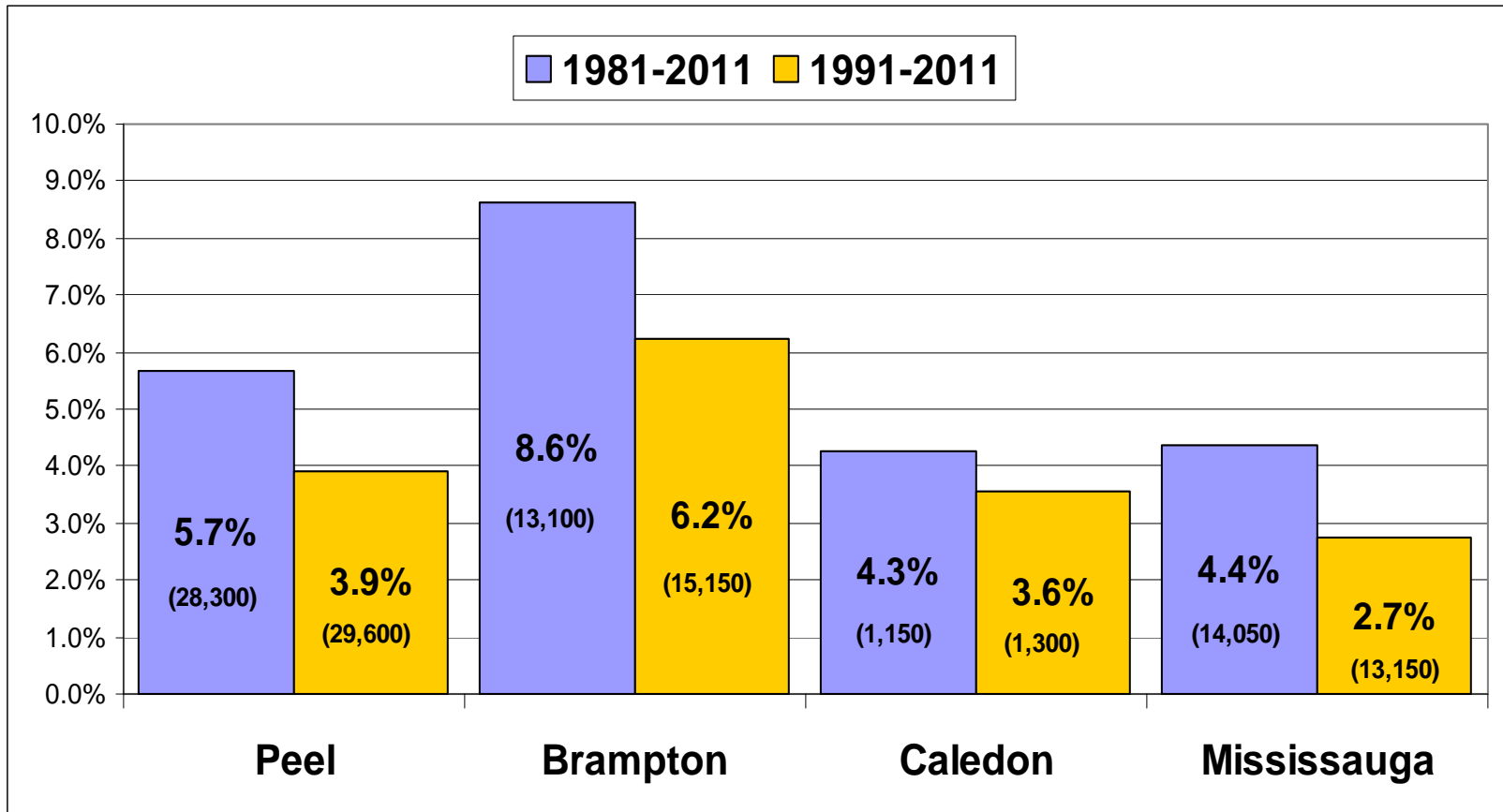




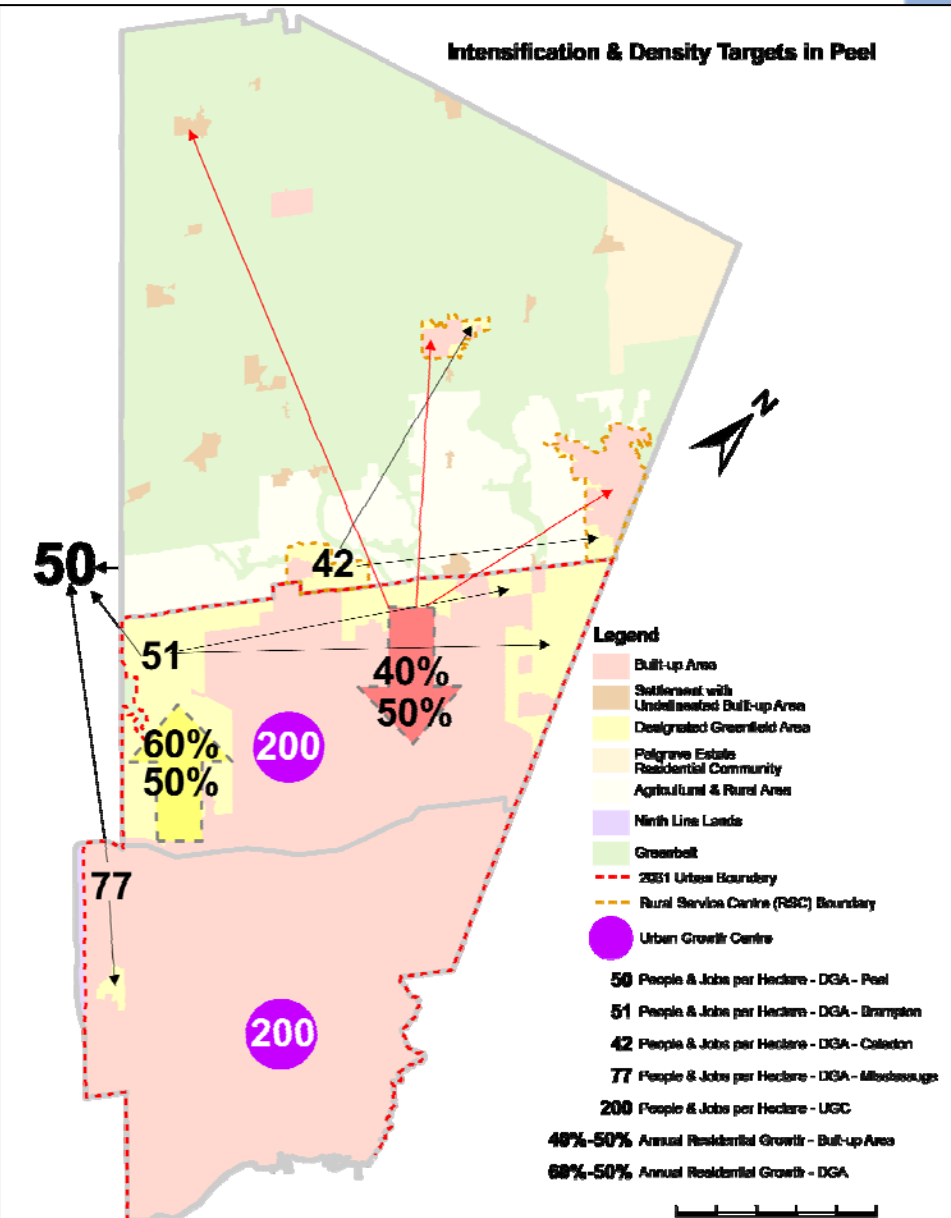
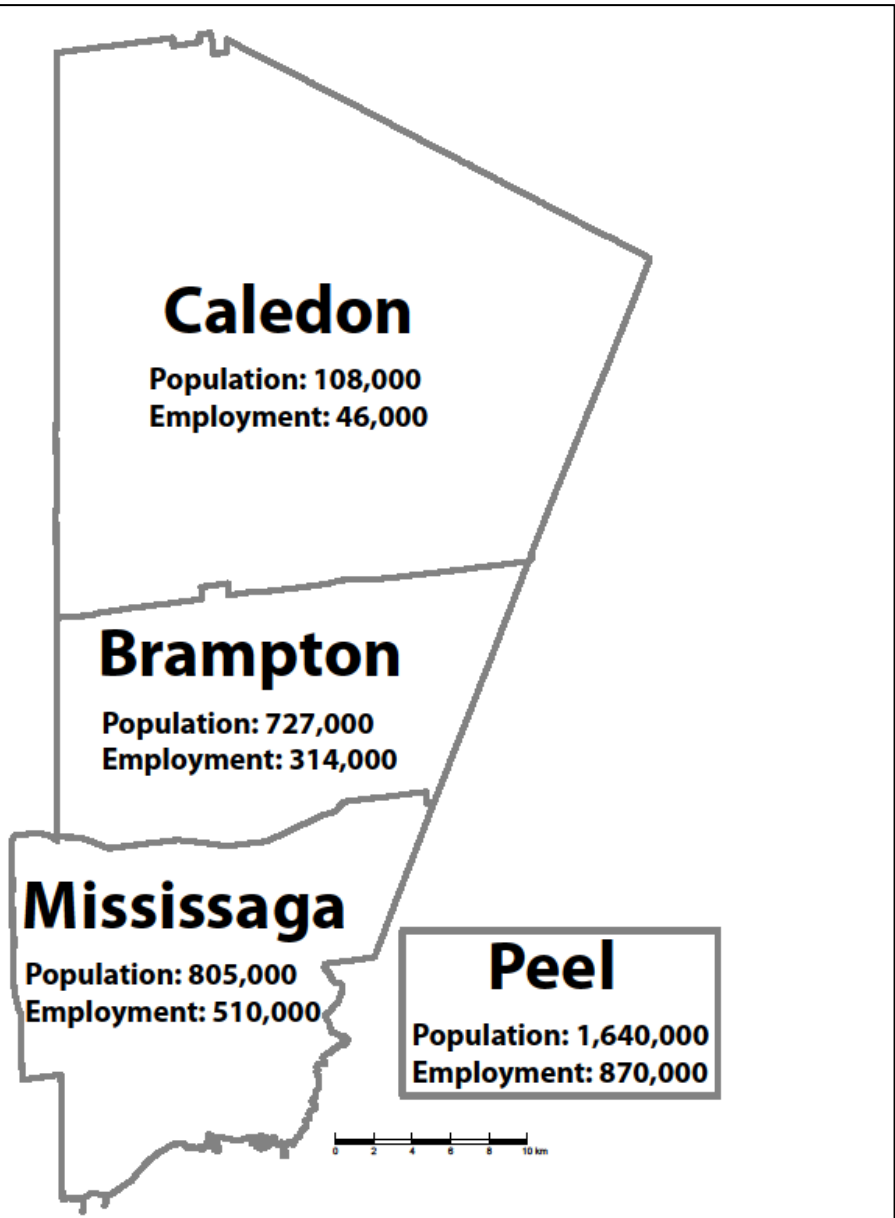
# Housing Completions in Peel



# Average Annual Growth Rates



# ROPA 24 to 2031



# Intensification allows this...

**Walking**  
**Main Street, Downtown Brampton**



**Transit**  
**Bramalea City Centre Bus Terminal**



**Optimize Community Infrastructure**  
**Hanlan Water Project**



**Improved Live/Work Opportunities within municipality**  
**Port Credit, Mississauga**



**Downtown Mississauga**



# And Supports the Protection of this...

## Agriculture Farms in Peel Region



## Natural Heritage Albion Hills Conservation Area



## Humber River



## Terra Cotta Conservation Area

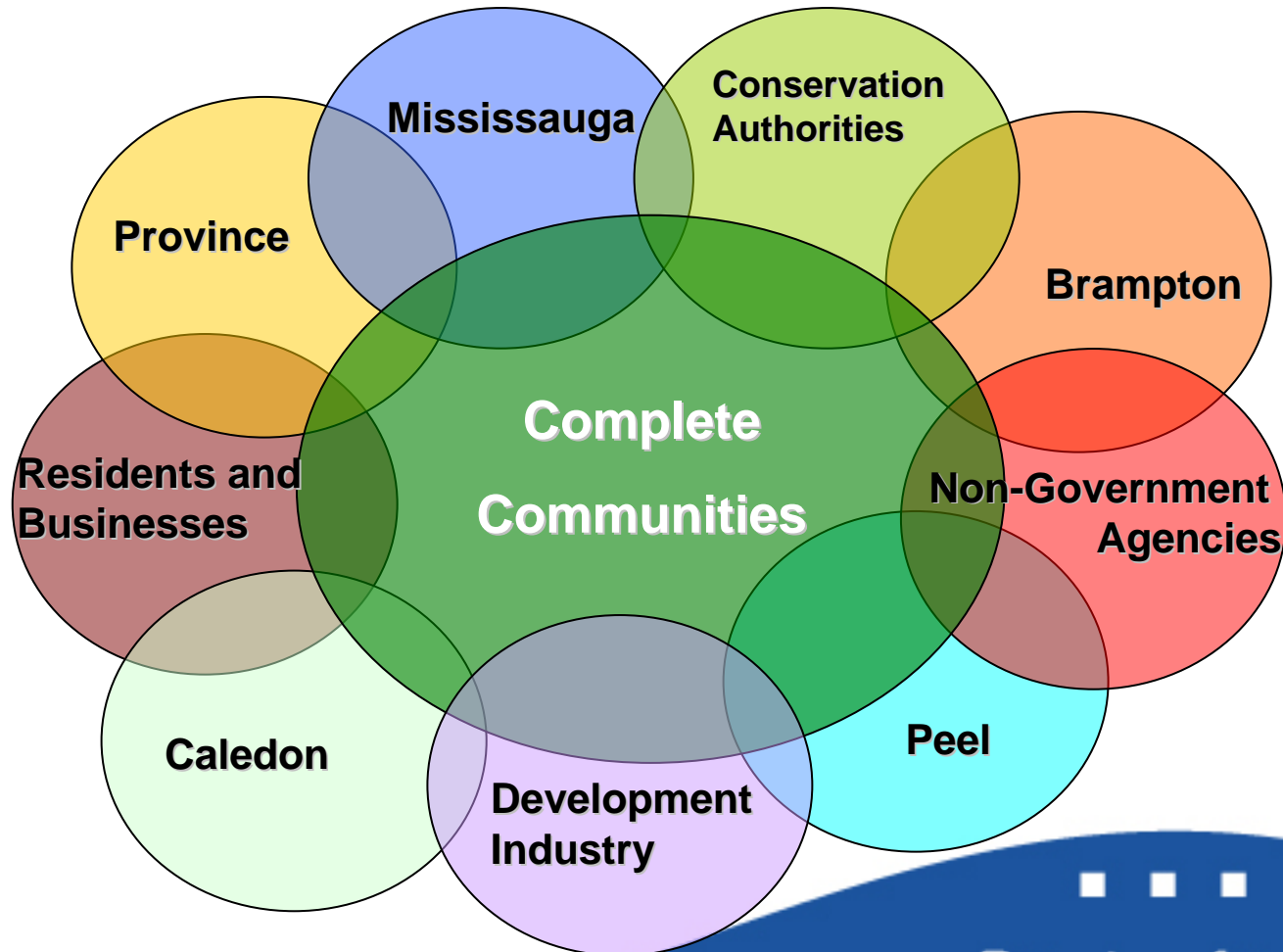


# November 2012 Proposed Forecasts by the Province

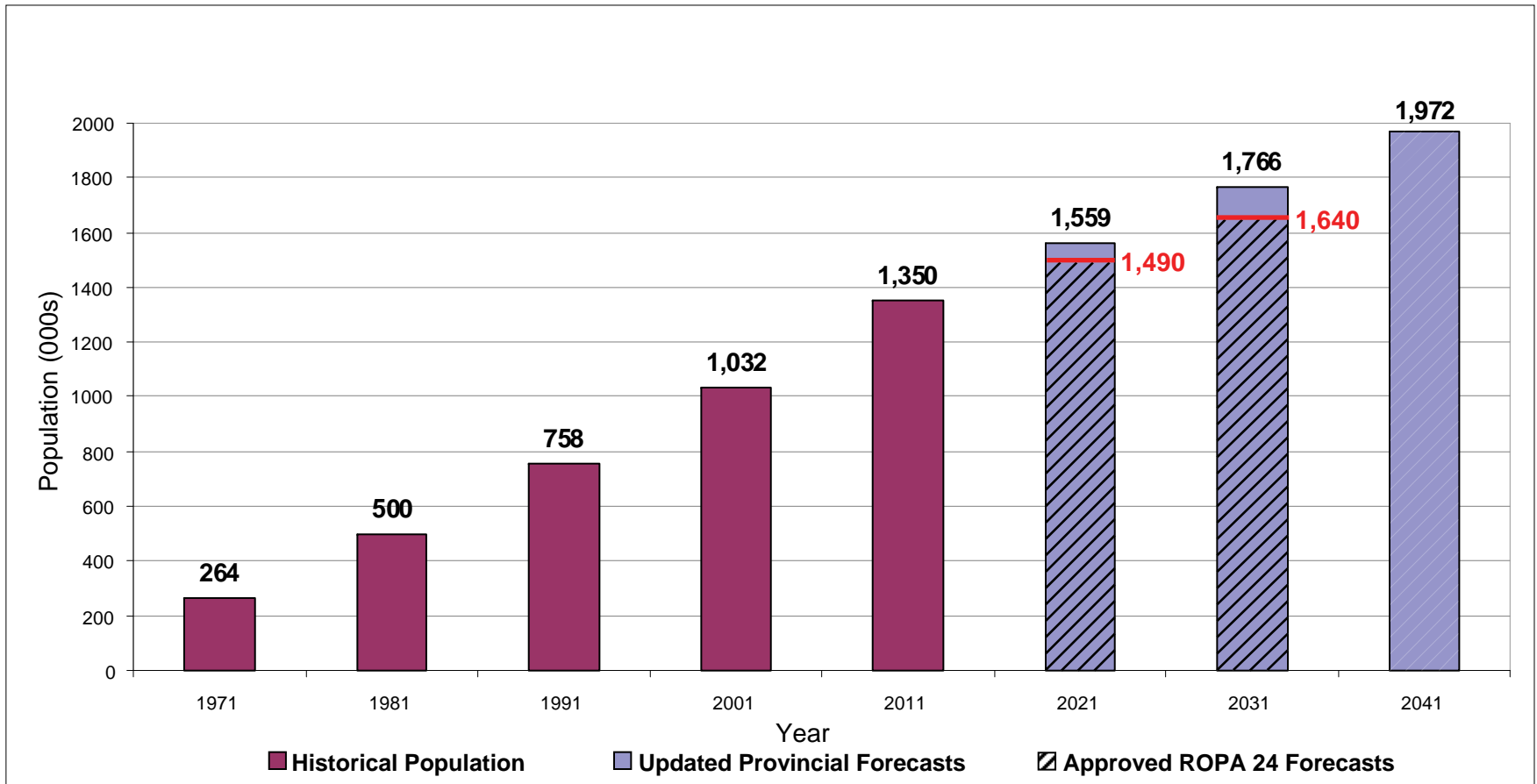
## Distribution of Population and Employment for the Greater Golden Horseshoe to 2041 (figures in 000s)

	POPULATION			EMPLOYMENT		
	2031	2036	2041	2031	2036	2041
Region of Durham	960	1,080	1,190	350	390	430
Region of York	1,500	1,700	1,790	780	840	900
City of Toronto	3,080	3,300	3,400	1,640	1,680	1,720
<b>Region of Peel</b>	<b>1,640</b>	<b>1,870</b>	<b>1,970</b>	<b>870</b>	<b>920</b>	<b>970</b>
Region of Halton	780	910	1,010	390	430	470
City of Hamilton	660	730	780	300	330	350

# Working Together to Manage Growth



# Population Growth in Peel

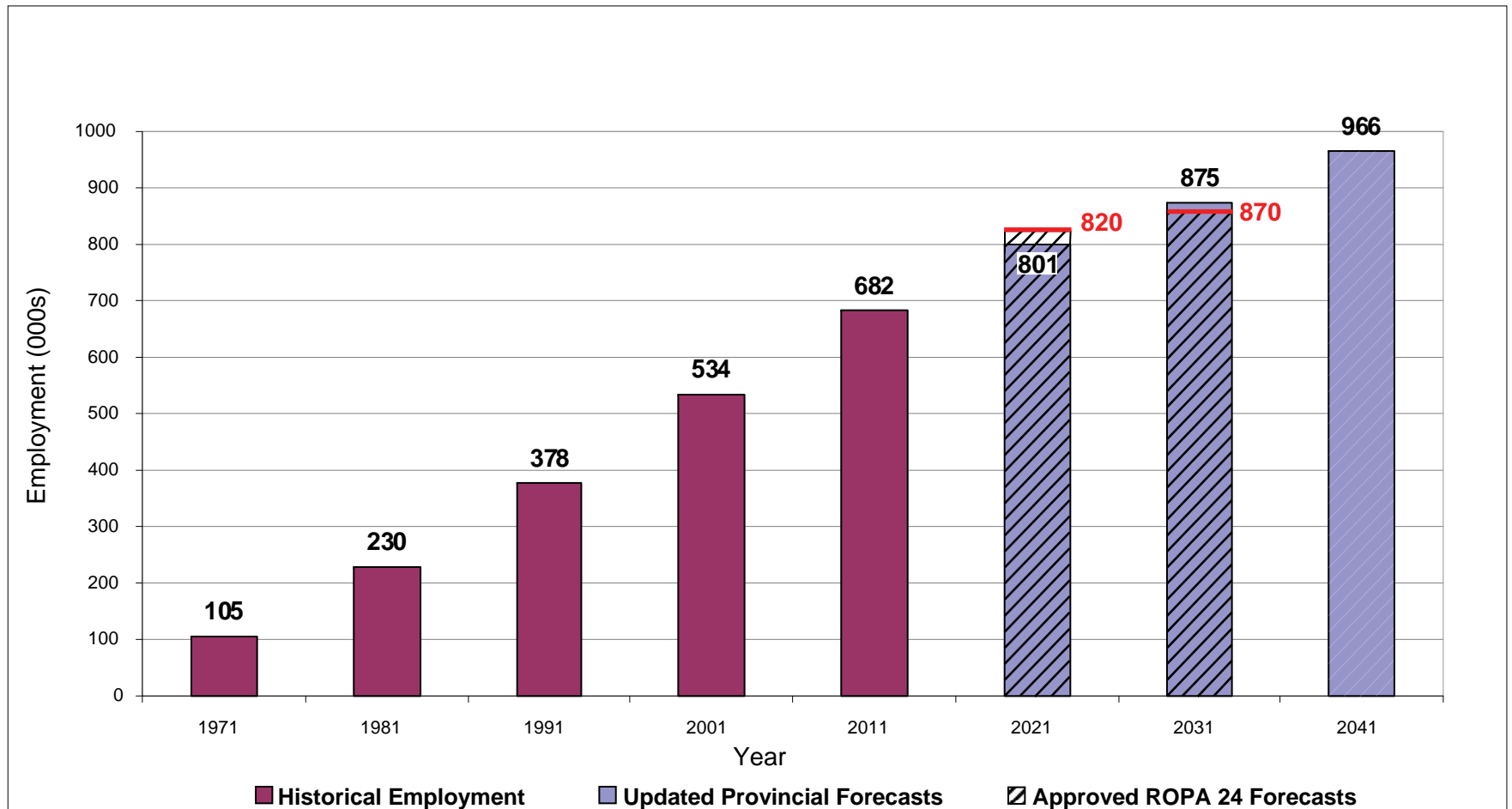


**Notes:**

- Undercoverage rate for Peel from 1971-1985 unavailable; in these instances undercoverage rate for Ontario used
- Forecasts from *Hemson's Greater Golden Horseshoe Growth Forecasts to 2041: Technical Report November 2012*



# Employment Growth in Peel



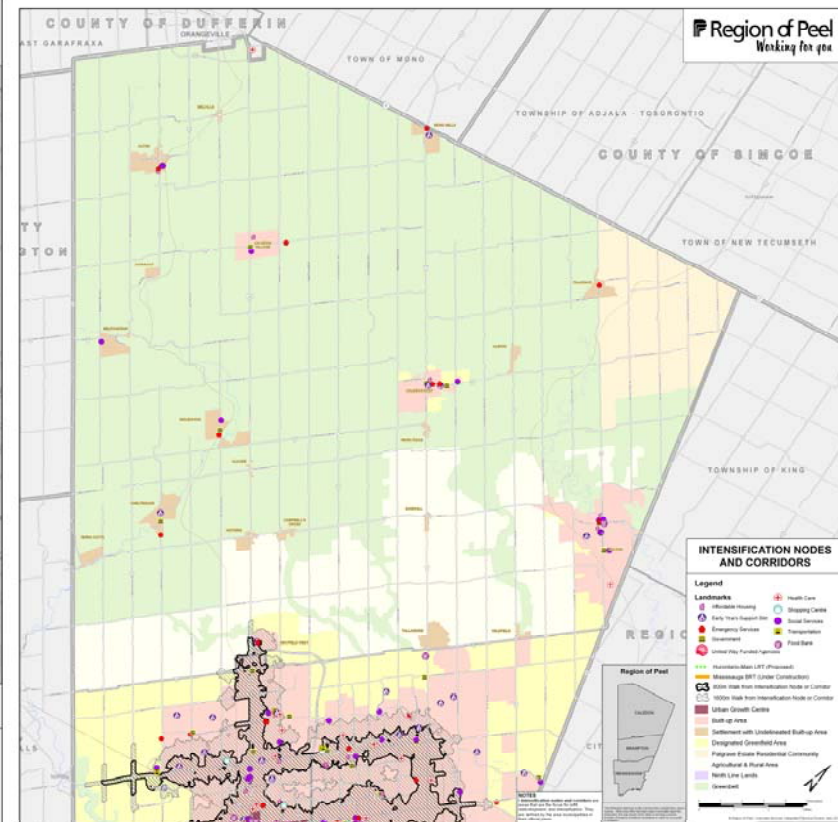
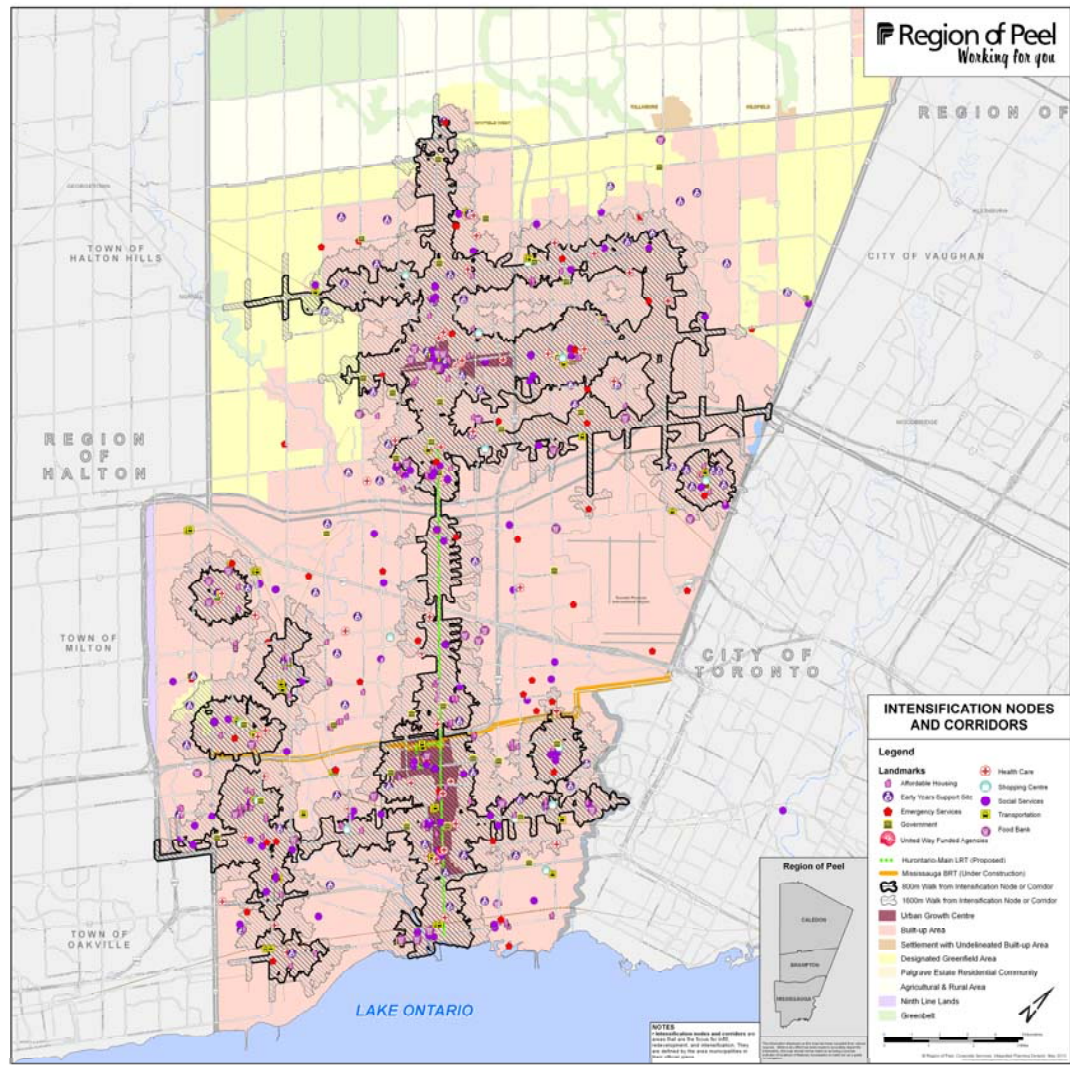
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# Appropriate Mix of Intensification and Greenfield



# Services Near Intensification Nodes and Corridors



# Consideration of Community Services

**Regional Headquarters, Brampton**



**Brampton YMCA**



**Brampton Civic Hospital**



**Mississauga Central Library and City Hall**

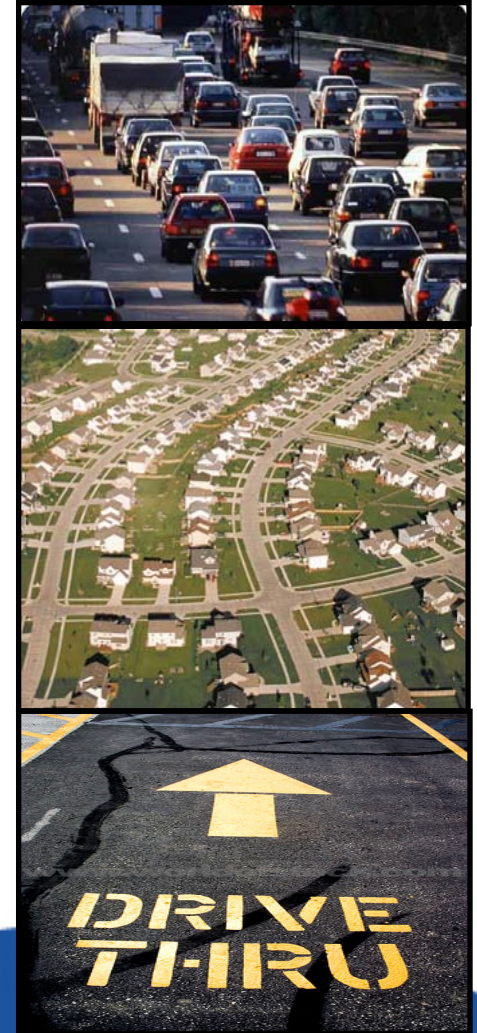


**Sheridan Hazel McCallion Campus**



# Linking Health and Planning

- Growing body of evidence demonstrates the link between **health and the built environment**
- People want to live in environments that support **healthy living**:
  - Trails and bike paths
  - Pedestrian areas
  - Tree cover
  - Public open space
- **How** and **where** we grow will play a role in the health of Peel residents



# Let's Grow Where We've Invested

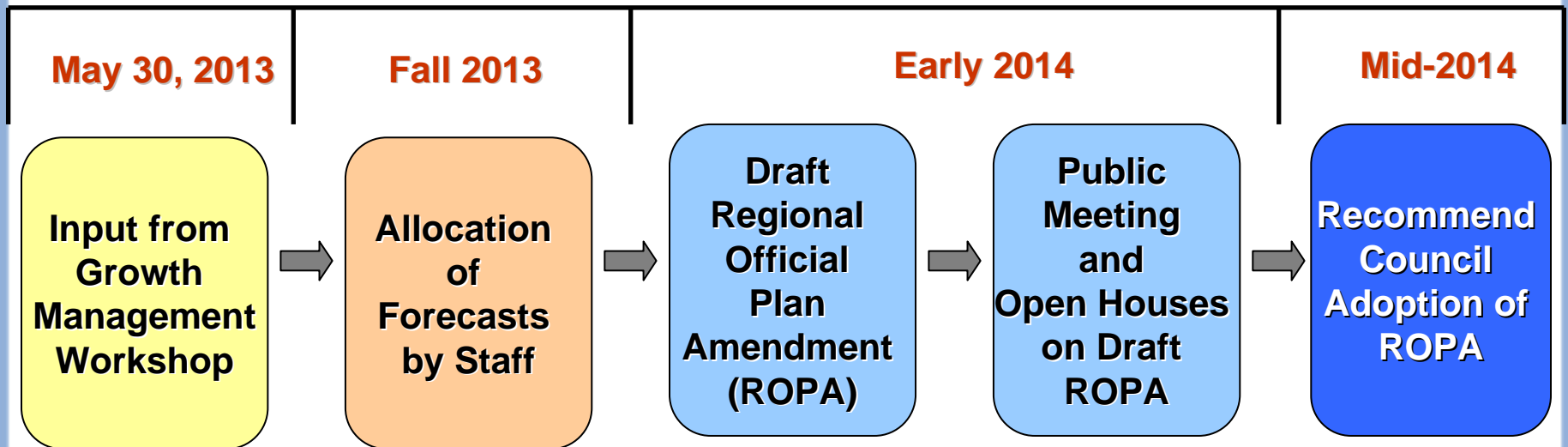
Celebration Square, Mississauga



Main Street, Downtown Brampton



# Next Steps



# Your Input Matters

- Your input today will be considered:
  - How to Manage Growth the Next 25-30 Years
  - Addressing Transportation Challenges and Opportunities
  - Region's Water and Wastewater Master Plan
  - Financial Impacts of Growth
  - Health and Human Services Planning
  - Enhancing Environmental Sustainability



# *Growing Where We Invest*

*Region of Peel Growth Management Workshop*



## Transportation Planning and Delivering for Growth

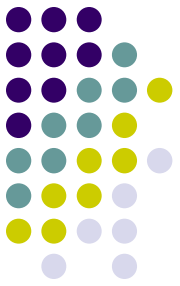
***Damian Albanese***

Director of Transportation Division

Public Works

Region of Peel

May 30, 2013

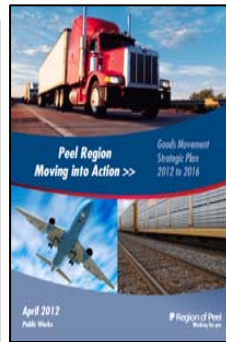
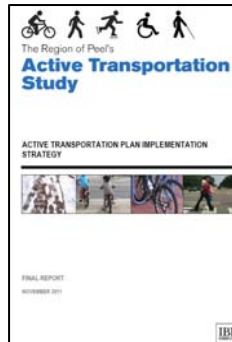
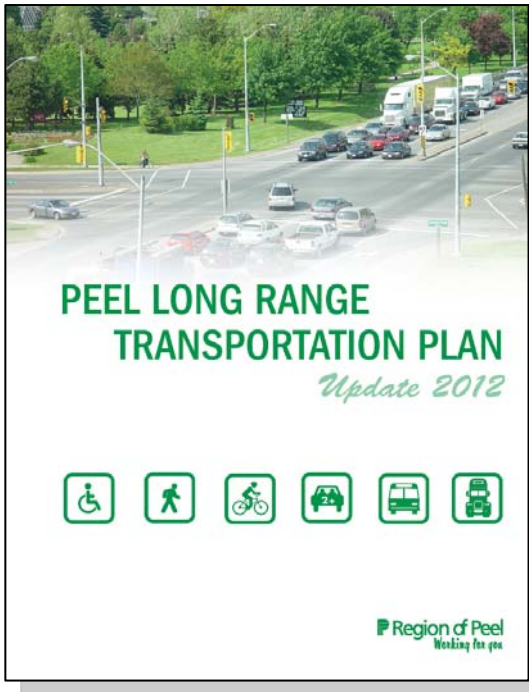
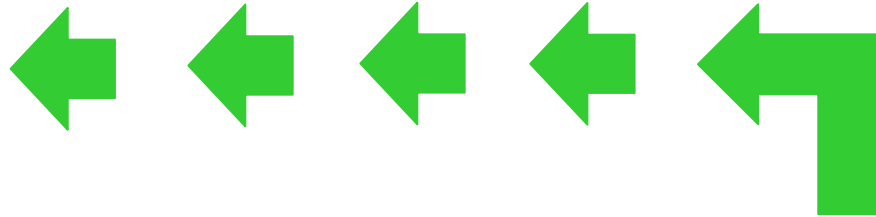


- Transportation Vision
- Transportation Past Trends, Future Targets and Challenges
- Moving Forward

# Transportation Visions for 2031



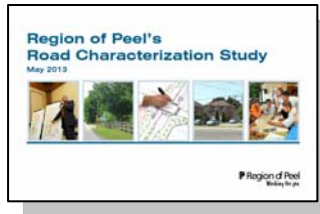
Strategic Plan  
Terms of Council Priorities  
Regional Official Plan



Regional Road Network



Goods Movement Network



Active Transportation Network



Road Character Network



# Transportation Trends at a Glance

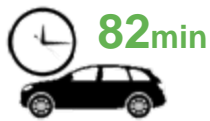


**2013**

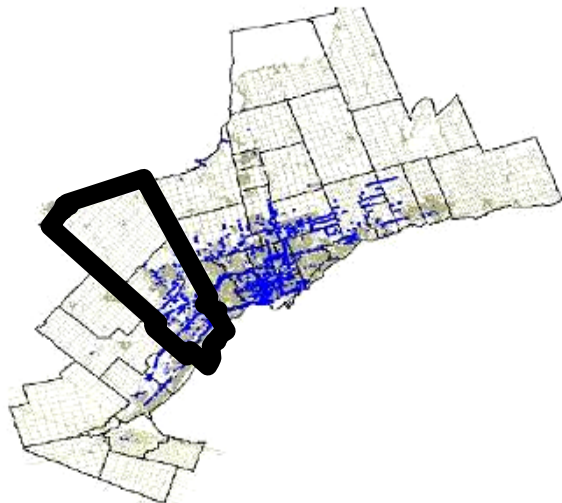
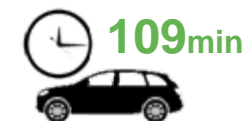
**Population  
in Peel  
(100,000s)**



**2031**

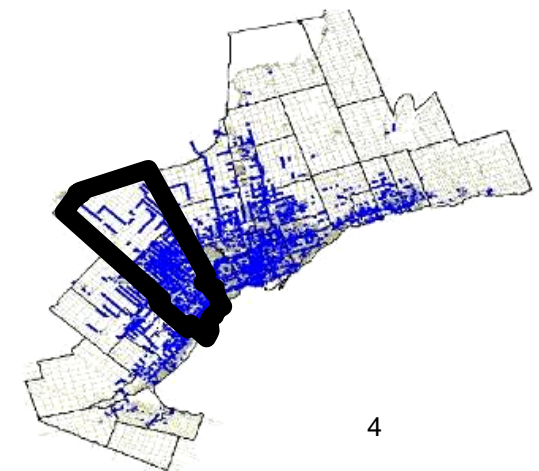


**+ 27min  
Average  
Commute Time**

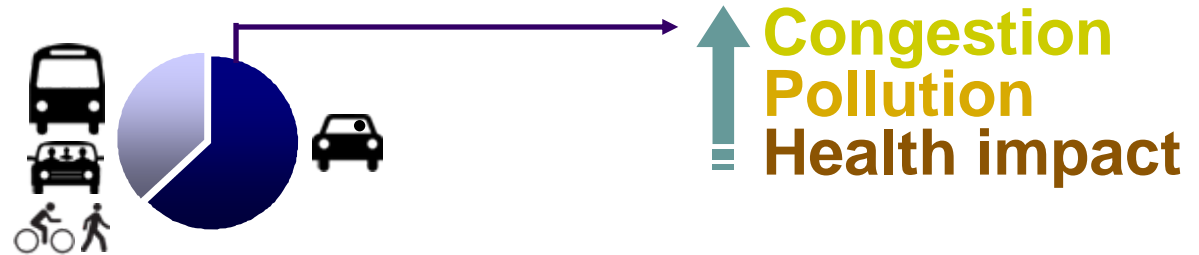
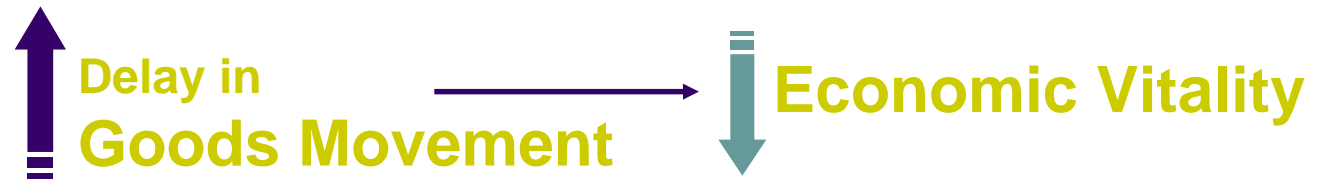
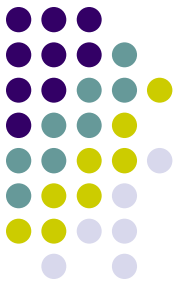


**Traffic Congestion Level**

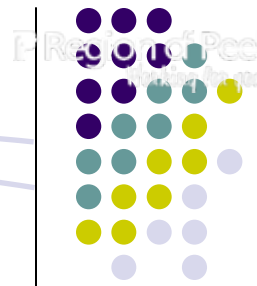
**-\$6B → -\$15B**



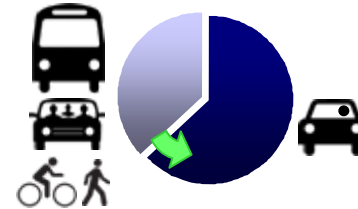
# Transportation Challenges



# Historical Trend



Modal Split	1996	2001	2006
<b>Unsustainable mode of travel:</b>			
Driving alone	65.4 %	65.6%	63.8% ↓
<b>Sustainable mode of travel</b>			
Carpooling (2+ occupancy)	13.2%	13.5% ↑	15.0% ↑
Transit (Local and GO)	8.5%	8.6% ↑	9.1% ↑
Others (Taxi, Walk, Cycle, School Bus)	12.9%	12.2%	12.2%

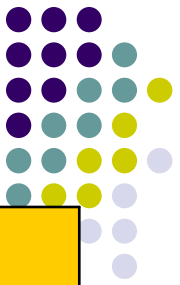


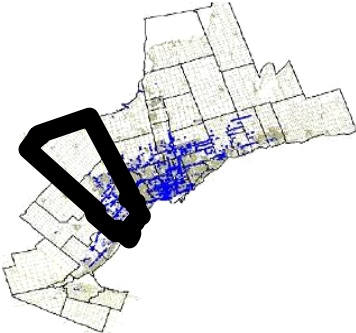
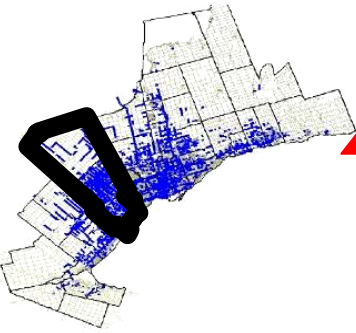
Sustainable mode of travel has been increasing its share, however....

	1996	2001	2006
<b>Total Daily Person Trips</b>	1.7 million	2.0 million ↑	2.3 million ↑

... it has been outpaced by the overall increase in travel demand

# Future Assumptions

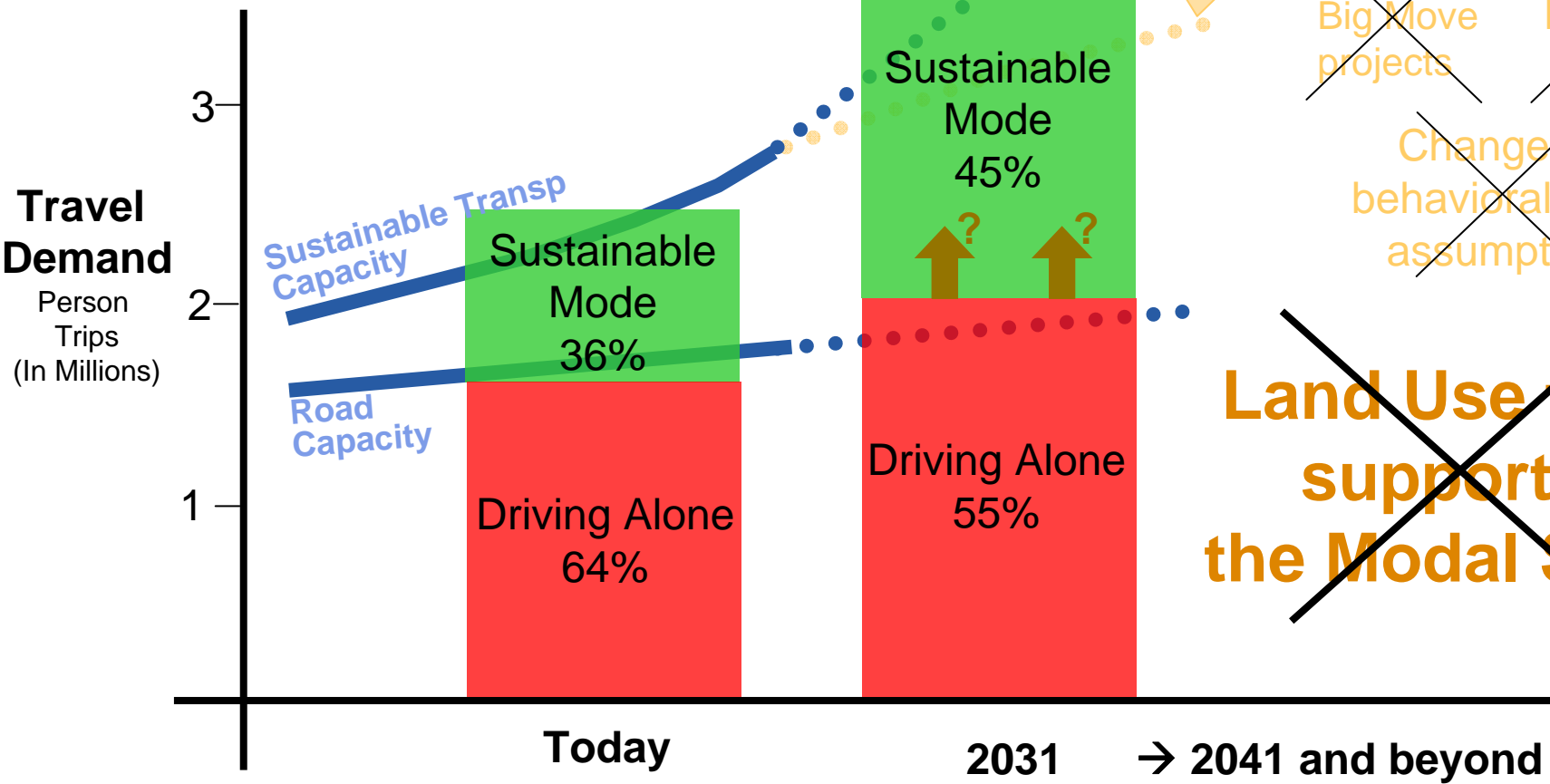


Mode Split (AM Peak)	Today	2031 Horizon
Driving Alone	64 %	Approx 55 % ↓
Sustainable Mode	36 %  Carpool = 15% Transit = 9% Walk/Cycle = 8% Others = 4%	Approx 45 % ↑ (Based on Transit Plans, AT Plans, etc)  Carpool = 18% ↑ Transit = 12% ↑ Walk/Cycle = 10% ↑ Others = 5% ↑
Growth in Travel demand	1.6 Million Vehicle Trips	2.0 Million Vehicle Trips ↑
Level of Congestion		

# Growth Management and Transportation



## What If...



~~Metrolinx Big Move projects~~

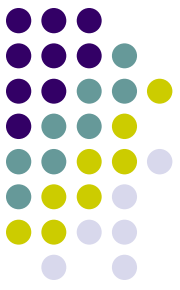
~~Funding~~

~~Change of behavioral shift assumption~~

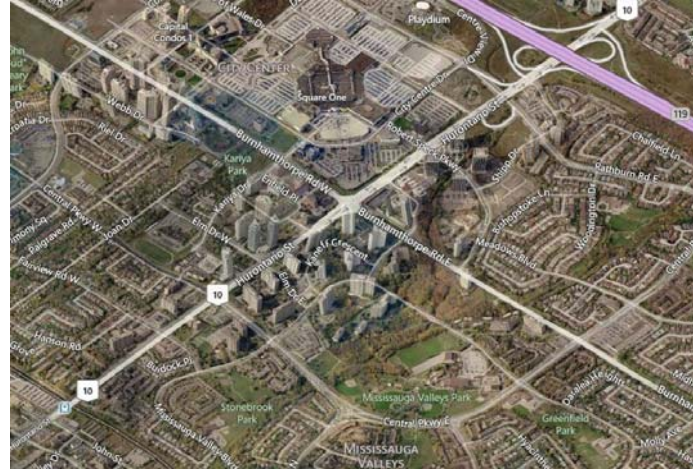
~~Land Use that supports the Modal Shift~~



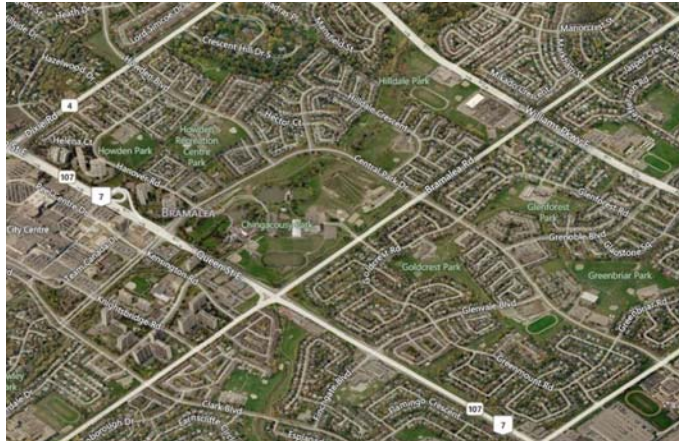
# Better Integration of Land use and Transportation Planning



## Greenfield and Intensification

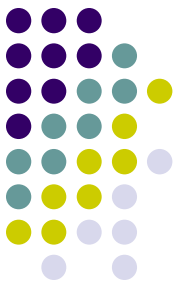


## Residential and Commercial



... to be discussed in details at Breakout Session

# Multi-modal Transportation Planning



## Active Transportation

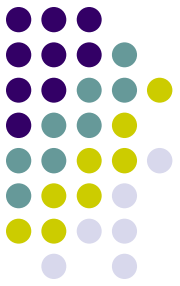


## Goods Movement



... to be discussed in details at Breakout Session <sup>10</sup>

# Providing Accessible Transportation



## Accessible Transportation



... to be discussed in details at Breakout Session

# Maintaining the State of Good Repair



## Road Maintenance



... to be discussed in details at Breakout Session

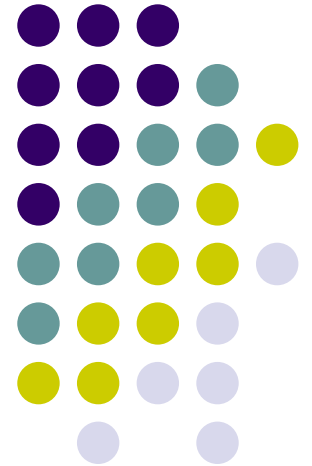
# Road to Success:



## Partnership and Collaboration



**Thank you**



# *Growing Where We Invest*

*Region of Peel Growth Management Workshop*

## **Water and Wastewater Master Plan**

### **Servicing Impact and Overview**

**Imran Motala, Capital Program Planning, Public Works  
Chris Hamel, BluePlan  
May 30, 2013**



# Agenda

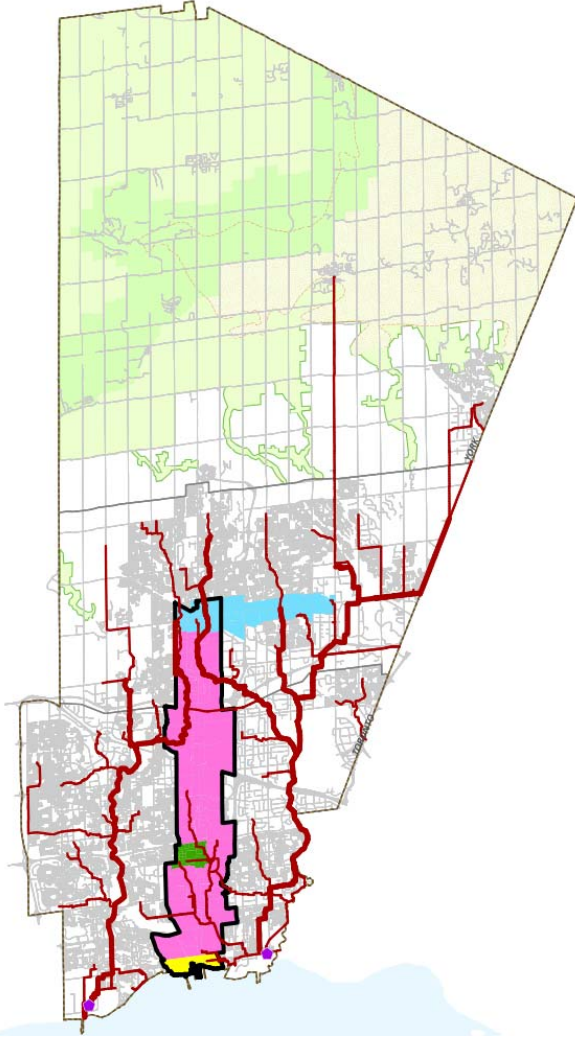
1. Overview of the Water and Wastewater Master Plan
2. Planning Scenario Review to Date
3. Summary of the 2031 Water Servicing Strategy
4. Summary of the 2031 Wastewater Servicing Strategy
5. Impact of Post 2031 Growth
  - Intensification
  - Greenfield
6. Impact of Location of Growth
7. Key Servicing Considerations



# Water and Wastewater Master Plan Process

- Currently being completed under the Class EA process for Master Plans
- Focused on confirming servicing strategies for the approved 2031 growth under Places To Grow
- Providing perspective on the servicing impacts post 2031
- Final Public Meetings early fall 2013
- Final Documentation fall 2013

# Planning Scenario Review



- Data as received from the area municipalities and compiled by the Region
- Intensification primarily within Corridor and MCC
- Hypothetical sensitivity scenarios including additional intensification and/or growth in the Caledon Agricultural and Rural Area

# Planning Scenario Review

- Population scenarios range from:
  - 1.64M in 2031 consistent with P2G
  - 2.21M with significant intensification
  - 2.35M with significant intensification and agr/rural area
  - 2.57M representing a potential buildout
- P2G Amendment 2
  - 1.64M in 2031
  - 1.97M in 2041
  - 1.90M in 2031 high growth scenario
  - 2.30M in 2041 high growth scenario

# Planning Scenario Review

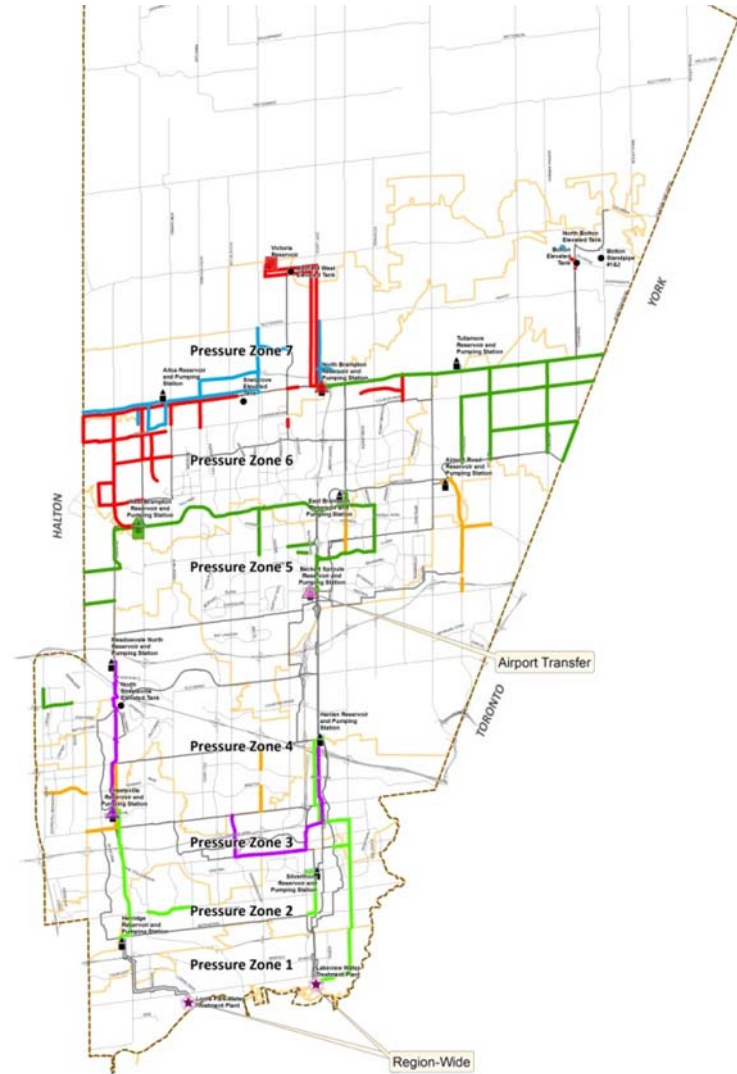
- Employment scenarios range from:
  - 0.92M in 2031 consistent with P2G
  - 1.23M with significant intensification
  - 1.29M with significant intensification and agr/rural area
  - 1.39M representing a potential buildout
- P2G Amendment 2
  - 0.87M in 2031
  - 0.97M in 2041
  - 0.94M in 2031 high growth scenario
  - 1.11M in 2041 high growth scenario

# P2G (2031) Servicing Strategies

## Preferred Strategy P2G (2031) - Water

- Current program at the Lakeview WTP and Lorne Park WTP will meet P2G (2031) capacity needs
- Feedermain upgrades currently planned (ie: Hanlan) are required and will meet P2G (2031) needs
- The East Trunk System will supply a larger portion of the lower pressure zones and will be the primary source for the Hurontario Corridor and MCC intensification areas
- The currently planned facilities will meet the P2G (2031) needs – no new storage or pumping facilities required
- Distribution system upgrades are required to support water supply and distribution throughout the network

- Preferred Water Strategy (2031)

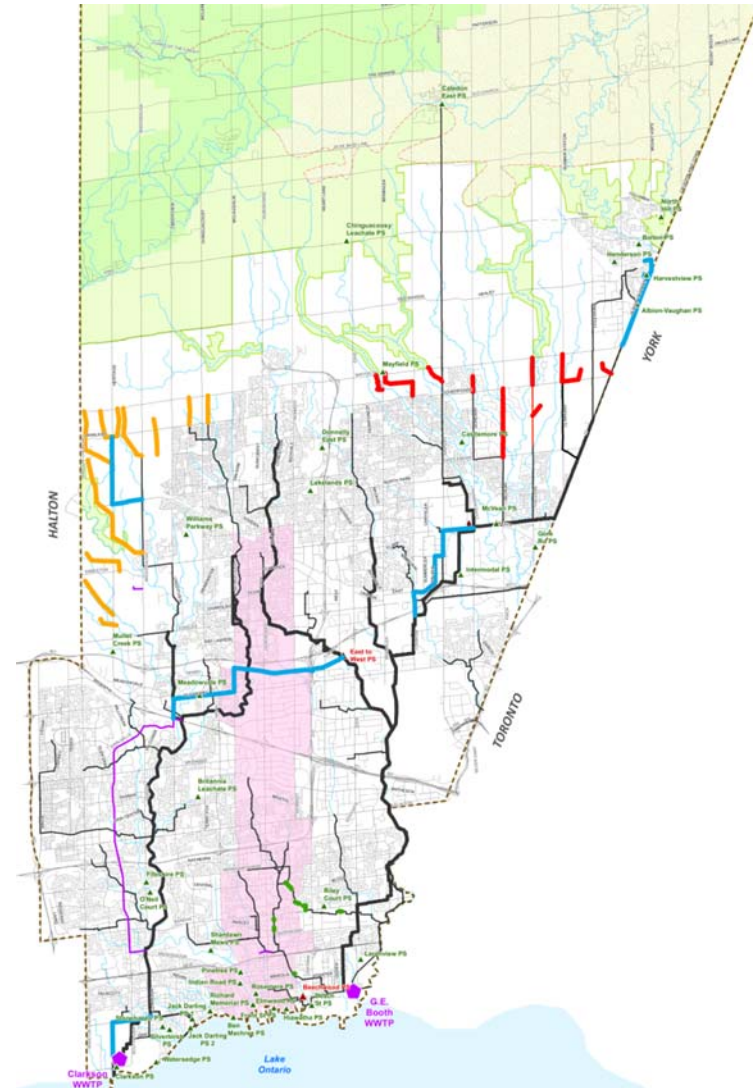


## Preferred Strategy P2G (2031) - Wastewater

- Recent expansion of Clarkson WPCP to 350MLD is sufficient to 2031
- GE Booth (Lakeview) WPCP will need to be expanded from 486 to 518MLD – this is already planned and budgeted for
- East to west diversion is required to defer Booth expansion and maintain all plants within 90% of rated capacity
- Collection system upgrades are required to support conveyance to the plants
- Long term inflow/infiltration program is required to meet continued level of service and defer/eliminate additional infrastructure upgrades



- Preferred Wastewater Strategy (2031)



# P2G (2031) Draft Cost Estimates

<b>Water</b>	<b>Preliminary Cost Est. (2012 \$)</b>
1 – Trunk	\$993,000,000
2 – Distribution	\$202,000,000
3 – Intensification	\$201,000,000
4 – Supplemental	\$163,000,000
<b>TOTAL</b>	<b>\$1,560,000,000</b>

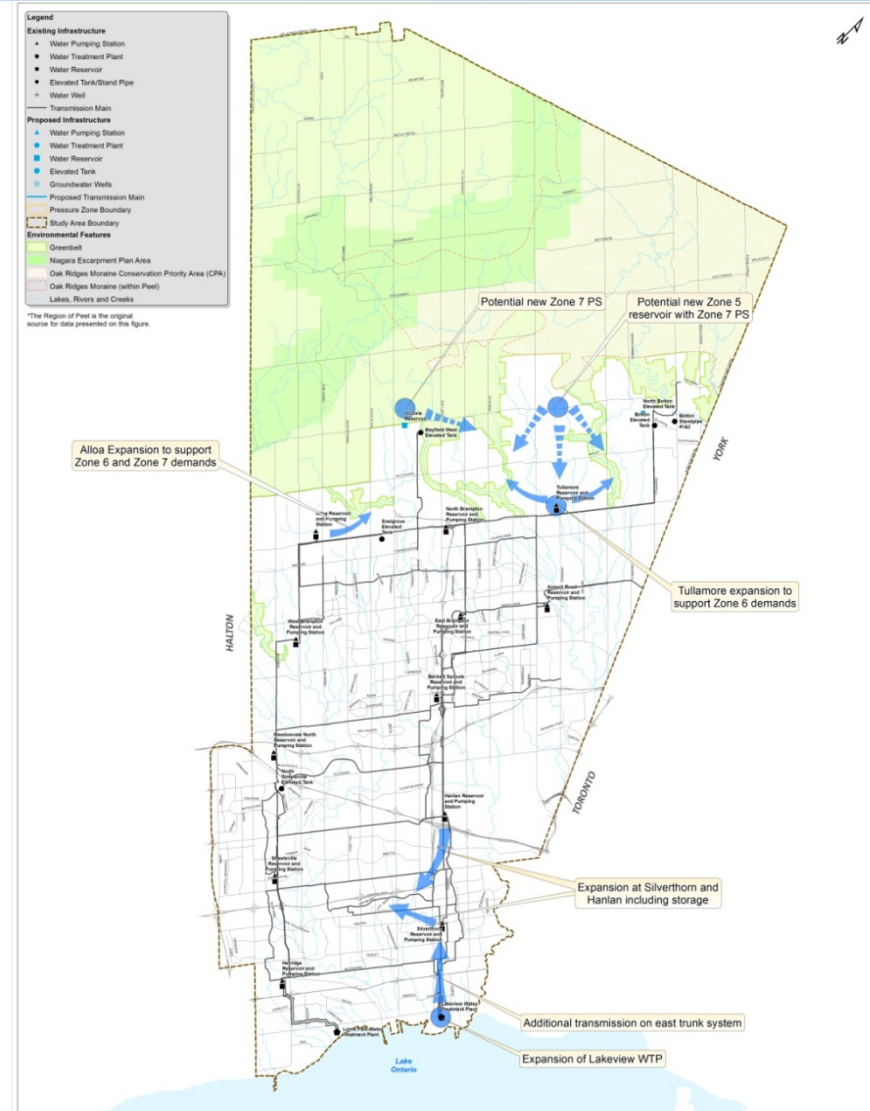
<b>Wastewater</b>	<b>Preliminary Cost Est. (2012 \$)</b>
1 – Trunk	\$452,000,000
2 – Distribution	\$147,000,000
3 – Intensification	\$13,000,000
4 – Supplemental	\$103,000,000
<b>TOTAL</b>	<b>\$716,000,000</b>

# Post P2G (2031) Servicing Impact

# Intensification Key Issues

- Current development applications are exceeding the projected quantum and density identified under Peel's P2G projections
- This trend could result in:
  - Accelerated growth ahead of P2G projections
  - Accelerated/increased capital program beyond currently planned P2G program
- New infrastructure projects are being introduced due to water/wastewater needs in the intensification areas
- Broader discussion on the potential impact to major infrastructure (big pipes and plants) needs to happen now

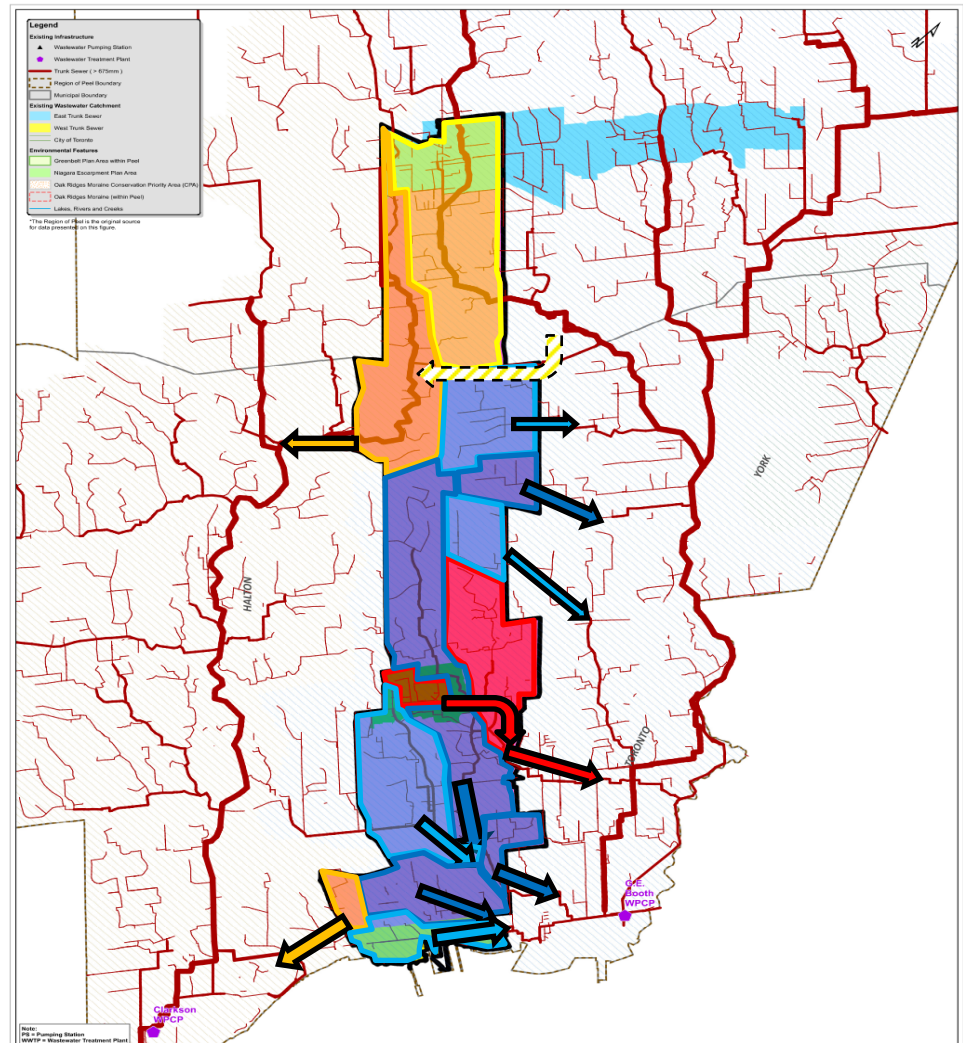
- # Potential Post-P2G (2031) Servicing Strategy



# Intensification Comments - Water

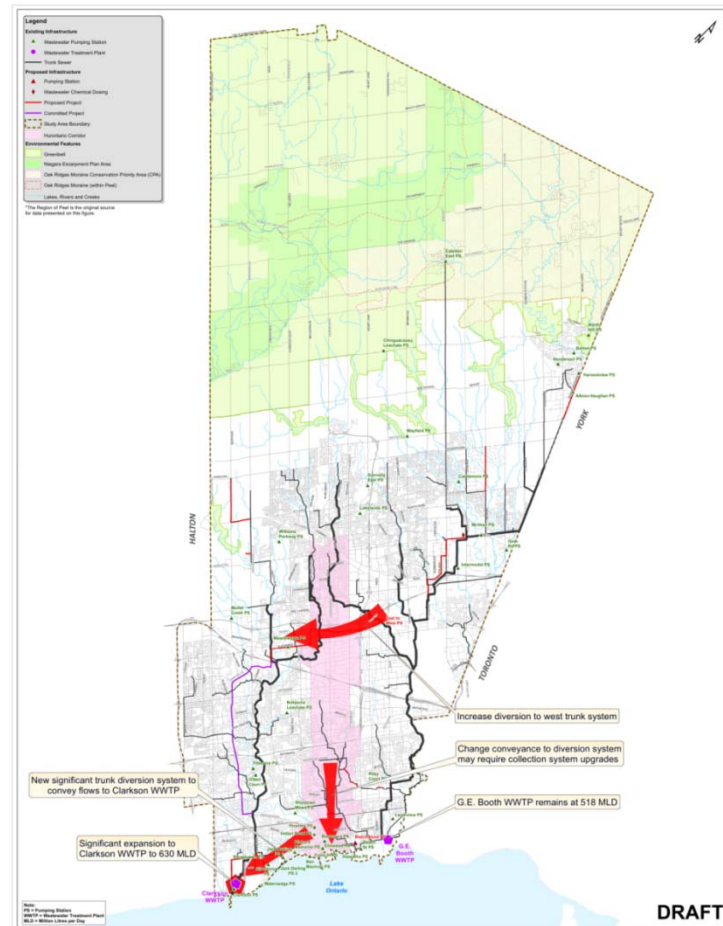
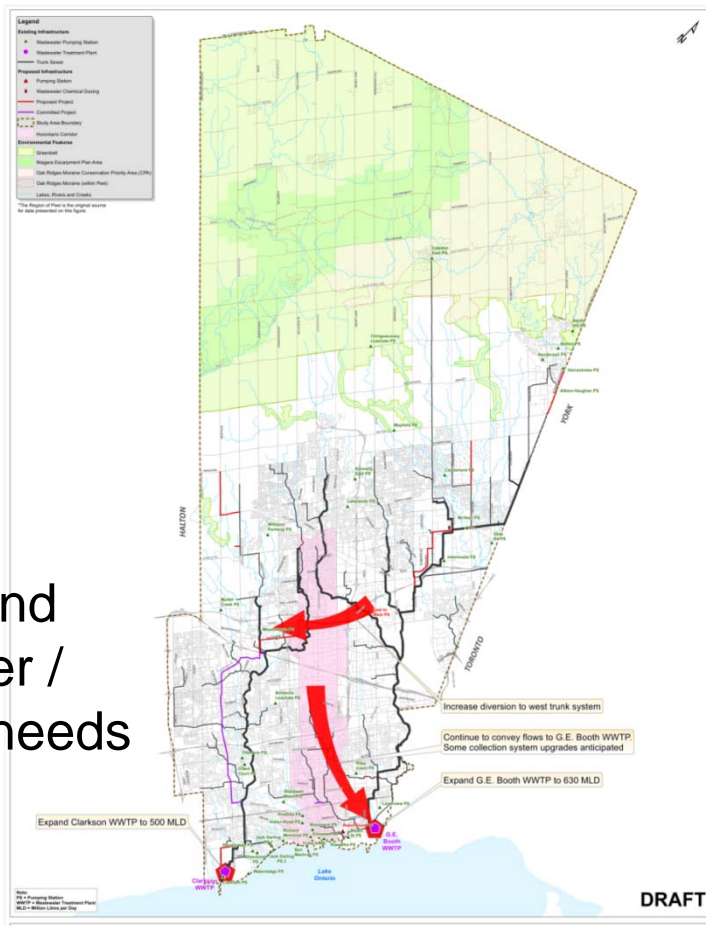
- Depending on the location of the intensification (even varying between corners of an intersection), the impact on the local distribution can vary greatly
- The water program has been accelerated based on the intensification to date. Large sub-trunks are planned or being implemented to support ultimate intensification
- Major trunks are currently being designed to support ultimate intensification
- There will need to be ongoing detailed modeling to confirm impact of intensification – it is anticipated that local distribution improvements will be required
- As the intensification hits a threshold additional plant capacity and intake will be triggered

- Wastewater impact from intensification
- Most of the intensification area flows to the G.E. Booth WPCP



# Potential Post-P2G (2031) Servicing Strategies

- Post P2G (2031) will trigger additional treatment capacity and trunk sewer / diversion needs





## Intensification Comments - Wastewater

- Depending on the location of the intensification (even varying between corners of an intersection), the impact on the local collection system can vary greatly
- Many sub-trunks have capacity in the short term, but will need capacity upgrades in the future
- There will need to be ongoing detailed modeling to confirm impact of intensification – it is anticipated that local sewer improvements will be required
- As the intensification hits a threshold, significant trunk sewer and diversion requirements will be triggered plus additional plant capacity

# Post P2G (2031) Cost Impacts

- **Water**
  - Lakeview WTP capacity expansion and intake
  - Pumping Station and Reservoir expansions
  - Feedermain extensions at the north limits
  - New pumping and storage facilities at the north limits
- **Wastewater**
  - Additional WWTP capacity expansion(s), incineration capacity and outfall upgrades/modifications
  - Major new trunk sewer and additional diversion capacity
  - Trunk sewer twinning
  - Localized sewage pumping stations

# Servicing Considerations Intensification vs Greenfield

	Intensification	Greenfield
<b>Local Systems</b>	<ul style="list-style-type: none"> <li>• Maximize use of existing infrastructure</li> <li>• May require capacity upgrades</li> <li>• Upgrades may be combined with asset management (state of good repair) work</li> <li>• Range of impacts depending on location of intensification</li> </ul>	<ul style="list-style-type: none"> <li>• All new local systems required</li> </ul>
<b>Trunk System Impact</b>	<ul style="list-style-type: none"> <li>• Will trigger treatment plant and intake/outfall upgrades</li> <li>• Impact primarily to south trunk systems</li> </ul>	<ul style="list-style-type: none"> <li>• Will trigger treatment plant and intake/outfall upgrades</li> <li>• Impact to south trunk systems</li> <li>• Impact also to north trunk systems including pipes, pumping stations and storage facilities</li> </ul>
<b>Servicing Costs</b>	<ul style="list-style-type: none"> <li>• Generally higher unit costs due to urban working conditions, traffic management, restoration, utility coordination, etc.</li> <li>• Costs may offset asset management (state of good repair) related costs</li> <li>• Long term operating and maintenance costs not significantly increased (same level of infrastructure)</li> </ul>	<ul style="list-style-type: none"> <li>• Generally lower unit costs due to unobstructed construction and flexible installation timing</li> <li>• No offset for asset management (state of good repair) program</li> <li>• Long term operating and maintenance costs increased (increased level of infrastructure)</li> </ul>
<b>DC Costing Review</b>	<ul style="list-style-type: none"> <li>• Intensification infrastructure costs should be considered growth servicing and DC eligible</li> <li>• Balance for benefit to existing development will be required</li> </ul>	<ul style="list-style-type: none"> <li>• Only trunk infrastructure costs are DC eligible</li> </ul>
<b>Overall Coordination</b>	<ul style="list-style-type: none"> <li>• Continued need to protect for infrastructure alignments and facility sites</li> </ul>	<ul style="list-style-type: none"> <li>• Continued need to protect for infrastructure alignments and facility sites</li> </ul>

# Location of Growth Sensitivity

- As growth extends north, key servicing issues include:
  - Growth may need to be located in new water pressure zones – new pumping and storage facilities would be required
  - Northern limits of the existing systems may not have sufficient capacity to support connections – ie: connection to existing sewers could be a constraint
  - Regardless of location, a minimum level of trunk capacity upgrades including treatment capacity expansion will be required

# Other Servicing Considerations

## Existing Infrastructure / Utility Impact

- As corridors evolve and intensify and community improvements are implemented (LRT/BRT), there is potential for significant infrastructure and utility relocation.
- It is difficult to provide the details at this time, but impacts are being considered and analyses are underway.

# Thank You



# *Growing Where We Invest*

*Region of Peel Growth Management Workshop*



## **Financial Considerations of Future Growth**

**Norma Trim  
Chief Financial Officer and  
Commissioner Corporate Services  
May 30, 2013**

# Growth Management Principles

- Growth guided by and conforms to Regional Official Plan to 2031
- Growth pays for growth to the fullest extent under *DC Act* - minimize impact on existing taxpayers
- Infrastructure to be provided in a way that maximizes efficient delivery and minimizes impact on communities
- Debt to be issued for growth infrastructure leveraging Region's high credit rating, but not to the extent of compromising its high credit rating



# DC By-law – Pending Actions

- CFO provided with authority to:
  - Monitor closely DC finances and report annually through Capital Budget process
  - Update DC by-law if 20% threshold exceeded
  - Undertake review of employment to further inform Regional service planning and future DCs
    - Collaborate with area municipalities
    - Development industry involvement

# Development Cost Pressures and Risks

- Escalating costs to Capital Plan
  - Externally mandated environmental standards (Province/EAs)
  - Long Term Master Servicing Plans
- Financing costs re: debt repayment
  - Impacting \$2.6 Billion of debt to be issued
- Cost of infrastructure to support additional population

# Extended Horizon Impact on DCs

- DC rates to be updated to reflect additional population and employment (to 2041) and related infrastructure costs
- Must determine additional infrastructure and cost required to support new population/employment:

$$\text{DC Rates} = \frac{\text{Infrastructure Costs}}{\text{Population / GFA}}$$

# Location of Additional Growth – Financial Considerations

- Expansion of capacity in highly urbanized areas likely to involve replacement of useful assets resulting in DC deduction for ‘benefits to existing development’
  - Infrastructure planned for upgrades and/or replacement could be an opportunity for coordination

# Location of Additional Growth – Financial Considerations (cont'd)

- Generally, infrastructure construction (over short-term) in highly urbanized areas may be more costly vs. green field locations
- Benefits to be gained in lower operating costs (over long-term) for some services in highly urbanized areas vs. green field locations (same level of infrastructure vs. more infrastructure)
- Growth and State of Good Repair (SOGR) costs need to be looked at in an integrated way
- Taxpayers to fund DC incentives or discounts