
DRAFT Water & Wastewater and Transportation Master Plan Updates

Presentation to
Special Council Meeting

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May 28, 2009

Draft W & WW and Transportation Master Plans

Overview

- ❑ Integrated study process
- ❑ Water & Wastewater MP highlights
- ❑ Transportation MP highlights
- ❑ Next steps

Integration, collaboration and coordination of Regional studies



Integration, collaboration and coordination of Regional studies

Common Themes

- ❑ Integration & coordination
- ❑ Sustainable development focussed
- ❑ Extensive consultation/liaison

Some Major Steps To Get Here

- ❑ Developed Sustainability Principles to guide the Master Plan studies
- ❑ Analyzed population projections and future land-use scenarios
- ❑ Produced several Issue Papers addressing infrastructure challenges & opportunities
- ❑ Analyzed preferred growth scenario
- ❑ Identified and assessed alternative solutions

Comprehensive Consultation Program

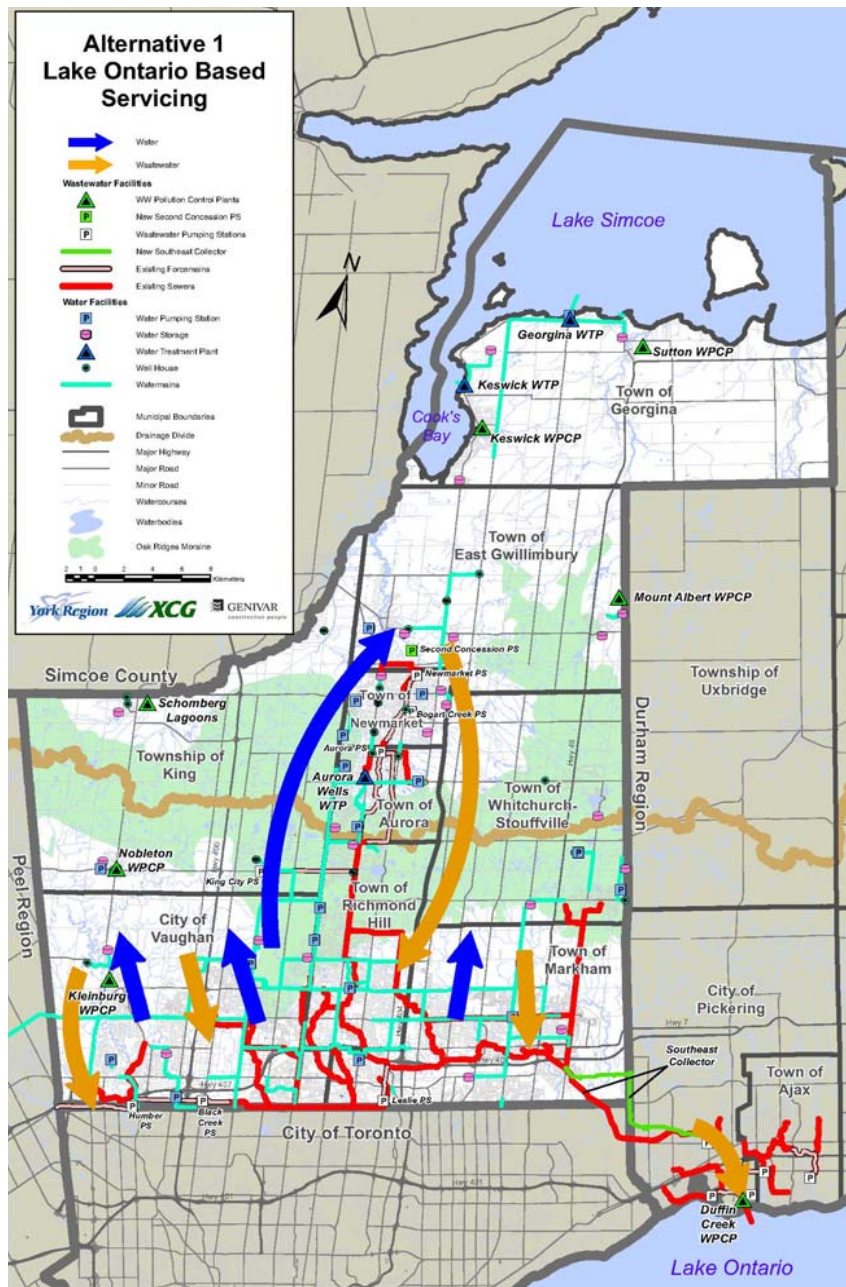
- ❑ Held three rounds of interactive public workshops in locations throughout York
- ❑ Conducted comprehensive consultation program engaging local municipalities and other stakeholders
- ❑ Participated in stakeholder workshops discussing sustainability principles
- ❑ Held two symposiums with community leaders, area agencies
- ❑ Produced three newsletters
- ❑ Developed comprehensive project websites

Draft Water & Wastewater Master Plan Update

Objectives of this Water & Wastewater Master Plan (WWMP) Update

- ☐ Estimate York Region's water and wastewater needs for the next 40 to 50 years for all 9 municipalities
- ☐ Master Plan process address Phases 1 and 2 of project Class EAs
- ☐ Confirm or modify projects of existing Master Plan
- ☐ Estimate the cost of the infrastructure needed to accommodate forecasted growth
- ☐ Address the Region's servicing demands while providing solutions that protect the natural environment
- ☐ Establish a high level Implementation Plan for the Capital Works Program

Alternative 1 Lake Ontario Based Servicing

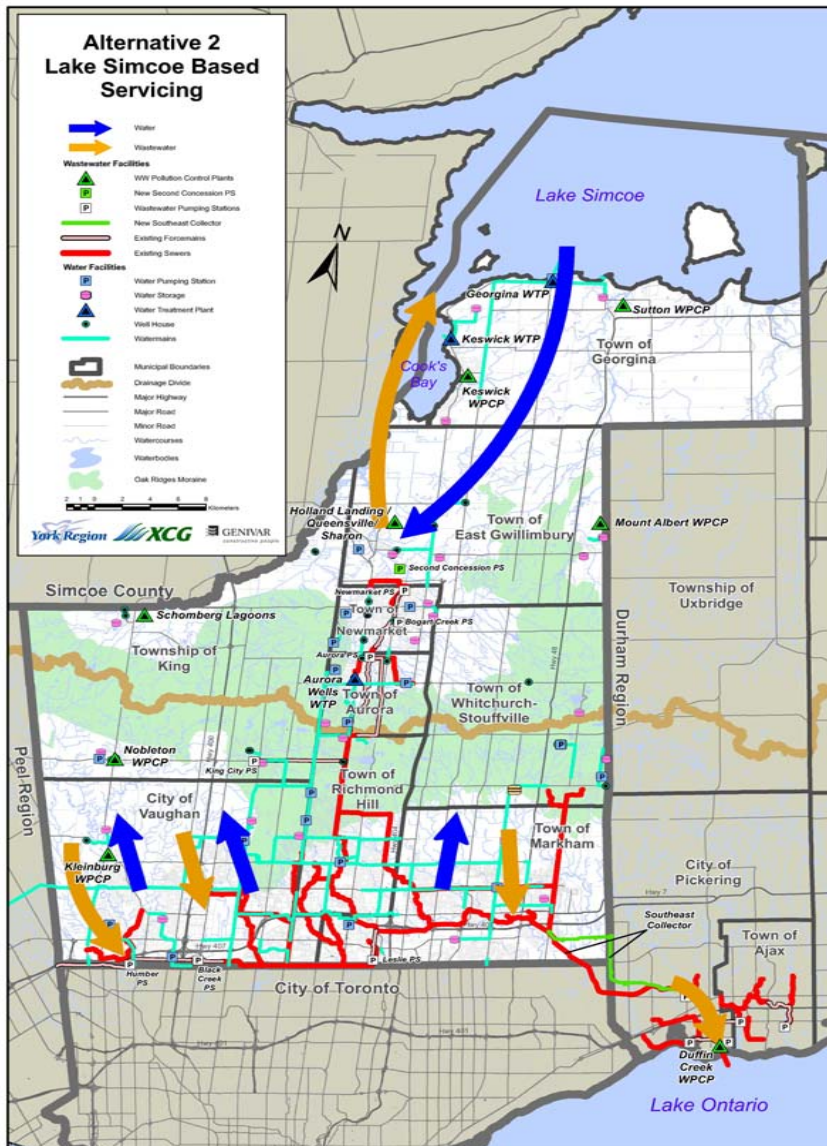


Alternative 1 Lake Ontario Based Servicing

- Current groundwater well supply will be maintained
- All additional water supply will come from Lake Ontario by way of the York Water System to service the communities of Aurora, Newmarket, East Gwillimbury, Kleinburg and King City
- Lake Simcoe will supply water and receive wastewater for Georgina
- Small Urban communities remain on local systems
- The York Durham Sewage System (YDSS) will be extended to East Gwillimbury
- Enhanced water efficiency and inflow/infiltration reduction/prevention

Alternative 2

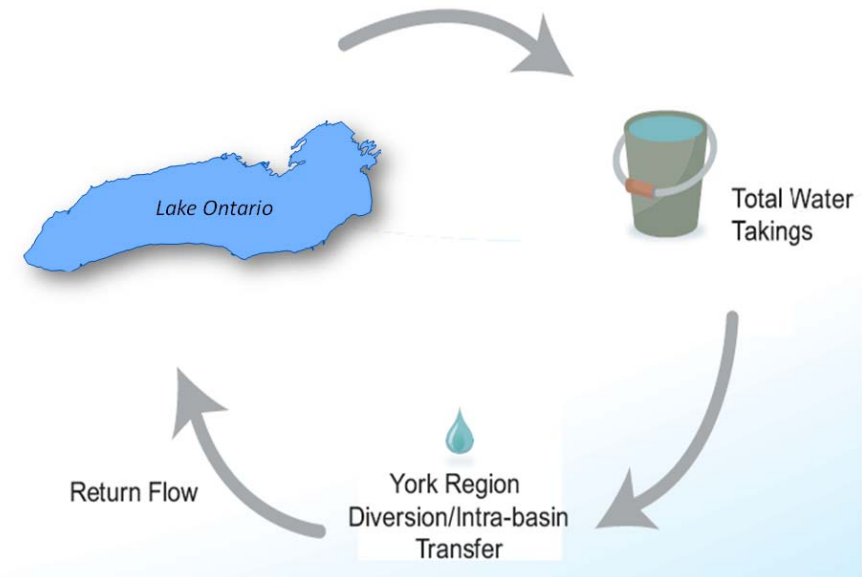
Lake Simcoe Based Servicing



- Current groundwater well supply will be maintained
- Additional water supply will come from Lake Ontario by way of the York Water System to service the communities of Aurora, Newmarket, Kleinburg and King City
- Lake Simcoe will supply water and receive wastewater for Georgina
- Small Urban communities remain on local systems
- Enhanced water efficiency and inflow/infiltration reduction/prevention
- Additional water supply for northern York Region will be from Lake Simcoe
- Northern York Region wastewater will be directed to Lake Simcoe by way of discharging treated effluent by extending an outfall into Lake Simcoe

Major Findings and Recommendations

- ❑ Lake Ontario based servicing (Alternative 1) most sustainable long term solution
 - ❑ Supports the Great Lakes water balance by returning flow to Lake Ontario; and,
 - ❑ Protects Lake Simcoe in accordance with Lake Simcoe Protection Act



Major Findings and Recommendations

- ❑ Projects in existing Master Plan
 - ❑ Majority of planned projects confirmed
 - ❑ Some projects altered or expanded to meet Growth Plan targets

- ❑ Major new infrastructure
 - ❑ To meet Growth Plan and forecasts to 2051
 - ❑ New infrastructure to support development in the future urban areas of north Markham, north Vaughan, and northern York Region
 - ❑ Primary Trunk Second Pipe (new outlet sewer for the YDSS)

Major Findings and Recommendations

Implementation of the following:

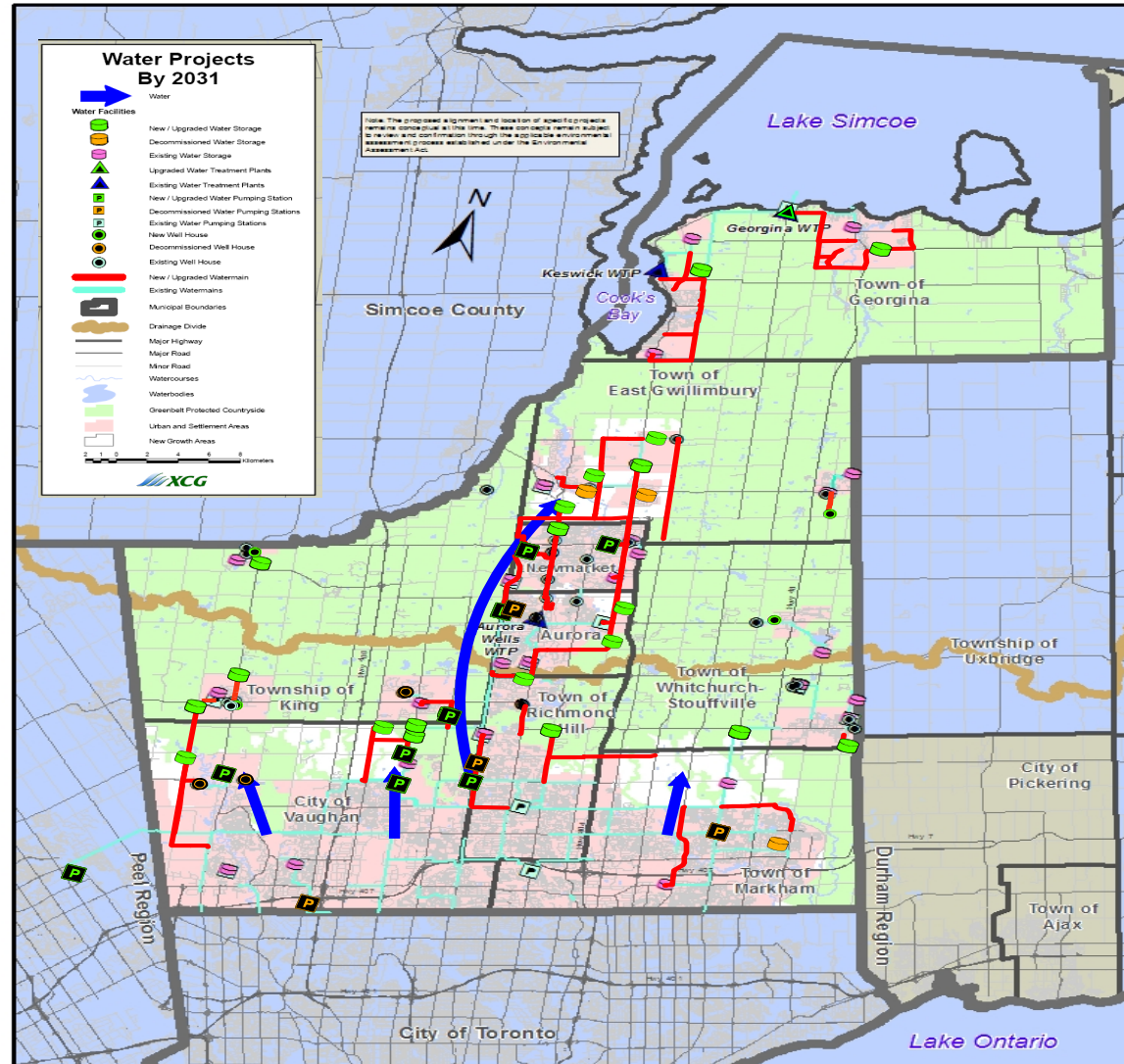
- ☐ 160 km of trunk watermains
- ☐ 12 water pumping stations and 22 water storage facilities
- ☐ 50 km of trunk sewers and forcemains
- ☐ 4 wastewater pumping stations, 1 wastewater treatment plant
- ☐ Expansion and/or upgrade of 8 wastewater treatment facilities
- ☐ Twin the Primary Trunk
- ☐ Cost shared water infrastructure in Peel and Toronto including expansion of 2 water treatment plants

Major Findings and Recommendations

51 recommendations for Policies and Programs for Sustainable Water & Wastewater Servicing

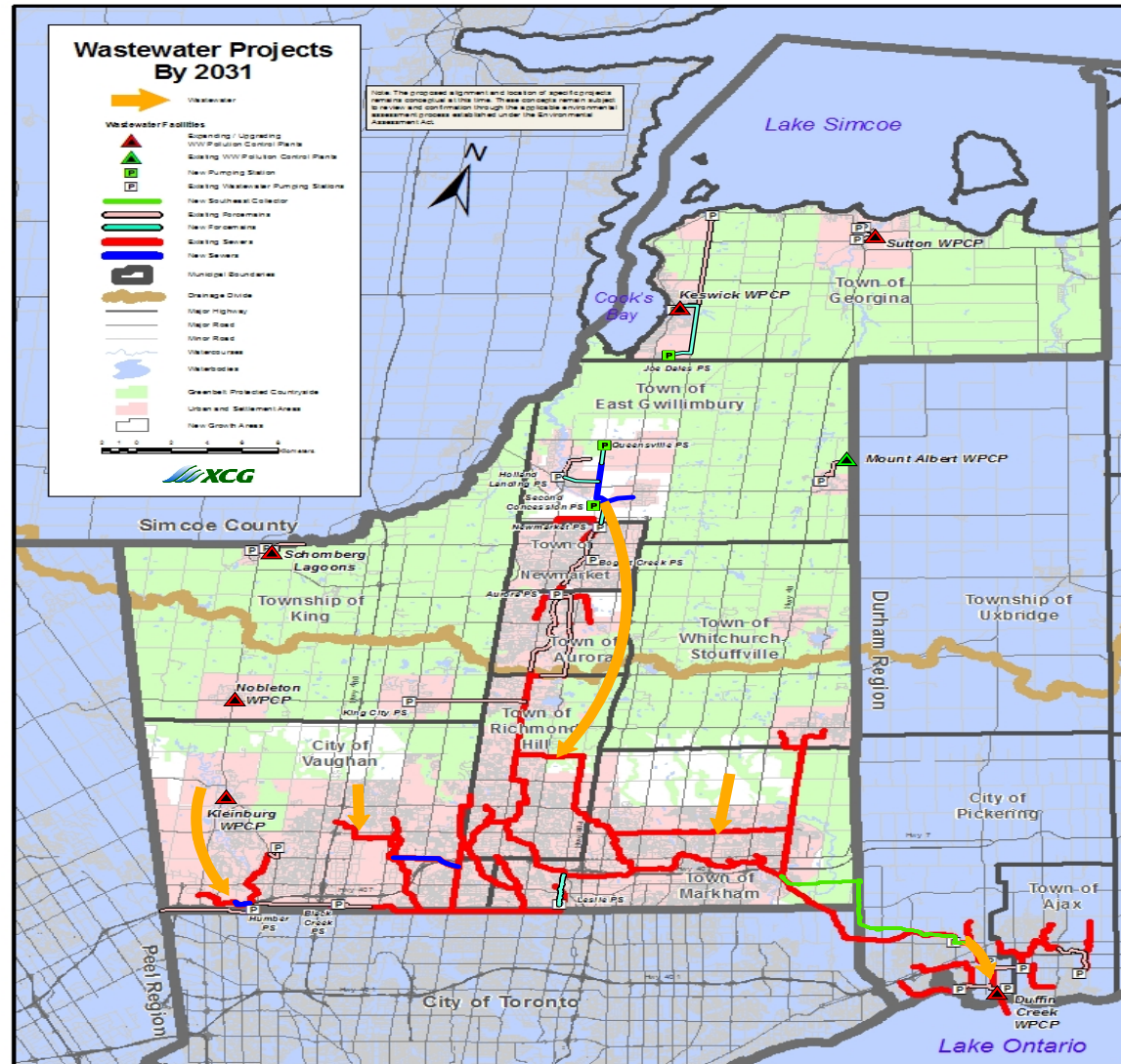
- ❑ Regional Official Plan Policies
- ❑ Safe and Clean Drinking Water
- ❑ Wise Use of Water for today and the future
- ❑ Reliable W & WW servicing for Community Well-being and Economic Vitality
- ❑ Communications, Consultation and Engagement
- ❑ Healthy Watersheds
- ❑ Respect for Natural and Cultural Heritage
- ❑ Climate Change and Energy Efficiency
- ❑ Full and Equitable Funding and Value-for-Money
- ❑ Timely and Integrated Service Delivery
- ❑ Monitoring Performance and Adaptive Management

Water Projects by 2031



Capital Works:
\$1.4 B

Wastewater Projects by 2031



Capital Works:
\$2.2 B

5 Year Action Plan – Key Actions

- ❑ Apply for increase in intra-basin transfer under Great Lakes Charter
- ❑ Peel Region – Explore additional wastewater treatment
- ❑ Priority Wastewater Projects
 - ❑ Leslie Street Pumping Station Upgrade
 - ❑ Upper York Sewage Solutions (UYSS)
 - ❑ Bogart Creek PS new sewer to UYSS
 - ❑ Newmarket PS new forcemain to UYSS
 - ❑ Southeast Collector Sewer - Second Pipe
 - ❑ Duffin Creek WPCP Stage 3 Pumping Station
 - ❑ Primary Trunk Sewer, Second Pipe – Initiate Class EA study
- ❑ Priority Water Projects
 - ❑ Pumping Stations - West Richmond Hill, Orchard Heights
 - ❑ Watermains - Bathurst St, Yonge St, Wellington St/Leslie St
- ❑ Enhance Water Efficiency Program (Water for Tomorrow)
- ❑ Continue Infiltration/ Inflow Reduction/Prevention Program
- ❑ Develop an overall Climate Change Strategy

Estimated Cost of Water Capital Works

Facilities	2031 Cost	2051 Cost
Watermains	\$ 313 M	\$ 313 M
Pumping Stations	\$ 48 M	\$ 73 M
Storage	\$ 271 M	\$ 279 M
Supply & Treatment (includes External Works*)	\$ 767 M	\$ 787 M
Decommissioning	\$ 9 M	\$ 9 M
Programs & Initiatives	\$ 108 M	\$ 198 M
Assessment, Planning & Enhancement	\$ 165 M	\$ 309 M
Rehab & Replacement	\$ 215 M	\$ 433 M
TOTAL	\$1,896 M	\$ 2,401 M

* Agreement costs with Toronto/Peel to 2036

Estimated Cost of Wastewater Capital Works

Facilities	2031 Cost	2051 Cost
Sewers/Forcemains	\$ 1,493 M	\$ 1,493 M
Pumping Stations	\$ 51 M	\$ 51 M
Treatment	\$ 501 M	\$ 1,043 M
Outfalls	\$ 73 M	\$ 73 M
External Costs	\$ 45 M	\$ 45 M
Assessment, Planning & Enhancement	\$ 193 M	\$ 361 M
Rehab & Replacement	\$ 509 M	\$ 1,139 M
TOTAL	\$ 2,865 M	\$ 4,205 M

Draft Transportation Master Plan Update

Objectives of this Transportation Master Plan (TMP) Update

- ❑ Updates 2002 TMP transit and road networks
- ❑ Prioritize short, medium and long-term transportation goals through 2031
- ❑ Identify policy and program needs
- ❑ Master Plan process address Phases 1 and 2 of project Class EAs



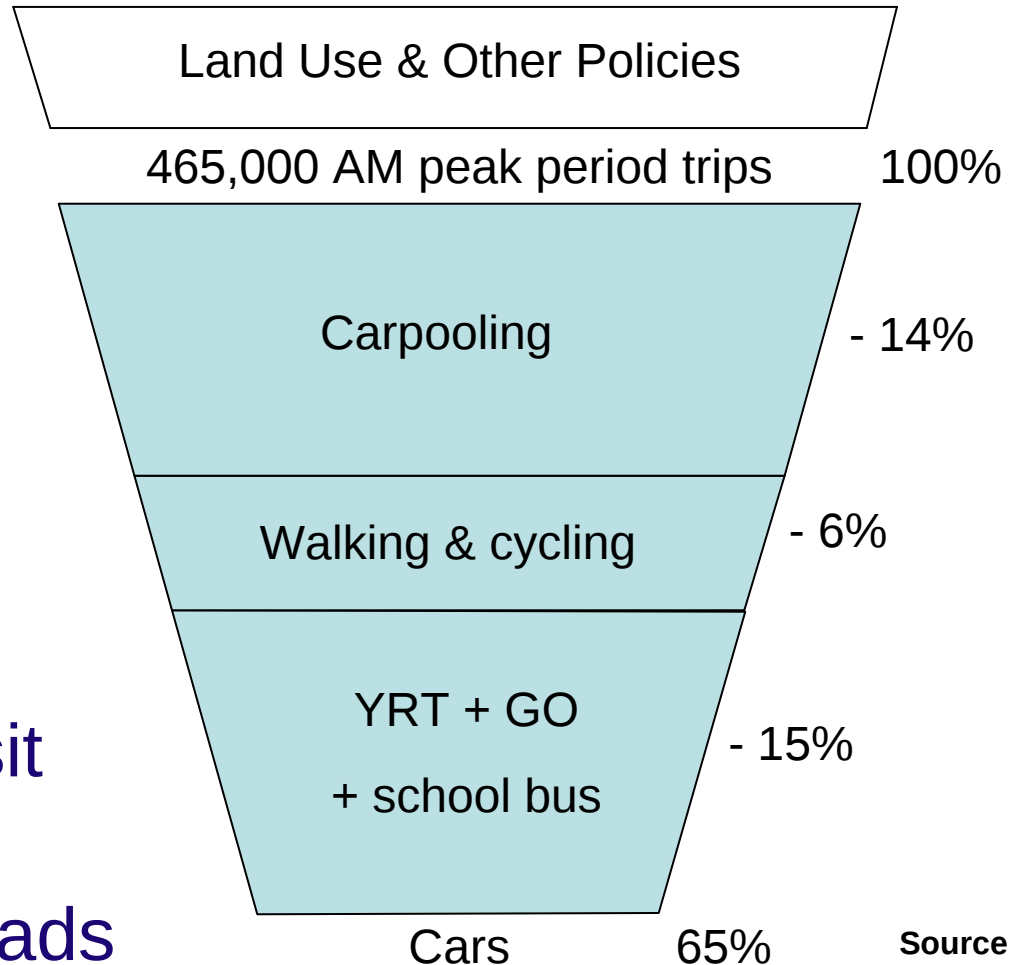
Sustainable Transportation Planning Approach

❑ Reduce need to travel

❑ Alternative modes

❑ Public transit

❑ Optimize Roads



Source: 2006 TTS

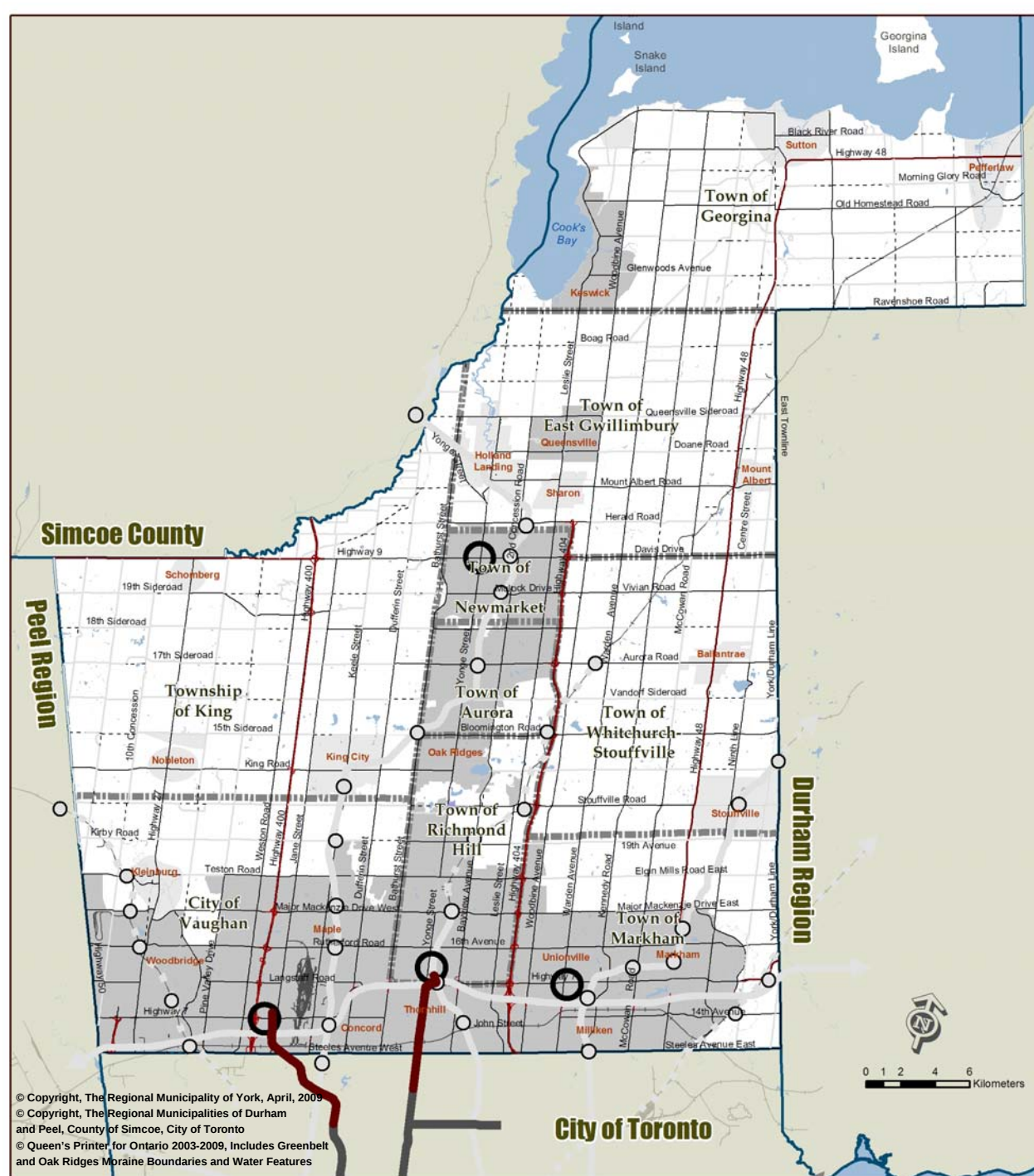
Major Findings and Recommendations

- ❑ Projects in the 2002 Master Plan
 - ❑ Majority of planned rapid transit network projects confirmed
 - ❑ Some road projects altered to support transit and alternative modes
 - ❑ Road widenings limited to new growth areas
- ❑ Major new infrastructure
 - ❑ More rapid transit lines and transit priority improvements
 - ❑ Highway extensions with transit service, connections with GO, TTC, and adjacent municipalities
 - ❑ Mid-block collectors and missing links to move people and goods

GO Rail and Highway 407 Transitway

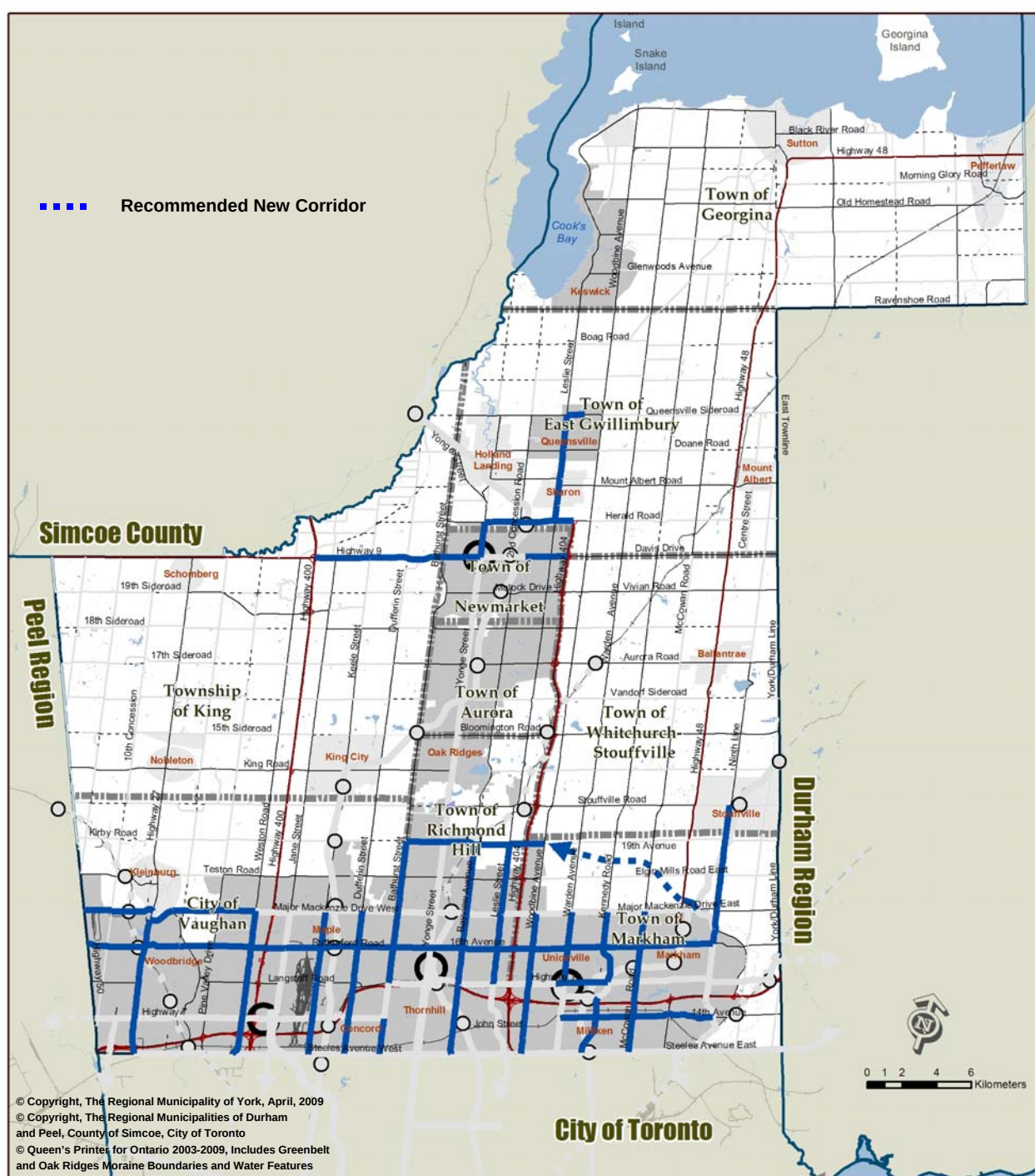


Subway Extensions





Transit Priority Corridors



Rural and Highway Transit Service



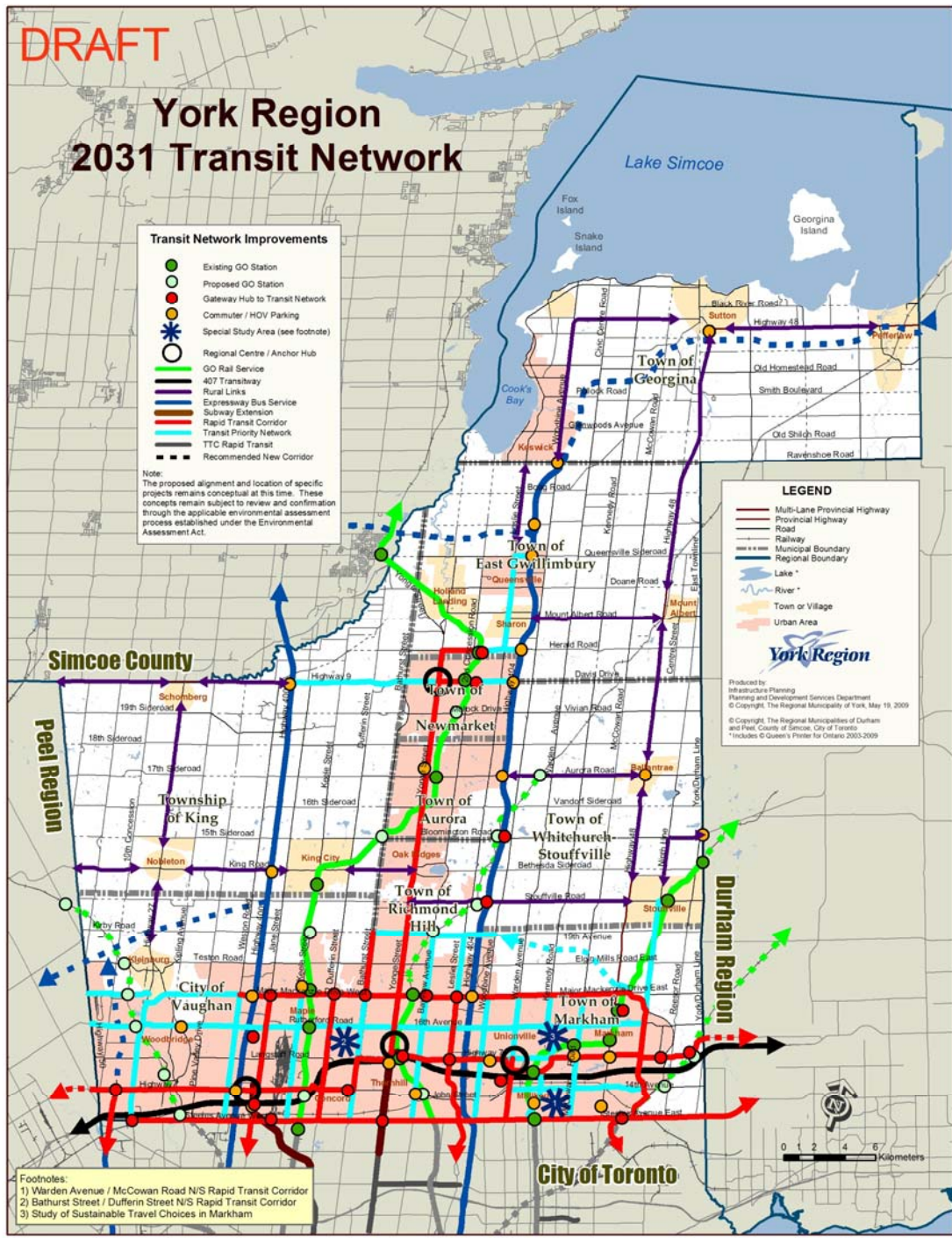
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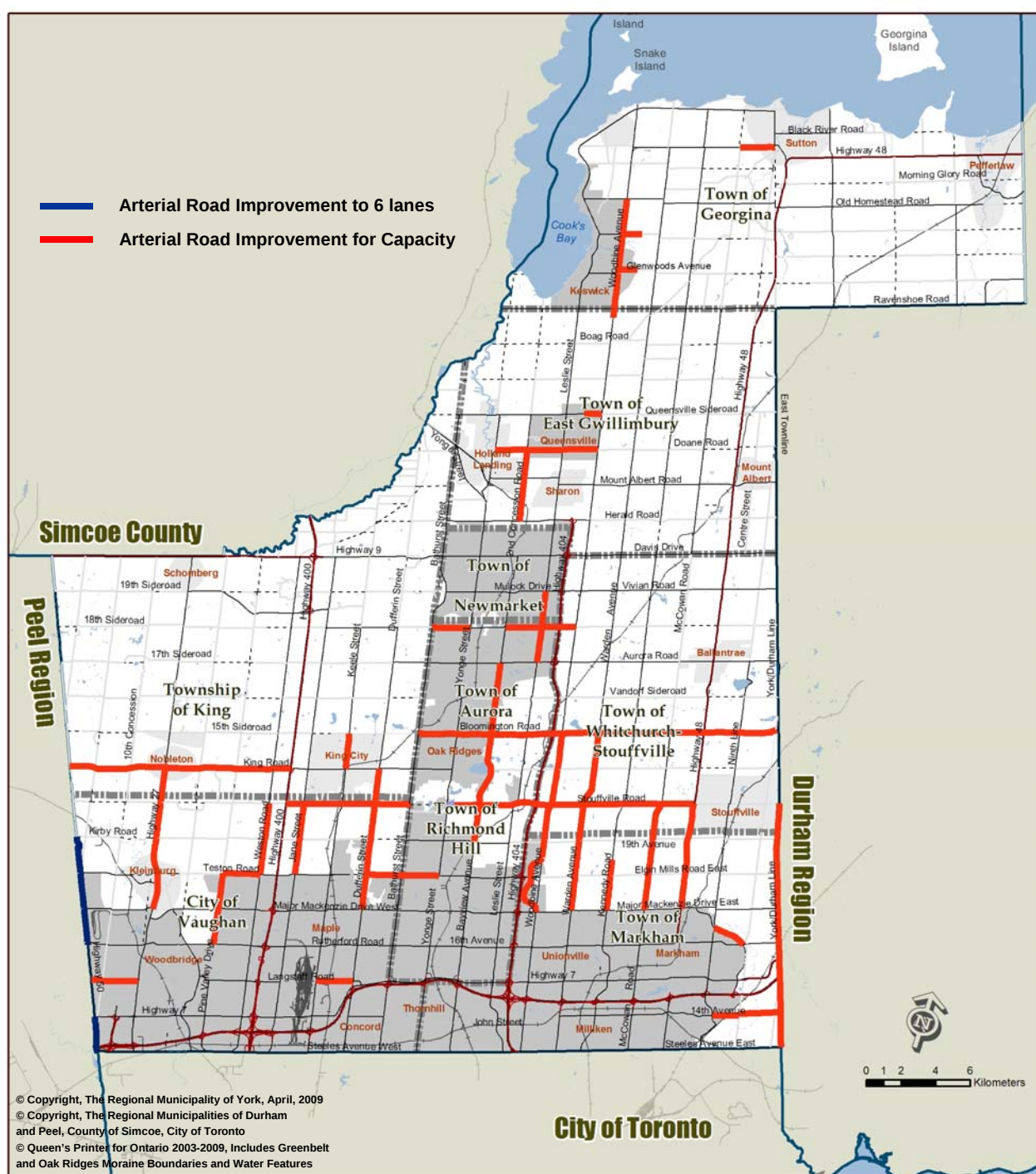
York Region 2031 Transit Network

DRAFT Recommended
2031 Transit Network

Total Cost = \$12.5B

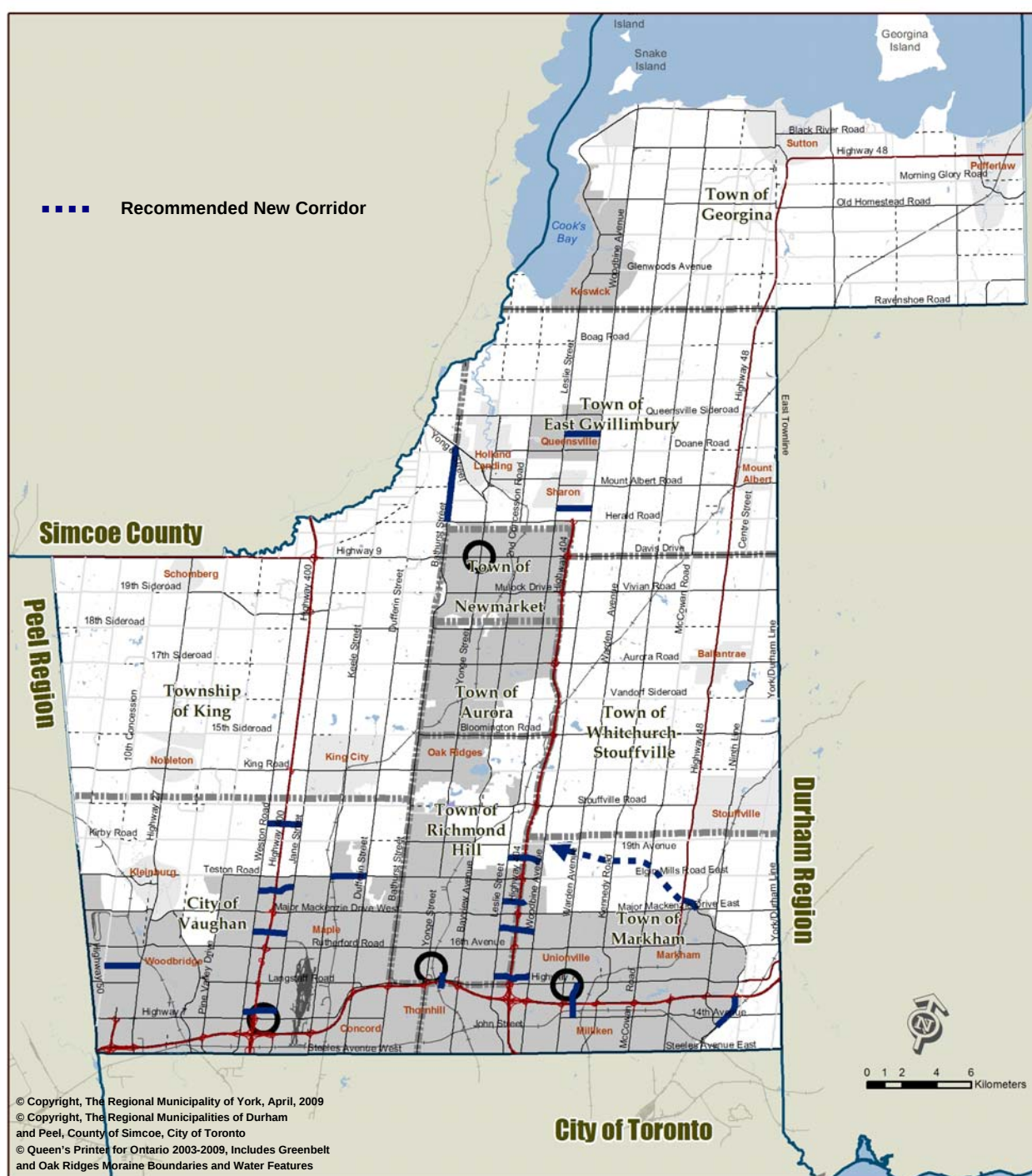


Arterial Road Improvements for Capacity

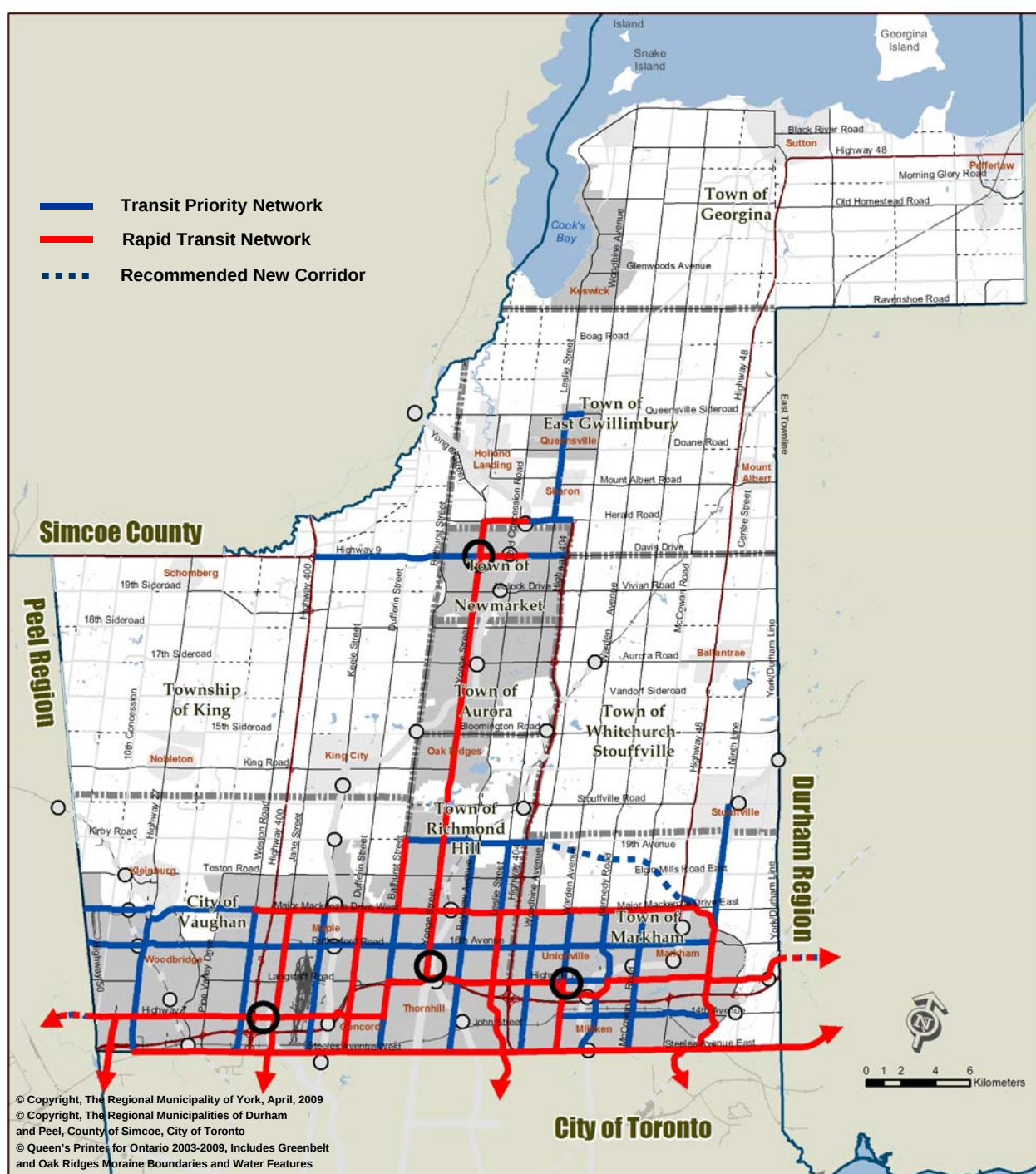


..... Recommended New Corridor

New local / Regional Roads



Road Improvements for Transit Priority

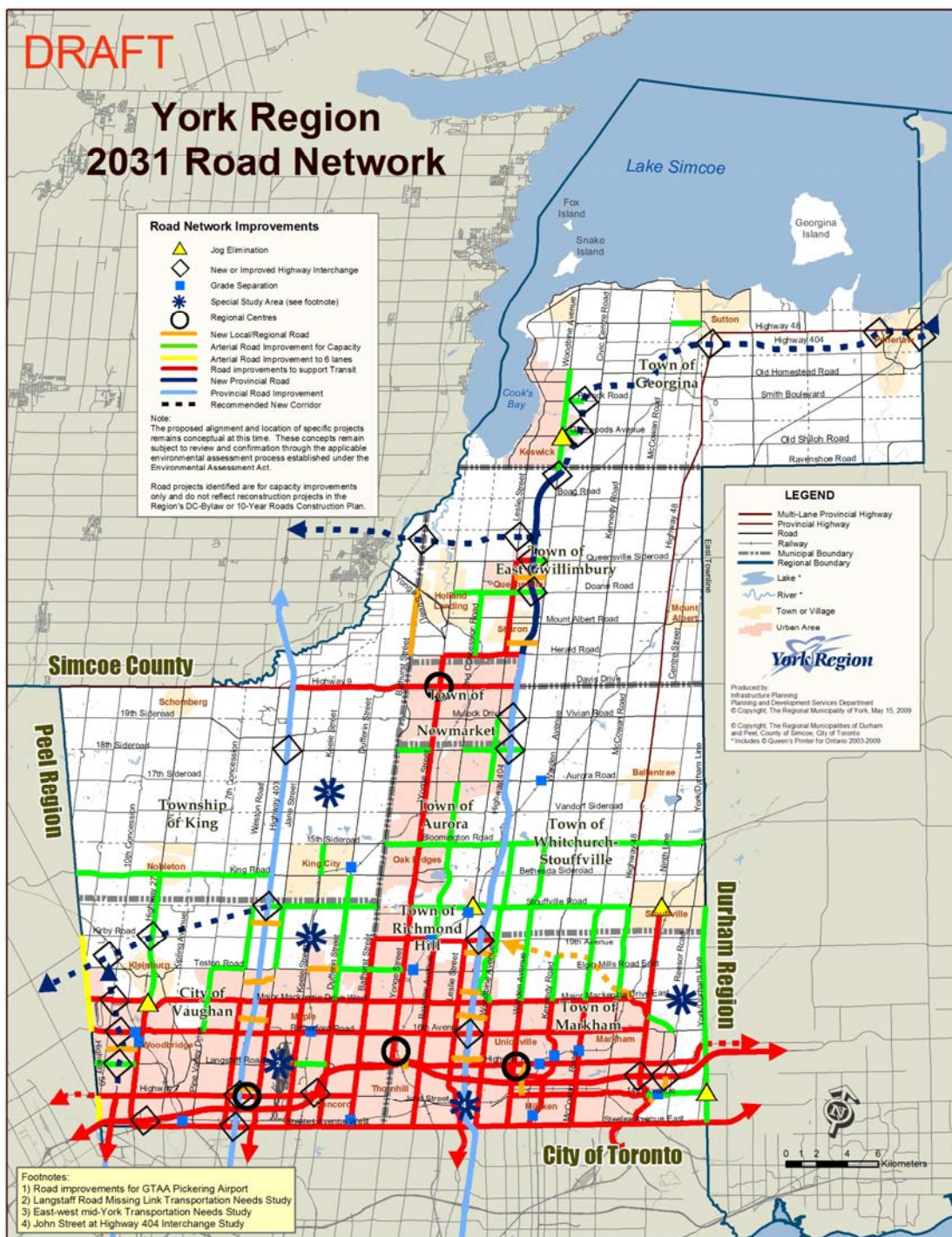


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York Region 2031 Road Network



DRAFT Recommended 2031 Road Network



Total Cost = \$2.5B

Policy Groups

Full policy/program framework includes about 100 recommendations

1. Reduce need to travel

- ☐ Land use planning
- ☐ Transit oriented development
- ☐ Travel demand management

2. Alternative modes

- ☐ Cycling and pedestrians
- ☐ Parking management/policies
- ☐ Collaboration and partnering
- ☐ Marketing and education

3. Transit

- ☐ Funding
- ☐ ITS applications

4. Roads

- ☐ Optimize road network
- ☐ Integrated ITS Strategy
- ☐ Goods movement
- ☐ Environmental protection



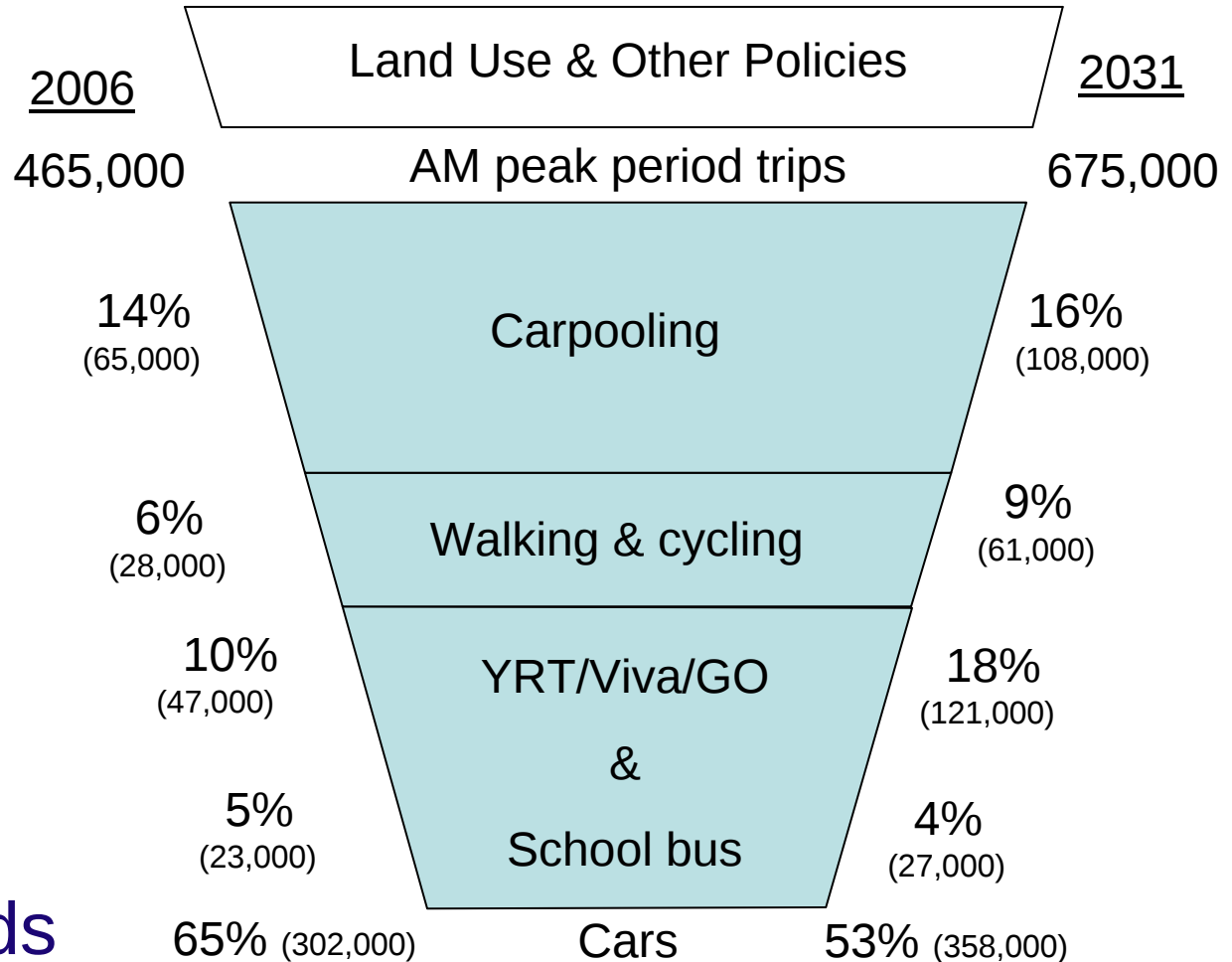
2031 Modal Shift

❑ Reduce need to travel

❑ Alternative modes

❑ Public transit

❑ Optimize Roads



5-Year Action Plan – Key Actions

- ❑ Yonge subway - continue to work with Metrolinx, Province and Feds
- ❑ Complete special area studies (e.g. Markham N-S link, mid-York Corridor)
- ❑ Bradford Bypass – work with Metrolinx and Province to include in Provincial plans
- ❑ Integration and implementation of ITS Strategy
- ❑ Implement sustainable and active transportation plans and policies
- ❑ Push for Hwy 427 ext & 400/404 improvements

TMP is Part of GTHA Network Plan

- ❑ TMP recommendations conform with Metrolinx's Big Move
- ❑ Consistent with GO Transit's 2020 Strategic Plan
- ❑ Consistent with TTC's Transit City Plan
- ❑ TMP provides more details on York Region needs

Estimated 2031 TMP Costs

	COSTS (Millions) ¹
	Capital
REGIONAL TRANSIT	
Infrastructure Expansion ²	12,500
Rehab/replacement	2,150
Subtotal	14,650
REGIONAL ROADS	
Infrastructure Expansion ³	2,540
Rehab/replacement	1,000
Subtotal	3,540
PROGRAMS & INITIATIVES	150
TOTAL	18,340

Footnotes:

1. In 2008 Dollars
2. Exclude GO Rail improvements
3. Exclude Provincial highway and interchange improvements

Next Steps for the Master Plans

- ❑ File Draft Master Plans for minimum 30-day public review
- ❑ Consult with stakeholders as necessary
- ❑ Receive comments by September 30
- ❑ Staff to report back with final Master Plans in Fall 2009
- ❑ Prepare infrastructure components for next DC Bylaw update

2031 Cost Estimates for the Master Plans

Infrastructure	Water	Wastewater	Transit	Roads
Capital Expansion	\$1.4B	\$2.2B	\$12.5B	\$2.5B
Rehab / Replacement	\$215M	\$509M	\$2.2B	\$1.0B
Programs / Initiatives / Planning	\$273M	\$193M		\$ 150M
TOTAL	\$1.9B	\$2.9B	\$14.7B	\$3.7B