

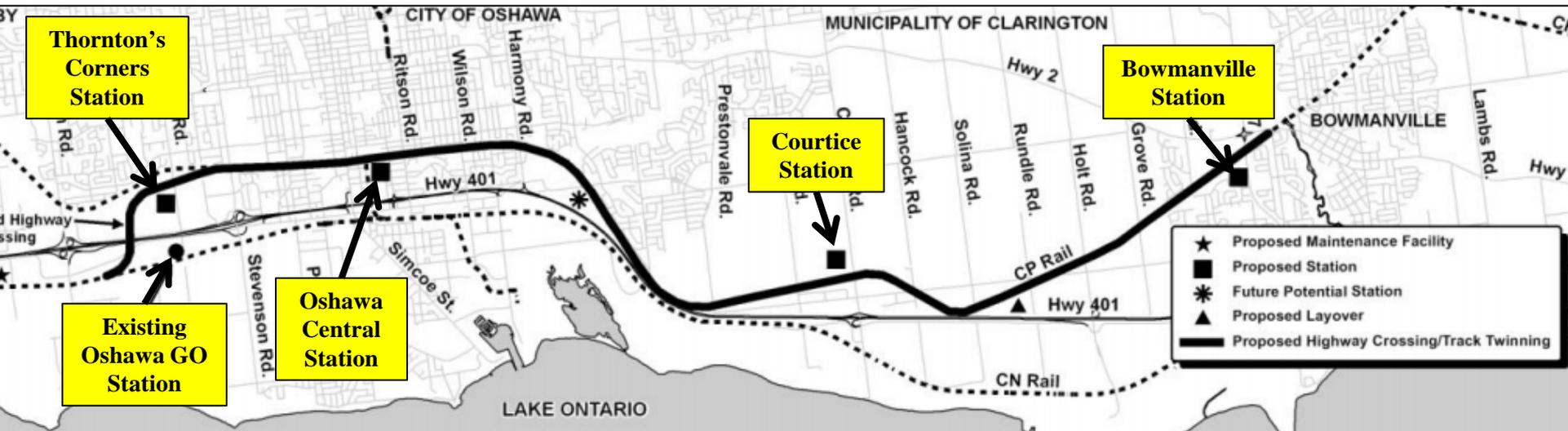
# GO Train Lakeshore East Extension through Central Oshawa to Bowmanville

## Economic Impact Analysis

Executive Report  
April 2016

# The Project

- 25 km extension of GO train service through central Oshawa to Bowmanville
- GO line crosses over Hwy 401 just east of Thickson Road to CP rail line, putting the service close to the jobs
- Four new GO train stations:
  - Oshawa: Thornton's Corners and Central Oshawa
  - Clarington: Courtice and Bowmanville



# What are the key impacts of extending the GO Train through Central Oshawa to Bowmanville? \*

The key impacts are delivering the goals set out in the latest Provincial Budget:

## *Jobs for Today and Tomorrow*



- 21,000 new permanent jobs
- 6,000 person-years in construction of project

## *Building Prosperity*



- Puts 170,000 additional working age pop within an hour of Downtown Bowmanville
- 74,000 additional for Downtown Oshawa = \$1.1B in urban development potential;

## *Fostering a More Innovative and Dynamic Business Environment*



- Goes to purpose of dLAB, enables entrepreneurship and productivity gains
- Optimizes Durham nuclear, IT, finance & insurance, health expertise labour pool

## *Investing in a Low-Carbon Economy*



- Trains replacing 50 million km/yr of car travel
- Efficient new buildings
- UOIT research

\* Source of slide: client team

# What are the key impacts of extending the GO Train through Central Oshawa to Bowmanville? (cont.) \*

The key impacts are delivering the goals set out in the latest Provincial Budget:

## ***Building Tomorrow's Infrastructure Now***



- Seamless, connected transportation to realize Growth Plan goals

## ***Investing in People's Talents and Skills***



- Puts growing postsecondary in easy reach
- Recognizes the talented labour pool in Durham

## ***Making Everyday Life Easier***



- More jobs closer to home
- More affordable living
- Cut commute time by up to ½; 6,000 homes created in walking distance of GO

\* **Source of slide: client team**

# Background

- Initiative for Economic Impact Analysis came from a diverse range of public and private sector community leaders;
- Recognized need to re-frame the problem and the discussion – locally and provincially:
  - not about a way to get people to jobs outside of Durham
  - about getting jobs here
  - transit infrastructure is an enabler of economic investment, competitiveness and productivity
- Province approved Environmental Assessment in 2011.

# Defining the Problem

## Key Findings:

- Imbalance between jobs available in the Region and the number of jobs held by Durham residents.
- Improved transportation infrastructure at planned employment hubs (dLAB, Downtown Oshawa, Courtice GO station, Clarington Energy Business Park and Bowmanville) could help stimulate business and job growth in Durham Region.

## Comparison of Commuting Residents to Jobs Available in Municipalities, 2011

	Employed Residents with Usual Places of Work	Usual Places of Work in Municipality	Net Outflow / (Inflow) of Residents for Usual Places of Work	Jobs in Municipality as % of Workers in Municipality
		<i>Jobs</i>		<i>Percent</i>
Pickering	38,370	29,670	8,700	77.3%
Ajax	48,625	24,045	24,580	49.4%
Whitby	52,490	33,945	18,545	64.7%
Oshawa	58,720	51,505	7,215	87.7%
Clarington	36,200	16,965	19,235	46.9%
Scugog	8,540	5,900	2,640	69.1%
Uxbridge	8,430	5,390	3,040	63.9%
Brock	4,160	2,750	1,410	66.1%
<b>Total Durham Region</b>	<b>255,535</b>	<b>170,170</b>	<b>85,365</b>	<b>66.6%</b>
Halton Region	218,470	188,225	30,245	86.2%
Peel Region	541,585	542,890	(1,305)	100.2%
York Region	426,640	388,170	38,470	91.0%
Toronto	1,034,130	1,291,050	(256,920)	124.8%
Hamilton	201,850	178,810	23,040	88.6%

Source: Altus Group Economic Consulting based on Statistics Canada, 2011 National Household Survey

- Durham Region needs to roughly double its pace of employment growth over 2011-2041 period to meet Growth Plan forecasts
- Durham has 67 jobs at workplaces in Durham Region for every 100 employed Durham residents (lowest in Greater Toronto & Hamilton Area)
- As manufacturing and goods-producing sectors decline, Durham will need to place increasing emphasis on service-producing sectors
- These service-producing sectors benefit from access to transit, to enable them to attract and retain talent, and maximize access to customers and clients.
- Clarington and Oshawa account for 30% of the Region's forecasted employment growth.

# Study Scenarios

The analysis assumes two scenarios:

- **Scenario 1:** Westbound peak service in a.m. and eastbound in the p.m.
- **Scenario 2:** Two-way, all day, four trains per hour service to Bowmanville

# Four Questions We Set out to Answer

Under each scenario, we asked:

1. How many more people could easily access Oshawa and Bowmanville?
2. What lands are available for (re)development around the 4 new stations?
3. What would the net result be of such investment?
4. What other impacts could be expected?

Here's what we found as the answers...

# 1.1 Access to Jobs

## Key Findings:

- Positive impact on access to jobs projected to 2026 within the 60 minute transit catchment of the Downtown Oshawa and Bowmanville GO stations.
- For Oshawa, small impact with Scenario 1 with around 5,000 additional jobs but significant impact of 28,000 additional jobs with Scenario 2.
- For Bowmanville, very significant impact with both Scenario 1 and 2 with approximately 78,000 to 125,000 additional jobs within 60 minutes.
- Potential to deeply alter travel behavior in Durham Region by reducing car dependency.

Transit Travel Time	Downtown Oshawa			Bowmanville GO		
	Base	Scenario 1	Scenario 2	Base	Scenario 1	Scenario 2
0-15	6,200	6,200	6,200	2,400	2,400	2,400
15-30	29,800	30,500	30,500	0	0	0
30-45	94,300	93,600	94,600	2,400	2,500	11,300
45-60	68,000	73,100	95,300	4,900	82,700	120,500
<b>TOTAL</b>	<i>198,300</i>	<i>203,400</i>	<i>226,600</i>	<i>9,700</i>	<i>87,600</i>	<i>134,200</i>
Change over base		<b>+5,100</b>	<b>+28,300</b>		<b>+77,900</b>	<b>+124,500</b>

# 1.2 Access to Workforce

## Key Findings:

- Positive impact on access to population of working age (20-65) within 60 minutes transit time of Downtown Oshawa ranging from an additional 20,000 people (Scenario 1) to 74,000 (Scenario 2).
- Substantial impact for Bowmanville ranging from an additional 80,000 to 170,000 people.
- This should be contrasted with the Base scenario value of approximately 24,000.
- The large increase in the available workforce enabled by the GO east extension should help make Durham Region a more attractive destination for new employers.

Transit Travel Time	Downtown Oshawa			Bowmanville GO		
	Base	Scenario 1	Scenario 2	Base	Scenario 1	Scenario 2
0-15	2,400	2,400	2,400	6,000	7,300	7,300
15-30	26,600	27,200	27,200	0	0	0
30-45	166,200	165,900	167,900	5,300	5,300	34,000
45-60	139,100	158,700	210,500	12,600	91,400	152,100
<b>TOTAL</b>	<i>334,300</i>	<i>354,200</i>	<i>408,000</i>	<i>23,900</i>	<i>104,000</i>	<i>193,400</i>
<b>Change over base</b>		<b>+19,900</b>	<b>+73,700</b>		<b>+80,100</b>	<b>+169,500</b>

## 2.1 GO Train Service Could Foster (Re)development of Underutilized Parcels Around Stations

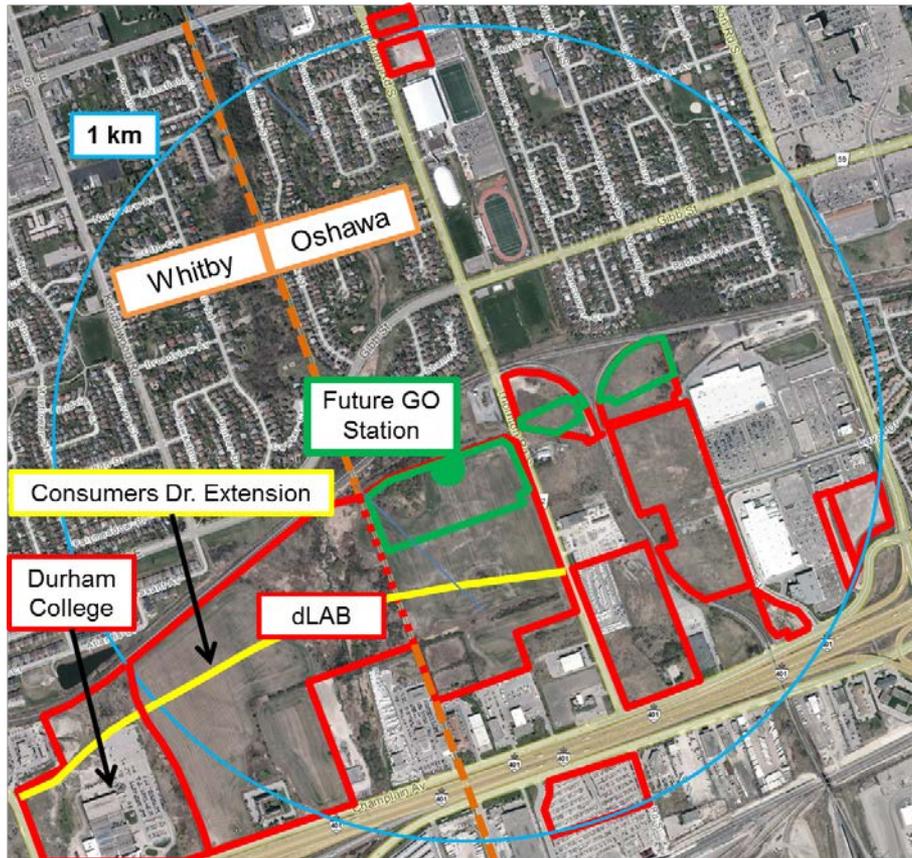
### Key Findings:

- **63 vacant or underutilized sites within 1 km** walking distance of the four proposed GO stations.
- Potential for:
  - nearly **6,000 residential units** within 1 km of Central Oshawa and Bowmanville GO stations.
  - **7.8 million ft<sup>2</sup> of non-residential development**, mostly around Thornton's Corners and Courtice GO stations, with some retail and office potential around Central Oshawa and Bowmanville.
  - **21,300 jobs** given non-residential Gross Floor Area.
- The significant amount of development potential around each GO station site means that the station areas will be able to develop with transit supportive densities as soon as the market is able to build.
- Potential for more slightly outside the 1km radius studied.

## 2.2 GO Train Service Could Foster (Re)development of Underutilized Parcels Around – Thornton’s Corners GO

### Key Findings:

- Potential to become a major office/institutional node incorporating post-secondary institutions, research and development uses



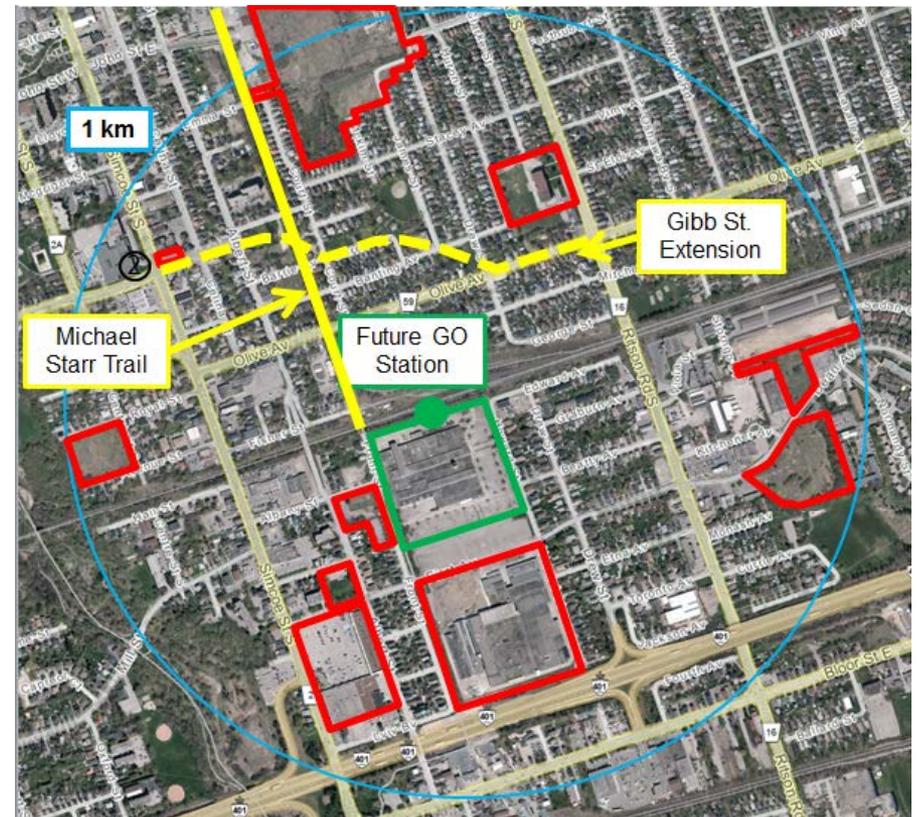
- Lands straddle Whitby/Oshawa border.
- 11 identified sites have potential for:
  - 110 residential units
  - 1,078,000 ft<sup>2</sup> office & institutional
  - 650,200 ft<sup>2</sup> retail and commercial
  - 543,500 ft<sup>2</sup> industrial
- dLAB - Urban employment and education hub containing mixed-use for both business and learning, Durham College Whitby campus, and based on a partnership of Durham College, UOIT and Trent University Durham.
- Durham Region to extend Consumers Drive through dLAB site.

## 2.3 GO Train Service Could Foster (Re)Development of Underutilized Parcels Around – Oshawa Central GO

### Key Findings:

Potential to be a major mixed use node south of the downtown core, comprising all of the Mobility Hub. The introduction of GO train services can be a catalyst to meeting Provincial growth targets for the Urban Growth Centre.

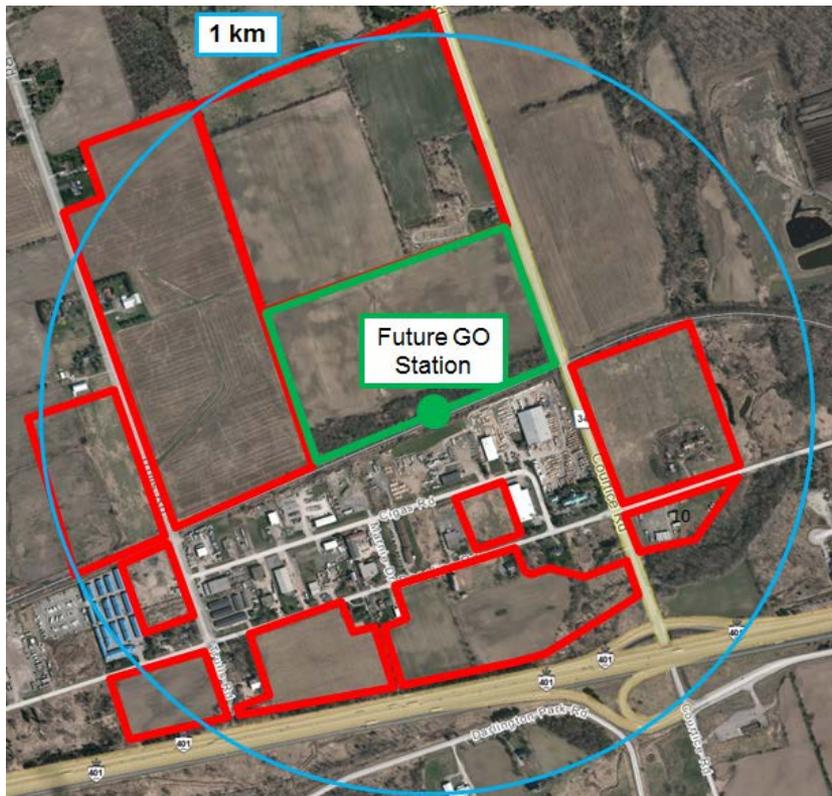
- 10 sites contain potential for:
  - 2,600 residential units
  - 570,000 ft<sup>2</sup> of retail and office space
- The Downtown Oshawa Urban Growth Centre is required to meet a density target of 200 persons & jobs per hectare by 2031. In 2006, density was 101, and increased to only 103 in 2011. Need to roughly double density between 2011 and 2031.
- City is planning for the Mobility Hub lands to be 75 residential units per hectare and an intensive, compact mixed land use area.



## 2.4 GO Train Service Could Foster (Re)development of Underutilized Parcels – Courtice GO

### Key Findings:

- Potential to be a major employment hub with significant amounts of available land around the station.
- GO train will service the Clarington Energy Business Park and help attract and retain talent from Durham, elsewhere in the GTA and Northumberland County.



- Lands around station are largely vacant and designated for development.
  - 10 identified sites have potential for:
    - 763,600 ft<sup>2</sup> of office space
    - 1,677,900 ft<sup>2</sup> of industrial space
- GO station is near Clarington Energy Business Park (located south of Highway 401), which has 9 vacant and underutilized sites, with potential for:
  - 1,981,900 ft<sup>2</sup> of office
  - 389,900 ft<sup>2</sup> of industrial
- Employment lands have access to Hwy 401, future East Durham Link (Hwy 418, connecting Hwys 401 and 407) and the Phase 2 Extension of Hwy 407 East.

## 2.5 GO Train Service Could Foster (Re)development of Underutilized Parcels – Bowmanville GO

### Key Findings:

- Potential to be an emerging mixed-use node and a westward extension of Bowmanville's existing and historic Downtown.
- Station immediately west of existing downtown Bowmanville.
- Area is seeing significant residential growth, but still has 23 vacant and underutilized sites, with potential for:
  - 3,300 residential units
  - 150,700 ft<sup>2</sup> of office space
  - 121,000 ft<sup>2</sup> of retail and commercial space
- Station area has already seen significant amounts of residential and commercial development, which the GO train service can be expected to accelerate.



## 2.6 GO Train Service Could Foster (Re)development of Underutilized Parcels – Clarington Energy Business Park

### Key Findings:

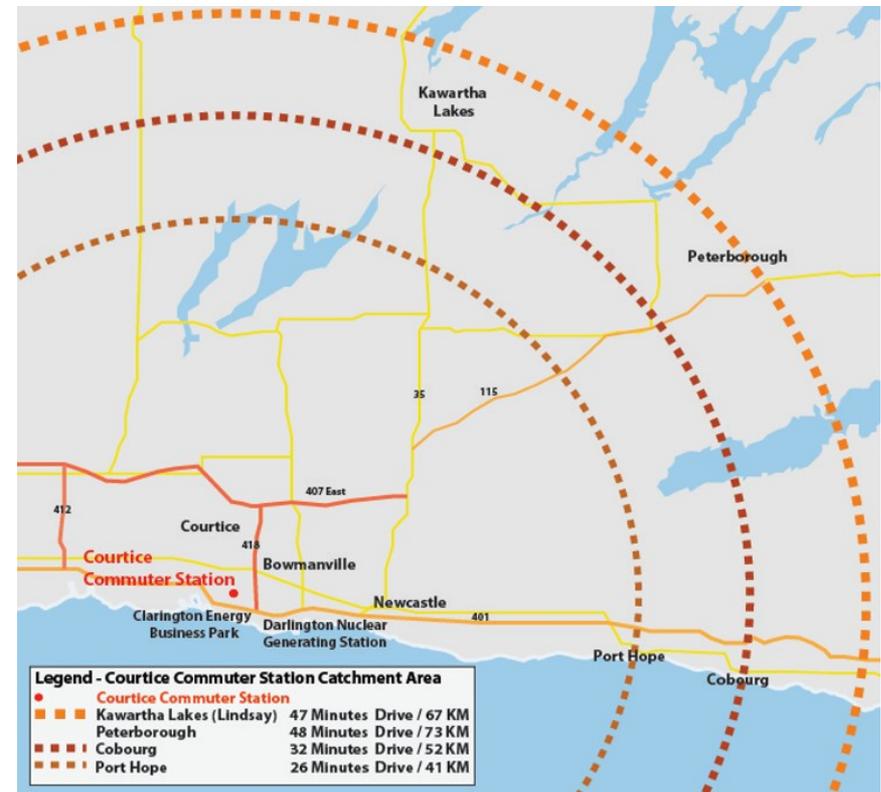
- Potential to be a focal point for research and development and related industrial activity with the Region's energy sector.
- Clarington Energy Business Park is southeast of Courtice GO station.
- Area has 9 vacant and underutilized sites, with potential for:
  - 1,981,900 ft<sup>2</sup> of office space
  - 389,900 ft<sup>2</sup> of industrial space
- Development of major employment hub associated with Darlington Nuclear.
- Site has access to Highway 401, Highway 35/115 and Highway 407 (via future Highway 418).



## 2.7 Impacts on Northumberland County, the City of Kawartha Lakes and Peterborough

### Key Findings:

- Development of a major employment hub around Courtice GO station would foster employment and economic opportunities for residents of surrounding municipalities to the east that would be within 30-45 minutes drive.
- The Courtice GO station, with access to Highways 401, 35/115 and Highway 407 (via Highway 418) would provide access to the municipalities north and east of Durham Region:
  - Northumberland County (incl. Port Hope and Cobourg)
  - City of Kawartha Lakes
  - Peterborough County
  - City of Peterborough



# 3. Benefits of Urban (Re)development Investments

## Key Findings:

- The project would, over-time, create demand for (re)development of sites, which would have significant fiscal impacts for Durham Region and local municipalities e.g. DC and property tax revenues.
- The (re)developments would also generate tax revenues for the federal and provincial governments through the HST on new home sales, Land Transfer taxes, income taxes for potential jobs created, etc.

Vacant and underutilized sites around stations have potential for nearly **6,000 housing units** and **7.8 million ft<sup>2</sup> of non-residential floor space**, which could generate roughly **21,300 jobs**.

## General

- \$1.2 billion in annual wages and income from 21,300 jobs on vacant and underutilized sites
- \$91.9 million in annual spending from potential new office worker population
- \$266 million in annual spending from residents occupying developments on identified sites

## Municipal

- \$230 million in DCs
- \$20.4 million per year in property tax revenues

## Provincial

- \$4.4 million per year in property tax revenues (for education)
- \$14.6 million in Land Transfer Tax revenues
- \$22.9 million in HST revenues (net of rebates)
- \$100.1 million per year in income tax revenues from jobs created in non-residential buildings

## Federal

- \$36.7 million in HST revenues (net of rebates)
- \$170.5 million per year in income tax revenues from jobs created in non-residential buildings

# Other Impacts

# 4.1 Benefits from Project Construction

## Key Findings:

- Project construction would have a substantial economic impact on the Durham Region, Ontario and Canadian economies.
- The project would generate significant amounts of employment, which would create revenues for the Provincial and Federal governments.

### Estimated Economic Benefits of the GO Lakeshore East Extension: Total Initial Construction Investment

	Direct		Indirect		Induced		Total	
	Low	High	Low	High	Low	High	Low	High
Economic Activity (\$millions)	532	to 614	346	to 399	247	to 285	1,125	to 1,297
Gross Domestic Product (\$millions)	251	to 290	179	to 206	143	to 165	573	to 661
Number of Jobs*	2,681	to 3,091	1,583	to 1,825	1,192	to 1,374	5,456	to 6,289
Wages (\$millions)	185.2	to 213.5	115.1	to 132.7	69.1	to 79.6	369.4	to 425.8
Business Earnings (\$millions)	70.0	to 80.7	64.7	to 74.6	67.7	to 78.1	202.4	to 233.4
Provincial & Federal Taxes (\$millions)								
Personal							85.6	to 98.6
Business							34.0	to 39.2
Total Provincial & Federal Taxes (\$millions)							<b>119.6</b>	<b>137.8</b>

\* person years of employment

Source: Altus Group Economic Consulting based on Statistics Canada Input-Output model and other sources

- Calculation of benefits associated with construction is based on costs presented from the June 2010 Metrolinx GO Rail Options Benefits Case Assessment report.
- Capital costs include the construction of the project (tracks, signals, stations, crossing of Highway 401), road crossings/tunnels, stations, engineering, project management contingency are \$330 million.
- Costs were modified using a more modest contingency of 15% (and a 10% inflation factor) which would mean that the costs would be \$257 million. Once capital rolling stock is included, capital costs are \$532 to \$614 million.

# 4.2 Benefits from On-Going Operation of Project

## Key Findings:

- The project will generate significant economic activity once service is operational through direct employment of persons involved with running trains, operating stations, etc, but also for suppliers and service providers required for on-going operation. These jobs will generate wages and tax revenues year after year.
  
- The estimated annual incremental operating cost of the service is \$35 million (in 2015 dollars) for Scenario 1 and \$139 million for Scenario 2.
  
- The on-going operation of the service would generate the following for Scenario 1 (the low end of each estimate) and Scenario 2 (the high end):
  - Gross Output of \$146 - \$584 million
  - Annual GDP impact of \$43 - \$172 million
  - Between 330 and 1,330 permanent jobs, both directly and indirectly in firms providing services and supplies
  - Annual Federal and Provincial taxes of \$5.9 to \$23.3 million

### Estimated Economic Benefits of the GO Lakeshore East Extension: On-Going Operation (Single Year), Scenario 1 and Scenario 2

	<u>Direct</u>	<u>Indirect</u>	<u>Induced</u>	<u>Total</u>
<b>Scenario 1</b>				
Economic Activity (\$millions)	34.8	15.9	95.2	145.9
Gross Domestic Product (\$millions)	26.3	8.1	8.5	42.9
Number of Jobs	171	79	83	333
Wages (\$millions)	13.4	4.8	4.2	22.4
Business Profit (\$millions)	0.0	0.6	0.4	1.0
Provincial and Federal Taxes (\$millions)				
Personal				5.8
Business				0.2
Total Provincial & Federal Taxes (\$millions)				<u>5.9</u>
<b>Scenario 2</b>				
Economic Activity (\$millions)	139.1	63.5	381.0	583.5
Gross Domestic Product (\$millions)	105.3	32.3	33.9	171.6
Number of Jobs	685	315	334	1,334
Wages (\$millions)	53.8	19.2	16.6	89.6
Business Profit (\$millions)	0.0	2.3	1.5	3.9
Provincial and Federal Taxes (\$millions)				
Personal				23.2
Business				0.2
Total Provincial & Federal Taxes (\$millions)				<u>23.3</u>

Source: Altus Group Economic Consulting based on Statistics Canada Input-Output model and other sources.

## 4.3 Benefits Arising from Change in Transit Ridership\*

- **Savings of Time:** the estimated time savings from the implementation of project would be 8,500 hours/day for Scenario 1 and 10,500 hours/day for Scenario 2, with a value of \$40.4 million and \$49.8 million per year.
- **Savings in Vehicle Operating and Ownership Costs:** for persons and households that are able to reduce car usage or eliminate their need for owning vehicles, the potential time savings are \$5.8 million for Scenario 1 and \$17.5 million for Scenario 2.
- **Savings from Improved Road Safety:** the reduction in vehicle kms driven means that fewer vehicles would be on the road, reducing congestion and improving road safety. Based on an estimate of the number of collisions avoided as a result of reduced vehicle usage, there would be annual savings of \$822,300 per year for Scenario 1 from 30 avoided collisions, and \$2.6 million per year for Scenario 2, and 98 avoided collisions each year.
- **Environmental Benefits:** the reduced automobile usage can be expected to reduce the amount of CO2 emissions generated resulting in annual savings of \$152,400 for Scenario 1 and \$489,700 per year for Scenario 2.
- The total **Net Present Value** of these savings over a 30-year period are \$389 million for Scenario 1 and \$582 million for Scenario 2.

\* Based on high-level ridership assumptions of an additional 2,000 passengers for Scenario 1 and 5,000 passengers for Scenario 2 in the morning peak period. These assumptions were developed based on the estimated changes in journey times. These estimates should be refined using detailed modelling tools when a Business Case for the project is prepared.

# Conclusion

- **Stimulates Transit-Oriented Development Around Stations:**
  - More than 60 sites unlocked for (re)development with nearly 8 million ft<sup>2</sup> of new non-residential space;
  - Enabling transit-oriented development – 6,000 residential units near stations, and 12,000 within walking distance of transit;
  - Establishment of two new major employment hubs, with potential for 21,000 new jobs;
  - Total of \$1.1 billion of urban (re)development potential;.
  - Helps Durham meet Growth Plan employment forecasts.
- **Project can Connect Eastern Durham Region to GTA:**
  - 170,000 more working age people within 60 minute transit commute of Bowmanville, and 74,000 within same of Downtown Oshawa;
  - Allows for greater connectivity for skilled labour in energy, advanced manufacturing, health fields;
  - Improved transit into Durham Region can help employers utilize assets of Durham Region and generate more local jobs.
  - Better connects three post-secondary institutions (Durham College, UOIT and Trent University Durham) to GTA-wide transit network.