

December 3, 2015

Resolution Number 2015-883

Mr. Denis Kelly  
Regional Clerk  
Regional Municipality of York  
17250 Yonge Street, 4th Fl.  
Newmarket, ON L3Y 6Z1

Dear Mr. Kelly:

**Subject: Region of Peel Goods Movement Economic Impact Analysis Study**

I am writing to advise that Regional Council approved the following resolution at its meeting held on Thursday, November 26, 2015:

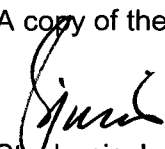
That the Region of Peel Goods Movement Economic Impact Analysis study be endorsed;

And further, that a copy of the report of the Commissioner of Public Works, titled "Region of Peel Goods Movement Economic Impact Analysis Study" be sent to the Ministry of Transportation, Transport Canada and Metrolinx for their information and use when considering infrastructure investments in Peel Region;

And further, that Regional staff be directed to work with area municipal staff to explore the feasibility of locations for freight villages in Peel Region to mitigate land use conflicts between residential and goods movement employment land uses;

And further, that a copy of the subject report be sent to the City of Brampton, City of Mississauga, Town of Caledon, the Regions of York and Halton and the Cities of Vaughan and Toronto.

A copy of the resolution and subject report is provided for your information.

  
Stephanie Jurrius  
Legislative Specialist

SJ:rc

cc: Damian Albanese, Director of Transportation, Public Works, Region of Peel

encl.

Also Sent to: Crystal Greer, City Clerk, City of Mississauga  
Mr. Peter Fay, City Clerk, City of Brampton  
Carey deGorter, Clerk, Town of Caledon  
Ulli S. Watkiss, City Clerk, City of Toronto  
Jeffrey A. Abrams, City Clerk, City of Vaughan  
Karyn Bennett, Regional Clerk, Regional Municipality of Halton  
Denis Kelly, Regional Clerk, Regional Municipality of York

DATE: November 10, 2015

REPORT TITLE: **REGION OF PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS STUDY**

FROM: Dan Labrecque, Commissioner of Public Works

## RECOMMENDATION

**That the Region of Peel Goods Movement Economic Impact Analysis study be endorsed;**

**And further, that a copy of the report of the Commissioner of Public Works, titled “Region of Peel Goods Movement Economic Impact Analysis Study” be sent to the Ministry of Transportation, Transport Canada and Metrolinx for their information and use when considering infrastructure investments in Peel Region;**

**And further, that Regional staff be directed to work with area municipal staff to explore the feasibility of locations for freight villages in Peel Region to mitigate land use conflicts between residential and goods movement employment land uses;**

**And further, that a copy of the subject report be sent to the City of Brampton, City of Mississauga, Town of Caledon, the Regions of York and Halton and the Cities of Vaughan and Toronto.**

## REPORT HIGHLIGHTS

- The Region of Peel is one of the country’s most important marketplaces for goods moving industries. One of the Action Items identified in the Peel Goods Movement Strategic Plan (2012-2016) is to “Quantify the economic impacts of freight to Peel’s economy” (Action item #22). A Region of Peel Goods Movement Economic Impact Analysis (EIA) was initiated to fulfill this Action Item.
- The Goods movement EIA is an innovative study which uses goods movement economic indicators related to Gross Domestic Product (GDP), jobs, output and taxes related to provide a snapshot of the current situation in Peel.
- The EIA provides baselines for measuring goods movement economic impacts into the future, a framework for assessing the economic impacts of infrastructure improvements and directions for the implementation of a freight village.
- The EIA estimated that in 2014, goods moving-related industries in Peel contributed \$49 billion of GDP, which is 48% of Peel’s GDP, 21% of all goods movement-related GDP in Ontario and 8.7% Canada-wide.
- The EIA estimated that in 2014, 43% of jobs in Peel were related to the goods movement supply chain, while goods movement-related jobs represent 27% in both Ontario and Canada.
- The Peel Goods Movement Task Force endorsed the EIA study on October 30, 2015.

## PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS

### DISCUSSION

#### 1. Background

The Region of Peel is one of the country's most important marketplaces for goods moving industries, driven by a well-established freight transportation network which includes the following elements:

- Canada's largest cargo airport: Toronto Pearson International Airport which processes 45 per cent of Canada's air cargo.
- Seven 400-series highways (410, 403, 401, 409, 427, QEW and 407).
- Two large intermodal rail facilities within and just outside its boundaries (CN Brampton and CP Vaughan).

Peel's location and transportation system serve as critical components of the Greater Toronto Hamilton Area (GTHA) regional economy, providing goods and services to Canada's largest urban region and enabling international trade. Latest estimates from the Ministry of Transportation Commercial Vehicle Survey (2014) show that approximately \$1.8 billion worth of goods are moved to/from/through Peel on a daily basis.

#### a) Region of Peel Goods Movement Strategic Plan (2012-2016)

The Region of Peel has long recognized the important role goods-moving industries play in Peel's economy. Through the Term of Council Priorities and the Peel Goods Movement Task Force (Task Force), Peel has been committed to improving the safe and efficient movement of goods. The Peel Goods Movement Strategic Plan (2012-2016) was endorsed by Regional Council and it identifies 23 action items to be completed over the five-year term of the Plan.

The Task Force determined that more information was required to fully understand the economic impacts of Peel's goods-moving industries to the regional, provincial and national economies. One of the action items identified in the Peel Goods Movement Strategic Plan is to "Quantify the economic impacts of freight to Peel's economy" (Action item #22). Therefore, a Region of Peel Goods Movement Economic Impact Analysis (EIA) was initiated to fulfill this action item and the Task Force has endorsed the completed study. This report provides high level findings of the EIA.

#### 2. Region of Peel Goods Movement Economic Impact Analysis Study

The project team, consisting of the consultant (WSP/Parsons Brinckerhoff), Regional and area municipal staff, and goods movement stakeholders, initiated the Region of Peel Goods Movement EIA to undertake an assessment of current and future GDP, jobs, output and taxes related to goods movement industry in Peel. The EIA also provides performance measures to measure economic impacts over time and assess impacts of various infrastructure improvements on the goods movement industry. The EIA also looked at the economic feasibility of the Freight Villages concept in Peel.

The core goal of this study was to quantify the local, provincial and national impacts of goods movement businesses in Peel to highlight the significance of goods movement in Peel's economy.

## **PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS**

### **a) Study Approach**

Early on in the study, a definition of goods movement was developed to determine what is considered 'goods movement industry'. This definition intended to capture industries generating high movement of goods in the supply chain. The broad definition of 'goods movement industry' includes multiple sector categories:

- Transportation and Warehousing;
- Construction;
- Manufacturing;
- Wholesale Trade;
- Agriculture and Forestry, Fishing, Hunting; and
- Mining, Quarrying, Oil and Gas Extraction.

It is important to note that while Transportation and Warehousing is often seen as the largest goods movement sector, the other sectors were included due to their strong reliance on the movement of goods to facilitate their business.

The Goods Movement EIA is an innovative study that was completed using research, economic modelling and consultation techniques:

- The research process involved determining best practices in modelling techniques for the economic contribution of goods movement industries.
- The economic modelling component involved detailed data collection and analysis for the application of an Input-Output model and use of a regression model to forecast industry employment. Forecasted figures are based on the 2031 forecasts contained in the Peel Regional Official Plan.
- Stakeholder consultation was sought throughout the study. In particular, input from stakeholders was gathered during a half-day workshop to develop transportation infrastructure improvement assessment criteria. Continued consultation was sought through meetings held with the Region of Peel and the Peel Goods Movement Task Force.

### **3. Highlights of Findings**

The EIA results show the significance of goods movement industries in the Region of Peel. These findings show the proportion of goods movement-related industry in relation to total industry in the Region of Peel.

Below is a summary of highlights and Appendix I provides additional details with graphics. A copy of the full report will be available for review from the Office of the Regional Clerk.

## PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS

### a) Economic Impacts

#### i) Industry Concentration

Industry concentration is a way to quantify how a particular industry in a region compares to the province or the nation. It identifies the industries which make a particular region unique in comparison to the provincial and national average. The measure used to assess industry concentration is a location quotient (LQ). An LQ is calculated by comparing an industry's share of regional employment to the share of provincial and national employment.

- Of the industries considered to be goods moving industries, as defined in the study, manufacturing, wholesale trade and transportation and warehousing have industry concentrations in Peel which far exceed the provincial and national averages. This suggests these industries make the Peel Regional economy unique and have the greatest potential for export to other provinces and internationally.
- Approximately two of every five businesses in Peel are in a goods movement sector. When compared across the GTHA, Peel has the highest share of goods movement establishments (approximately 40%) across all the municipalities.

#### ii) Gross Domestic Product (GDP)

GDP is the total value-added produced in a region or country, measured as the monetary value of all the finished goods and services. It includes all public and private consumption, government outlays, investments and net exports which occur within a region. GDP is the most appropriate measure for assessing the overall economic impact of the goods movement industry, since the value of the productive work done by each goods moving industry is only counted once.

- The EIA estimated that in 2014, goods moving-related industries in Peel contributed \$49 billion of GDP to the Peel economy, which is 21% of all goods movement-related GDP in Ontario and 8.7% Canada-wide.
- The \$49 billion of goods movement-related GDP is 48% of all GDP generated in Peel and is 6.3% of the total Ontario GDP and 3.2% of Canada's total GDP.
- Goods movement GDP is expected to increase at an annual rate of 1.2% through to 2031 to reach a value of \$60 billion.

#### iii) Jobs

Jobs represent the total employment impact created as a result of goods movement industries in the Region of Peel. Jobs are measured in terms of full-year equivalent positions for ongoing employment.

- It is estimated that 43% of jobs in Peel are related to goods movement. This far exceeds the goods movement job share in Ontario and Canada with 27% in each.

## PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS

- These jobs in turn create roughly \$29 billion in labour income, representing about 47% of Peel's total labour income and about 10% of Ontario's total labour income.
- In terms of forecasted growth by sector, agriculture and mining jobs remain very small as a total of employment in Peel. Construction, wholesale trade, transportation and warehousing all experience growth over the 2014 to 2031 period. Transportation and warehousing experiences the largest growth of any industry at an annual growth rate of 3.43 percent.

### iv) Output

Output consists of goods and services which are produced within a goods movement establishment that become available for use outside that establishment, plus any goods and services produced for own final use by the establishment. Output by industry is measured as the sum of the transaction prices of these goods and services, which equates to total business revenues.

- Total output related to goods movement industries in Peel was \$104 billion in 2014 and this number is expected to grow .98% annually to 2031.
- Goods movement related output represents 55% of all output in Peel, in Ontario goods movement output is 39% and 47% for all of Canada.

### v) Property Tax

It is estimated that in 2013, goods movement industries contributed \$125 million in property tax revenue to the Region. This represents roughly 14.3% of all property taxes remitted to the Region, including industrial, commercial and residential property taxes. Excluding the contribution of residential taxes, goods moving industries represent 48.1% of total industrial and commercial property taxes remitted to the Region.

## b) Performance Measures

A series of performance measures were developed in this study to quantify and monitor the ongoing health of goods movement industries and their contribution to the Peel economy. The ten measures include:

- i) GDP;
- ii) Jobs;
- iii) Freight tonnage;
- iv) Value of industrial building permits;
- v) Level of activity;
- vi) Roadway condition;
- vii) Bridge condition;
- viii) Annual hours of truck delay;
- ix) Truck reliability index; and
- x) Level of service.

## **PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS**

The economic impacts derived from the EIA show the current robust goods movement economy. These results will be used as a baseline for the Region to analyze annual changes in goods movement over time and assess the outcomes and impacts of the Region's goods movement program.

### **c) Infrastructure Prioritization**

An infrastructure prioritization methodology was developed in this study to identify a process for evaluating and prioritizing infrastructure investments which will maximize goods movement economic returns and add value to the regional economy. A workshop was held to gather feedback on a database list of 232 infrastructure projects and to facilitate discussion for the development of project assessment criteria to prioritize the projects in the database from a goods movement perspective. It is anticipated that the types of projects identified as priority types will lead to more efficient goods movement through the Region, thereby improving the economic contribution of these industries to Peel. The process developed from this study is being integrated into capital budgeting to help provide a goods movement lens when considering infrastructure projects.

### **d) Feasibility of Freight Villages**

The applicability of freight villages in Peel was explored in the EIA. Freight villages have the possibility of mitigating land use conflicts between transportation and logistics activities and other uses such as residential. This includes reductions in noise, pollution, traffic congestion and road maintenance by localizing movements within a specific site. The campus-style layout of a freight village concentrates truck movements within a single area and can result in significant reductions in truck traffic on local roads. Freight villages have also been shown to create large numbers of jobs to the specific sites in freight-related services.

Several sites on employment lands in Peel were explored for potential implementation of a freight village. The future GTA West Corridor may also provide future opportunities. When analyzing where a facility may be located the following typical criteria would be considered and an ideal location would include all of them:

- A large contiguous area of greenfield land designated for Employment uses in planning and policy and available for development.
- Serviced land in terms of water and sewer infrastructure.
- Close to planned capital improvements in transportation infrastructure.
- Close to major highways.
- Close to existing or future rail intermodal facilities.

Through future work, a business case will be prepared for all potential sites to determine where to focus future efforts, in collaboration with the area municipalities.



## PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS

### 4. Study Recommendations and Proposed Next Steps

The following recommendations were developed from this study relating to economic impacts, performance measures, infrastructure prioritization, and freight villages. These recommendations are the proposed next steps to be undertaken.

#### a) Economic Impact

- i) Relay the message to the public, area municipalities, provincial and federal governments that goods movement industries are a vital part of Peel's economy and will continue to be in the future. Implement outreach strategy to promote goods movement industries in Peel.
- ii) Support the promotion of efficient goods movement in Peel to sustain jobs, promote job growth and attract further investment in goods moving industries in Peel Region.

Regional staff will use the messages and figures developed through the EIA to promote the goods movement program and attract investment in Peel.

#### b) Performance Measures

- i) Implement the performance measurement plan to track the economic contribution of goods movement industries. Develop a regular scheduled update to the performance measures framework.

Using the performance measures plan and economic impact figures in the EIA, Regional staff will annually monitor changes in goods movement for future planning.

#### c) Infrastructure Prioritization

- i) Apply the final criteria framework to prioritize projects which best support the goods movement goals outlined in the *Goods Movement Strategic Plan 2012 to 2016*.

Regional staff will integrate the prioritization framework into capital budgeting processes.

#### d) Freight Villages

- i) Develop business cases for potential sites and gauge interest in a freight village amongst local goods movement firms.
- ii) Explore opportunities for future employment land for large contiguous employment lands that may facilitate the development of a freight village.
- iii) Explore the option of coordinated planning with York Region in the development of freight village near the CP Vaughan Intermodal facility to ensure to benefit from the existing CP facility.

Regional staff will undertake further in the exploration of sites for Freight Villages in Peel in collaboration with area municipal staff and report back to Regional Council on the outcomes of the work at a future date.

## PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS

### CONCLUSION

The EIA study results provide strong evidence that goods movement is vital to the Peel economy. It is clear from the results that Peel is unique from the rest of Ontario and Canada and will continue to be in the future given its locational characteristics.

It is important to note that the goods movement-related employment forecasts developed as part of this study have been developed in relation to the 2031 employment forecasts as outlined in the Peel Region Official Plan. If any changes are made through other ongoing growth management work in the Region, including changes to the employment forecasts in future Official Plan updates, the goods movement-related employment would be adjusted appropriately. While growth in goods movement sectors is expected to yield economic benefits, there are other factors such as the *Places to Grow* density targets which will need to be considered as well. As part of the Peel Goods Movement Strategic Plan, another action item has been completed with recommendations to revise the planning framework for flexibility in accommodating land-intensive goods movement land-uses with low employment densities. A report to Regional Council will be brought forward in 2016 with the paper's recommendations.

The results of this study provide a good baseline for understanding the goods movement situation in Peel and enables future monitoring and planning to ensure goods movement economic contributions are sustained into the future. The established prioritization framework will be used to embed a goods movement lens into capital planning to understand the potential overall economic impacts when making infrastructure improvements. Additional work on Freight Villages will be undertaken as a possible way to mitigate land use conflicts between residential and goods movement employment land uses. The study results will be used to help continue building partnerships and move the Task Force agenda forward.



Dan Labrecque, Commissioner of Public Works

#### Approved for Submission:




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D. Szwarc, Chief Administrative Officer

### APPENDICES

1. Appendix I – Region of Peel Goods Movement Economic Impact Analysis Summary Highlights

*For further information regarding this report, please contact Kathryn Dewar, Principal Planner, ext. 4214, [kathryn.dewar@peelregion.ca](mailto:kathryn.dewar@peelregion.ca).*

*Authored By: Kathryn Dewar, Principal Planner*

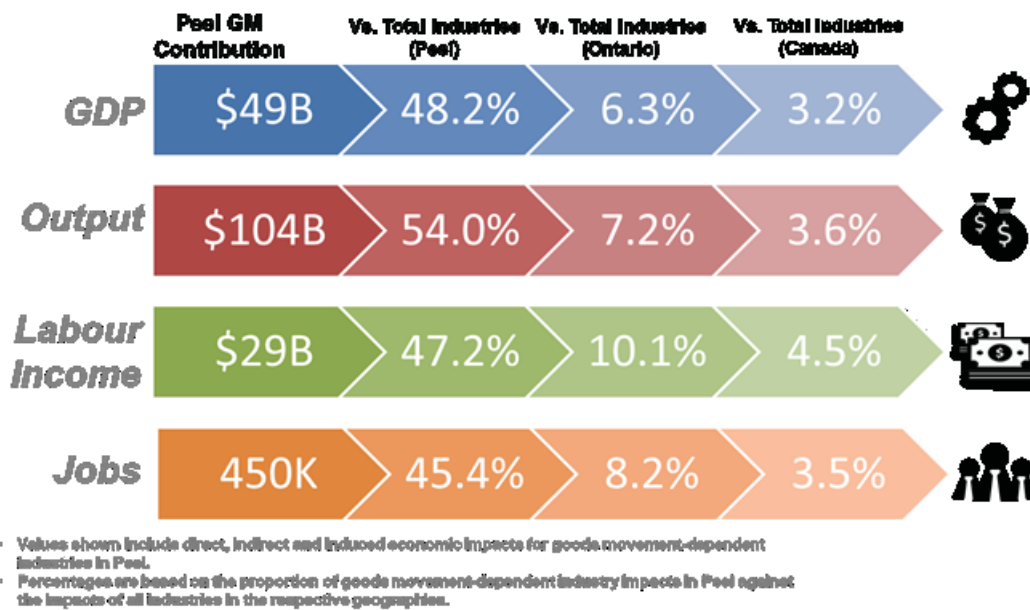
*Reviewed in the workflow by: Financial Support Unit*

**APPENDIX I - REGION OF PEEL GOODS MOVEMENT  
ECONOMIC IMPACT ANALYSIS STUDY**

## Region of Peel Goods Movement Economic Impact Analysis Summary Highlights

The Region of Peel Goods Movement Economic Impact Analysis results show the significance of goods movement industries in the Region of Peel. Below is a summary of highlights.

**Figure 1 - Summary of Current Situation Results**



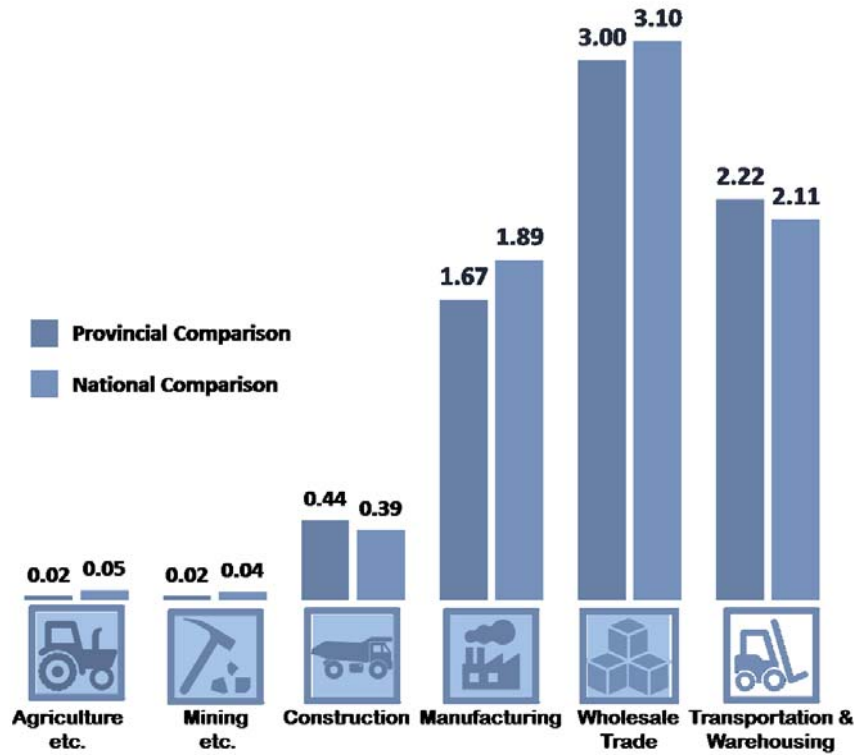
### Industry Location Concentration

Industry concentration is a way to quantify how a particular industry in a region compares to the province or the nation. It reveals the industries which make a particular region unique in comparison to the provincial and national average. The measure used to assess industry concentration is a location quotient (LQ). **Figure 2** shows the LQ of the industries considered to be goods moving industries, as defined in the study, manufacturing, wholesale trade and transportation and warehousing have industry concentrations in Peel which far exceed the provincial and national averages. This suggests these industries make the Peel Regional economy unique and have the greatest potential for export to other provinces and internationally.

For a LQ greater than 1, Peel has a greater concentration of employment than comparison group. For a LQ less than 1, Peel has less concentrated industries compared to provincial and national employment.

**APPENDIX I - REGION OF PEEL GOODS MOVEMENT  
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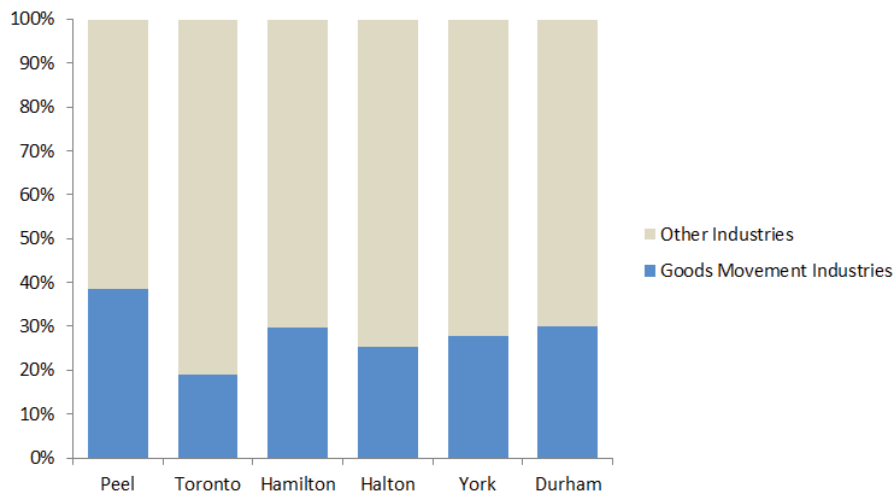
**Figure 2 - Peel Goods Movement Location Quotients by Industry**



Source: Employment Surveys for Mississauga, Brampton, and Caledon. 2014  
Statistics Canada. CANSIM. 2014

Figure 3 shows approximately 2 of every 5 businesses in Peel are in a goods movement sector. When compared across the GTHA, Peel has the highest share of goods movement establishments across all the municipalities

**Figure 3 - Goods Movement Business Establishments as a Share of Total Industry Establishments by Municipality**



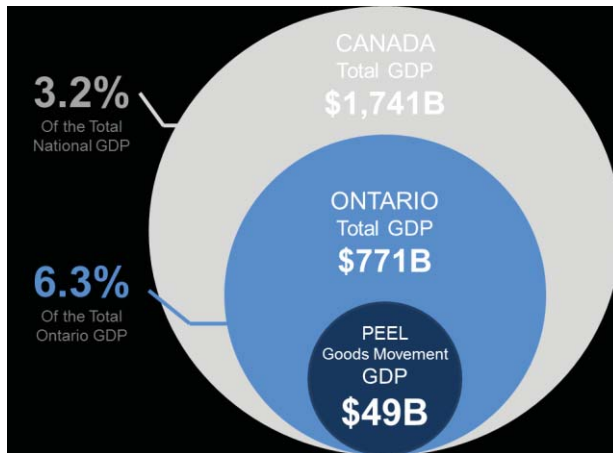
Source: Statistics Canada. Canadian Business Patterns, 2011

## APPENDIX I - REGION OF PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS STUDY

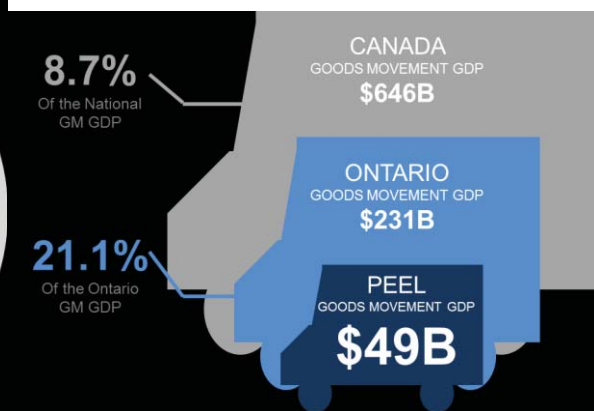
### Gross Domestic Product (GDP)

The GMEIA results show the real significance of goods movement industries in the Region of Peel. These industries currently contribute **\$48.8 billion** worth of gross domestic product (GDP) to the regional, provincial and national economy. These goods movement industries represent roughly 48.2% of Peel’s total GDP (direct and indirect impacts), 6.3% of Ontario’s total GDP and 3.2% of Canada’s national GDP. GDP is generally accepted as the most appropriate measure for assessing the overall impact of an industry. **Figure 4** shows the Peel goods movement related GDP in relation to total Ontario and Canada GDP. **Figure 5** shows the Peel goods movement related GDP in relation to the goods movement related GDP of Ontario and Canada.

**Figure 4 Peel Goods Movement Related GDP Contribution to Overall Provincial and National GDP**

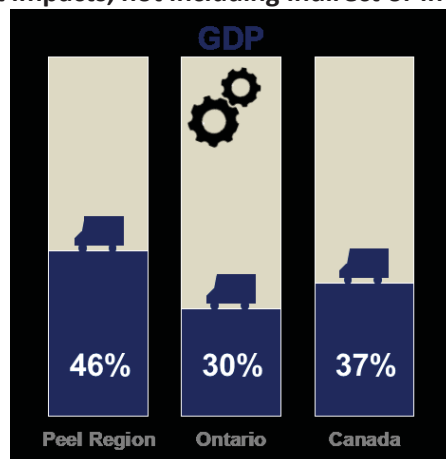


**Figure 5 - Peel Goods Movement Industry GDP in Comparison with Provincial and National Goods Movement Related GDP**



Overall, goods movement industries in Peel make up a larger share of the economy when compared to the Ontario and national averages. **Figure 6** shows the overall contribution of goods moving industries to the Peel, Ontario and Canadian economies.

**Figure 6 - Economic Impact in comparison with percentage of Ontario and Canada goods movement related employment (only direct impacts, not including indirect or induced)**



Source: WSP|Parsons Brinckerhoff

**APPENDIX I - REGION OF PEEL GOODS MOVEMENT  
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Peel’s goods movement GDP value is expected to increase at an annual rate of 1.2% though to 2031 to a value of \$60 billion.

**Figure 7 – Peel Existing and Forecasted Economic Input: Direct, Indirect and Induced Economic Impacts for Goods Movement-Dependent Industries in Peel**



Source: WSP|Parsons Brinckerhoff

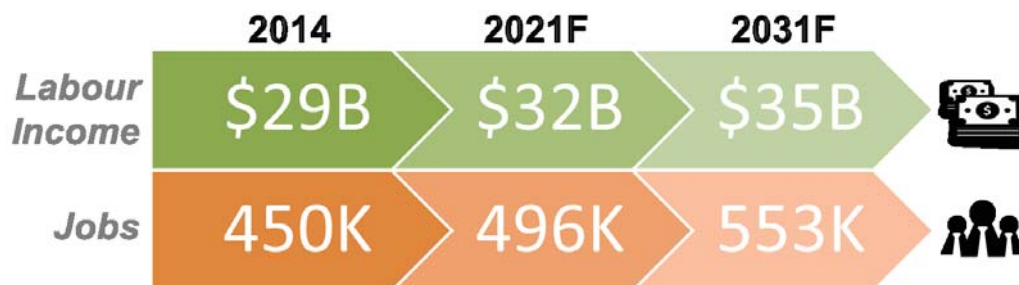
**Jobs**

In addition to the contribution to GDP, goods movement industries accounted for a total of 258,004 direct jobs in Peel in 2014. These jobs represent people employed directly by freight and logistics dependent business sectors. These direct jobs are expected to grow at an average annual rate of 1.5% to reach a total of 330,604 in 2031. In addition to the 258,004 direct jobs, 192,297 more indirect and induced jobs are created through inter-industry purchases and consumer expenditures induced by household income spending. This equates to a total of 450,301 jobs attributable to freight and logistic dependent industries in Peel.



These jobs in turn create roughly \$29.0 billion in labour income, representing roughly 47.2% of Peel’s total labour income and 10.1% of Ontario’s total labour income.

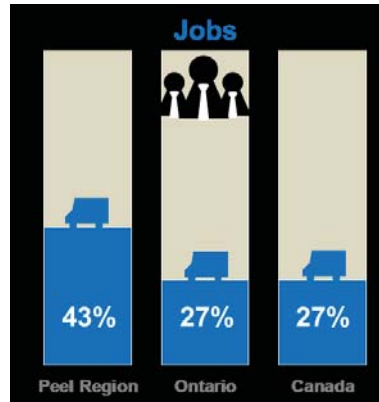
**Figure 8 – Peel Existing and Forecasted Labour Income and Jobs: Direct, Indirect and Induced Economic Impacts for Goods Movement-Dependent Industries in Peel**



Source: WSP|Parsons Brinckerhoff

## APPENDIX I - REGION OF PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS STUDY

Figure 9 – Peel jobs related to goods movement as a percentage of total jobs, compared to Ontario and Canada percentage of goods movement related jobs (only direct impacts, not including indirect or induced)



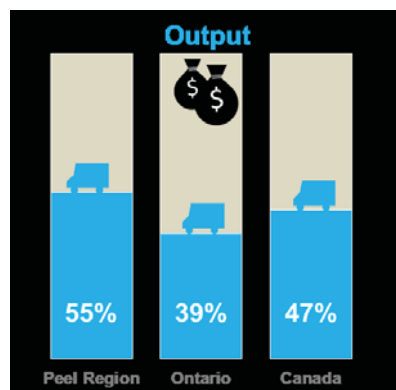
Source: WSP|Parsons Brinckerhoff

### Output

Output consists of goods and services which are produced within a goods movement establishment that become available for use outside that establishment, plus any goods and services produced for own final use by the establishment. Output by industry is measured as the sum of the transaction prices of these goods and services, which equates to total business revenues. **Figure 10** Shows the comparison of Peel output to Ontario and Canada.

- Total output related to goods movement industries in Peel was \$104 billion in 2014 and this number is expected to grow .98% annually to 2031.
- Goods movement related output represents 55% of all output in Peel, in Ontario goods movement output is 39% and 47% for all of Canada.

Figure 10 – Peel output related to goods movement as a percentage of total output, compared to Ontario and Canada percentage of goods movement related output (only direct impacts, not including indirect or induced)



Source: WSP|Parsons Brinckerhoff

## APPENDIX I - REGION OF PEEL GOODS MOVEMENT ECONOMIC IMPACT ANALYSIS STUDY

Figure 11 – Peel Existing and Forecasted Economic Output: Direct, Indirect and Induced Economic Impacts for Goods Movement-Dependent Industries in Peel



### Taxes

Freight and logistics dependent industries also contribute to the regional and local tax base in Peel and the area municipalities, Mississauga, Brampton, and Caledon through property taxes. **Table 1** shows an estimated total of property taxes remitted for Regional purposes. In terms of overall Regional tax contribution, goods moving industries contributed an estimated \$125 million to the Region in 2013, the most recent year of available data. This represents roughly 14.3% of all property taxes remitted to the Region, including industrial, commercial and residential property taxes. Excluding the contribution of residential taxes, goods moving industries represent 48.1% of total industrial and commercial property taxes remitted to Peel Region.

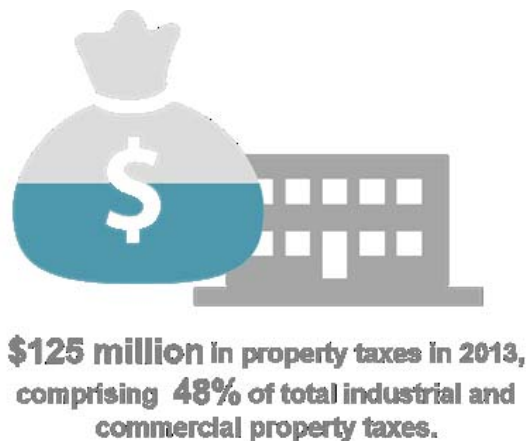


Table 1 - Goods Movement Industries Property Tax to Peel and Area Municipalities (\$ Millions) 2013

Impact	Mississauga	Brampton	Caledon	Peel Total
<b>Regional Contribution</b>	\$86.6	\$34.3	\$3.9	\$124.8

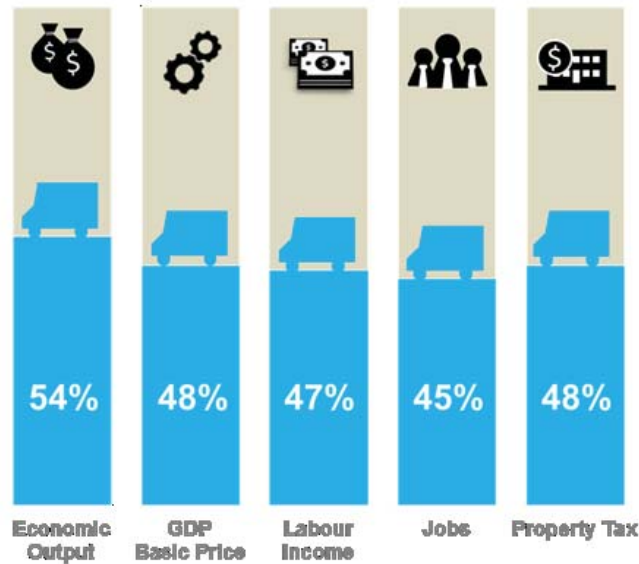
Source: WSP | Parsons Brinckerhoff



**APPENDIX I - REGION OF PEEL GOODS MOVEMENT  
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**Figure 12** summarizes the economic impacts and percentages that goods moving industries represent in Peel versus all other industries in Peel.

**Figure 12 - Summary of Peel Goods Movement Industry Economic Impacts Compared to Peel Industries Overall (Direct, indirect and Induced impacts)**

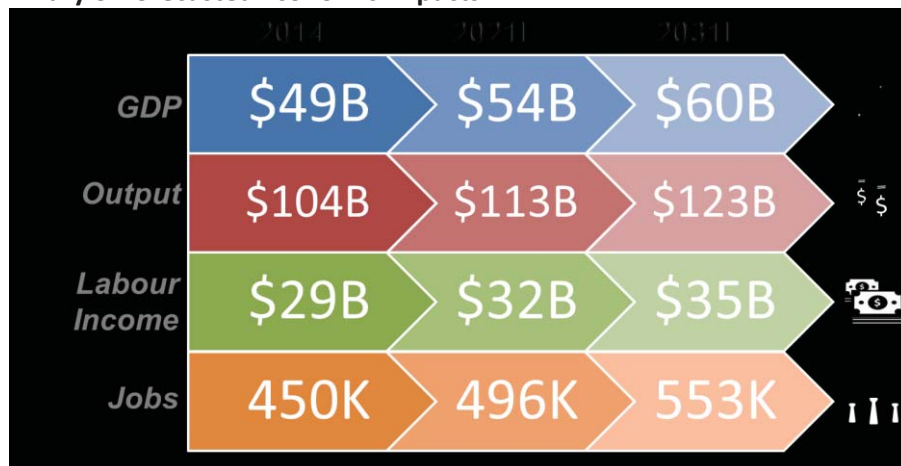


Source: WSP | Parsons Brinckerhoff

**Future Forecasts**

A forecast model was created using a series of regression models which relate historical employment in Peel by industry to forecasted population growth. **Figures 13, 14 and 15** provide the results of the forecast. All metrics to measure economic growth are expected to increase over the 2014 to 2031 period.

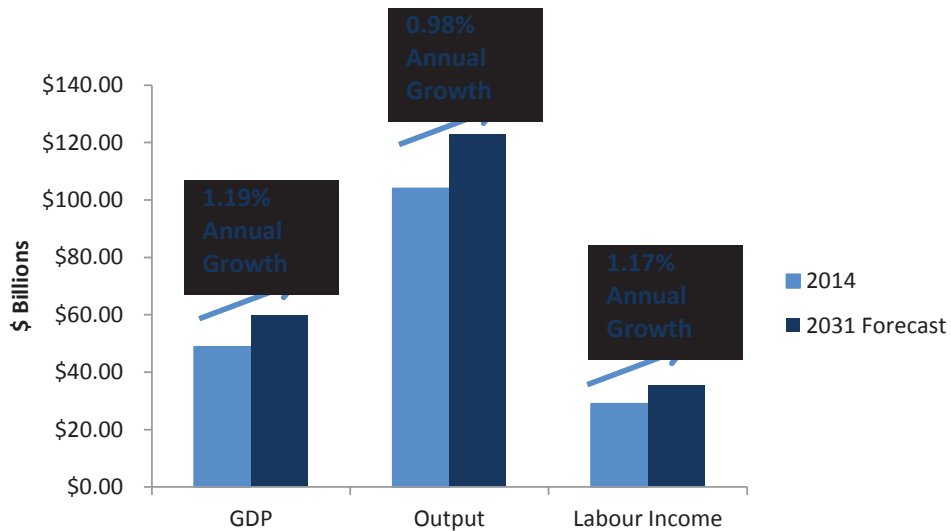
**Figure 13 - Summary of forecasted Economic Impacts**



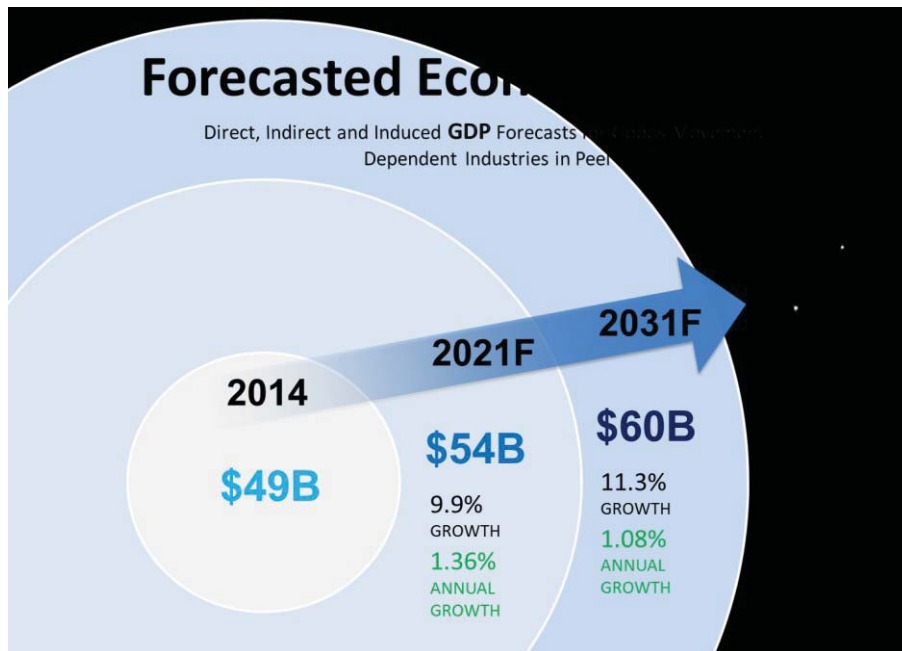
Source: WSP | Parsons Brinckerhoff

**APPENDIX I - REGION OF PEEL GOODS MOVEMENT  
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**Figure 14 - Annual Growth Forecasts for GDP, Output and Labour Income (\$ Billions)**



**Figure 15 - Forecasted GDP**



In terms of growth by sector, **Figure 16** shows how employment by goods movement changes over time. Agriculture and mining jobs remain very small as a total of employment in Peel. Construction, wholesale trade, transportation and warehousing all experience growth over the 2014 to 2031 period. Transportation and warehousing experiences the largest growth of any industry at an annual growth rate of 3.43 percent.

Manufacturing is forecasted to decline over the 2014 to 2031 period at an annual rate of -0.55 percent per year. This is consistent with historical decline in of manufacturing jobs Peel and Ontario.

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Figure 16 - Direct Jobs Forecast by Sector

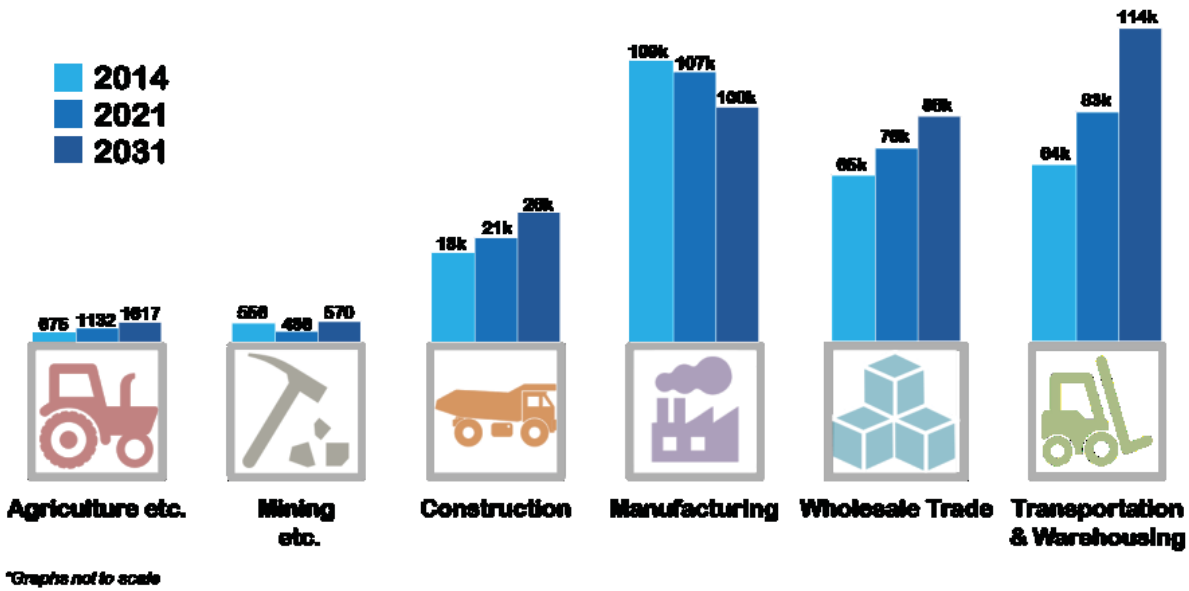
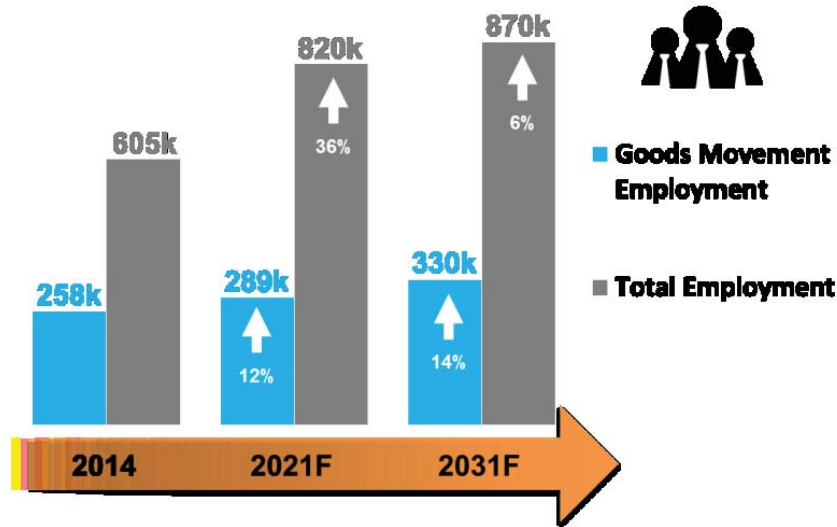


Figure 17 – Goods Movement Employment Growth and Total Employment Growth



Direct jobs are also expected to grow. **Figure 17** compares the forecasted growth in goods moving industry employment compared to total employment. To 2031, total employment is expected to outpace goods movement employment growth.