

## **Freight and Goods Movement Strategy**

Date: September 22, 2020

To: Infrastructure and Environment Committee

From: General Manager, Transportation Services

Wards: All

### **SUMMARY**

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On October 18, 2017, the Public Works and Infrastructure Committee adopted the Freight and Goods Movement Strategy Framework (Item PW24.8). The framework recognized the need for a freight and goods movement strategy (FGMS) that supports goods movement industries and applies a Complete Streets approach with regard to freight requirements to strengthen Toronto's economic competitiveness while supporting neighborhoods.

The City of Toronto has been experiencing unprecedented growth, evidenced on our streets by increased demands on curb space partially attributable to the rise of E-commerce and associated delivery systems. Given these demands and the proliferation of new technologies, delivery models and methods in goods movement, the associated impacts of some of these freight activities also contributes to traffic congestion, poor air quality, increased Greenhouse Gas (GHG) emissions and noise and has sometimes compromised the safety of other modes in the city. Likewise, the freight and goods movement industry have also experienced challenges of their own such as limited parking and loading options, travel time reliability across the city, and regulatory constraints that limit new delivery methods, to name a few. The FGMS outlined in this report contains targeted actions to address many of these issues faced by both the City and the freight industry.

In developing the FGMS, a study was undertaken which included literature reviews, industry interviews, freight modeling and analysis, strategic planning, policy development and stakeholder consultation and engagement. Consultation was a major cornerstone of this study because the impacts of freight and goods movement is not just a local matter but of regional concern to many of the surrounding municipalities and agencies. Ultimately, the findings provided the opportunity to:

- Understand the state of freight and goods movement in the City, including regional impacts and opportunities;
- Understand experiences elsewhere, including best practices;
- Understand stakeholder needs and concerns;

- Identify strategic policy options; and
- Develop a Freight and Goods Movement Strategy (FGMS).

The Vision Statement of the FGMS is to provide a goods movement system that is safe, reliable and sustainable, connecting people and products while protecting Toronto's vibrant and thriving economy and quality of life. The Strategy identifies twenty-four (24) strategic actions that Transportation Services proposes to undertake to enhance city-wide Freight and Goods Movement immediately and over the next several years. These strategic actions can be grouped into the categories of system and access performance, environment, equity, economic competitiveness, safety and adaptability.

The staff report is seeking City Council approval on twenty-four (24) strategic actions meant to address the unique characteristics, needs, and impacts of freight mobility. The FGMS provides a framework to support the current networks and operations of goods movers, shippers, carriers and manufacturers, while also keeping a long-term horizon on the future disruptive changes to come. The Strategy will be delivered over the next 1 to 3+ years and will be led by Transportation Services in partnership with other divisions or external partners.

While the FGMS was initiated and for the most part completed in pre-COVID-19 times, the current pandemic has given new urgency and profile to the importance of the optimal management of freight and goods movement in Toronto and enabled the City to accelerate some early pilot projects.

## **RECOMMENDATIONS**

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The General Manager, Transportation Services recommends that:

1. City Council approve the Freight and Goods Movement Strategy in Attachment 2.
2. City Council forward this to the Toronto Police Services Board and request the Board to work with the General Manger, Transportation Services to explore opportunities to enhance commercial vehicle enforcement and inspections to uphold safety standards.
3. City Council request the Chief Planner and Executive Director, City Planning in consultation with the General Manager, Transportation Services, and in consultation with freight industries, to:
  - a. explore the use of regional drop yards to improve freight distribution operations;
  - b. update guidelines for loading and unloading areas in new commercial and residential developments to address current freight and goods movement practices;
  - c. further develop freight specific land use policies to support freight and goods movement and ensure the long-term viability of major goods movement facilities and corridors; and

d. explore the use of urban consolidation centres to reduce heavy truck movement at peak times and enhance opportunity for greater utilization of active transportation modes.

4. City Council request the Toronto Parking Authority Board to explore business arrangements with courier companies to pilot the use of delivery vans as mobile pick-up and drop-off locations in repurposed parking lots.

5. City Council request the Ontario Ministry of Transportation to review and revise the Ministry's definition of a motor assisted bicycle to allow heavier, throttle operated electric motors having greater power output to operate on public highways and to work with the City of Toronto and other municipalities to ensure that the definition supports more efficient and sustainable urban delivery option.

6. City Council request the Ontario Ministry of Municipal Affairs and Housing introduce the necessary legislative and regulatory changes to make off-peak delivery a permanent program.

7. City Council request all funding and positions required for implementation of the Freight and Goods Movement Strategy by Transportation Services be included in the 2021 Operating Budget and 2021 - 2030 Capital Budget submission for consideration.

## **FINANCIAL IMPACT**

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Funding and resources required in various programs for the following will be included in the 2021 Operating and 2021 - 2030 Capital Budget submissions for consideration during the budget process to address the financial and additional staff resources required to implement the actions described in this report dated September 22, 2020.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the financial impact information.

## **EQUITY IMPACT STATEMENT**

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The movement of freight and goods contributes to the economic prosperity of the city on a daily basis. The roads that are used by various types of trucks to connect producers and consumers carry a wide range of goods and commodities. The majority of truck movement is generally found on the major roadways and expressways leading to and from employment lands and city centres. While this is generally considered an accepted outcome of urban living, there are certain neighbourhoods that experience a disproportionate amount of truck volumes and have the burden of increased noise, reduced air quality, resultant negative health impacts, and sometimes reduced safety.

The forthcoming Strategic Truck Network (STN), one of the twenty-four (24) proposed strategic actions, will consider the impacts on all residential lands, including those

housing equity-seeking groups and neighbourhoods. Particular attention will be given to eliminate or at least minimize the extent of any truck network routes through the 31 City of Toronto Neighbourhood Improvement Areas (NIAs) whose residents often include visible minorities, seniors (aged 65+), youth aged 15-24 and persons with low and below poverty level income. Consideration will also be given to addressing the air quality related impacts typically associated with larger trucks that contribute to higher air pollution levels, which is linked to childhood asthma, cardiovascular disease and lung cancer. Furthermore, the ultimate STN will build on what is proposed in this report to strengthen the complete streets approach to corridors with significant number of trucks and numerous vulnerable road users (i.e., pedestrians and cyclists).

## **DECISION HISTORY**

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At its meeting on October 18, 2017 the Public Works and Infrastructure Committee adopted, as amended, the report of the General Manager, Transportation Services entitled "Freight and Goods Movement Strategy Framework". The report outlined various factors to be considered for the development of a robust Freight and Goods Movement Strategy for Toronto, the subject of this report, and served as the basis from which Transportation Services undertook a comprehensive study through a consultant assignment. The Committee decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2017.PW24.8>

At its meeting of July 28, 2020, City Council adopted, as amended, IE14.11 entitled "Regulatory Clarity for E-Cargo Cycles". This item sought improved on-street access for cargo bikes by, among numerous actions, seeking permission for e-cargo cycles over 40kg to access City cycle tracks, requesting the Ontario Ministry of Transportation to review and revise their definition of a power-assisted bicycle (i.e., including e-cargo cycles), and requesting that "...the General Manager, Transportation Services, report on progress in its Freight and Goods Movement Strategy in Fall 2020 on pilot project proposals for e-cargo cycles, including potential for feasibility of requiring evidence of driver training and other initiatives with industry and government partners". The City Council decision can be found at:

<http://app.toronto.ca/tmmis/viewAgendaItemHistory.do?item=2020.IE14.11>

## **COMMENTS**

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### **Background**

The City of Toronto is experiencing unprecedented growth, with its population expected to increase from 2.96 million in 2018 to 4.27 million in 2046, an increase of 44.5 percent<sup>1</sup>. Freight and goods movement industries are significant contributors to the city's Gross Domestic Product (GDP) and employment. In 2018, four industry sectors were responsible for fifty percent (50%) of GDP output in the City; contributing \$97.5

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<sup>1</sup> Ontario Ministry of Finance, Ontario Population Projections, 2018-2046.  
<https://www.fin.gov.on.ca/en/economy/demographics/projections/>

billion to the economy. These were manufacturing; professional, scientific and technical services; real estate, rental, and leasing; and finance and insurance. Freight and goods movement related industries, which are those related to the movement of goods, contributed about \$57.9 billion, accounting for about thirty percent (30%) of GDP<sup>2</sup>.

In 2018, about 630,000 Toronto residents were employed with goods and freight movement related industries in the city, representing about forty-four percent (44%) of the workforce. This compares to 794,000 residents employed with all other industries in the city<sup>3</sup>.

Increased demands for goods and services, commerce and economic development and urban growth have led to mounting pressure on the freight and goods movement industry and its supporting infrastructure and institutional networks. Industrial demand from trade and construction strain the condition and performance of the transportation network. At the same time, region-wide development has further intertwined the movement of goods between ports, rail and freight corridors across jurisdictions in the Greater Toronto and Hamilton Area (GTHA).

## **Issues and Opportunities with Freight and Goods Movement in the City**

The need for a planned, cohesive approach to managing the freight and goods movement system, in terms of the City's infrastructure networks, policies, and communities, is paramount to support the growing freight and goods movement system and ensure its efficient and effective performance. Toronto's pressures as they relate to the movement of goods and its economic development, can be defined under four broad categories:

- **Rapid growth** and the pressures stemming from population growth, increased demand and the local economy;
- **Technological trends** affecting how industries and the public interact, how consumption occurs and the influence of technology;
- **Local industrial growth** and the institutional and economic forces that hinder and support growth to sustain competitiveness both as a global City and as a region; and
- **Climate change** and the effects of both governmental action, changing industry practices and public expectation to reduce emissions rapidly over the coming decades.

## **Current Freight and Goods Movement Challenges for Industry**

Industry and stakeholder consultation was integral in developing the FGMS. Input from the public, industry leaders and various levels of government and City staff assessed, confirmed and incorporated the array of goods movement concerns and ideas, resulting

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<sup>2</sup> Toronto's Economy, Labour Force and Demographics, Gross Domestic Product (GDP) for City. Online: <https://www.toronto.ca/city-government/data-research-maps/toronto-economy-labour-force-demographics/>

<sup>3</sup> Toronto's Economy, Labour Force and Demographics, Gross Domestic Product (GDP) for City. Online: <https://www.toronto.ca/city-government/data-research-maps/toronto-economy-labour-force-demographics/>

in a portfolio of effective strategies which were endorsed at a final stakeholder workshop in March of 2020. The FGMS consultation and engagement approach was segmented into two phases, with the list of stakeholders and consultation tactics detailed in Attachment 1.

In the first phase, stakeholders were given an opportunity to voice their issues and challenges related to goods movement, identify areas of concern and priority areas for policy solutions. In the second phase, discussion focused on solutions and recommendations leading to an action plan covering four thematic areas:

- Planning and Infrastructure
- Street Design and Management
- External Economic Impacts
- Innovation

From this and the most pertinent issues facing the goods movement industry and their operation in the City, twenty-four (24) freight and goods movement strategic actions were developed.

### **COVID-19 Pandemic and Goods Movement Pilots**

Certain initiatives were launched as pilots during the Covid-19 pandemic, such as overnight deliveries, tracking truck volumes associated with goods movement and the use of cargo cycles. The opportunity presented itself due to expressed interest and the pressures associated with the pandemic to move forward with these immediately.

The importance of goods movement was heightened during the pandemic crisis as, for the first time in recent times, the public became concerned about the availability of many household products. At the outset of the pandemic, there were concerns that some supplies were running out and suppliers looked to do more deliveries during off-peak periods to meet the increased consumer demand.

To ensure continued access to goods during a state of emergency, the City suspended its enforcement of the loading and unloading provision of the Noise Bylaw, therefore permitting off-peak deliveries. Under the Noise Bylaw, noise made in connection with deliveries is prohibited from 11 p.m. to 7 a.m. the next day, except until 9 a.m. on Saturdays, Sundays and statutory holidays. Following this change, the Government of Ontario further expanded permissions for off-peak deliveries by introducing [O. Reg. 71/20](#) which amended the City of Toronto Act by removing the City's authority to prohibit or regulate noise made in connection with the delivery of goods. This regulation is in effect until September 19, 2021. In the event that the provincial regulation is revoked during the off-peak delivery pilot, Transportation Services and Municipal Licensing and Standards will work in partnership to determine what operational and/or bylaw amendments are required.

Off-Peak Delivery has proven to be a viable solution to address the challenges faced by the goods movement industry while minimizing the transportation impacts. In 2019, the results of an Off-Peak Delivery Pilot in the Region of Peel showed the potential benefits of such a program. The results showed that 30% of deliveries shifted to off-peak

periods, up to 30% of trucks were taken off the road during peak-periods thereby reducing congestion, an 18% reduction in travel time, an 11% decrease in GHG emissions and fuel costs, an 11% to 18% reduction in harmful air pollutants and no noise complaints. Such a program will be especially important for business recovery post-pandemic and it is recommended that the City of Toronto request that the Ministry of Municipal Affairs and Housing introduce the necessary legislative and regulatory changes to make off-peak delivery a permanent program.

Since March 2020, Transportation Services has been monitoring the impact of the COVID-19 pandemic on travel across all modes. Of particular interest has been how the pandemic has impacted goods movement within the City. Based on data collected at downtown Toronto traffic monitoring stations (which may differ from the overall City pattern), truck traffic volumes have been much less impacted than other vehicular traffic. Early in April 2020, truck traffic dropped to 75% of historical levels while light auto traffic dropped to about 40%. The volumes gradually recovered and by July of 2020, truck traffic levels were largely in line with pre-COVID historical averages in downtown Toronto. At the same time, the increased number of deliveries in private and car-like vehicles (e.g., on-demand deliveries for food), expected to carry into the future, would not have been included in the overall totals for goods movement.

While there has been ongoing interest by the public and delivery companies in cycling solutions for delivering goods, this enthusiasm has ramped up during the pandemic. The use of cargo cycles can provide an alternative effective response to the increased demands for deliveries in some areas and for certain products. City Council at its meeting of July 28 and 29, 2020, adopted a report entitled, "Regulatory Clarity for E-Cargo Cycles" (Item IE14.11) permitting e-cargo cycles over 40kg in cycle tracks, in addition to current provisions that allow them in bicycle lanes. Work with the Ministry of Transportation is expected to be undertaken to promote motor assisted e-cargo cycles that are larger (with a payload capacity over 400kg when fully loaded), to operate in mixed traffic in the city. Amendments to Provincial regulation would open up opportunities to companies such as Purolator, FedEx and UPS to operate these large types of motor assisted e-cargo cycles, which would allow a more efficient and sustainable delivery option.

Anticipating that there will be more delivery vehicles on our roads, the City will continue to improve how we make urban spaces more accommodating for deliveries, especially given the increasing pressures on city streets for parking and loading of vehicles. While the 2018 Curbside Management Strategy has already implemented some improvements (e.g., delivery vehicle parking zones), additional parking options to support and encourage alternative delivery methods will further support the freight industry and is a focus of some of the FGMS strategic actions.

## **Development of the FGMS**

The vision of the Freight Goods Movement Strategy is to provide a goods movement system that is safe, reliable and sustainable, connecting people and products while protecting Toronto's vibrant and thriving economy and quality of life.

The movement and distribution of goods across the supply chains – from production to final sale to waste collection – is a vital part of the City's economic engine. The Strategy, in its entirety, will be an evolving, guiding policy document that ensures the optimal movement of goods and services, in a manner that prioritizes the safety of residents and road users, and further improves Toronto's high quality of life.

The vision is intended to support the City's trajectory towards high global economic competitiveness into the future. Resilient economic development means that policies support the current networks and operations of goods movers, shippers, carriers and manufactures, while keeping a long-term time horizon on the future disruptive changes to come. This vision is informed by stakeholder consultation, industry interviews and best practice reviews to ensure it focuses effectively on present needs and future demands.

While the City has a number of policies and plans that guide the development of its built environment (i.e., the Official Plan, the Congestion Management Plan, the Curbside Management Strategy, the Vision Zero Safety Plan, TransformTO and Complete Streets guidelines), none are directly focused on the movement and coordination of freight activity. The FGMS will serve as a framework to coordinate, accelerate and drive the City's economic competitiveness now and into the future.

The FGMS has seven goals in support of the vision statement. They include the following:

- **System Performance:** Provide an efficient and reliable multimodal transportation system that enhances freight mobility.
- **Access Performance:** Preserve and strengthen access to Employment Areas, improve last-kilometre deliveries and connections with local and provincial freight systems.
- **Environment:** Improve freight operations to reduce impacts on the natural and built environment.
- **Equity:** Support liveability in communities, especially for Toronto's most vulnerable residents, by reducing the disproportionate impacts from goods movement through investments in freight infrastructure as well as supportive policies and regulations.
- **Economic Competitiveness:** Reduce and eliminate barriers in the freight transportation system to enhance the economic competitiveness and growth for the goods movement sectors and businesses, allowing Toronto's economy to thrive.
- **Safety:** Ensure the movement of goods throughout Toronto is done safely, and in alignment with Vision Zero, including the protection of vulnerable populations.
- **Adaptability:** Identify, anticipate and adapt to emerging trends, innovations and risks affecting the freight and goods movement industry.



## **Freight and Goods Movement Strategy - Implementation Plan**

The FGMS implementation plan includes a list of initiatives that Transportation Services proposes to undertake to improve freight and goods movement immediately and over the next several years. These initiatives range from relatively simple in nature serving a single stakeholder in the near-term, to more complex serving multiple stakeholders over the longer term. Initiatives are divided into the following categories:

- *Short-Term (Years 1 to 2)* are high priority, initiated as soon as practicable.
- *Medium-Term (Years 2 to 3)* initiatives are intended to be tackled over the next 2 to 3 year period.
- *Long-Term (Years 3+)* initiatives are expected to be addressed in year 3 and beyond.

A summary of the twenty-four (24) strategic actions is outlined in Attachment 2. Transportation Services will lead many of these initiatives or be the coordinating division partnering with others stakeholders and divisions. In addition, the ability for Transportation Services to roll-out the Strategy will require both financial and new staff resources which will be included in the 2021 Operating and 2021 - 2030 Capital Budget submission for consideration during the budget process.

### **Conclusion**

The Freight and Goods Movement Strategy outlined in this report is recommended to enhance freight and goods movement operations throughout the City of Toronto. The combination of high-level policy directions and thoughtful and strategic implementation will improve movement in a way that supports economic vitality, multi-modal mobility and access for people and goods. Endorsement of the long-term recommendation (#24) to periodically review and update the Strategy is intended to ensure that the long-range goals of the FGMS are targeted through relevant future considerations.

This Strategy will also be supported by parallel work that will be undertaken by the Smart Freight Centre (SFC), a centre of excellence for goods movement, which was launched in April 2020 with seed funding from the Region of Peel. The City has recently become a member of the SFC, which includes public and private sector partners. The SFC will work with its partners on regionally significant goods movement issues and projects, focussed on improving the efficiency and reduce the community and environmental impacts of moving goods in the Greater Toronto and Hamilton Area. Much of the work will be undertaken in partnership with the Universities of McMaster, Toronto and York.

## CONTACT

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## SIGNATURE

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Barbara Gray  
General Manager, Transportation Services

## ATTACHMENT

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Attachment 1: Stakeholders and Engagement Tactics  
Attachment 2: Strategic Actions

## Attachment 1: Stakeholders & Engagement Tactics

Audience	Description	Consultation Tactics
City Staff	<p>Representatives from all municipal departments who may be impacted or have a role in the implementation of the strategy.</p> <p>Included: MLS, City Planning, Environment &amp; Energy, TPA, Transportation, Solid Waste, Toronto Police Service, Economic Development &amp; Culture, Toronto Public Health, TTC</p>	<ul style="list-style-type: none"> <li>• Workshops</li> <li>• Project Team Meetings</li> </ul>
Government Agencies	<p>Representatives from external agencies that have jurisdiction over some elements of the plan including the Ontario and Federal governments.</p> <p>Included: MTO, Transport Canada, Metrolinx</p>	<ul style="list-style-type: none"> <li>• One-on-One Interviews</li> <li>• Working Group Sessions</li> </ul>
Surrounding Municipalities	<p>Representatives that address goods movement for surrounding municipalities that share the border with the City of Toronto.</p> <p>Included: Cities of Vaughan, Markham, Pickering, Mississauga, Brampton, Region of York, Region of Durham, Region of Peel</p>	<ul style="list-style-type: none"> <li>• One-on-One Interviews</li> <li>• Online Survey</li> <li>• Workshops</li> </ul>

Audience	Description	Consultation Tactics
Goods Movement Industry	<p>Shipper and carrier representatives including those who coordinate goods movement for their companies and within and around the City boundary.</p> <p>Included: UPS, Purolator, CN Rail, CP Rail, Ontario Stone, Sand and Gravel Association and other major manufactures of goods and products and logistic companies</p>	<ul style="list-style-type: none"> <li>• One-on-One Interviews</li> <li>• Working Group Sessions</li> <li>• Workshops</li> </ul>
Other Stakeholders	<p>Representatives from other interest groups and the public.</p> <p>Included: Pembina Institute, BIAs, Canada Post, CAA, CNIB, Cycle Toronto, GTAA, Retail Council of Canada, Toronto Industry Network, Ontario Trucking Association</p>	<ul style="list-style-type: none"> <li>• Workshops</li> <li>• Online Survey</li> </ul>

## Attachment 2: Strategic Actions

Table 1: Short-Term Strategies (Years 1 to 2)

Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
1	<b>Promote Off-Peak Delivery (OPD) through the implementation of a pilot program.</b>	<ol style="list-style-type: none"> <li>1. Develop operational guidelines that target congested areas or corridors, examine program size and scale by industry sector, and look to minimize related noise impacts.</li> <li>2. Develop partnerships with MTO and surrounding Municipalities to promote OPD across City of Toronto boundaries.</li> <li>3. Identify and overcome the needs of receivers in support of off-peak deliveries.</li> </ol>	<p>Municipal Licensing and Standards</p> <p>Economic Development and Culture</p> <p>Ministry of Transportation Ontario</p> <p>Surrounding Municipalities</p>
2	<b>Expand parking opportunities for commercial vehicles.</b>	<ol style="list-style-type: none"> <li>1. Identify curbside areas in high demand for commercial vehicles.</li> <li>2. Review and change existing regulations with a view to accommodate additional commercial parking spaces, by location and time of day.</li> </ol>	<p>Transportation Services</p>
3	<b>Promote the use of technologies that minimize noise impacts of truck operations and related activity.</b>	<ol style="list-style-type: none"> <li>1. Work with shippers to promote the awareness and benefits of minimizing noise impacts.</li> <li>2. Identify incentives to increase the development and adoption of technologies that reduce noise from truck operations and related activity.</li> </ol>	<p>Private sector shippers and carriers</p>

Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
4	<p><b>Explore opportunities with Toronto Police Service to enhance commercial vehicle enforcement and inspections to uphold safety standards.</b></p>	<ol style="list-style-type: none"> <li>1. Review existing commercial vehicle enforcement program service levels and undertake needs assessment.</li> <li>2. Identify problematic vehicles and safety issues.</li> <li>3. Explore ways to enhance timely, targeted enforcement.</li> <li>4. Toronto Police Service's commercial vehicle enforcement and inspection program is driven by analytics and complaints. Currently, the program is supported by only three (3) full time inspectors and two (2) part time inspectors from the Primary Response Unit who are also tasked with regular policing duties. An examination of the inspection program may identify additional resources needed to achieve an appropriate level of inspection and monitoring.</li> </ol>	<p>Toronto Police Service</p>
5	<p><b>Develop a city-wide public education program with private sector partners to enhance the understanding of safety issues around freight mobility for both commercial vehicle operators and other road users.</b></p>	<ol style="list-style-type: none"> <li>1. Develop educational and training materials related to freight mobility safety, for specific target audiences (e.g., truck drivers, pedestrians, cyclists, auto drivers).</li> <li>2. Partner with agencies (e.g., OTA), MTO, and private sector (e.g., shippers and carriers) to inform truck operators of City efforts to establish a strategic truck network, modify street design elements for trucks, and the overall importance of freight mobility safety.</li> <li>3. Coordinate with city-wide campaigns, such as Vision Zero, to educate pedestrians, cyclists, and auto drivers on freight mobility safety issues.</li> </ol>	<p>Ministry of Transportation Ontario</p> <p>Ontario Trucking Association</p> <p>Private sector partners, shippers and carriers</p>

Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
6	<p><b>Establish a Strategic Truck Network (STN) which identifies corridors and alternative routes that are priorities for the implementation of freight and goods movement supportive infrastructure improvement.</b></p>	<ol style="list-style-type: none"> <li>1. Identify corridors with significant existing and expected freight usage and those with geometry well-suited to freight usage.</li> <li>2. Determine the impact of the Strategic Truck Network on surrounding lands, including impacts on equity seeking groups and the City's 31 Neighbourhood Improvement Areas.</li> <li>3. Review the STN's connections to major roadways and neighbouring municipalities and identify required amendments to regulations for heavy vehicle movement.</li> <li>4. Identify alternative routes to improve network resiliency.</li> <li>5. Identify potential locations for commercial vehicle safety inspections.</li> </ol>	<p>Ministry of Transportation Ontario</p> <p>Surrounding Municipalities</p> <p>Shippers and carriers</p>
7	<p><b>Promote the use of cargo bicycles, including e-assist, to reduce the impact of freight and goods movement.</b></p>	<ol style="list-style-type: none"> <li>1. Determine required regulatory changes to promote desired motor assisted cargo bicycle operation and parking on roads, and other public right-of-way.</li> <li>2. Identify infrastructure needs, including security, storage, and electrical charging stations, and safety considerations in order to support the adoption of cargo bicycles.</li> <li>3. Conduct a pilot program in partnership with industry (i.e., courier companies).</li> </ol>	<p>Ministry of Transportation</p> <p>Ontario Surrounding Municipalities</p> <p>Courier Companies</p>
8	<p><b>Partner with the Toronto Parking Authority to explore and pilot the use of delivery vans as mobile pick-up and drop-off locations in repurposed parking lots.</b></p>	<ol style="list-style-type: none"> <li>1. Explore business arrangements with shippers and carriers to identify needs and opportunities.</li> <li>2. Develop a permitting program and system.</li> <li>3. Design a pilot program in consultation with industry.</li> </ol>	<p>Toronto Parking Authority</p> <p>Private sector shippers and carriers</p>

Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
9	<b>Explore the use of an appointment-based system to facilitate curbside loading and unloading.</b>	<ol style="list-style-type: none"> <li>1. Work with industry to assess situations to utilize and benefit from an appointment-based / reservation system.</li> <li>2. Determine target areas or corridors of need.</li> <li>3. Identify suitable appointment-based loading zone systems.</li> <li>4. Determine appropriate fee structure.</li> <li>5. Develop a pilot program in consultation with industry.</li> </ol>	Private sector shippers and carriers

**Table 2: Medium-Term Strategies (Years 2 to 3)**

Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
10	<b>Develop additional truck street design guidelines for areas, corridors and intersections that reflect the needs of freight vehicles and has consideration for other modes.</b>	<ol style="list-style-type: none"> <li>1. Enhance design and planning standards for freight mobility, integrating these into the guidelines of other transportation modes.</li> </ol>	Transportation Services
11	<b>Explore the use of regional drop yards to improve freight distribution operations.</b>	<ol style="list-style-type: none"> <li>1. Identify existing barriers to the establishment of private drop yards.</li> <li>2. Conduct a feasibility study to assess optimal drop yard locations while considering land use and proximity to major roadways and key freight generators.</li> <li>3. Identify specific site requirements and needs informed by goods movement industry stakeholders.</li> </ol>	City Planning



Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
12	Update guidelines for loading and unloading areas in new commercial and residential developments to address current freight and goods movement practices.	<ol style="list-style-type: none"> <li>1. Review the requirements of the zoning by-law related to loading space rates, specified dimensions, and access to them.</li> <li>2. Develop guidelines or best practices advice for loading area design.</li> </ol>	City Planning
13	Enhance the communication of road operation condition to freight operators	<ol style="list-style-type: none"> <li>1. Work with industry stakeholders to examine ways to best disseminate available information.</li> <li>2. Utilize tools like real-time notification to provide timely road operation condition information (i.e., temporary lane closures, street occupation, construction work zones, and incidents) to freight vehicle operators.</li> </ol>	Ontario Trucking Association  Private sector shippers and carriers
14	Explore a permitting system to allow the use of available curb space for the exclusive use of commercial vehicles during mid-day and/or off-peak periods	<ol style="list-style-type: none"> <li>1. Explore stakeholder demand for exclusive curbside space.</li> <li>2. Develop and implement a permit parking pilot project to serve commercial vehicles loading and unloading during off-peak periods.</li> </ol>	Ontario Trucking Association  Private sector shippers and carriers
15	Work with public and private sector partners to encourage the adoption of zero- and low-emission freight vehicles to reduce the environmental impacts of freight and goods movement.	<ol style="list-style-type: none"> <li>1. Work with industry and senior levels of government to overcome barriers (i.e., refueling infrastructure and vehicle cost) to facilitate the adoption of zero- and low-emission freight vehicles.</li> <li>2. Work with public and private sector partners to improve acquisition and utilization of zero- and low-emission freight vehicles.</li> <li>3. Explore the potential to introduce city-wide electric vehicle charge station hubs supporting freight and goods movement vehicles.</li> </ol>	Environment and Energy  Ontario Trucking Association  Private sector shippers and carriers

Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
16	<b>Expand the use of communal parcel lockers at public and private facilities to reduce the burden and impact of last-kilometre deliveries.</b>	<ol style="list-style-type: none"> <li>1. Work with shippers and carriers to determine parcel locker facility needs.</li> <li>2. Explore opportunities to place new or expand the number of existing parcel lockers at facilities such as shopping or retail centres, grocery stores, transit stations to install communal parcel lockers.</li> <li>3. Explore opportunities to introduce parcel lockers by repurposing unused real estate or ensuring parcel lockers are available in future residential developments.</li> </ol>	<p>Toronto Transit Commission</p> <p>Private sector shippers and carriers</p> <p>Retailers and Grocery Stores</p>
17	<b>Explore a permitting system to regulate convenient curbside parking for mobile freight vehicles providing mobile pick-up and drop-off.</b>	<ol style="list-style-type: none"> <li>1. Explore opportunities with carriers to identify curbside needs and opportunities.</li> <li>2. Develop a permitting program and system (i.e., application- based) that considers location specific permits.</li> <li>3. Design a pilot program in consultation with industry.</li> </ol>	<p>Private sector shippers and carriers</p>
18	<b>Advance the study, development and deployment of connected and autonomous delivery vehicles and devices to support last-kilometre deliveries.</b>	<ol style="list-style-type: none"> <li>1. Work with partners to identify available funding to advance the study of connected and autonomous delivery vehicles and devices.</li> <li>2. Identify partnership opportunities with agencies (i.e., Ontario Centres of Excellence and Universities) to advance programs related to the study, development, and testing of freight and goods movement connected and automated vehicle technologies.</li> <li>3. Evaluate current regulatory limitations and potential opportunities for implementation.</li> <li>4. Coordinate with future updates on the City's Autonomous Vehicle Tactical Plan.</li> </ol>	<p>Ontario Centres of Excellence</p> <p>Universities</p> <p>Others</p>

Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
19	<b>Identify and enhance existing data sources to support continued understanding of freight activity.</b>	<ol style="list-style-type: none"> <li>1. Explore alternative means of attaining data, including industry partnerships.</li> <li>2. Attain, consolidate, analyze, and store all relevant freight and goods movement data collected in a readily accessible form.</li> <li>3. Coordinate data activities with city-wide campaigns, such as Vision Zero, to ensure these activities inform better understanding of and response to freight mobility safety issues.</li> </ol>	Transportation Services

**Table 3: Long-Term Strategies (Years 3+)**

Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
20	<b>Identify and implement truck priority measures along the Strategic Truck Network to support the efficient movement of freight.</b>	<ol style="list-style-type: none"> <li>1. Conduct a freight audit along the forthcoming Strategic Truck Network to identify issues affecting freight movements.</li> <li>2. Identify infrastructure, regulatory, and technological improvements to enhance the efficiency and reliability of the network.</li> <li>3. Prioritize investment towards improvements to increase freight travel time reliability, average travel time, and throughput along the forthcoming Strategic Truck Network.</li> </ol>	Transportation Services
21	<b>Develop freight specific land use policies to support freight and goods movement and ensure the long-term viability of major goods movement facilities and corridors.</b>	<ol style="list-style-type: none"> <li>1. Strengthen protections for Employment Areas well-served by freight and goods movement facilities and corridors.</li> <li>2. Review the Official Plan policy frameworks for lands adjacent to the identified forthcoming Strategic Truck Network to ensure they are supportive of freight and goods movement.</li> </ol>	City Planning

Item	Strategy	Actions & Considerations	Partner Divisions and Other Stakeholders
22	<b>Examine the feasibility of implementing commercial vehicle low-emission zones</b>	<ol style="list-style-type: none"> <li>1. Conduct a feasibility study to define the location, size, scope, and framing of the low emission zones based on best practices and local attributes such as high pollution zones, exposed population groups, congestion considerations, public priorities, and alternative transportation / delivery means.</li> <li>2. Identify policy changes and options, including the use of incentives, regulatory tools, or applying varying rates by vehicle type, to facilitate adoption while considering best practices from other jurisdictions.</li> <li>3. Engage stakeholders to explore policy considerations, concerns, uptake, and timing.</li> <li>4. Communicate regulatory changes and benefits with the public and industry.</li> </ol>	<p>Environment and Energy</p> <p>Ontario Trucking Association</p> <p>Private sector shippers and carriers</p>
23	<b>Explore the use of urban consolidation centres to reduce heavy truck movement and enhance opportunity for greater utilization of active transportation modes</b>	<ol style="list-style-type: none"> <li>1. Conduct a feasibility study to identify optimal locations, associated real estate opportunities, site development needs, partnership opportunities, and public / private sector roles.</li> <li>2. Explore partnerships with developers and agencies to repurpose existing facilities (e.g., parking areas, loading docks, storage areas) for consolidation needs.</li> <li>3. Identify existing barriers to the establishment of urban consolidation centres.</li> <li>4. Work with goods movement industry stakeholders to identify specific site requirements and needs.</li> </ol>	<p>City Planning</p> <p>Property Owners</p> <p>Developers</p>
24	<b>Update the Freight and Goods Movement Strategy to address emerging trends and issues.</b>	<ol style="list-style-type: none"> <li>1. Identify and dedicate resources towards a review and update of the Strategy to identify emerging opportunities and respond to industry and technological changes while ensuring consistency with City policies and its Official Plan.</li> </ol>	<p>Multiple City Divisions and Agencies</p> <p>Freight Industry &amp; Other Stakeholders</p>

