Executive Summary

City of Windsor Truck Route Study

1. Background & Purpose

Truck transportation is essential for Windsor's economy and residents, particularly given its strategic location at the Canada–U.S. border and its significant industrial base, especially in automotive and logistics. The current 251 km truck route network required modernization to:

- Address safety, livability, and environmental concerns
- Reflect new developments (e.g., NextStar EV battery plant, Amazon Fulfillment Centre)
- Prepare for traffic pattern shifts with the Gordie Howe International Bridge (GHIB) opening in 2025

The Truck Route Study was launched in July 2023 and followed a four-phase approach, including technical analysis and broad stakeholder and public engagement.

2. Key Study Drivers

- **Population growth:** Windsor-Essex region projected to grow from ~423,000 (2021) to ~594,000 (2046)
- **Economic activity:** Includes major automotive manufacturers (e.g., Stellantis, Ford), distribution centres, and cross-border logistics
- **Infrastructure changes:** GHIB expected to divert some truck traffic but also introduce new routing demands
- **Public concerns:** Rising volumes of truck traffic near residential zones, schools, parks, and commercial areas

3. Engagement Process & Insights

Two rounds of engagement (Oct 2023 & April–May 2024) gathered input from:

- The public via **surveys, drop-in centres, and an interactive web map**
- **Business Improvement Areas (BIAs), freight/logistics stakeholders**, and **adjacent municipalities**

Key feedback themes:

- Concerns over **pedestrian and cyclist safety**
- Impact of **truck noise and vibration** on adjacent neighborhoods
- Need for **redundant, reliable truck routes** and **improved signage**
- Uncertainty about **GHIB's traffic impact** on West Windsor
- Calls for **more equitable and sustainable** routing options

4. Strategic Framework

A vision built around six principles:

1. **Safety**
2. **Environmental and public health**
3. **Connectivity**
4. **Reliability and redundancy**
5. **Ease of enforcement**
6. **Adaptability**

Two core **objectives**:

- Optimize goods movement efficiency
- Maintain community livability

Evaluation criteria included roadway type, adjacent land use, truck volumes, and pedestrian/cyclist activity.

5. Network Development Process

A structured **five-step process** was followed:

1. **Select candidate roads**: Based on functional class and current use
2. **Evaluate segments**: Scored based on efficiency and livability
3. **Develop draft networks**:
    - **Option 1**: Single-tier network for all trucks >4,500 kg
    - **Option 2**: **Dual-tier network** with:
        - **Primary Routes** for all trucks
        - **Local Delivery Routes** restricted to trucks ≤3 axles
4. **Apply mitigation measures**
5. **Finalize network** based on community input and technical review

Option 2 (Dual-Tier Network) was selected due to its balance between freight efficiency and community impact mitigation.

6. Truck Route Specifications

- **Primary Truck Routes**: Open to all trucks >4,500 kg gross vehicle weight
- **Local Delivery Routes**: Accessible only to trucks with 3 axles or fewer for through travel; larger trucks permitted only for local deliveries

These classifications are **enforceable** based on visible vehicle axle counts, per the Ontario Highway Traffic Act.

7. Final Network Recommendations

Two truck route networks were proposed:

- **Long-Term Network (6-20 years)**:
  - Incorporates planned future roads (e.g., Lauzon Parkway Extension, Sandwich South east-west arterial)
- **Near-Term Network (0-5 years)**:
  - Based on existing roads
  - Includes Broadway Street and Sandwich Street south of Ojibway Parkway, to be transferred to City of Windsor after opening of Gordie Howe Bridge
  - Contingent on mitigation measures at key locations (e.g., McHugh Street, Wyandotte Street West)
  - Includes staging changes, such as delayed downgrading to Local Delivery status on select routes

8. Implementation Plan

Key steps:

- **Update Traffic By-law 9148**: To reflect dual-tier routes and new rules for vehicle type restrictions
- **Signage**:
  - Use of both **prohibitive** ("No Trucks") and **permissive** signs
  - New sign design for Local Delivery Routes (e.g., "Trucks with 3 axles or fewer only")
- **Education & outreach**: Targeting truck operators, enforcement agencies, and the public
- **Enforcement strategy**: Initial soft rollout with warnings, followed by stricter measures
- **Monitoring**:
  - Evaluate compliance
  - Use traffic data and engagement feedback to refine the network over time

9. Supporting Strategies

To enhance truck route effectiveness:

- **Road design adjustments** for truck maneuvering and safety
- **Cycling infrastructure upgrades** and route realignments
- **Traffic signal optimization** and intersection controls
- **Truck parking provisions**
- **Emission reduction** measures (e.g., idling restrictions)
- **Integration with complete streets and multimodal planning**
- **Cross-border coordination** and emergency detour planning

10. Key Benefits of Recommended Network

- **Improved road safety** for vulnerable users (pedestrians, cyclists)
- **Reduced cut-through truck traffic** in residential neighborhoods
- **More predictable, consistent truck routing** for industry
- **Supports Windsor's land use, transportation, and environmental goals**
- **Positioned for future growth and cross-border trade increases**