

# Truck Route Network Monitoring & Evaluation Framework

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Truck Route Sub-committee  
September 13 , 2022



Hamilton

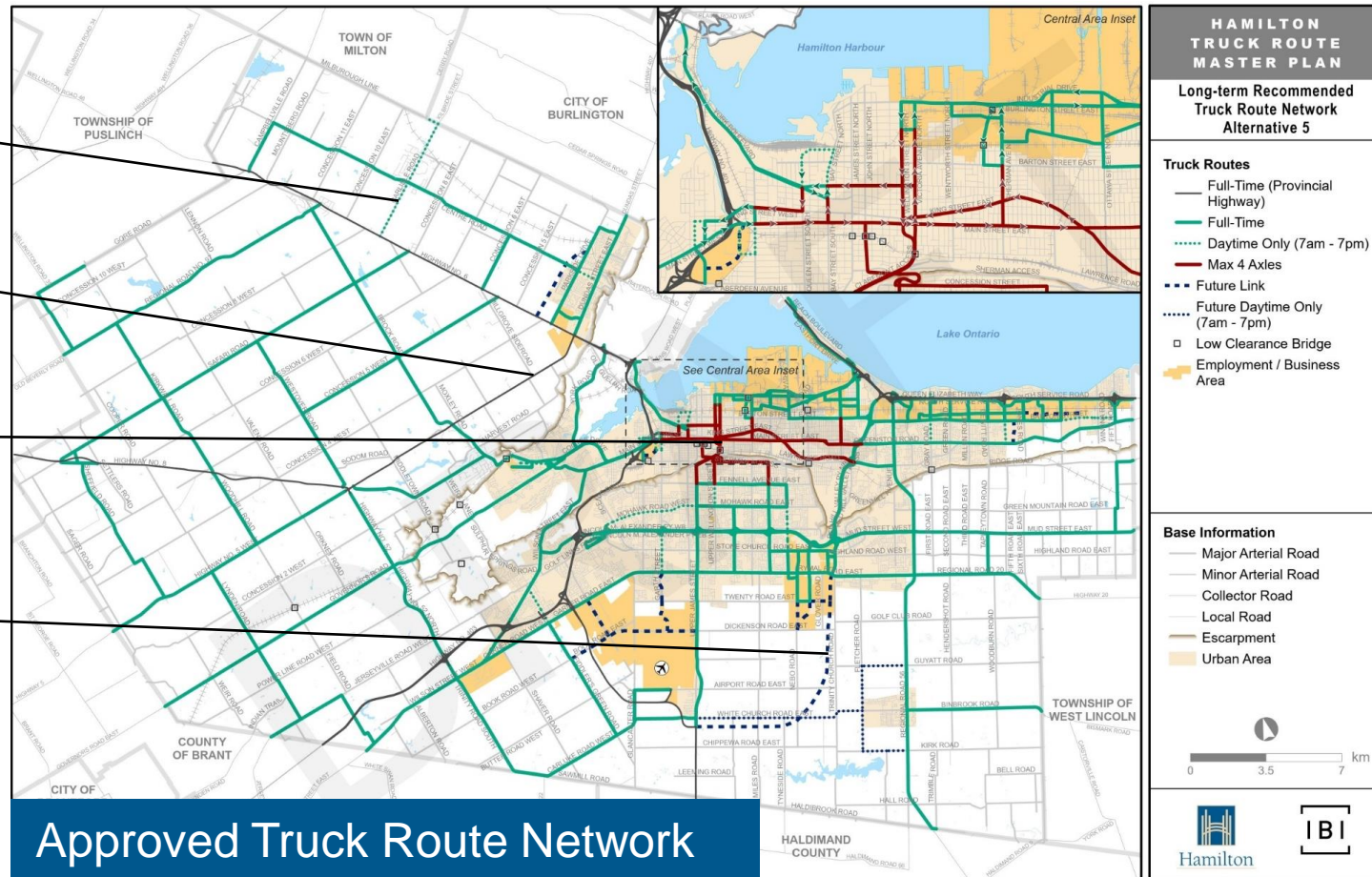
**Planning and Economic Development Department**  
Transportation Planning and Parking

# Outline

- Truck Route Master Plan 2022 & Approved Truck Route Network
- Truck Route Network Implementation Status
- Truck Route Sub-committee Recommendations (March 28, 2022)
- Monitoring and Evaluation Framework
- Evaluation Criteria & Data Collection
- Next Steps

# Truck Route Master Plan 2022 & Approved Truck Route Network

- **Modified Routes (7AM-7PM)**
- **Removed Routes** (e.g. Sydenham, Wilson Street, North Service Road)
- **Maximum 4-Axle** restriction for routes in central area
- **Future Routes**

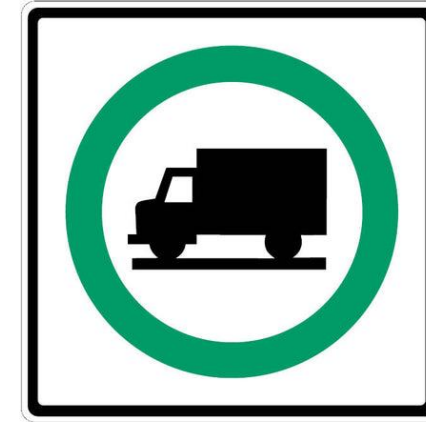


# Truck Route Network Implementation Status

## Implementation of signs:

- Inventory, manufacturing, removal/installation
- January to April 2023
- Phased Implementation - prioritizing areas with highest impact (e.g. Downtown, Suburbs, Rural)

Example:



or




**Maximum 4-Axle**

# Truck Route Sub-Committee Recommendations, March 28, 2022

## Truck Route Master Plan Update (PED19073(c)) (City Wide)

- a) That staff be directed to develop a framework and associated criteria that can be used to evaluate changes to the approved Truck Route Network in order to inform future revisions to the truck route network; and
- b) That the criteria be presented to the Truck Route Sub-Committee by Q3 2022 with the results of the evaluation being completed no later than 2024.





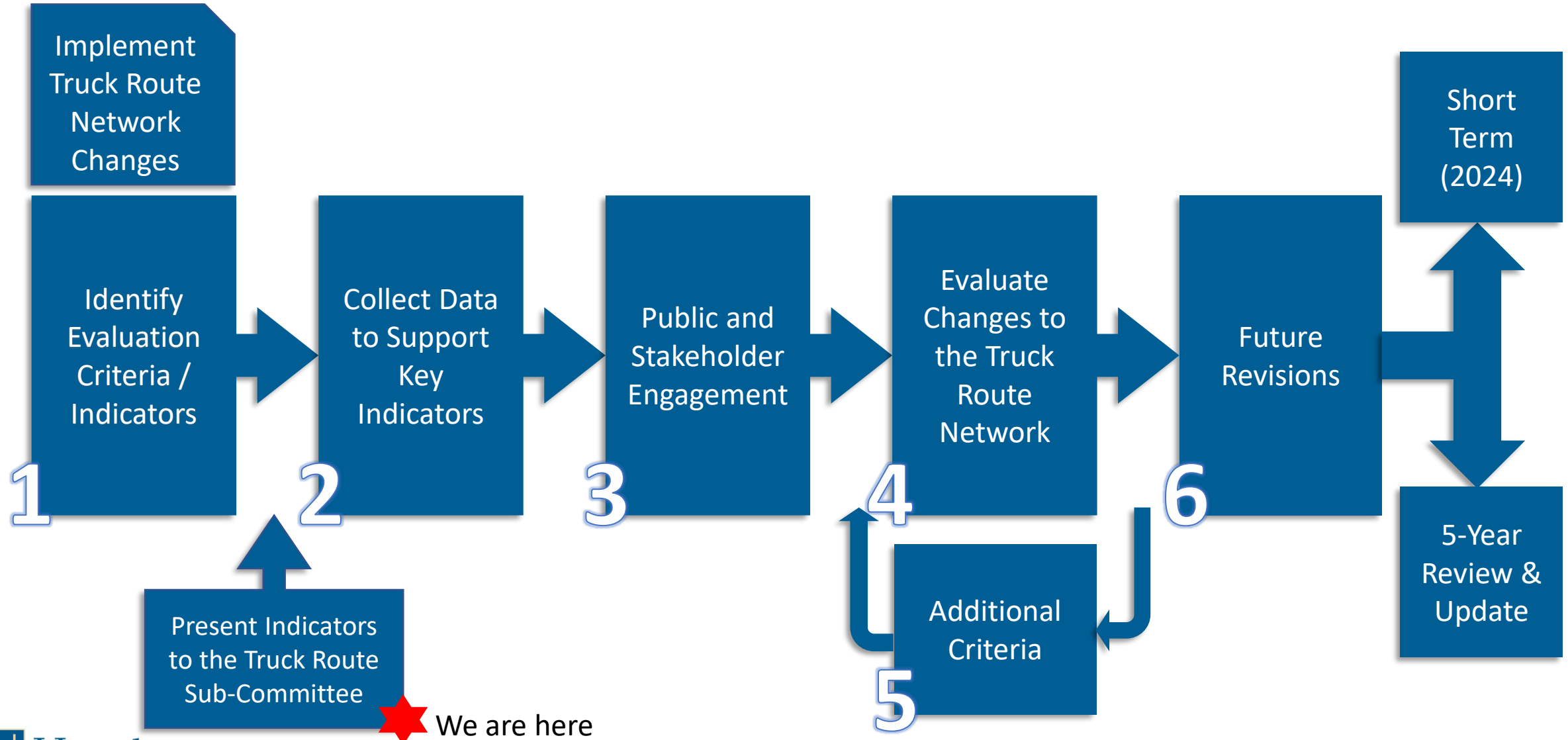
Community  
Liveability

Economic  
Prosperity

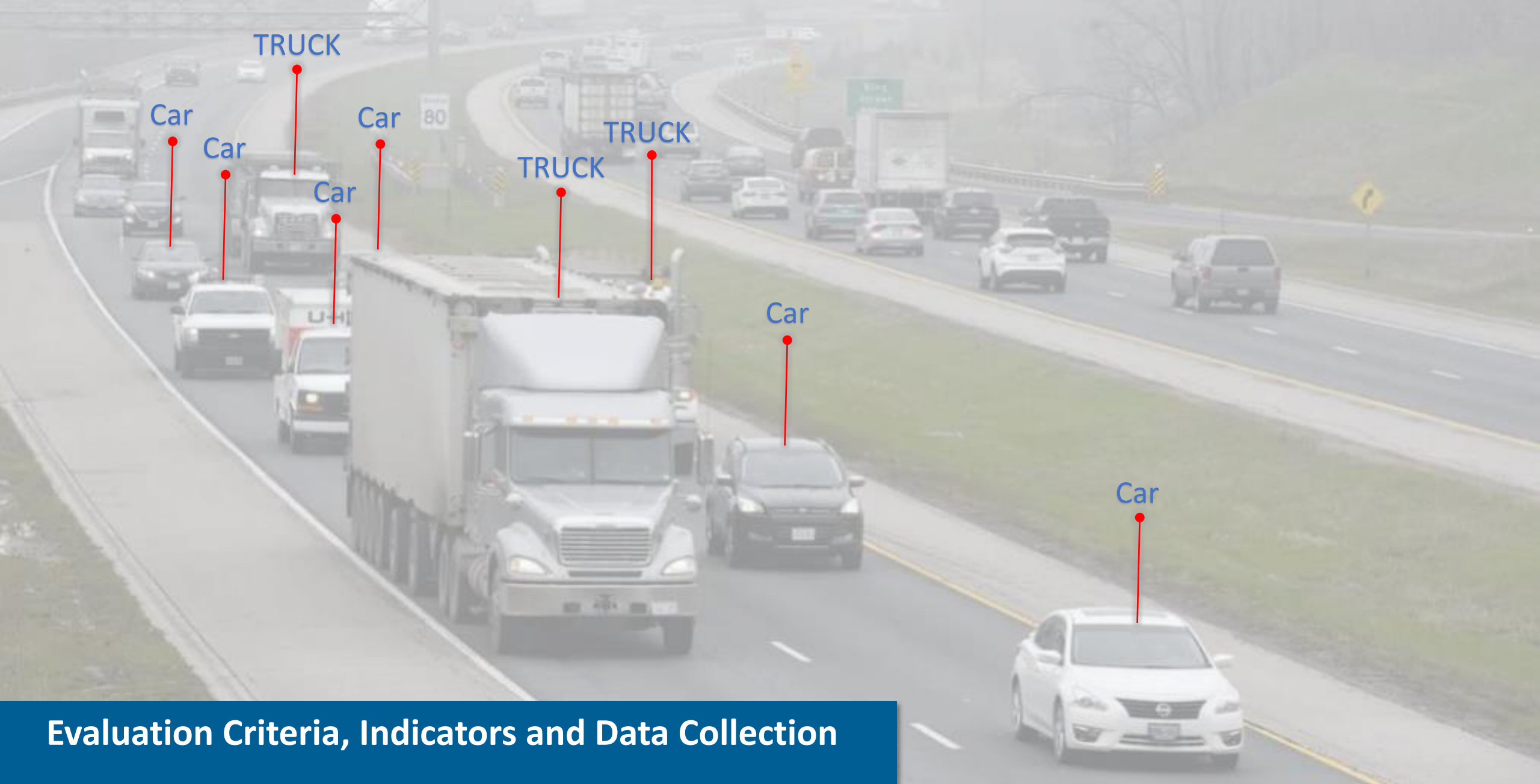
Environmental  
and Public  
Health

## Monitoring and Evaluation Framework

# Truck Route Network Monitoring and Evaluation Framework







Evaluation Criteria, Indicators and Data Collection



# Evaluation Criteria and Indicators – Community Liveability

Community  
Liveability

- Number of collisions involving trucks
- Exposure of vulnerable road users to truck traffic along key routes
- Change in Potential for Safety Improvement ranking of the truck route that was removed or modified
- Truck volumes passing through neighbourhood development areas
  - Breakdown of type of complaints related to trucks including cut-through trips, noise and vibration, and speeding
  - The density of residents (vulnerable population) living on a truck route



## Evaluation Criteria and Indicators – Public and Environmental Health



- Changes in measured air quality (CO, NO<sub>2</sub>, CH<sub>4</sub>, CO<sub>2</sub>, PM 2.5, NO<sub>x</sub> etc.)
- Changes in noise levels at select monitoring stations
- Number of sensitive land uses within 50-meters of a truck route (i.e. Elementary Schools, Hospitals, Secondary Schools, Long-Term Care Facilities)

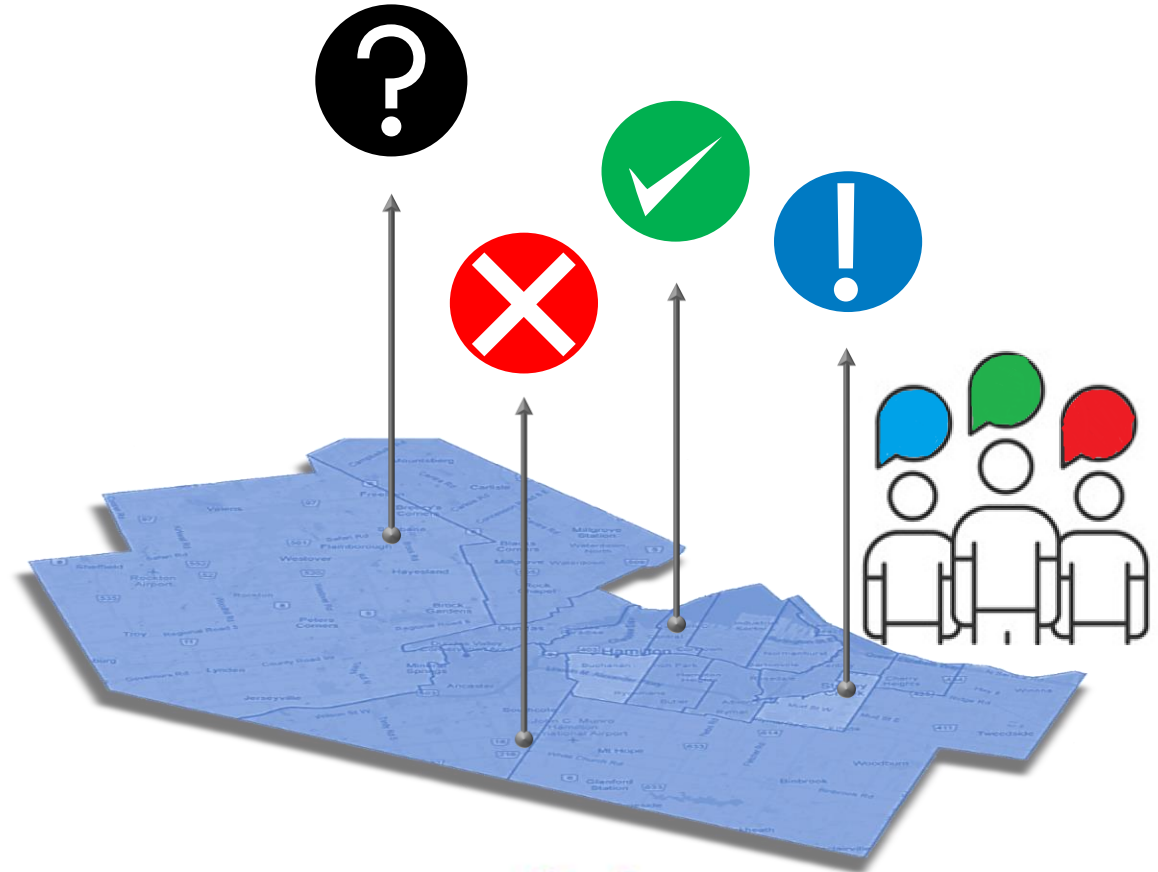
## Evaluation Criteria and Indicators – Economic Prosperity



- Number of new development applications on former truck routes
- The volume of goods moved through the Port of Hamilton and Hamilton International Airport:
  - Commodity volume
  - Truck volumes entering/exiting the port
- Percent change in average truck trip length (measured using telemetric data)
- Change in truck trip times from key business parks/goods movement terminals (measured using telemetric data).

# Public and Stakeholder Engagement

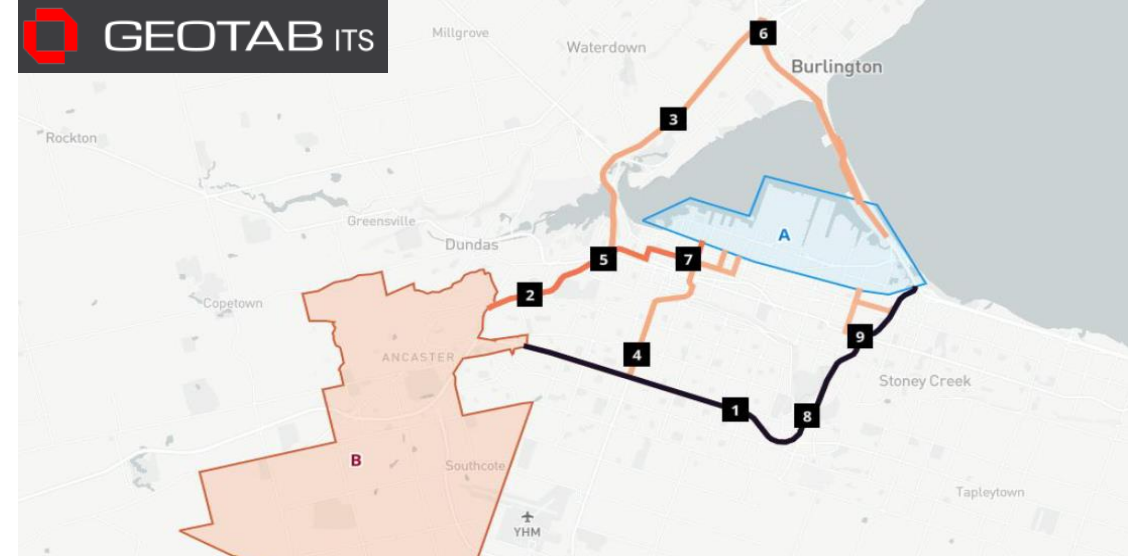
- Public Opinion Survey
- Interview Targeted Stakeholder Groups
- Focus Group Meetings
- Enforcement





## Data Collection

- Truck volume count at targeted locations
- Top routes between key truck trip origin and destinations
- Big Data (Telemetric truck information - GeoTab)
- Commodity flow data from Port of Hamilton and Hamilton International Airport
- Commercial Vehicle Survey (MTO)
- Air quality and noise level data



■ **Geographies** - Standard, Custom or Segment / link selection

■ **Connectors** - Filter journeys between O/D pairs based on connecting geographies

■ **Vehicle classification** - View insights broken out by vehicle class

■ **Vocations** - Patented machine learning model examines driving behaviors and classifies trips and vehicles into categories according to their purpose

■ **Industry** - Understand which industries are contributing the trips on your roads

■ **Custom journey definition** - Chain individual trips together to ensure intermediary stops do not skew the data

■ **Speed of analysis** - Shorten time to insight, process months of data for large jurisdictions in minutes.





Recommendations



## Recommendations

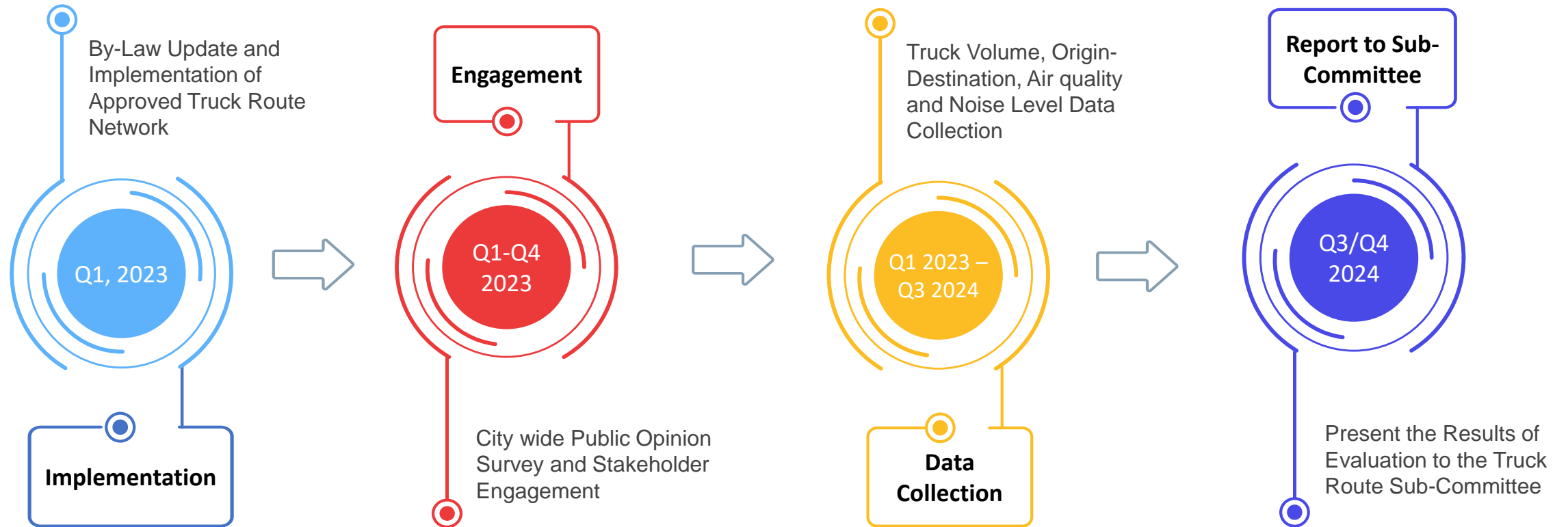
- a) That the framework and associated criteria for the evaluation of approved truck route network described in this Report PED19073(d) be received and approved;
- b) That staff be directed to operationalize the truck route network evaluation framework including all required data collection, public and stakeholder engagement and analysis commencing in early 2023 and through 2023/2024 and report back to the Truck Route Sub-Committee by no later than Q4 2024;
- c) That the estimated upset limit cost of \$20,000 associated with implementing and promoting a public opinion survey be funded from Project ID 4032155744 Transportation Master Plan (TMP) Modelling and Monitoring;

## Recommendations

- d) That the estimated upset limit cost of \$30,000 to conduct targeted data collection including truck volume and routing surveys, be funded from Project ID 4662115820 Traffic Count Program;
- e) That Outstanding Business List Item ACP, respecting Public Works Report 22- 005, Item 5 (PED19073(c)), staff to develop a framework and associated criteria that can be used to evaluate changes to the approved Truck Route Network in order to inform future revisions to the truck route network and that the criteria be presented to the Truck Route Sub-Committee by Q3, 2022 with the results of the evaluation being completed no later than 2024, be identified as completed and removed from the Public Works Committee Outstanding Business List.



## Next Steps



# Thank you!

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