TAC Educational Achievement Award Nomination

ONTARIO MINISTRY OF TRANSPORTATION

FREIGHT-SUPPORTIVE GUIDELINES

R. Kortright
Ontario Ministry of Transportation, Toronto, Ontario, Canada
robin.kortright@ontario.ca

ABSTRACT

As communities grow and change it has become increasingly important to understand, plan and design for the movement of freight in order to maintain goods movement efficiency and the economic competitiveness of communities, while integrating and balancing the needs of other transportation system users and the compatibility of surrounding land uses.

There is broad agreement among both industry and municipalities that guidance is needed to improve understanding of freight needs, better route goods through communities and balance needs of freight with needs of others.

The Ontario Ministry of Transportation published the Freight-Supportive Guidelines in January 2016 to address this need. The document was developed as a unique resource, the first of its kind in Canada, to help municipalities better understand and plan for the vehicles that transport goods through their communities and thereby support community livability, safety and economic competitiveness.

With an innovative, easy to use design and comprehensive scope, the document is designed to support municipal planners, engineers and others in creating freight-supportive communities. The document includes hundreds of specific strategies related to land use planning, site design and operational procedures as well as detailed case studies and links to specialized resources to support implementation.

In view of the above, we would like to nominate the Ontario Ministry of Transportation's Freight-Supportive Guidelines for recognition with the 2016 TAC Educational Achievement Award.

1. INTRODUCTION AND OVERVIEW

Goods movement supports thousands of jobs in Ontario alone, and generates billions of dollars in trade. Implementing strategies that support efficient movement of freight is important for all municipalities and communities seeking to attract new industry and to address the needs of existing businesses. Communities specifically designed to accommodate the movement of freight are safer and more livable, and consumers there have better access to goods and services. Incorporating freight movement into the design of communities and transportation systems can also help protect the environment by reducing travel times, vehicle delays and associated air pollution.

In January 2016, the Ontario Ministry of Transportation published Freight-Supportive Guidelines to help municipalities, both urban and rural, better understand and plan for the vehicles that transport goods through their communities. The Guidelines provide land use planning, site design, road design and operational best practices, examples and implementation tools for use in creating safe and efficient freight-supportive communities across Canada.

The document, the first of its kind across Canada, includes over 50 guidelines and almost 350 strategies to assist planners, engineers and others create safe and efficient freight-supportive

communities, including detailed guidance and links to specialized resources related to land use planning, site design and operational procedures.

In recognition of the Ontario Ministry of Transportation's contribution to education and training in developing this unique and valuable resource, we would like to nominate the Ministry for the 2016 TAC Educational Achievement Award.

2. DESCRIPTION OF THE ACHIEVEMENT

The Freight-Supportive Guidelines were developed to provide municipal planners, engineers and other transportation and land use planning specialists a comprehensive resource to draw upon when seeking to create communities, individual developments and transportation networks capable of supporting safe and efficient movement of goods while integrating and balancing the needs of other transportation system users and surrounding land uses.

The introductory chapter of the Guidelines provides background and context on the role and importance of freight movement in the economy, along a description of the various modes used for goods movement. This background illustrates and explains the transportation needs of the freight industry and demonstrates why decisions related to transportation and land use planning as well as infrastructure investments should take into consideration the movement of goods through communities.

The following three chapters provide guidelines, in-depth strategies and supporting resources in the areas of:

- Land use and transportation planning, providing strategies for incorporating freight considerations into municipal planning processes while balancing the needs of freight with other municipal objectives to create more complete and sustainable communities;

- Site design, providing a range of strategies that are common to most types of sites and providing more detailed strategies for specific land uses, including industrial, office, retail, institutional, existing and new urban areas and rural sites. Coordination between freight and public transit, cyclists and pedestrians also is addressed in relation to site design; and

- Road design and operations, incorporating freight movement into the design and operation of municipal transportation infrastructure.

The Implementation Strategies chapter provides an overview of tools and actions that can be used to implement the guidelines and strategies in the preceding chapters.

Canadian and international case studies are included to identify best practices and to help guide Ontario municipalities in the application of the Guidelines. The case studies include references to complementary guidelines and provide references for more information about the case study.

The Freight-Supportive Guidelines are available at no cost from the Ontario Ministry of Transportation's website in accessible PDF format, in both French and English, through the link below:

http://www.mto.gov.on.ca/english/publications/freight-supportive-guidelines.shtml.

See Appendix for the Table of Contents and sample pages from the Guidelines.

3. CONTRIBUTION MADE TO EDUCATION/TRAINING

Industry and municipalities alike agree that guidance is needed to improve understanding of freight needs, better route goods through communities and balance needs of freight with needs of others.

The Freight-Supportive Guidelines were produced to meet this need. The document is complementary to the Ministry's 2012 Transit-Supportive Guidelines, which were recognized with awards on both a provincial and national level by the Ontario Provincial Planners Institute and the Canadian Institute of Planners. While the Transit-Supportive Guidelines is a valuable resource, in many ways the Freight-Supportive Guidelines make a more significant contribution to education and training. While there is substantial material available related to planning and design to support transit and active transportation, across Canada there is limited guidance available for communities seeking to support efficient movement of freight and manage conflicts with other road users and surrounding uses.

The Guidelines are a unique, in-depth resource for municipal planners and civil engineers charged with accommodating and facilitating the efficient movement of freight. In a clear, accessible and easy to use format, in both official languages, they provide guidance on how and why to integrate freight into long-range land use planning processes, strategies for specific site design challenges, and operational procedures to best accommodate goods movement within municipal transportation networks.

The Guidelines provide a structured, proactive framework for analysis of municipal freight challenges and opportunities by introducing the concept of a 'freight audit'. Detailed, step by step guidance, designed to be adaptable in application on a district basis and to smaller communities as well as cities or regions, allows municipalities to identify issues affecting local freight movements and obtain the baseline information necessary to help establish planning and infrastructure priorities needed to support the safe and efficient movement of freight.

By taking the innovative approach of integrating guidance on long-term land use and transportation planning, site design and operations into a single document the Guidelines provide specialists working in a particular area an improved understanding of links and synergies between their work and that of others.

The document has been structured with an innovative design to support these connections, with complementary guidelines highlighted in the sidebar text throughout the document, as well as direct links to hundreds of recommended resources to delve deeper into specific topics.

4. BENEFITS/PAYOFF

While the final Freight-Supportive Guidelines have only recently been released, past drafts of the document released for consultation have already been met with supportive comments from municipalities and industry alike, recognizing the document as a practical, user-friendly and comprehensive resource.

Particularly in smaller communities without the resources to invest in specialized expertise, the Guidelines will support transportation planners, engineers and others across Canada in understanding, accommodating and facilitating the movement of freight vehicles through their communities. Improving how municipalities plan, design and operate their transportation networks to better accommodate the movement of goods is critical to:

- avoiding conflicts between freight vehicles and transit, cyclists and pedestrians, improving community livability and safety;
- supporting freight efficiency, reducing transportation-related emissions; and
- enhancing economic health and competitiveness of communities.

Efficient movement of freight is essential to the economy. The movement of goods plays a major role in the economy, generating large revenues and supplying hundreds of thousands of jobs. Canada's economy is multi-faceted, ranging from farming to manufacturing to knowledge-based businesses, all of which depend on the movement of freight in some way. An increase in municipal planning for freight improves the economic health and competitiveness of communities of all sizes.

Planning for freight also supports community livability and safety. More information on how freight moves through communities can improve planning while reducing problems involving freight trucks and trains, pedestrians, cyclists, transit vehicles and cars. Long-term planning for both freight and travel-intensive land uses allows residential areas, schools, hospitals and other similar developments to be more appropriately located, either set away from freight facilities or shielded using strategically placed landscaping, screens and/or walls.

Finally, efficient movement of freight can help protect the environment. Supporting freight efficiency reduces transportation-related pollution and lessens the need for future investment in transportation infrastructure.

5. VALUE TO THE CANADIAN TRANSPORTATION COMMUNITY

The question of how to develop safe, livable and economically competitiveness is one that is relevant to communities across Canada.

The Freight-Supportive Guidelines provide a unique resource for those seeking to better understand and accommodate the movement of goods through their communities. Applicable to urban, rural and northern conditions, with guidance for road, rail, air and marine modes, the Guidelines are a new and invaluable reference for use across Canada.

The Guidelines have been designed to address the concerns of communities both large and small. The breadth of topics covered target small and mid-sized as well as large communities,

providing relevant content for communities all across Canada. A legend identifies guidelines with specific relevance for a range of community sizes, from small (with a population less than 50,000) and mid-sized communities (50 – 150,000) to large communities (150 – 500,000) and big cities (500,000 +). The legend also highlights guidelines appropriate to particular settings (e.g. rural or urban) and specific land use types (e.g. greenfield, commercial).

The document has been designed to be a best practice reference, presenting a variety of ways to meet the objective of building freight-supportive communities. Case studies and resources are drawn from across Canada as well as international sources. Understanding that circumstances vary from place to place, it is expected that municipalities across Canada will adapt these guidelines and examples to their own individual situations.

6. SUMMARY

Creating communities that are supportive of freight movement is important to the sustainability of the Canadian economy, helping to maintain a high quality of life.

The Freight-Supportive Guidelines are a unique resource to assist planners, engineers and others in creating safe and efficient freight-supportive communities. They are comprehensive and freely available in accessible format in both Canada's official languages. They have an innovative design that is easy to use and encourages the reader to make connections between different aspects of long-term planning, design and operations to support a more holistic approach to planning for the movement of freight.

The Guidelines are designed to be useful to those in communities both large and small, dealing with challenges from accommodation of farm vehicles and transportation of aggregates to conflicts between cyclists and courier vehicles.

We submit that the Ontario Ministry of Transportation has made a significant contribution to education and training in publishing the Freight-Supportive Guidelines, and seek recognition for the document through the Transportation Association of Canada's 2016 Educational Achievement Award.

Thank you for your consideration.

APPENDIX

Freight-Supportive Guidelines Cover, Table of Contents and Sample Pages

Freight-Supportive Guidelines



Ontario

Freight-Supportive Guidelines Table of Contents (1)

Freight-Supportive Guidelines Table of Contents (2)

2.3 Planning for the Freight Movement Network

Figure 2.9: Traditional employment areas may not be located near highway access

Historically, *employment areas* were located near water and rail. More recent highway-related *employment areas* have developed to take advantage of sophisticated highway systems.

The following Guidelines provide strategic direction for planning for the freight network, and are intended to address transportation planning. The Guidelines also provide direction on considering strategic linkages between *employment areas* and the connections to the provincial or regional highway network. An effective freight movement network can help trucks maximize efficiency and increase *logistics* options that will benefit businesses, transportation providers and consumers, while avoiding or minimizing conflicts in residential areas.

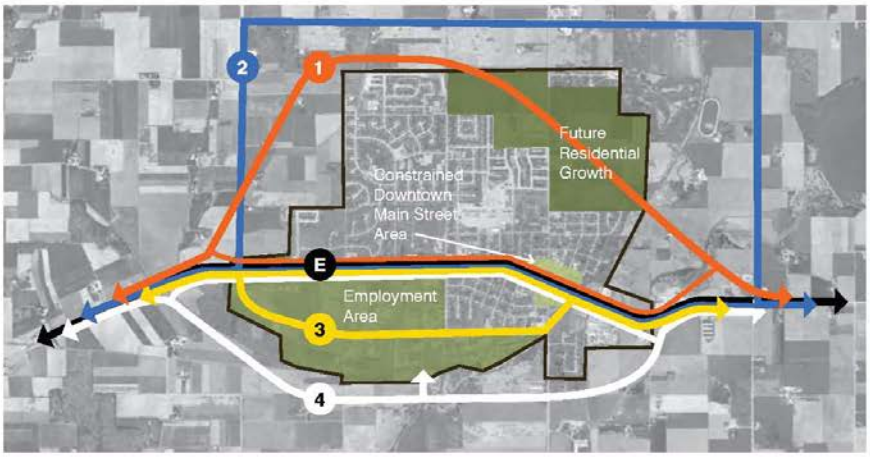
Planning for freight within the context of an overall strategy for how streets are designed and used is important; likewise it is also important to recognize that the strategies needed to accommodate freight will vary depending on both traffic flows and land uses in the area. Context sensitive solutions are necessary to ensure that freight movement is part of the planning discussion while balancing priorities and solutions to manage the needs of *pedestrians*, cyclists, transit, automobiles and trucks. *Complete streets* are designed to balance the needs of all modes of transportation on a road, including freight. However, not all streets are the same. Trade-offs between street design features should reflect long-term objectives for the street and surrounding area. In rural or heavy industrial areas, *complete streets* may look very different from those in downtown or main street areas.

Figure 2.10: An example of a complete street

Complete streets are designed, built, operated and maintained for all modes of transportation and for all types of users.

Figure 2.13: Alternatives to addressing truck traffic that passes through a town's main street area

All through and local traffic must pass through constrained historic main street area leading to congestion and conflicts. Four alternatives are shown. Note: While option 4 is preferred for transportation outcomes, an Environmental Assessment would be required to assess options and take other factors into consideration.



Option	Advantages	Disadvantages
1 **Option 1:** East side bypass using new road	• Time savings for through traffic	• Conflicts with development area • Requires land acquisition • Does not service the *employment area*
2 **Option 2:** East side bypass using existing roads	• Minimal cost • Encourages non-freight traffic to remain on the main street	• Little time savings for through traffic • Turning movements will add to travel time • Does not service the *employment area*
3 **Option 3:** West side bypass through *employment area*	• Makes best use of existing roads • Direct access into *employment area*	• Limited time savings for through traffic • Potential conflicts with existing uses
4 **Option 4:** West side bypass adjacent to *employment area*	• Time saving for through traffic • Good access to *employment area* • Fewer turning movements • No conflicts with existing or proposed uses	• Requires land acquisition • May have environmental impacts

Freight-Supportive Guidelines Sample Pages (3)

By their very nature transit nodes are almost always also high *pedestrian* usage areas. Careful design of the connecting corridor street should always include the safe design of *pedestrian* crossing points. Visibility and traffic speed are key considerations to help ensure that the street is safe for *pedestrians*.

Strategies

Scope:	Settlement size:	Setting:
All		

Required resources:	Land type:
$ - $$$	All

Complementary Guidelines:

- 2.4 Improved Integration of Transportation and Land Use Planning, specifically Guideline 2.4.1
- 3.9 Site Design to Coordinate Freight Transportation with Public Transit, Cyclists and Pedestrians
- 4.1 Access and Intersections
- 4.2 Corridors

a. Centre Medians:

i. Provide a safe location for *pedestrians* to stand when getting off a transit vehicle or while they are waiting to cross the street.

ii. When designing roads with a centre median, consider how that median will affect the operation of freight, especially trucks.

iii. Require new site development to be oriented so that large vehicles can easily access the site from side streets.

iv. Promote shared driveways, access easements or new collector streets.

v. Consider options for allowing large trucks to turn around safely once on the arterial street if an alternative access point cannot be found. The simplest solution is generally a loop of collector streets connected to the major arterial street at traffic signals. Right turn movements are preferred. Where suitable collector streets do not exist and cannot be created, other options need to be considered.

Figure 2.14: Truck supportive median options

When a median (including a centre-of-street transit line) prevents left turns into or out of a driveway, provisions for truck-friendly turn-around options must be provided.

Municipalities should reference the Ontario Ministry of Transportation *Transit-Supportive Guidelines* 2.3.1 and 3.1.4.8 for additional information on determining the location of transit stops.

b. Intersections: Intersections are not only the most constrained locations on roadways, but they are also the most likely place for conflict between freight, transit vehicles, *pedestrians* and other road users.

i. Consider locating transit stops and stations on the far side of the intersection (i.e., transit vehicles cross the intersection then stop). Far side stops can expedite travel times as well and therefore are attractive from a transit perspective.

ii. Avoid or minimize the use of right-turn channelized turning lanes that create traffic islands at intersections with high