

**Submission to the**  
**Ontario Ministry of Transportation**  
**regarding**  
**Draft Update of Ontario's Transit-Supportive Guidelines**

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On behalf of its members and stakeholders in the wider construction and infrastructure sector, the Residential and Civil Construction Alliance of Ontario (RCCAO) is pleased to make this submission in response to the Ministry of Transportation's draft Transit-Supportive Guidelines. In the summer of 2009 RCCAO was invited by MTO to participate on one of its Working Groups to update the 1992 Transit-Supportive Land Use Planning Guidelines. The comments below greatly expand upon a discussion held at the first Working Group meeting held in September 2009.

Established in 2005, RCCAO is composed of management and labour groups that represent all facets of the construction industry. Our members include companies and workers who build both low-rise and high-rise homes as well as roads, sewers and watermains, bridges and other infrastructure related to transit expansion. Our members are:

- Carpenters' Union
- Greater Toronto Sewer and Watermain Contractors Association
- Heavy Construction Association of Toronto
- International Union of Operating Engineers, Local 793
- International Union of Painters & Allied Trades, District Council 46
- Joint Residential Construction Association
- LIUNA Local 183
- Residential Carpentry Contractors Association
- Toronto and Area Road Builders Association

RCCAO consults with governments, the private sector and the construction industry to devise solutions to issues related to public infrastructure and advocate for adequate investment in public transit, roads and highways, water and sewer systems and other public infrastructure essential to economic growth and quality of life. We provide research and reports, and make recommendations on how to realistically ensure adequate infrastructure for the province. Much of this work relates to MTO, Metrolinx and Toronto Transit Commission policies.

### **MTO draft Transit-Supportive Guidelines: A Progressive Document with an Unfortunate Omission**

The MTO's draft Transit-Supportive Guidelines set out a range of traditional and innovative strategies that, if implemented, can help boost transit ridership thereby supporting provincial and municipal policies related to transportation, land use and the environment. In the Greater Golden Horseshoe, the Places to Grow Plan seeks to concentrate land uses in 25 "urban growth centres" by 2031 and promote convenient transit access within these centres. The 2008 Metrolinx Regional Transportation Plan ("The Big Move") complements local public transport initiatives by connecting these centres with higher order transit. RCCAO supports this holistic approach to land use and transportation planning as it will help to facilitate transit ridership objectives, as well as encourage more effective infrastructure investment decisions.

We would like to congratulate MTO for recognizing the role that parking fees can play in terms of reducing congestion, shifting automobile demand to transit (and other sustainable modes) and

leveraging revenue streams. Implemented fairly, parking fees influence how individuals evaluate the utility of their trip relative to its actual costs, including those that are externalized (e.g. emissions). Net parking revenues can be leveraged and earmarked to transit – as the guidelines encourage local municipalities to do so. With this in mind, our suggestions focus on revenue tools that can help make transit more viable and competitive with the automobile.

Unfortunately, road pricing (also known as tolling) has been omitted from the guidelines even though RCCAO and other organizations made the case in 2009 for incorporating technological innovations and pricing mechanisms to achieve greater transit-orientation in urban regions.<sup>1</sup> We are surprised at this because road pricing is quite similar to parking in that it increases the attractiveness of public transport by:

- providing a price signal to choice riders.<sup>2</sup> In order to avoid payment of the fee, motorists might opt to take transit (or decide to take the trip when the cost is lower).
- reducing congestion so that all modes move more efficiently.<sup>3</sup> For both choice riders and captive riders, transit service improves when there is less congestion on the road resulting in shorter trip times for all modes and leading to reduced transit service delivery costs. This increases transit ridership as well as active transportation, car sharing and auto-sharing.
- raising revenue for many of the new or redesigned infrastructure that the draft guidelines encourage (e.g. transit, complete streets, urban design, parking facilities) which, in turn, make transit more attractive to choice riders. Indeed, motorists will be demanding that infrastructure be put in place as a result of higher single-occupancy vehicle (SOV) operating costs.
- having a quick financial payback time (within four years) compared to road/rail investments which is typically between 15 and 25 years.<sup>4</sup>

Fortunately, Section 40 of the Ontario Municipal Act provides municipalities with the power to “designate”, “operate” and “maintain” toll roads – with final authorization from the province.<sup>5</sup> As municipalities do not have the financial and technical means (nor the political fortitude) to implement toll systems independently, the province must play the primary role by coordinating road pricing policy on a regional scale with municipalities as partners in the process – following a similar implementation process used for the Places to Grow plan. Thus, it would be beneficial for MTO’s Transit-Supportive

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<sup>1</sup> The case for road pricing and other innovations was made during a MTO Working Group meeting that took place on September 22, 2009.

<sup>2</sup> “Choice rider” is a term defining those individuals who have regular access to an automobile but may choose transit if/when it is deemed to be convenient, safe and competitively priced. Some choice riders also consider the environmental impacts of their trip by auto so take transit (or car-share, cycle or walk) instead. For economic, age and/or physical reasons, “captive riders” are transit-dependent as they do not have access to an automobile.

<sup>3</sup> Lindsey, Robin (2010, December 2). *Smart Growth and Road Pricing 101*. Presentation to Transport Futures Forum. Slide 7. Retrieved from [www.transportfutures.ca/smart/presentations](http://www.transportfutures.ca/smart/presentations).

<sup>4</sup> Eliason, J. et al (2005). *The Stockholm congestion charging trial - what happened?* Page 33. Retrieved from [www.stockholmsforsoket.se/upload/Rapporter/Expert\\_group\\_summary\\_060621.pdf](http://www.stockholmsforsoket.se/upload/Rapporter/Expert_group_summary_060621.pdf)

<sup>5</sup> Ontario Municipal Act, RSO, 2001, c. 25, s. 40 (2). Retrieved from [www.e-laws.gov.on.ca/html/statutes/english/elaws\\_statutes\\_01m25\\_e.htm#BK53](http://www.e-laws.gov.on.ca/html/statutes/english/elaws_statutes_01m25_e.htm#BK53)

Guidelines to provide municipalities with an introduction to priced highways, priced zones and fully priced road networks. We offer an overview of these road pricing systems along with some brief examples below.

### Conventional Toll Highways

Tolled highway corridors connect urban areas and, historically, have been characterized by toll booths located at selected interchanges within the corridor. This concept has been applied in various locations across North America since the 1800s. In general, all vehicles stop at a toll plaza and, upon making a flat fee payment, a gate rises permitting them to continue on their journey. Electronic technology developed in the 1990s enables motorists to pay tolls via a transponder mounted in their car (known as Dedicated Short Range Communication - DSRC) or cameras (known as Automatic Number Plate Recognition – ANPR). Retrofitting conventional toll plazas with electronic gantries allow vehicles to maintain high speeds, avoid traffic back-ups at plazas and pay a fluctuating fee based on congestion levels.

**EXAMPLE #1: 407 ETR****City:** Greater Toronto Area**Population:** 6 million**Area:** 7,124 km<sup>2</sup>**Density:** 842/km<sup>2</sup>**Per Capita Income:** \$43,000**Web:** [www.407etr.com](http://www.407etr.com)

Opened in 1997, Ontario's 407 Electronic Toll Route (ETR) extends 108 kilometres from Burlington to Pickering. Using both ANPR and DSRC technology at 198 access points, drivers of passenger vehicles are currently charged an average of 21.55 cents per kilometre depending on when and where they drive. An independent study of the 407ETR found that motorists saved 33 minutes of time and 3 litres of gas per trip in contrast to those using the parallel Highway 7, a six-lane public road with multiple intersections and traffic lights.<sup>6</sup> Though the toll revenue accrues to the private 407ETR Concession Company and is therefore not earmarked for transit, a portion of the corridor has been set aside for future high-speed transit. The tolls on the future eastern extension of the 407 will be regulated by the government so that "motorists pay for the highway, freeing up provincial investment dollars for other priorities such as public transit."<sup>7</sup>

### High Occupancy/Toll (HOT) Lanes

A HOT lane is a specialized toll facility that maximizes the use of existing general lanes or High Occupancy Vehicle (HOV) lanes<sup>8</sup> by improving their efficiency and earmarking net revenues to corridor-specific transit service. In the case of HOV lanes that are usually underused by multi-passenger vehicles (minimum 2 passengers) using it for free, HOT lanes allow SOVs to gain access to reversible lanes<sup>9</sup> by

<sup>6</sup> Nassereddine, Imad (2009, November 12). *407 ETR: Gaining User Acceptance*. Presentation to Transport Futures Road Pricing & Public Acceptance Workshop. Retrieved from [www.transportfutures.ca/past-events/workshop-2009/presentations](http://www.transportfutures.ca/past-events/workshop-2009/presentations)

<sup>7</sup> Government of Ontario (2009, January 27). *Province to own Highway 407*. Retrieved from <http://news.ontario.ca/mto/en/2009/01/province-to-own-highway-407-extension.html>

<sup>8</sup> HOV lanes are limited access lanes in which only vehicles with more than one person (e.g. carpools, vanpools, and uses) are allowed. See [www.mto.gov.on.ca/english/traveller/hov/](http://www.mto.gov.on.ca/english/traveller/hov/).

<sup>9</sup> Reversible lanes allow transportation officials to change the direction of the lanes during morning and afternoon rush hours.

paying a fee<sup>10</sup> that varies with the amount of traffic in the adjacent “free” general lanes. Trip times decrease substantially for those who opt for the HOT lane while opening up capacity for those who choose to remain in the general lane(s).<sup>11</sup>

**EXAMPLE #2: I-394 MnPASS**

**City:** Minneapolis-St. Paul, USA

**Population:** 3.3 million

**Area:** 16,483 km<sup>2</sup>

**Density:** 200/ km<sup>2</sup>

**Per Capita Income:** \$37,974

**Web:** www.mnpass.org

In 2005, the Minnesota Department of Transportation (MnDOT) converted 9.5 miles of inefficient I-394 HOV lanes (built in 1991) to HOT lanes.<sup>12</sup> Branded as MnPass, SOV drivers pay a toll of between 50 cents to \$8.00 depending on the number of vehicles in the general “free” lanes. HOT lane traffic speed for SOVs, transit and carpools is maintained at 50 mph virtually all the time while the general lanes have stop and go traffic during rush hour periods. The system generates annual toll revenues of \$300,000 which are

earmarked to transit service, an amount that will increase as new priced lanes are added in the future.<sup>13</sup> The I-394 MnPASS Phase II Planning Study, launched by MnDOT in 2008 with several collaborating agencies, sets out a plan to maintain efficient highway traffic levels over the next 25-30 years by improving transit service (e.g. building new transit stations, increasing bus service), intensifying development and promoting telework in the low-density corridor.<sup>14</sup>

### Priced Zones

Priced zones are created by establishing a cordon around congested urban areas as a way to improve multi-modal traffic flow and raise revenues for transit and other transport infrastructure. When a SOV crosses the cordon, they are charged a flat or dynamic fee by way of ANPR cameras situated at entry points or a transponder that communicates with overhead gantries.

**EXAMPLE #3: LONDON**

**CONGESTION CHARGE**

**City/Country:** London, UK

**Population:** 8 million

**Area:** 1,572 km<sup>2</sup>

**Density:** 4,760/km<sup>2</sup>

**Per Capita Income:** \$60,000

**Website:** www.tfl.gov.uk

The City of London, which created its 21 square kilometre “Congestion Charge” zone in 2003, has experienced a 25% decrease in congestion due to the £10 charge (\$15.60 CDN). Over half of the car trips shifted to transit (and other modes) without a decrease in the total number of trips made and the increased public transport reliability resulted in schedules being changed -- buses were arriving at destinations too early! Since 2003, net revenues of approximately \$225 million have been invested in

<sup>10</sup> Digital signage display changing prices in advance of HOT lane entrances so that motorists can decide whether to enter or not.

<sup>11</sup> De Corla-Souza, Patrick (2009, November 12). *Gaining Public Acceptance for Road Pricing: Experience in the United States*. Presentation to Transport Futures Road Pricing & Public Acceptance Workshop. Retrieved from [www.transportfutures.ca/past-events/workshop-2009/presentations](http://www.transportfutures.ca/past-events/workshop-2009/presentations)

<sup>12</sup> Buckeye, Ken (2009, November 12). *Road Pricing Experience in Minnesota, USA*. Presentation to Transport Futures Road Pricing & Public Acceptance Workshop.. Retrieved from [www.transportfutures.ca/past-events/workshop-2009/presentations](http://www.transportfutures.ca/past-events/workshop-2009/presentations)

<sup>13</sup> Marley, Patrick (2010, October 22). *Walker backs creation of toll lanes*, Milwaukee-Wisconsin Journal Sentinel. Retrieved from [www.jsonline.com/news/statepolitics/105580798.html](http://www.jsonline.com/news/statepolitics/105580798.html)

<sup>14</sup> Buckeye, K. and Munnich, L. (2009). *I-394 MnPASS Phase II planning study: Linking land use, transit, telecommuting, and congestion pricing*. Page 1. Retrieved from <http://pubsindex.trb.org/view.aspx?id=881478>

new transportation infrastructure, including bus improvements, roads and bridges, walking and cycling, road safety, environmental enhancements and local plans.<sup>15</sup>

### Fully Priced Road Networks

Fully priced road networks (FPRN) charge SOVs for use of the entire road network – highways, arterials, collector and local roads. Compared to priced highways and zones, this is more efficient and more equitable since everyone pays directly for the roads they use – just as transit riders pay for every trip they choose to make. Besides influencing drivers to consider transit for more of their trips, FPRN charging encourages SOVs to move closer to existing transit facilities thereby reducing congestion and urban sprawl as well as creating more demand for transit.<sup>16</sup>

#### **EXAMPLE #4: SINGAPORE ERP**

**City/Country:** Singapore

**Population:** 5 million

**Area:** 710 km<sup>2</sup>

**Density:** 6,814 km<sup>2</sup>

**Per Capita Income:** \$51,000

**Web:** [www.lta.gov.sg](http://www.lta.gov.sg)

Although it is not a true FPRN as defined above, Singapore's dynamic Electronic Road Pricing (ERP) system is the closest thing to it in the world. With an aim to maintain free flow driving conditions at least 85% of the time, the ERP incorporates priced zones, highways – and arterial roads. Using on-board transponders (activated by debit cards), levies of \$0.70 to \$2.20 are automatically deducted from the 370,000 vehicles that pass under ERP gantries each weekday and some Saturdays. Since its initial introduction in 1975, congestion has

fallen by 60%, crash rates declined by 25% and major transit investments have been made -- most after 1982. Of the 7.7 million trips taken in Singapore each day, 50 per cent of commuters use transit, 36 per cent travel by car and 12 per cent use taxis.<sup>17 18</sup> Yearly revenues from the ERP now stand at \$58 million, \$46.5 million of which is dedicated to transportation system upgrades and the balance to administration.<sup>19</sup> Singapore is currently looking at upgrading the ERP to a Global Navigation Satellite System (GPS-based) system so that its transportation network can be defined as a true FPRN.

### Conclusion

As MTO's Transit-Supportive Guidelines 2011 document correctly points out, not every strategy can be implemented in every context. The same applies to road pricing. A growing body of evidence, however, shows that a Fully Priced Road Network will have the largest impact in terms of increasing

<sup>15</sup> Evans, Jeremy (2010, March 3). *Eliminating Gridlock with Intelligent Traffic Systems*. Transport for London. Presentation to Urban Transportation Summit.

<sup>16</sup> Anas, Alex (2010, December 2). *Congestion, Road Pricing and Urban Sprawl*. Presentation to Transport Futures Smart Growth & Road Pricing Forum. Slide 36. Retrieved from [www.transportfutures.ca/smart/presentations](http://www.transportfutures.ca/smart/presentations)

<sup>17</sup> Lim Sing Loo, Eddie (2006). *Electronic Road Pricing: Singapore's Experience*, Page 6. Retrieved from [www.itdp.org/documents/5837\\_Eddie\\_Lim\\_Singapore\\_Pricing.pdf](http://www.itdp.org/documents/5837_Eddie_Lim_Singapore_Pricing.pdf)

<sup>18</sup> Lim Sing Loo, Eddie (undated) - *Electronic Road Pricing: The Singapore Way*, Page 4. Retrieved from [www.comp.nus.edu.sg/~wongls/icaas-web/links/.../eddie-erp-talk.pdf](http://www.comp.nus.edu.sg/~wongls/icaas-web/links/.../eddie-erp-talk.pdf)

<sup>19</sup> Singapore Land Transport Authority. *Electronic Road Pricing*. Retrieved from [www.lta.gov.sg/motoring\\_matters/index\\_motoring\\_erp.htm](http://www.lta.gov.sg/motoring_matters/index_motoring_erp.htm)

transit use/competitiveness, reducing congestion and curbing urban sprawl.<sup>20</sup> If all roads are priced (with at least a portion of revenues earmarked to transit), a higher proportion of new housing and jobs will locate in mixed use areas (assuming zoning is relaxed) since individuals and businesses seek to avoid tolls – and the only way they can avoid tolls is by switching to transit that is typically more available in established districts and neighbourhoods. A strategic combination of market and public sector economic policy will result in scarce funding being invested where transit will have the most chance to succeed: near the hubs and corridors where it is currently available, where higher density is generally accepted and where utilization of land value capture methods will be more effective.<sup>21</sup>

MTO's updated Guidelines provide strategies that support transit operationally, financially and culturally. If this is to occur in the next 20 years, road pricing and other measures that level the playing field between SOVs and transit will be needed sooner than later. Metrolinx, for instance, must deliver an investment strategy by June 1, 2013 in order to support implementation of the Regional Transportation Plan.<sup>22</sup> It would be prudent of MTO to incorporate road pricing and technological solutions in advance of this date. RCCAO respectfully urges MTO to include road pricing in the final publication of the Transit-Supportive Guidelines.

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<sup>20</sup> Anas, Alex (2010). Ibid. Slide 36.

<sup>21</sup> Flack, Sue (2010, December 2). *Road Pricing in Europe and the GTHA*. Presentation to Transport Futures Smart Growth & Road Pricing Forum. Slide 13. Retrieved from [www.transportfutures.ca/smart/presentations](http://www.transportfutures.ca/smart/presentations)

<sup>22</sup> A number of organizations, including the Toronto Board of Trade, Greater Toronto Civic Action, RCCAO and Transport Futures, have requested an expedited delivery of the investment strategy. Transportation Minister Kathleen Wynne has also called for Metrolinx to submit its investment strategy in 2012.