401RT Express

1247 Mary-Lou Street, Innisfil, Ontario L9S 0C2; T: 705-294-4110; www.401rt.ca

Transforming Transportation in Toronto

October 2026

Rapid Transit Rescue For Toronto

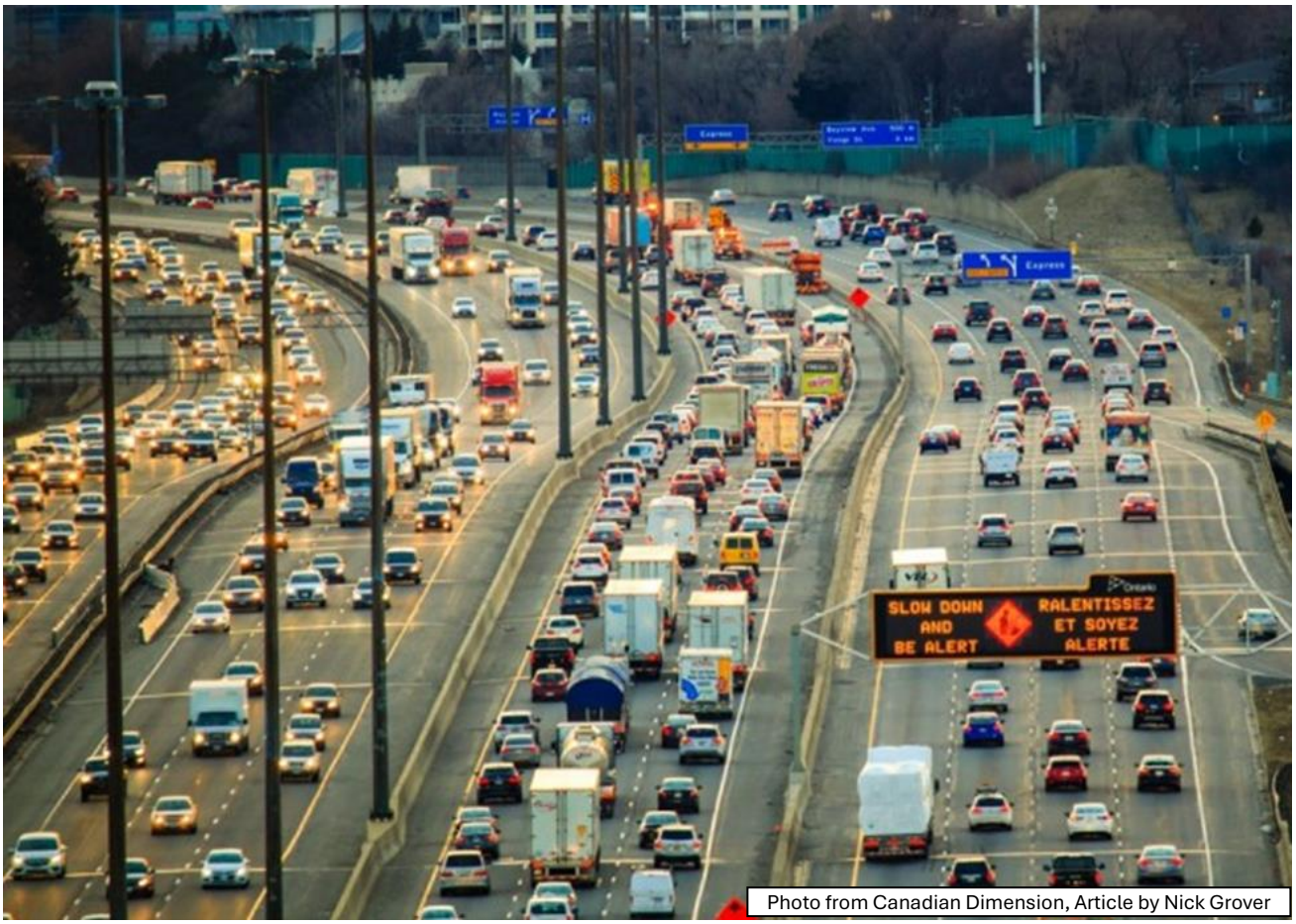


Photo from Canadian Dimension, Article by Nick Grover

Every day, close to 1.4 million vehicles use Highway 401 in the core of the Greater Toronto Area, from Mississauga to Pickering. The flow of cars and trucks is slowing down in ever-longer peak periods, and thousands of people get caught in the massive gridlock on Highway 401 between Dixie Road in Mississauga and Highway 400. It's brutal and hellish, not only for the average commuter, but also for enormous numbers of trucks. Even now during peak periods, there is barely room for more traffic, particularly on either side of the Mississauga border with Toronto.

Population has been forecasted to increase over the next thirty years – close to a million more people in Toronto alone. Various reports suggest that traffic congestion in the Toronto region costs billions of dollars every in lost productivity. The Canadian Centre for Economic Analysis has estimated that congestion in the Greater Toronto and Hamilton Area costs $44.7 billion per year. Highway 401 in Toronto will become gridlocked and nonfunctional for much of every day. That must not happen.

Many of the daily commuters who are slogging through it dream of another way to get to where they want to go. It now costs them $11,000 and more per year to buy and operate a used car, and $16,000 and more per year for a new car. It's essentially a massive hidden road toll that cuts deeply into the budgets of moderately incomed households, preventing them from investing in other household priorities. Personal relationships are affected, too. Family gatherings, softball games, special events and much more are falling victim to the city's gridlock – people just can't get from here to there in reasonable time.

The Ontario government is rushing to expand rapid transit systems in the Toronto region to try to keep things moving. The Finch West LRT and Eglinton LRT have become operational, and other projects – the Ontario Line, northward extensions of the Line 1 and Line 2 subways, and more GO Transit – are underway. Beyond 2030, nine more rail rapid transit expansions and bus rapid transit are planned for Toronto.

Is keeping pace with population growth good enough? Few people will be happy if all that can be said in 2055 will be "Well, at least it hasn't gotten much worse than 30 years ago". That would mean unending road congestion.

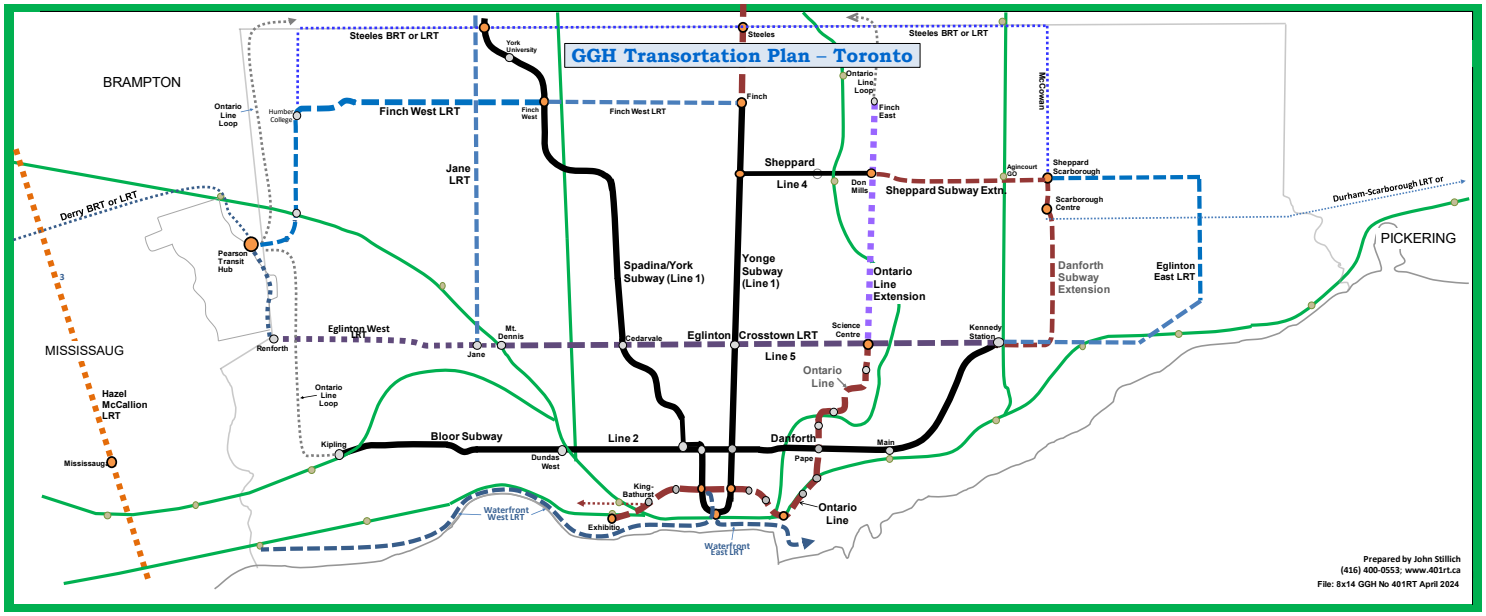
Unfortunately, with the exception of GO Transit enhancements, none of the planned transit initiatives will have a measurable effect on Highway 401 congestion. No rapid transit is planned that can enable rapid travel across the whole of the rapid transit-poor northern half of the city that can connect travelers directly to key destinations and to north-south rapid transit. It is why people drive on Highway 401, into the downtown core, clogging the Don Valley Parkway and other arteries across Toronto and beyond.

The Ontario government assumes that the majority of trips taken in the core of the Toronto area will continue to be by personal automobile and, for that reason and to ensure uncongested travel for trucks and commercial vehicles, the GGH Transportation Plan includes a stated policy to add road capacity to Highway 401, by means of a new underground highway 401 tunnel. The new highway is currently undergoing a feasibility study that will determine what type, size, features, locations, physical constraints, cost and risks could work, if at all. Inclusion of a rapid transit line is also included in the study. The new highway may extend from the City of Brampton to the City of Markham via the Highway 401 corridor.

The Highway 401 Tunnel plan will not work. It would require massive property acquisitions for on and off ramps and may cost $1.5 billion per kilometre to build – possibly $90 billion to construct, depending on length. Multi-year disruptions on Highway 401 would be created during decades of construction, including massive removals of earth.

By encouraging people to travel by automobile, It may be that by the time the tunneled highway is complete, it will be immediately filled. A major side effect will be that the number of motor vehicle trips on municipal roads going to and from the highway will have increased, to up to 40% by 2055. Many municipal roads are already congested during peak periods in 2025, and cannot be widened to accommodate more vehicles.

Parking lots across the city will remain full. The downtown core will continue to be congested with cars from Toronto's northern suburbs. Pearson International Airport's expanded parking lots and garages will be full. The Don Valley Parkway and other roads will remain clogged for most of the day, even with the Ontario Line nearby. And too many households will have to bear the burdensome costs of owning and operating personal automobiles, often one for every adult in the home.



Major new restrictions on, or even an end to, the Canada-US-Mexico trade agreement (CUSMA) would mean major job losses and economic redirections in Canada. Without CUSMA, both the U.S. and Canada would levy tariffs on products entering their countries. Costs to consumers will increase and job losses will be heavy, until new economic strategies take effect. The protectionist administration of the federal government in the United States may end or soften soon after 2028; however, until it happens unemployment will increase.

Effects of Artificial Intelligence on Travel

The impacts of AI and the trade war with the United States will change forecasts for the need for the Highway 401 tunnel and for rapid transit.

The employment effects of a rapid adoption of artificial intelligence by commerce is unknown; estimates of AI-induced job losses vary widely – forecasts of job losses range from a third of existing jobs to 90% or more. The degree to which Ontario and Canada can replace lost jobs is unknown. AI-caused job losses may be more permanent than the current trade war.

AI will affect the degree that the proposed Highway 401 tunnel will be necessary. People who are unemployed travel less – perhaps half as many trips per week or less – and more of their daily trips are likely to be closer to home. However, a portion of the unemployed will continue to use regional highways for access to education, or to investigate job opportunities, maintain social contacts, access health services, attend sports, music and other cultural events, and for other reasons.

The illustration below shows one scenario of what AI may mean for congestion on Highway 401 from Derry Road in Mississauga to Liverpool Road in Pickering. It assumes a million more Toronto residents by 2055, and that AI will result in a net loss of 50% of office jobs, 20% of non-office jobs and 20% of commercial vehicle jobs. In that scenario, the result is that 2055 traffic volumes will remain close to 2024 volumes, and the Highway 401 tunnel would not be justifiable. The 50/20/20 job loss scenario may be a middle-ground scenario. If AI-generated job losses are higher, traffic on Highway 401 will lessen; if job losses are less, traffic on Highway 401 will increase. For example, using the same population and a 25%/10%/10% net job loss scenario, Highway 401 traffic would increase by approximately 20% by 2055.

Overall, depending on its impacts, the effects of AI suggest that the Highway 401 tunnel may not be worth the effort. Even a 20% increase in vehicle volumes on Highway 401 by 2055, congestion may be manageable with road tolls, systems of express buses, encouraging returns to remote work, reducing the work week to four days, and, if necessary, adding 'trucks-only' lanes (perhaps above Highway 401 rather than underground).

Overall, the idea of adding more road traffic in a fixed urban area is questionable, given that congestion is already a problem. Few residents, businesses and traffic officials consider that keeping road congestion at 2024 levels is acceptable.

Effect of A.I. Job Losses on Hwy. 401 Traffic Volumes: A Scenario	Non-Commercial						Commercial	TOTALS (DAILY TRIPS)
	Office			Non-Ofice				
	Peak Hrs	Off-Peak Hrs	24 hrs.	Peak Hrs	Off-Peak Hrs	24 hrs.		
Percent of daily volumes	56%	44%	100%	56%	44%	100%	19%	
AADT for Highway 401 adjusted to 2024	313,416	241,584	555,000	313,416	241,584	555,000	260,400	1,370,400
Increase to **4.0** million	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
Pre-AI increase 2055 volumes	404,408	311,721	716,129	404,408	311,721	716,129	336,000	1,768,258
Assuming net % AI job losses of	**50%**	**50%**	**50%**	**20%**	**20%**	**20%**	**20%**	
Job loss percentages are highly variable and conceptual only, and assume that job losses will be partially offset by new employment (unresearched). New employment is likely to be technology industry work, or personal, health, recreational, environmental, public security and other non-AI related jobs.								
Remaining travelers	202,204	155,861	358,065	323,526	249,377	572,903	268,800	1,199,768
Trips by persons having lost jobs @ **10%**	20,220	15,586	35,806	8,088	6,234	14,323	6,720	56,849
Assumes that these will be non-work Highway 401 trips, such as for educational, medical, social, job search, or for other reasons.								
	222,424	171,447	393,871	331,614	255,611	587,226	275,520	1,256,617
Spatial adjustment - trucks @ **1.5**							137,760	137,760
The average truck takes up approx. 1.5 times the space of autmobiles. This affects efforts to contain overall traffic congestion.								
GO Enhancement Effect @ **2%**	(4,448)	(3,429)	(7,877)	(6,632)	(5,112)	(11,745)		(19,622)
GO Transit takes a minor share of all trips in the Toronto area, but has a disproportionately positive effect on road congestion because most of its users are longer distar								
	217,976	168,018	385,994	324,982	250,499	575,481	413,280	1,374,755
Incr/(Decr) in Spatial Volumes Over 2024	(95,440)	(73,566)	(169,006)	11,566	8,915	20,481	152,880	**4,355**
This is the increase (decrease) in Highway 401 traffic to be managed, based on the inputs entered.								**0.3%**

The Northern Toronto Rapid Transit Gap

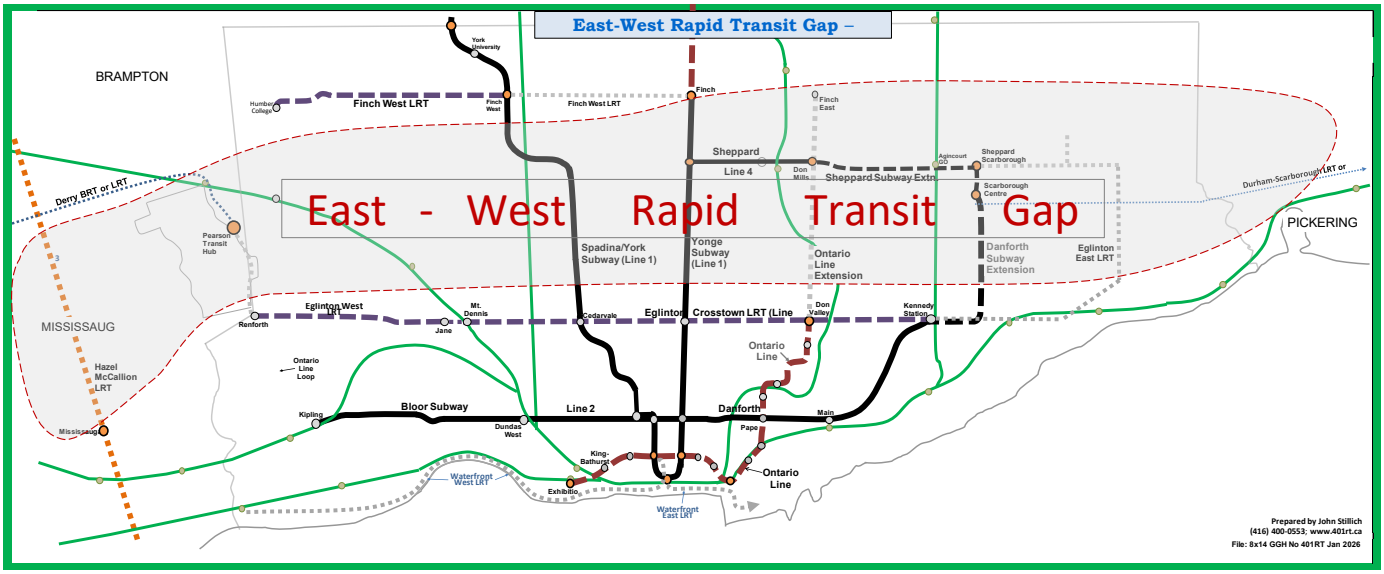
Keeping the number of trips by automobiles in Toronto to 2024 volumes requires major improvements to public transit. One essential element is a rapid transit line that can compete directly and effectively with Highway 401 through the core of the Toronto area.

The singular factor that restrains the use by transit in Toronto and its neighbours is that the network provides no easy way to cross the northern half of Toronto, and east-west connectivity to the Line 1 subway and other north-south transit services is inadequate.

One of the only two east-west rapid transit lines that exist north of Eglinton Avenue in Toronto is the Finch West LRT, which will continue to be too slow for today's car drivers to use, and is too remote to make a noticeable difference in Toronto's traffic volumes even if extended to Yonge Street and to Pearson International Airport. The other east-west rapid transit line is the 5.5-kilometre long Sheppard Subway. Even if the Sheppard subway's planned extension to McCowan Road (at Scarborough Town Centre) is built, it will be only 13 kilometres long. Toronto is 40 kilometres wide. It will not attract the number of new transit trips to make it worthwhile. They key point is that these two transit lines cannot seamlessly serve people whose trip origins or destinations are beyond their terminuses.

As an example of inadequate transit, getting from Neilson Road at Ellesmere Road in Scarborough to Pearson Internation Airport by public transit will continue to be a struggle. It would mean a bus trip to Sheppard Avenue, a wait, a bus or LRT to the Sheppard subway at McCowan Road, another wait, the subway ride to Yonge Street, a wait for the Yonge subway, a ride to Finch Station, a wait for the Finch West LRT, and a trip on the Finch West LRT past Humber College to the airport. Altogether, almost a two-hour trip. The Eglinton LRT, geographically in the southern half of Toronto, won't be of much help.

The only sensible way to travel will seem to be to drive to Pearson on Highways 401 and 409; however, the 401 will also be congested for most of the day, and be gridlocked during peak periods.



Interim Transit Measures

Constructing new rapid transit lines takes up to ten or more years to complete. In the interim, short term solutions can be introduced that will help municipalities expand their transit services to attract more transit users. This can be a $2 billion (or more) Provincial program that provides capital grants for the purchase of municipal buses and for local transit infrastructure. It also means bringing back the long-lost 50% provincial subsidy for all municipal transit operating deficits. Those initiatives will invigorate transit services and transit use by travelers. They will enable more frequent bus services, new express bus services, new community bus services and industrial shuttles, experimental autonomous vehicle services, transit shelters at all stops, and more. In various ways, that will encourage transit ridership that reduces motor vehicle traffic on local roads, including the congestion caused by cars coming off Highway 401 and other highways. The measures will reduce the congestion that builds pressures to add road capacities.

Closing the Rapid Transit Gap: The 401RT Express

As the population of the Toronto area continues to increase, the most effective relief for Highway 401 congestion and gridlock is a seamless intermunicipal rapid transit line that extends from Pickering through the northern half of Toronto and deeply into Mississauga – a transit line that is fast and comfortable enough to compete directly with driving across Toronto on Highway 401. As envisaged in this document, it includes 36 stations stops along its 64-kilometre route, and provides easy connections to both legs of the Line 1 subway, an Ontario Line that's extended northward from Eglinton Avenue East, the Line 2 Subway extension to Scarborough Centre, six GO Transit rail lines, and to key destinations and a hundred bus connections along the way.

Rather than tunneling, 96% of this "***401RT Express***" is elevated above and adjacent to Highway 401's eastbound collector lanes from Liverpool Road in Pickering to Highway 401 at Derry Road in Mississauga, where it is close to Brampton.

However, the alignment along the 401 bypasses several highly significant destinations, including Pearson International Airport and its massive adjacent employment areas, and downtown Mississauga.

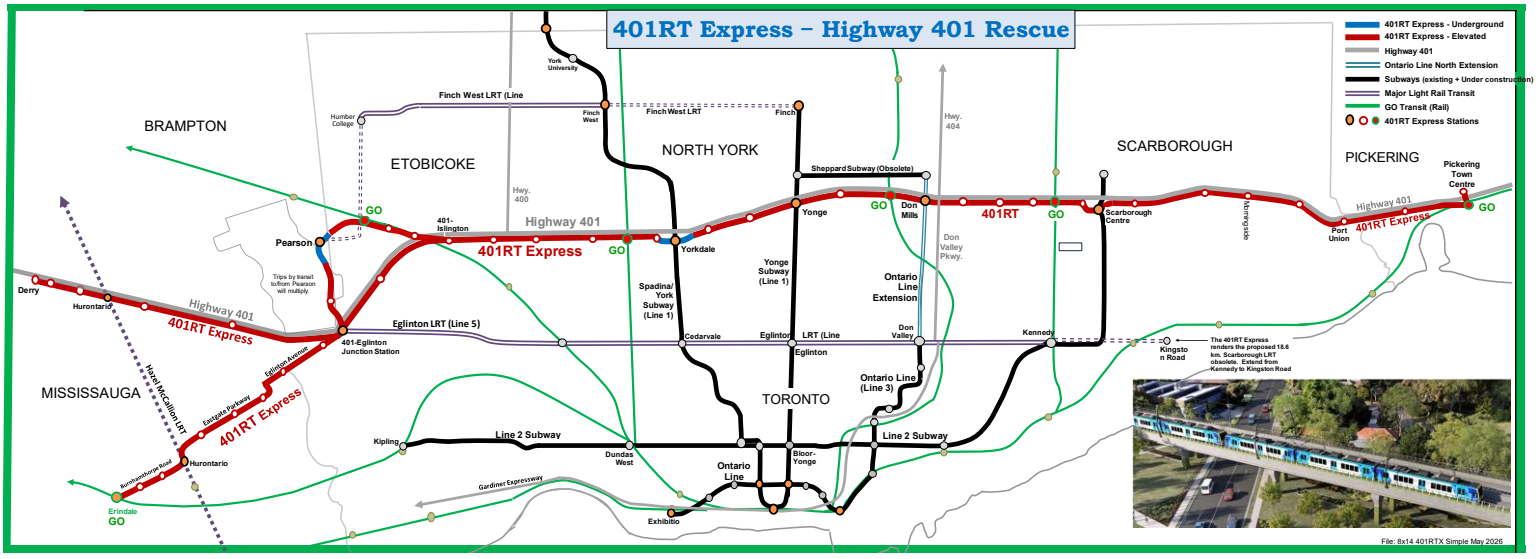
That can be resolved. Westward from its Islington/401 station, the 401RT Express is envisaged to include a seamless 25-kilometre 14-station branch line off the Highway 401 corridor alignment, from Islington Avenue to Pearson International Airport and its employment area, and southward from there to a junction of Highway 401, Eglinton Avenue, the Eglinton West LRT, and the Mississauga Transitway. From there it would continue above existing transportation corridors to Mississauga's downtown core, and terminate at the Erindale GO Station. 401RT users traveling westward from anywhere east of Islington Avenue can choose to board alternating trains – one that continues along Highway 401 to Derry Road, or one that travels to Pearson and to Mississauga's downtown core. No transfers would be needed. Overall, the 401RT Express extends for 88 kilometres, plus five kilometres to several storage and maintenance yards. Of the 89 kilometers, only 3.3 kilometres are underground – at Pearson airport and at Yorkdale.



A summary illustration is shown below. More detailed illustrations of the 401RT Express alignments (using Google Earth) can be accessed at www.401rt.ca.

Importantly, the 401RT Express concept includes an extension of the Ontario Line northward to Sheppard Avenue East. The extension will be necessary in order to keep 401RT Express users from overcrowding the Line 1 subway at Yonge Street.

Locating the 401RT Express (or just 401RT) above existing corridors means that property acquisition costs or neighbourhood disruptions would be minimal. 75% of the lands bordering the highway are non-residential. Careful separation of the 401RT from the closest bordering residential lands should minimize or resolve NIMBY (Not-In-My-Backyard) reactions. Unlike new stations on the Eglinton LRT and Ontario Line, most stations would be of basic design above the on- and off-ramps along the highway's south edge.



Elevating the 401RT also means it can be built faster than tunneling it, and at less per-kilometre cost than the Ontario government's proposed Highway 401 tunnel. Rail bed segments would be supported by single

or dual pillars. The length of the 401RT Express may require numerous emergency bypass tracks between stations. As an option, a continuous end-to-end third track can be built to minimize situations that may interrupt services.

Commuter parking for the 401RT would be possible at numerous locations. At Erindale GO Station and at the Pickering Town Centre stations existing ground-level lots can be replaced by new multi-level garages. Elevated parking garages can be constructed at several other 401RT Express stations, and are possible at stations near the base of Highways 410, 400 and 404 to enable commuters from north of Toronto to transfer to and from the 401RT. Maintenance yards can be constructed over Highway 401 west of Jane Street, east of Dixie Road, at Kennedy Road in Scarborough, above Eastgate Parkway, and potentially elsewhere. At Pickering Town Centre, some land would need to be acquired from retailers.

Operating speeds can entice many people out of their cars and onto transit. For example, the 401RT Express will get travelers from its Yonge Street station to Pearson International Airport in about 26 minutes. End-to-end travel time from Pickering to Erindale GO station in Mississauga could be 63 minutes. These times reflect an average 85 kilometre per hour cruising speed between stations.

Travel time for the arduous trip example between Neilson Road and Pearson airport would be cut in half, from 110 minutes to just 52 minutes. That kind of change would have a transformative effect – Scarborough and Etobicoke would be reachable and feel closer together, particularly for some of the 20% of adult residents who cannot or do not drive automobiles.

With a 401RT Express operational, many travelers flying out of Pearson International Airport will be able to leave their cars at home instead of fighting traffic and paying for airport parking. Friends and families won't need to drive them to or from the airport.

Importantly, the 401RT Express would have enough capacity to offset all non-commercial traffic growth (all traffic volume growth) on Highway 401 for many decades after it becomes operational. The perceived need to add road capacity to any part of Highway 401 would end.

Effects of AI on 401RT Express Ridership

Excluding the unknown effects of artificial intelligence on employment and the affordability of and need to travel, the 401RT Express, if fully implemented, could generate 440 million new transit trips in the Toronto area by 2055.

The previous example of an AI impact scenario for Highway 401 can also be extended to provide a sense of what AI would mean for trips on the proposed 401RT Express. The illustration below assumes that the Highway 401 tunnel will not be built, and that, given highly congested roads, non-commercial vehicles would opt to use the 401RTX instead of local roadways. It illustrates the effects on the 401RT Express in the Highway 401 corridor plus its seamless branch from the Islington/401RT station to the Erindale GO station.

Based on a net AI job loss scenario of 50% for office jobs (for example, for every 70 jobs lost, 20 new jobs are created), 20% for non-office jobs and 20% for transport jobs, the scenario indicates that transit ridership will potentially be 170 million new 401RT Express trips per year in 2055, plus 21 million new trips on GO Transit and 40 million on enhanced municipal bus services. Excluding additional maintenance costs of track segments directly exposed to weather, the operating revenue-to-cost ratio for the TTC could be (approximately) 57%. The 2025 TTC operating ratio was 46%. (Note: Operating revenues and costs would be distributed to Mississauga, Toronto and Durham transit systems; it is assumed that revenue-to-cost ratios are similar.)

If net AI-generated job losses are higher, traffic growth on Highway 401 will decline or reverse, travel by automobile will be faster than it is today, and shifts to transit will be less. If net job losses are less, traffic on Highway 401 will increase and demand for transit alternatives to driving will increase. For example, using scenario of a population of 4,000,000 and a 25%/10%/10% net job-loss, Highway 401 traffic would increase by approximately 20% by 2055. If the traffic increase is diverted to the 401RT Express, transit ridership increases dramatically to close to 325 million per year, including 25 million on GO Transit and 48 million on enhanced municipal bus services. The 401RT Express operating revenue-to-cost ratio for the TTC would be much higher than the TTC average in 2025. (A template to enable various scenarios to be run is available as a downloadable file at www.401rt.ca.)

Due to uncertainties, what the AI impact be by 2055 and beyond is unknown. The question may be the degree to which the 401RT Express will convey benefits, for reasons of affordability for travelers, promoting employment (including 40,000 construction jobs per year), long term environmental benefits, better access to destinations, promoting better land use, the need to avoid a Highway 401 tunnel, or for other reasons. If traffic on Highway 401 decreases as a result of AI, or remains at current or modestly higher levels, there is no need to construct the Highway 401 tunnel. (A template of the figure below is available at www.401rt.ca to enable other scenarios to be generated.)

Estimated Potential Demand for a 401RT Express (Including AI Job Loss ffects)	Non-Commercial Vehicles (Daily)						Commercial Vehicles	TOTALS (Daily)
	Office			Non-Ofice				
	Peak Hrs	Off-Peak Hrs	24 hrs.	Peak Hrs	Off-Peak Hrs	24 hrs.		
Percent of daily trip volumes (per MTO TTS)	56%	44%	100%	56%	44%	100%	19%	
–MTO AADT for Highway 401 adjusted to 2024	313,416	241,584	555,000	313,416	241,584	555,000	260,400	1,370,400
– Islington-Pearson-Erindale GO Miss'ga	102,467	78,983	181,450	102,467	78,983	181,450	85,100	448,000
This includes the off-401 catchment area of the Islington-to-Erindale GO segment of the 401RT Express, which includes significant/critical destinations in the region.								
Estimated trip totals for 2024	415,883	320,567	736,450	415,883	320,567	736,450	345,500	1,818,400
Toronto Population (3.1m in 2024) 4.0 million	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
Pre-AI trip volume increases - 2024 to 2055.	536,624	413,634	950,258	536,624	413,634	950,258	445,806	2,346,300
Assuming net % AI job losses of	**50%**	**50%**	**50%**	**20%**	**20%**	**20%**	**20%**	32%
Job loss percentages are highly variable and conceptual only, and assume that job losses will be partially offset by new employment (unresearched). New employment is likely to be technology industry work, or personal, health, recreational, environmental, public security and other non-AI related jobs.								
Job losses, based on the job loss %s above	(268,312)	(206,817)	(475,129)	(107,325)	(82,727)	(190,052)	(89,161)	(754,342)
Remaing trips by persons unaffected by AI	268,312	206,817	475,129	429,299	330,907	760,206	356,645	1,591,981
401RTX trips by persons having lost jobs @ 10%	26,831	20,682	47,513	10,732	8,273	19,005	8,916	75,400
Assumes that there will be trips related to educational, medical, social, job search and other needs. Exclude non-401RTX trips on municipal transit.								
Remaining daily trips in 401RTX area	295,143	227,499	522,642	440,032	339,180	779,212	365,561	1,667,381
Spatial adjustment - trucks @ 1.5							182,781	182,800
The average truck takes up approx. 1.5 times the space of autmobiles. This affects efforts to contain overall traffic congestion.								
GO Enhancement Effect @ 2%	(5,903)	(4,550)	(10,453)	(8,801)	(6,784)	(15,584)		(26,000)
GO Transit takes a minor share of all trips in the Toronto area, but has a disproportionately positive effect on road congestion because most of its users are longer distance								
Total 2055 Spatial Volumes (Daily)	289,240	222,949	512,189	431,231	332,396	763,627	548,342	1,824,200
Incr/(Decr) in automobile volumes over 2024	(126,643)	(97,618)	(224,261)	15,347	11,830	27,177		(197,084)
Add'l shifts to 401RTX re high costs of driving @ 10%	12,664	9,762	22,426	1,535	1,183	2,718		25,144
Add'l shifts to 401RTX re frustrations of congesti 10%	-	-	-	1,688	1,301	2,990		2,990
Others, who do not wish to drive, or prefer trans 5%	14,462	11,147	25,609	21,562	16,620	38,181		63,791
Trip diversions to 401RTX caused by increasses in trucking							202,842	202,842
Increases in space taken up by trucks will add to congestion and to diversions from driving by automobile to using the 401RT Express.								
Potential 401RT Express ridership in 2055 10%	27,126	20,909	48,036	24,785	19,104	43,889	202,842	294,766

The Total 294,766 represents the degree to which average daily congestion increases, and the potential modal shift to transit per day that needs to be made to keep traffic to 2024 levels by 2055.

	Annual 2055	
	107,675,000	295,000
Other Factors that increase 401RT Express ridership:		
• Urban development at/near potential 401RT Express stations (higher transit modal share due to close proximity to Highway	**7,490,000**	20,500
• Potential 401RT Express ridership increase from new GO Transit intersects	**18,660,000**	51,100
• Higher transit share of trips to Pearson (air travelers only)	**6,530,000**	17,900
• Shifts to transit – Worker commutes to Pearson and adjacent employent areas	**10,460,000**	28,700
• Trip transfers from Eglinton E LRT & extended Sheppard Subway to a 401RT Expre	**19,650,000**	53,800
Estimated 401RT Express ridership in 2055	**170,465,000**	467,000
Additional ridership effects of a 401RT Express:		
• Increase in GO Transit ridership resulting from intersects with 401RT Express	**21,300,000**	58,400
• Non-401RT Express trips generated by additional buses on intersecting routes	**40,430,000**	110,800
Estimated transit ridership effect of the 401RT Express	**232,195,000**	1,103,200

Why The 401RT Express Should Be Built

The 401RT Express should be seen as the more effective and more appropriate alternative to the Ontario government's proposed Highway 401 tunnel: the tunnel will add to road traffic, while the 401RT Express would reduce it. If the highway tunnel is built, funding for future rapid transit planning will be constrained or become unaffordable.

The effects of a full-scale 401RT Express would be transformative for the core of the Toronto area. It would boost the attractiveness of the Toronto area as a place to live, work, invest, and enjoy. No other rapid transit initiative or combination of rapid transit initiatives would provide as many benefits. The 401RT Express would seamlessly fill the rapid transit gap across the northern half of Toronto, connect all of Toronto from east to west, and be the first to address the reality of cross-boundary travel which, for Highway 401 alone, exceeds 700,000 trips per day. By connecting to key destinations, 13 other rapid transit lines (including GO) and more than 100 municipal bus routes, the 401RTX would transform travel in Toronto away from being a car-centered regional core to being a transit-oriented city. It will create a dramatically significant positive effect on affordability for travelers and would offer many new opportunities for people who do not have a driver's license.

Building the 401RT Express would, during its construction, create 40,000 jobs per year, and likely several thousand direct permanent jobs thereafter. Given the threats to jobs from the trade war and the impacts of AI, this is highly important.

If the approved 1,000-kilometre Alto High Speed Rail project between Toronto and Quebec City is seen as worthwhile, the 401RT Express is even more so. AI impacts aside, the Alto HSR, when completed, is estimated to carry 24 million trips per year by 2055 – 65,800 per day, and 43 million per year over the longer term (per Alto); the full-scale 401RT Express will carry a million per day.

The 401RT Express is justifiable for other reasons:

- Current congestion levels are unacceptable; the Province's plan to increase highway capacity will increase reliance on personal automobiles for travel, and add to congestion on municipal roads.
- The 401RT Express will enable freight to continue to move freely on Highway 401.
- Currently, access to Pearson is problematic; the 40RT Express can end the expressed need for the Greater Toronto Airports Authority to add more parking garages.
- The 401RT Express would rescue the Eglinton LRT if the ridership capacity of the LRT is exceeded.

With regard to construction, the 401RT Express would be built by multiple teams working simultaneously on different aspects and locations along its entire length. With enough resources, the construction of the elevated 401RT Express can be completed in a 13-year period. However, if there is a need to prioritize segments of the 401RT Express, the first should be the one that affects the Sheppard Subway and Eglinton East LRT, both of which are under active planning work in 2025.

A list of 67 general benefits is attached to the end of this document.

Goodbye to The Sheppard Subway

Despite many years of discussion and planning about extending the Line 4 Sheppard subway to McCowan Road in Scarborough, **the 401RT Express will render the entire Sheppard Subway obsolete**. According to TTC statistics, people use the Sheppard subway mostly to go to Yonge Street or to catch a Don Mills bus, or to go to points east of the subway's Don Mills terminus. With a 401RT operating, most travelers who want to get to Yonge Street from, for example, somewhere along Markham Road or Kennedy Road, will

prefer to take a bus not to Sheppard Avenue East but to the nearby 401RT, two minutes south of Sheppard Avenue or two minutes north of Ellesmere Road. **The Line 4 extensions should not be built.**

Very importantly, the 401RT Express will enable seamless travel to or from *west* of Yonge Street, and *eastward* to and from Pickering. Closing the Sheppard Subway could mean replacing it with a seamless bus service that can run from Toronto's eastern border to Weston Road. The extension of the Sheppard Subway to McCowan Road at Scarborough Town Centre would cost approximately $7.5 billion to construct. Because the 401RT will render the entire Sheppard Subway operationally non-viable, those extension costs should be avoided. Lands at the current Bayview, Bessarion, Leslie and Don Mills stations can be sold, or repurposed for multi-storey affordable housing – for seniors, lower-income households, currently homeless persons, and for other persons who need support.

Also actively being planned is the $4.65 billion Eglinton East LRT (EELRT; also known as the Scarborough LRT), which would run eastward from Kennedy Subway station and northward on Morningside Avenue. The principal impetuses for the EELRT are to provide better transit service to the University of Toronto's Scarborough campus (UTSC) and to the Malvern community. However, the 401RT Express will, together with Line 1 and Line 2, provide much easier and faster service to UTSC and Malvern from across all of Toronto (view the map illustration). **The Eglinton East LRT should not be built.**

Building Line 4 extensions and the Eglinton East LRT would be costly and historic mistakes. More information can be found at the www.401rt.ca's "Sheppard Extension Problem" file.

How is the 401RT Express Affordable?

By eliminating tunneling almost completely, building stations to a basic functional standard and avoiding spatial grandeur, and aligning the 401RT Express above and within existing transportation corridors, the cost to build the 401RT Express and Ontario Line extension is limited to an estimated $67 billion; rolling stock will cost an additional ≈$7 billion. Nevertheless, people of thrift, and perhaps others, will argue "That's Too Much!! I can't afford this!! My taxes will go through the roof!" Not so.

The $74 billion cost to taxpayers is deceptively overstated. Ontario taxpayers won't be digging into their wallets to pay that much. For one thing, the cost would be carried forward by public debt; in that way, the future users of the 401RT Express would, very appropriately, contribute to the cost. Debt financing also greatly reduces the annual cost to taxpayers. Moreover, the cost will not be immediate; it will rise slowly over more than a decade of construction.

The $70 billion cost of building the 401RT Express is based on a two-track system, stations of basic functional design, three maintenance/storage yards and, being almost entirely within and above existing transportation corridors, includes almost no property acquisition costs. The 401RT Express cost may adjust for the following:

- A third track for bypasses, emergencies and maintenance vehicles ($3.7bn if the 3rd track is limited to station areas; $12 billion for a full-length 3rd track);
- The cost of maintenance vehicles, and maintenance yards more expensive than $3 billion each;
- Potential cost reductions for segments funded by the Geater Toronto Airports Authority (GTAA);
- Federal cost sharing of up to 40% or more of gross costs (federal funding should be expected);
- A reduction in station costs (in whole or in part) if private land developers are given air rights above stations to build residential or office buildings;
- Some GO Transit / 401RTX station costs are not fully costed; several hundred millions$. (The 401RT Express connects to six GO Transit stations);

- Cost avoidances resulting from not constructing several currently-planned rapid transit initiatives are not included (up to ≈$12 billion; see below);
- A Potential $1.5 billion additional cost of tunneling, rather than elevating, the 401RT Express from Hurontario Street to Erindale GO station;
- Extending the 401RT Express to Brock Road in Pickering; Adding or deleting stations (currently costed for 50 stations.

A significant cost-saving measure will be the elimination of some of the Ontario Government's currently planned rapid transit initiatives, including fairly high-profile initiatives that have been around for decades and hoped for by many. Altogether, they produce a cost avoidance of up to $13 billion in future infrastructure costs. Several transit projects being planned that would be rendered obsolete by the 401RT Express include:

1. The proposed $7.5 billion Sheppard Subway extension to McCowan Road and to Scarborough Centre. The subway would run closely parallel with the 401RT Express and would not have the ridership volumes to justify its construction.
2. Most of the proposed $4.65 billion Eglinton East LRT extension in Scarborough. A 401RT Express through Scarborough provides much better and faster access between the northern half of Scarborough and the rest of Toronto. However, extending the LRT to Kingston Road (≈ $1.7 billion) may be worthwhile, but not further.
3. The planned $1.3 billion extension of the Eglinton West LRT from Renforth Drive to Pearson would not be needed. Travelers to Pearson would transfer from the Eglinton LRT to the 401RT Express at a junction station east of Renforth. The Eglinton LRT extension to Pearson would be an impediment to construction of the 401RT Express. ***It should not be built***.

For a 401RT Express across the underserved northern half of Toronto and into Pickering and Mississauga, and more than 400 million new transit trips per year by 2055, its $74 billion cost (including the OL extn) is a huge bargain.

The cost to Ontario would very likely be reduced by federal cost-sharing as a public transit project, and may also be eligible as a "Build Canada" initiative that increases economic productivity and maintains the essential functionality of Highway 401 for the movement of workers and goods. In the past, federal cost-sharing for transit infrastructure has reached 40% of eligible costs; for the 401RT Express, 40% can be a $30 billion federal contribution.

The 401RT Express appears to meet the criteria for Build Canada projects. It increases economic productivity, is environmentally appropriate, First Nations would approve the project, and it has a reasonable expectation of successful completion.

Of critical importance, the 401RT Express eliminates the perceived need to build a new highway tunnel under Highway 401 – a potential cost avoidance of perhaps $90 billion.

The tax cost to Toronto households would be highly affordable. Cost sharing by the federal government (assuming 40%), population growth, deficit funding and assuming a borrowing rate for the Ontario government of 3.75%, the average daily cost per taxpayer by 2041 for Ontario's costs to build the 401RT Express could grow to about 24 cents per day. Ontarian's share of the 401RT Express's federal cost may add another 8 cents.

And what's the comparison? The cost per year to own and operate a new gasoline-powered car in Ontario can be, variably, $15,000 per year, or $41 per day. So, for many thousands of people in the core of the Toronto area, switching from driving a car to using public transit can be a household budget bonanza.

All of a sudden, it's an easy decision.

401RT Express Cost Scenario - Per Taxpayer

(Costs to build, in millions of dollars)

Canada:	Ontario:	
74,000	74,000	Gross Infra Cost of 401RT Express
44,400	29,600	Canada Share @ **40%** scenario
	44,400	Net Ontario cost
3.3%	3.8%	Assumed borrowing rate
1,443	1,665	Public debt cost per year
65.7%	64.7%	Personal income tax share
947.6	1,077.0	millions $$ per year
47,700,000	19,700,000	Canada/Ontario population 2041
70%	63%	Population that pays income taxes
33,390,000	12,411,000	population that pays taxes
947.6	1,077.0	Millions $$ per year (per above)
$28.38	$ 86.78	Cost per taxpayer per year in 2041
8	**24**	cents per day

About me: My background until my retirement was a career as a corporate financial analyst at Queen's Park for the Ministry of Community and Social Services (MCSS) and the Ministry of Health and Long-Term Care, focusing on program expenditure analysis and planning for a number of ministry programs, and coordinating budget processes. Subsequent to my retirement, I have focused my attention on sustainable transportation and land use planning, including having worked with a small (no longer active) organization called the Sustainable Urban Development Association. I also produced a document entitled "Newburg: Embracing High Density at the Urban Fringe". In 2018, my wife and I moved from Mississauga to Innisfil, where we live near our daughter and her family.





2041 Toronto Rapid Transit Scenario

Highway 401 is rescued from gridlock.

Travel demand growth is diverted to transit.

Not shown: 600 more north-south buses to improve service frequencies and access to rapid

Up to 13 new North-South rapid transit connections and 100+ new N-S bus connections are created.

401RT Express:
- Elevated Sections (94% of total)
- Underground Sections
- New Rapid Transit Intersects
- GO-401RT Express Intersects
- Ontario Line North Extension
- Highway 401
- GO Transit (Rail)

Steeles BRT or PBL
Islington
York University
Access to York University from across Toronto via 401RT Express is improved.
Humber College
Finch West LRT
Finch West
Finch
Travel times by transit to Pearson and nearby employment areas from across northern Toronto are significantly reduced.
Sheppard Ave. buses
Local and Express Sheppard Ave. buses
Sheppard Subway is closed
Seneca - Finch
Hwy. 404
The 401RT Express replaces the Sheppard Subway, and provides better service for Scarborough and for Toronto.
Avoid Sheppard Subway extension to Scarborough Town Ctr. Save $7.5bn.
Finch East
Huntingwood
Sheppard Scarborough
Access to & from Malvern is improved.
Attendance at Metro Toronto Zoo increases.
PICKERING
29 minutes to Yonge Street
Durham Transit ridership increases.
Pickering Town Centre
Whites Road
Bayly-GO
Possible Alto HSR stn
Meadowvale
Port Union
401RT Express
Rapid access from Scarborough & Pickering to Pearson & airport employment area.
Social isolation reduced for people who do not drive cars, as 401RT Express improves access to destinations across Toronto.
Hwy. 400
Highway 401
Woodbine/ Hwy.27 GO
Martin Grove
Etobicoke North
401-Islington
Barrie GO
Bayview
Leslie GO
401-Yonge
401-Victoria
Warden-401
401-Kennedy
Brimley
Markham-Centennial
Neilson-Malvern
Morningside -UTSC
Scarborough Centre
1 km. link
Automobile congestion at Pearson is reduced. Major improvement to transit access is created.
Airport Hub
Alternate Alignment
Kipling North
401-Weston
401-Jane
401-Keele
401-Dufferin
Yorkdale
401-Bathurst
Avenue
401RT Express
Long-desired east-west rapid transit links to GO Rail are created .
Possible Alto HSR stn E of Birchmount Rd.
Student/worker access to UTSC & Centennial College is improved.
Line 2 Subway Extension
Lawrence East
401RT boosts Line 2 Subway ridership.
Extend Eglinton East LRT to Kingston Road only. Save $3.0 bn.
Kingston Road
Add Brimley-Danforth Stn (Convergence of Eglinton, Brimley and Danforth Roads)
33 minutes to Yonge Street.
Derry BRT or LRT
Derry
Mississauga Road
Mavis
Hurontario
Kennedy-Britannia
Dixie
Highway 401
401RT Express
401RT Express maximizes ridership on the Hazel McCallion LRT.
Convair
Dixon-Martin
401-Eglinton Junction Station
Replaces Renforth location
MACC
401RT Express eliminates the perceived need to add road capacity to Highway 401.
Eglinton LRT Renforth to Pearson not needed. Save $1.3 bn.
Eglinton West LRT
Mt. Dennis
Spadina/ York Subway (Line 1)
Cedarvale
Eglinton
Crosstown
Yonge Subway (Line 1)
Traffic on many city streets is contained or reduced.
Corporate area is revitalized.
Don Mills-Lawrence
Don Mills
Don Valley
Barber Green
Kern
Ontario Line Extension
401RT Express increases GO ridership.
Kennedy Station
401RT rescues Don Valley Parkway from gridlock.
Ontario Line
Main
Pape
Bloor-Yonge
Line 2 Subway
Dundas West
Kipling
401RTX+Line 1 Subway creates alternative to 427/Gardiner drive to downtown.
401RT creates faster transit access to downtown from across northern Toronto
Howard Park
QuRK
Ossington
Dufferin
Liberty - GO
Strachan
King-Bathurs
Exhibitio
Waterfront West LRT (concept)
Concept for Ontario Line extension under high-density King West
Waterfront East LRT
MISSISSAUGA
Mississauga Transitway
401RT Express
Tahoe
Tomken
Dixie
Central Parkway
Hurontario
Hwy. 403
Hwy. 403 congestion is reduced.
Confederation
Mavis
Erindale GO
Burnhamthorpe Road
Hwy. 410
Hazel McCallion LRT
Dundas BRT
34 minutes to Yonge Street.

Commuter parking garages can be located above or near numerous 401RT Express stations.

401RT storage and maintenance yards can be placed above Highway 401 at several locations.

Destinations near Highway 401

1 Pearson International Airport	14 Seneca College
2 Mississsuga Airport Corporate Centre	15 Richmond Hill GO
3 Hurontario LRT	16 North York General Hospital
4 Malton community	17 Fairview Mall
5 Employment Area	18 Stouffville GO
6 Woodbine Entertainment Centre	19 Scarborough Town Centre
7 Kitchener GO to/from Brampton	20 Centennial College
8 Downsview Park	21 Malvern Community
9 Yorkdale Mall	22 Scarborough Health Network
10 York University	23 UnivY of Toronto Scarborough
11 Barrie GO	24 Toronto Zoo
12 Humber River Hospital	25 Pickering Town Centre
13 Downtown North York	26 Rouge National Urban Park

The 401RT Express in the Highway 401 corridor is almost entirely elevated along the highway's south edge. 75% of bordering lands are non-residential. Stations are normally above ramp configurations south of the highway.

The 401RT Express – with 96% of its 90-kilometre length elevated above grade – may cost $68 billion to build (including $6bn for rolling stock). The 401RTX renders $12 billion of other planned rapid transit unnecessary and duplicative.

The 401RT Express will generate more than 400 million new transit trips per year by 2055, including 27m more GO Transit trips, plus 14m new Ontario Line trips. 13 new North-South rapid transit connections and more than 100 new North-South bus connections are created.

Prepared by John Stillich
sustainability@rogers.com
(705-294-4110); www.401rt.ca

File: 11x17 401RTX + Notes June 2026

Benefits of the 401RT Express

The 401RT Express is a concept for a seamless 89-kilometre 50-station rapid transit line through the core of the Greater Toronto Area that is almost entirely elevated over or alongside existing transportation corridors. It would operate from Pickering Town Centre to an Islington station at Highway 401 in Toronro and, westerly from there, divided into two branches – one to Pearson International Airport and its employment area, and then southwesterly through Mississauga's downtown core to the Erindale GO station, and the second branch continuing along the Highway 401 corridor to Derry Road in northwestern Mississauga.

The 401RT Express is of transformative significance, and would affect other transit expansion decisions in Toronto, Mississauga, and Durham Region. The scale of the 401RT Express reflects the magnitude of the transportation and climate change problems facing the region; the overall traffic congestion problem in Toronto cannot be resolved with constrained approaches. The following list of general benefits is lengthy and significant, and highlights the strategic importance of the 401RT Express in the Toronto area. Purely local benefits are generally not included in this list.

1. The first practical transit alternative to driving across northern Toronto is created, bringing rapid transit much closer to many thousands of today's car-driving commuters.
2. The first seamless and practical rapid transit connection is created between Toronto and downtown areas of Mississauga and Pickering.
3. Access to the ongoing movement of employment and other destinations from the downtown Toronto core to its northern suburbs becomes less car-dependent.
4. Up to thirteen new rapid transit connections are created (Hazel McCallion LRT, Mississauga Transitway, Union-to-Pearson Express, Woodbine GO, Barrie GO, Spadina/York Subway, Yonge Street Subway, Oriole GO, Pickering GO, an extended Ontario Line, the Scarborough Line 2 subway extension, a possibly-relocated Agincourt GO station or additional GO/401RT Express transfer station south of the Agincourt GO station, and the Lakeshore East GO Transit line at Pickering.
5. Gridlock on Highway 401 is avoided as high volumes of transfers from the highway to rapid transit occur.
6. Gridlock and congestion on the Don Valley Parkway is ended as the 401RT Express enables rapid transit access to the Ontario Line .
7. Plans to widen Highway 401 between Highway 427 and Highway 404, or to construct a highway tunnel under the 401, are rendered unnecessary. The 401RT Express and Ontario Line reduce or end road congestion in downtown Toronto.
8. The 401RT Express creates a large economic stimulus as at least **40,000** new jobs are created per year for up to 13 years during the 401RT Express's construction – more than any other transportation job creation project in the GTA has achieved.
9. Hundreds of ongoing transit operating jobs are created, including maintenance, customer service, security, administration, and more.
10. More than 100 new surface bus route connections to rapid transit are created.
11. North-south bus trips to east-west rapid transit are significantly shorter in time and distance.
12. The 401RT Express enables the GO Rail system to be used for trips across Toronto's suburban North; east-west rapid transit access to/from the radial GO Rail system has been long desired.
13. The seamless 89-kilometre length of the 401RT Express and its up to 50 stations maximize trip origin-destination opportunities.
14. The extremely high level of congestion on Highway 401 between west of Dixie Road and Highway 400 is eased or ended.
15. Truck transport is improved, and economic costs of transport delays on highway 401 are avoided as car drivers transfer to the highly visible 401RT Express.
16. The trip capacity of the Highway 401 corridor in Toronto is more than doubled.

17. Productivity losses caused by road congestion – more than $10 billion per year in the Greater Toronto – are reduced from 2026 levels.
18. The 401RT Express reduces or ends road congestion on the Don Valley Parkway, by providing east-west connectivity to the Ontario Line and Line 2 extension in Scarborough.
19. The 401RT Express relieves potential over-capacity pressures on the Eglinton LRT.
20. Traffic congestion on city streets throughout Toronto and in parts of Mississauga and Pickering is reduced as major modal shifts to transit occur; all road trips begin and end on local streets.
21. Travel times across the northern half of Toronto are significantly reduced when compared to current transit services. End-to-end travel time on the 401RT Express from Pickering Town Centre to Erindale GO station (69 kilometres) is approximately 80 minutes. This compares well to current travel times by automobile during peak periods.
22. Excluding unemployment effects of artificial intelligence and the trade war with the United States, the 401RT Express increases transit ridership by more than 400 million per year by 2051, including a 52 million annually in local non-401RT Express trips on enhanced intersecting bus services and 24 million new 401RT Express trips resulting from new GO Rail intersects.
23. GO Transit ridership increases by approximately 27 million trips per year by 2051, 25% beyond current forecasts, as a result of six new Intersect stations with the 401RT Express (Erindale GO, Kitchener Line at Highway 27, Barrie GO Line, Leslie-Oriole GO, the (potentially relocated) Agincourt GO station, and Pickering GO).
24. Overall, the "loose ends" of north-south rapid transit lines are connected to enable rapid access to destinations along the 401RT's east-west axis. This is highly significant.
25. Overcrowding of the Yonge Subway as a result of high 401RT Express ridership is avoided once the Ontario government's plan to extend the Ontario Line to Sheppard Avenue East is completed; this essential extension should coincide with 401RT Express implementation.
26. The 401RT Express may reduce the number of automobiles on Highway 401 and other roads by approximately 15%, a reduction that can enable some streets to have more and safer bicycle lanes, wider sidewalks, and more greenscaping.
27. The addition of large multi-level garages above the Weston and Jane 401RT Express stations (plus access ramps) may enable the creation of a transfer point for drivers having come into Toronto on Highway 400. This enables people to avoid using city streets to get to downtown Toronto or other destinations.
28. In general, access to services and to employment across Toronto and to/from Mississauga, Pickering and Brampton becomes much faster and easier, especially for persons of modest incomes, or who do not own cars or cannot drive. This is a significant enhancement of quality of life for them.
29. The northwest arm of the 401RT Express brings parts of Milton and Brampton within rapid transit commuter range of Toronto. For example, travel time on the 401RT Express from its Derry Road terminus to Pearson International Airport is approximately 25 minutes.
30. Rapid, affordable, and direct rapid transit access to Pearson International Airport from downtown and from suburban locations across the region is created (Approximately 85% of trips to the airport do not originate from downtown Toronto).
31. Travel costs are reduced for thousands of households as fewer cars need to be owned, or are used less. Money saved can be redirected towards other household priorities. After-tax household savings vary widely, but can range between $11,000 and $20,000 per year per vehicle (or more), less the cost of using public transit (approx. $1,900/year in 2024). **This is a significant household affordability benefit**.
32. For many commuters, the 401RT Express becomes the first alternative to what is now an expensive forced daily drive on congested highways to and from Toronto.
33. The Greater Toronto Airports Authority's plans for a transit hub are transformed to be much more effective, and perhaps simplified; parking infrastructure would be reduced.
34. Rapid direct access to Pearson International Airport via the 401RT Express from locations across Toronto makes the Government of Ontario's planned $1.3 billion extension of the Eglinton Crosstown LRT from Renforth to Pearson International Airport unnecessary. A 401RT Express northward from the juncture station at Eglinton Avenue east of Renforth Drive would provide the rapid transit link to/from Pearson. The LRT extension would be an impediment to a continuous 401RT Express service to and from Pearson; **it should not be built**.

35. Access to the employment areas surrounding Pearson airport is greatly improved; these employment areas in Mississauga and Toronto revitalize as accessibility to them improves, and helps them to become more attractive to business and to workers.
36. Current and forecasted road overcapacity situations in the large employment areas around Pearson International Airport are reduced.
37. Employment opportunities and labour market conditions are enhanced. Fewer people will decline employment opportunities near the airport or elsewhere due to road congestion and travel times. This resolves an important concern of employers regarding workforce access, especially at and near Pearson International Airport.
38. The 401RT Express's intersect with the Line 2 subway's extension at Scarborough City Centre significantly increases ridership on the Line 2 extension.
39. Enhanced access from across all of Toronto to the University of Toronto Scarborough Campus, Centennial College (Scarborough), York University, and the U of T downtown campus is created. Many students will no longer need to decide on courses of study based on travel time and distances to campuses, nor will need to acquire an automobile for their commutes.
40. Improved and rapid access to the University of Toronto's Scarborough campus using the 401RT Express will reduce ridership volumes on the proposed Eglinton Crosstown East LRT extension, **rendering it unnecessary**. Savings from eliminating the LRT extension approaches $4.6 billion. Extending the LRT from Kennedy station 4.5 kilometres to Kingston Road ($1.7 billion) will ease travel for some transit users east of Kenedy station.
41. Overall, the 401RT Express will serve Scarborough residents much better than the Sheppard Subway, **rendering the entire Sheppard Subway obsolete**.
42. The perceived benefits of a Jane Street LRT proposed by Toronto would be reduced, as east-west connections provided by the 401RT Express, the Finch West LRT, and the Eglinton Crosstown LRT at Jane attract Jane bus users and reduce passenger volumes and trip-length crowding on Jane Street buses to Bloor Street. Savings may be $2.6 billion.
43. Access to employment opportunities and services for residents of disadvantaged communities and for people who do not drive automobiles is significantly improved.
44. Direct rapid transit access to Mississauga's Airport Corporate Centre (at MACC station) from across northern Toronto and from central Mississauga is created.
45. Canada and Ontario government capital cost contributions could result in an influx of more than $50 billion into the Toronto area economy during the 401RT Express's construction. Almost all of the 401RT Express's costs would be provincially and federally funded.
46. Overall, federal cost-sharing would make the 401RT Express a much more financially advantageous option for the Government of Ontario, compared to the proposed Highway 401 tunnel (illustration at right). Shareability would be based on improving economic productivity, environmental benefits, and social factors.

Cost-Sharing Options	Gross Cost ($millions)	Federal Cost-Sharing	Net Ontario Cost ($millions)
Highway 401 Tunnel	90,000	0%	90,000
401RT Express	70,000	40%	42,000
Cost Savings	20,000		48,000

The 401RT Express may be cost-shareable as a Build Canada project, or as a fundable public Transit project.

47. Economic losses from traffic congestion are reduced; business efficiency is improved.
48. Economic losses from imports of motor vehicle fuels and automobiles are reduced. Most cars and trucks sold in Ontario are imported, as is almost all fuel.
49. The number of deaths and injuries from motor vehicle collisions and the traumas and costs borne by the families and friends of crash victims are reduced, as are the associated daily congestion effects of collisions.
50. The 401RT Express helps enable the transformation of Yonge Street north of Highway 401 as the Yonge Street subway is extended to Highway 7. The 401RT Express will attract new transit users from driving on Yonge Street, by making it easier for them to access employment east and west of Yonge Street.
51. Greenhouse gas emissions are reduced by more than 800,000 metric tons per year until electricity-powered vehicles become more prominent. Toxic vehicle emissions and their negative effects on health are also reduced.

52. The operational effectiveness of the Toronto area's pre-existing transit system is improved; for example, more people will use existing buses and new buses for local trips not related to the 401RT Express (approximately 52 million per year by 2051) as service frequencies improve with the addition of more than 600 north-south buses as part of the 401RT Express concept. Frequency of service for some of these routes may be reduced to five minutes.
53. The 401RT Express will act as a relief valve for the Eglinton LRT if the LRTR experiences periodic or sustained overcapacity problems.
54. Suburban sprawl is eased, as development in the central area of the GTA is attracted by the 401RT Express, including construction of buildings near and at 401RT Express stations, and along intersecting arterial roadways served by enhanced bus services.
55. Property tax revenues are increased from new urban development at/near 401RT Express stations, and from increased property values in parts of Toronto, Mississauga, and Pickering, and in some '905' areas served by GO Transit.
56. For owners of real estate near 401RT Express stations, property values will increase. (Unfortunately, this also means buyers must spend more money to purchase property.)
57. Improved transit access via the 401RT Express supports an increased distribution of work across Toronto outside the downtown core and in Mississauga.
58. Rapid access to/from the 401RT Express improves automobile-free connectivity for businesses, and access for workers who live both downtown and in suburban areas.
59. Rapid transit access to places of work or to home outside the downtown core may enable the number of parking spaces downtown and across Toronto to be reduced, even as overall travel demand increases with population growth. Opportunities increase to transform public downtown parking spaces into affordable housing, open greenspaces and other public uses.
60. Overall operating revenues for the 401RT Express may cover 100% of costs or more by 2051, much better than that of Toronto's overall public transit system. The estimate assumes that 401RT Express users will pay a small premium fare than the standard fare for TTC buses.
61. Based on estimated new transit ridership generated by 2055, the overall capital cost-effectiveness of the 401RT Express would be more than twice that of Ontario's announced 2019 Rapid Transit Plan for Toronto, based on the cost per new transit trips generated.
62. Based on total new transit ridership generated by 2055, the capital cost effectiveness of the 401RT Express compared to the proposed High-Speed Rail (HSR) service from Toronto to Windsor would be approximately 14 times that of the relatively lightly-used HSR.
63. For Mississauga's residents, the 401RT Express through downtown Mississauga would enable affordable access to destinations to and from the airport area and across Toronto, and generate modal shifts to public transit that would reduce growing congestion on Highway 403 to/from Toronto.

Ontario Rapid Transit Plan vs. 401RT Express	New Trips (Million/yr) 2051	Infra. Cost ($Mil)	Cost per New User
Ontario Rapid Transit Plan*	118	39,500	$335
401RT Express	436	68,400	$157
Comparative Ratio	3.70	1.73	2.14
401RT Cost Effectiveness Advantage			**2.14**

* Costs of the announced $28.5 billion have increased to approximate current values, and include the Hazel McCallion LRT, the Ontario Line, the Yonge North Suubway extension, the Scarborough Subway, and the Eglinton West LRT extension to Renforth.

High Speed Rail to Windsor vs. 401RTX	**Millions of New Trips/ year 2051**	**Gross Infra. Cost ($Mil)**	**Cost per New User**
HSR to Windsor	10	21,000	$2,100
401RT Express	436	62,300	$143
Comparative Ratio	44	2.97	**14.7**

401RT Express is multiple times as cost effective as the HSR Toronto to Windsor, based on new transit trips generated.

64. The operational revenue-to-cost ratio of the Hazel McCallion LRT in Mississauga is improved as intersects with the 401RTX at two points attracts additional new ridership; additional high-density urban development at and near Hurontario Street is supported.

65. Based on total new transit ridership generated, 401RT Express would be extraordinarily more effective than a high-Speed rail service between Quebec City and Toronto, serving ten times the number of trips at much less cost. The comparative cost effectiveness of the 401RT Express enhances arguments for federal cost sharing. the cost-

Comparing Rapid Rail Concepts	Millions of Trips/year 2051	Gross Infra. Cost ($Mil)	Cost per User
Alto HSR Toronto to Quebec City			
- Recent Estimate	43	$90,000	$2,093
401RT Express*	436	$64,000	$147
Cost effectiveness advantage of 401RT Express:			**14.3**

* Excluding rolling stock

66. The alignment of the 401RT Express almost entirely above existing transportation corridors preserves existing communities as it greatly improves access to rapid transit. In comparison, the Alto HSR will disrupt and divide communities as it bypasses them.
67. The 401RT Express at its Port Union, Whites Road, and Liverpool stations enables transfers between the Durham-Scarborough BRT and 401RT Express to speed travel for many cross-boundary commuters. The Scarborough portion of the BRT would become unnecessary.
68. In York Region, the 401RT Express would ease road congestion to and from Toronto as north-south York Region bus services connecting to the 401RT Express improve.