

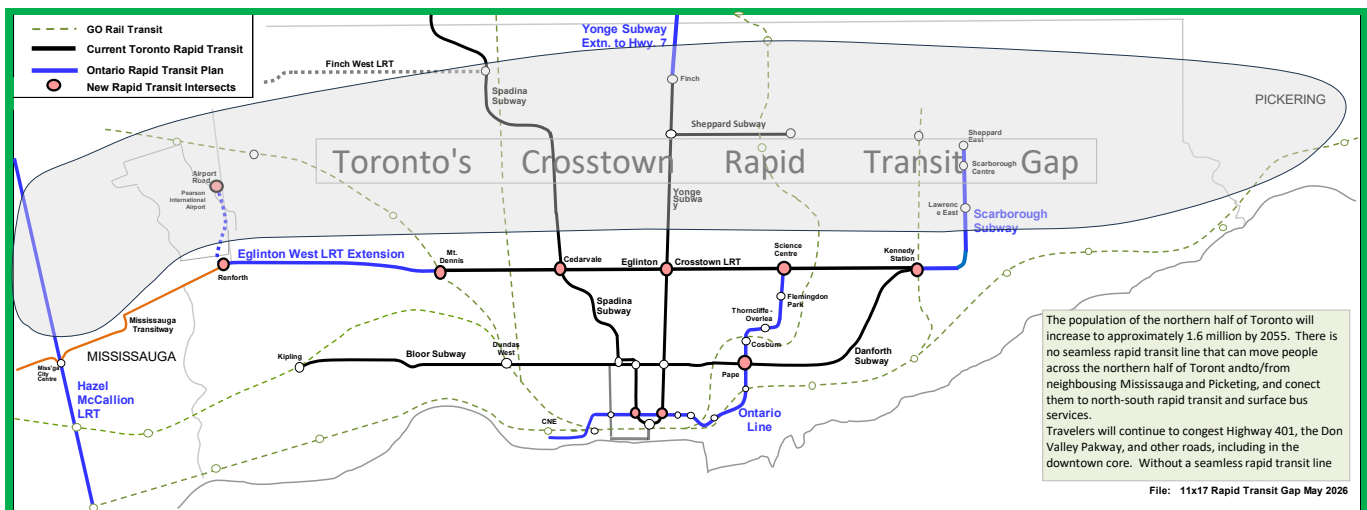
May 25, 2026

The 401RT Express: Rescuing Transportation in Toronto

By 2055, a million more people may call Toronto home, and hundreds of thousands more will commute into the city from neighbouring municipalities every day. Travel demand growth will exceed the expected transit ridership growth of transit initiatives that have been identified in the Ontario Government's Greater Golden Horseshoe Transportation Plan for Toronto.

Achieving a sustainable transportation system in Toronto must recognize that most of Toronto's traffic problems originate in the suburbs, including in the northern half of Toronto, where 1.3 million residents and 300,000 jobs today will increase by close to a third or more by 2055. Highway 401 in the core of the Toronto area is at high risk of becoming non-functional due to traffic gridlock. The Premier of Ontario has recognized the danger and has proposed to add highway capacity by way of a tunnel under Highway 401. The end result may be better traffic flow on Highway 401 where the tunnel exists; however, by encouraging more dependence on using personal automobiles will add to congestion on municipal roads, many of which are already congested during peak periods and cannot be widened.

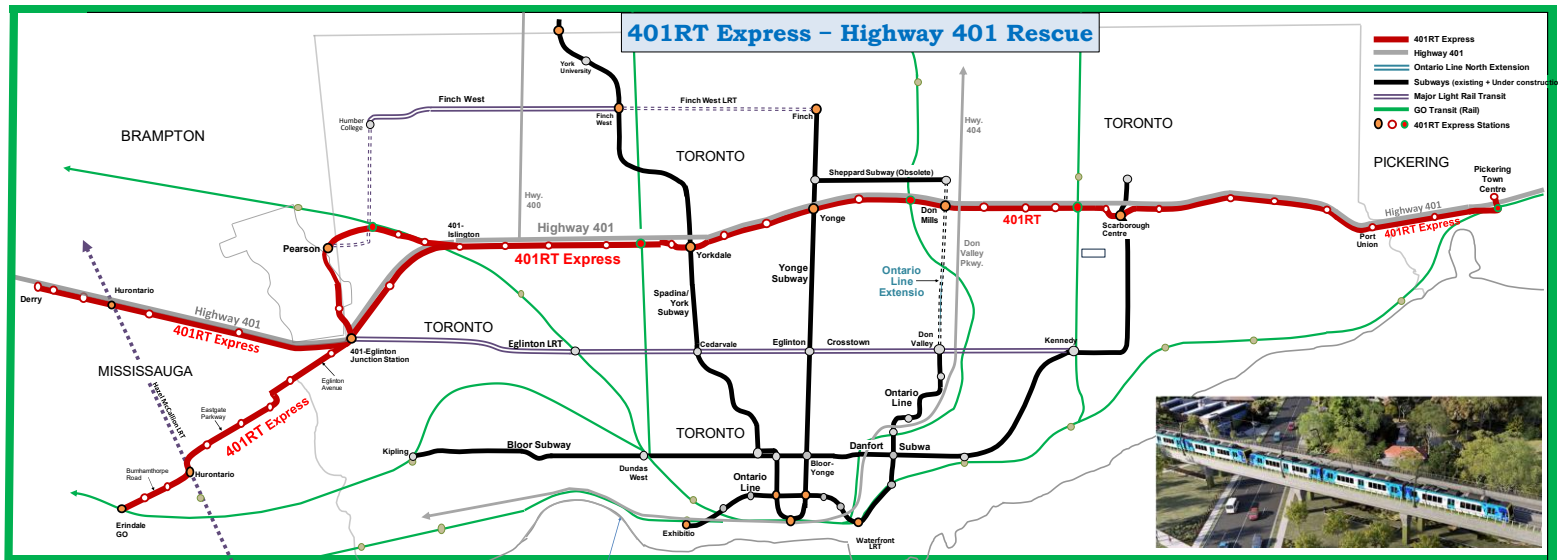
Gridlock on highways and municipal roads must not be allowed to happen. A principal reason for congestion in the core of the Toronto area, and particularly on Highway 401, is the lack of practical public transit options across the enormous rapid transit gap in northern Toronto. There is simply no practical alternative to driving.



Fixing the gap requires a continuous east-west rapid transit line from Mississauga to Pickering through the underserved northern half of Toronto.

The rapid transit line illustrated below – the **401RT Express** – is an almost completely elevated rapid transit line running along the south edge of the Highway 401 corridor from Liverpool Road in Pickering to Derry Road in Mississauga, plus a secondary line from Islington Avenue at Highway 401 to Pearson International Airport and the southward to and through downtown Mississauga. Altogether 85 kilometres in length with 50 stations and a cruising speed between station aerating 85 kilometres per hour.

Without this rapid transit line, or something very similar, there is no hope of achieving the level of reductions in automobile traffic necessary to avoid increases in traffic congestion in Toronto, and little hope of avoiding the construction of the Highway 401 tunnel.



The 401RT Express would connect to up to 13 north-south rapid transit lines and 100+ municipal bus routes. It would transform transportation in the core of the Toronto area and increase quality of life significantly. The 401RT Express would ease the financial burdens of many thousands of householders struggling with costs of a second or third automobile, which may cost between \$5,000 to \$20,000 per year to own and use. A list of more than 60 general benefits is available at www.401rt.ca.

The 401RT Express is likely to be extraordinarily successful. Major shifts from driving to the Express will occur because travel on Highway 401 and on alternative local roads will often be slower than traveling on the 401RT Express for the east-west segment of most trips. Added to this basic modal shift, other factors will increase transit ridership by 2051:

- GO Transit’s six intersects with the 401RT Express will generate approximately 27 million new GO Transit trips and 24 million new 401RT Express trips.
- The Islington-to-Pearson-to-Erindale GO branch of the 401RT Express will generate additional trips to and from downtown Mississauga, the Mississauga Airport Corporate Centre, and points in Toronto.
- The transit modal share of trips to and from Pearson International Airport and its adjacent employment area will be multiple times higher than is currently the case.
- Additional municipal buses on north-south routes intersecting with the 401RT Express will generate transit ridership travelers whose destinations are not the 401RT Express; an estimate is 52 million new transit trips per year by 2055.
- New and existing urban development in the form of high density housing and office uses at and near the 401RT Express will have higher than average rates of transit usage.
- The increasingly burdensome costs of automobile ownership and use will accelerate the shift of trips to the 401RT Express.
- The growth in truck movements will also affect gridlock and encourage additional shifts to transit for commuters.

Without the 401RT Express, those additional transit trips will not occur. Overall, the Express will generate more than 400 million new transit trips per year by 2055.

Key destinations directly served by the 401RT Express include Pickering Town Centre, Scarborough City Centre, the Line 1 subway, Yorkdale, Pearson International Airport and its surrounding employment area, and Mississauga's City Centre area. The northwestern arm of the Express would reduce dramatically the highly congested portion of Highway 401 between Dixie Road and Highway 400.

The rapidly-increasing use of artificial intelligence may have an effect on both transit ridership and travel by automobile. Based on one scenario – a 50% net loss of office jobs and a 20% net loss of non-office and transport jobs – would result in Highway 401 traffic remaining at 2025 levels by 2055, and reduce 401RT Express and GO Transit by ridership by up to half; even so, ridership on the 401RT Express would be slightly less per station than for the Line 2 subway. However, estimates of AI's effect on employment and job creation vary widely, and are highly uncertain. The perceived need for a Highway 401 tunnel would end; ridership on the 401RT Express would remain operationally viable.



The 401RT Express would require an extension of the Ontario Line from Eglinton Avenue East to the 401RT Express in order to prevent an overloading of the Line 1 subway on Yonge Street; an extension of the Ontario Line to Sheppard Avenue East is in the Government of Ontario's plans for future rapid transit.

The 401RT Express is proposed to be almost entirely elevated above ground – 85 kilometres from end to end, including 64 kilometres along the Highway 401 corridor.

The 401RT Express would render some existing transit expansion plans unnecessary. The 401RT Express would attract significant ridership from the City of Toronto's Scarborough LRT extension to Malvern and the Sheppard Subway, rendering them non-viable. The Sheppard Subway should be eliminated entirely, and be replaced by enhanced bus services from Port Union Road to Weston Road. The Eglinton West LRT extension from Renforth to Pearson – which would be an obstruction to the 401RT Express – should be eliminated. In total, a cost avoidance of approximately \$13 billion can be realized (view illustration below).

The 401RT Express would cost an estimated \$62 billion to build, plus approximately \$6 billion for rolling stock. It would very likely be cost shareable with the Government of Canada (historically up to 40%); the Highway 401 tunnel, which could cost \$90 billion, would not be shareable. Overall, the 401RT Express could be \$50 billion less expensive for Ontario to build than the highway tunnel.

When compared to the recently-approved Alto high speed rail service between Toronto-to-Quebec City, the 401RT Express would be many times as cost effective, based on cost per transit user (comparison table below). Importantly, the 401RT Express is *an immediate need* to maintain the functionality of Highway 401 and to reduce congestion in the Toronto area; the HSR may be nice to have, but is not critical.

The 401RT Express, as an elevated rapid transit line, can be built relatively quickly, with six to ten independent crews working simultaneously on 401RT Express segments, stations, operating systems, and maintenance yards at various locations, once preconstruction planning is completed. Overall, up to 40,000 jobs per year can be created for up to ten years of construction. Visit www.401rt.ca for more information in the downloadable file "Rapid Transit Rescue".

The 401RT Express should be seen as a continuation of current rapid transit expansion activities. Given future growth and road congestion in the Toronto area, the construction of the 401RT Express should begin as current rapid transit projects begin to wind down, with advance planning and evaluations beginning as soon as possible.

Note 1 : Current and planned rapid transit initiatives rendered obsolete by the 401RT Express:

1. The \$5.3 billion Scarborough LRT to Malvern (+rtn. to McCowan), less a useful \$1.7bn extension of the LRT to Kingston Road. Access to Malvern and the University of Toronto Scarborough Campus is faster for many travelers via the 401RT than the LRT.
2. The \$1.3 billion Eglinton West LRT from Renforth to Pearson. The Line 1 subway and 401RT Express combination would deliver most downtown trips to Pearson as fast as the Eglinton West LRT and provide direct transit trips to Pearson from northern Toronto.
3. The \$7.5 billion Sheppard Subway extension to Scarborough Centre station. The Sheppard Subway is closely parallel to the 401RT, which would draw users of the Sheppard Subway, to the point that the subway would be operationally non-viable.
4. Savings would be partially offset by decommissioning costs of the Sheppard Subway.

401RT Express Summary	Infra-structure Cost \$m	2055 Trips per Year Millions	Cost per New Trip	Kms. Of Track	Cost per Km. of Track
401RT Express - Erindale GO to Islington	12,400	70	178	31.7	\$391
401RT Express - Derry to Pickering	41,700	205	203	53.3	\$782
401RT Express - Rolling Stock (trains+buses)	6,100				
Maintenasnce and storage yards	8,250				
Bus ridership increases (non-401RTX trips)		52			
401RT Express Effect on GO Transit (\$ by GO)		51			
Other (Pearson, urbanization, Sheppard Sbwy, Other)		60			
Total Recommended Infrastructure	68,450	438	\$156	85.0	\$805
N.B. The 401RTX requires an extension of the Ontario Line northward from Eglinton; this is already in MTO's Greater Golden Horseshoe Transportation Plan.					
Planned rapid transit rendered obsolete by the 401RT Express:					
Sheppard Subway Extn. to Scarboro Ctr.	7,500	6	} \$626	9.0	\$830
Less Decommissioning Sheppard Sbwy; net	-800				
Eglinton West LRT - Renforth to Pearson	1,300	4	} \$515	7.6	\$171
Eglinton E LRT - Kndy to Malvern to McCowan	5,300	11			19.1
Eglinton E LRT - Kndy to Kingston Rd (optional)	-1,700	-3		-4.5	\$378
Total Cost avoidances*	11,600	18	\$647	31.2	\$371

* The 401RT draws ridership from these higher-order transit routes, rendering them operationally non-viable. Overall, these trips are not lost; they would be served by existing bus services or trips are diverted to the 401RT Express.

N.B. Excludes shortening of the planned Durham-Scarborough BRT to east of Liverpool Rd. (not itemized)

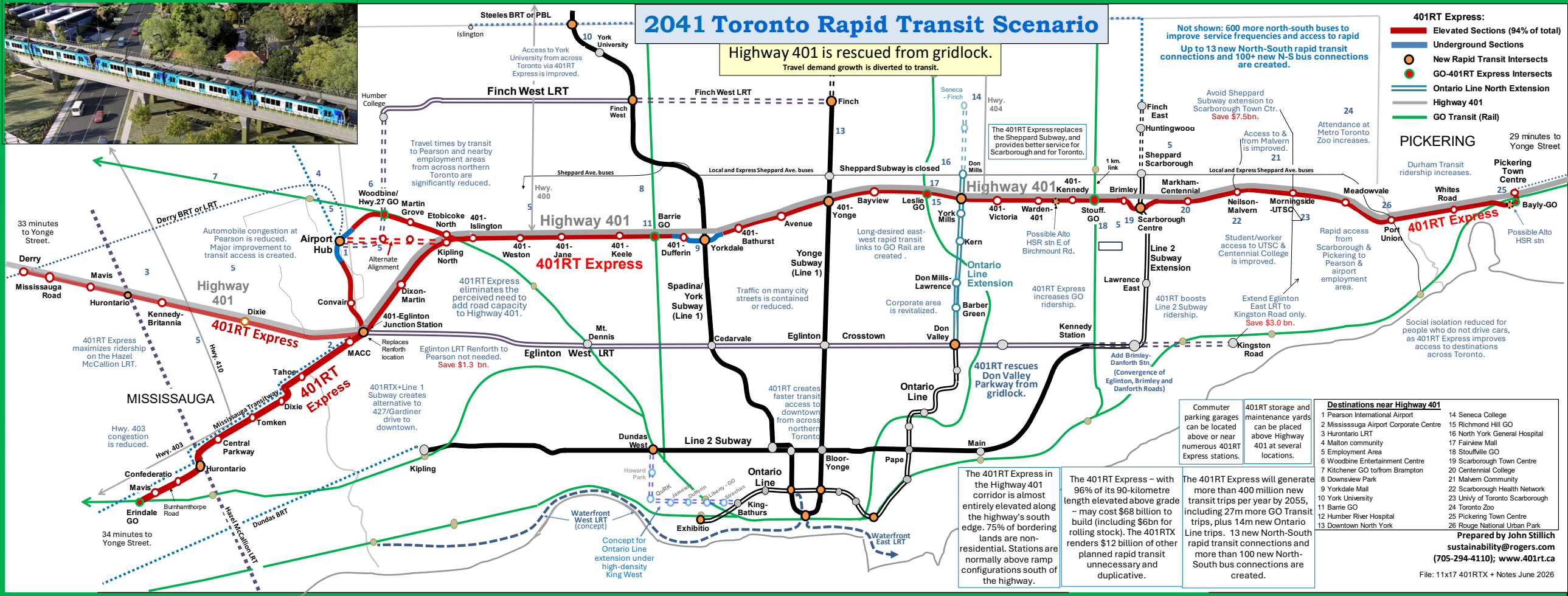
Comparing Rapid Rail Concepts	Millions of Trips/year 2051	Gross Infra. Cost (\$Mil)	Cost per User	Kms.	Cost to Gov't. of Canada
Alto HSR Toronto to Quebec City					(\$m)
- Recent Estimate	40	\$90,000	\$2,250	1,000	unknown
401RT Express*	438	\$62,400	\$142	85	\$37,440
Cost effectiveness advantage of 401RT Express:			15.8		

* Excluding rolling stock



2041 Toronto Rapid Transit Scenario

Highway 401 is rescued from gridlock.
Travel demand growth is diverted to transit.



- 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)

PICKERING

29 minutes to Yonge Street

Durham Transit ridership increases.

Pickering Town Centre

Whites Road

Meadowdale

Port Union

401RT Express

Possible Alto HSR stn

Social isolation reduced for people who do not drive cars, as 401RT Express improves access to destinations across Toronto.

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.

Avoid Sheppard Subway extension to Scarborough Town Ctr. Save \$7.5bn.

Access to & from Malvern is improved.

Attendance at Metro Toronto Zoo increases.

The 401RT Express replaces the Sheppard Subway, and provides better service for Scarborough and for Toronto.

Sheppard Subway is closed

Local and Express Sheppard Ave. buses

Highway 401

401RT Express

401RT Express eliminates the perceived need to add road capacity to Highway 401.

Long-desired east-west rapid transit links to GO Rail are created.

Traffic on many city streets is contained or reduced.

401RT rescues Don Valley Parkway from gridlock.

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 Mississauga 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 from Brampton	20 Centennial College
8 Downsview Park	21 Malvern Community
9 Yorkdale Mall	22 Scarborough Health Network
10 York University	23 Univiy 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.

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