GET TORONTO MOVING
BALANCED TRANSPORTATION PLAN FOR TORONTO
www.gettorontomoving.ca
‘GET TORONTO MOVING’ TRANSPORTATION PLAN
SUMMARY REPORT

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BIBLIOGRAPHY

‘Network 2011’ TTC Report 1985
Boro Lukovic – tunnelling expert
Globe and Mail newspaper
GO Transit
Canadian Automobile Association
Canada Pension Plan Investment Board
Ontario Teachers Pension Fund Investment Board
City of Toronto
Metrolinx
WHO WE ARE

The task force who have contributed to this plan consist of:

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POLICY

There are two ways needed to end traffic gridlock: High-capacity rapid transit and improved traffic flow. The overall guiding policy of this plan is: the "Get Toronto Moving' Transportation Plan oversees policies and projects with the goal of improving the efficiency of all modes of transportation which are the choices of the people of Toronto, including automobiles, public transit, cycling and walking within available corridors. The City has no place to ‘encourage’ or entice people to switch to different forms of transportation from what they regularly use. That is the free choice of the people. The City and the Province are only responsible for providing the facilities for the transportation choices of the people.

Neighbourhoods and residential and commercial communities must be left intact to flourish. Ways and means must be found to construct new transportation routes without disruption to residential areas or to established green spaces.

There are plenty of available utility corridors across Toronto, some very wide, used for railways and hydro-electric power lines. It is recommended that some of these be utilized for new transportation routes to minimize the impact on communities and neighbourhoods. Private funding can also be utilized for construction of tunnelling.

No new expressway has been constructed in Toronto south of Highway 401 since 1971. This needs to be addressed. Major new expressways can be constructed in tunnels under major streets and rail corridors and in utility corridors with the use of private funding and paid for by toll revenue.

High-capacity transit must take the shape of new subways and GO commuter rail lines, not slow-moving light rail or streetcar routes. Faster transit carries more people.
RAPID TRANSIT SUBWAYS

Subways are the best form of rapid transit. They do not interfere with street traffic and move a lot of people. They also do not require as much winter maintenance as surface transit. Streetcar LRT's remove road space, cut off neighbourhoods on either side, as has been experienced on St. Clair Avenue West, move slowly and require much winter maintenance. They are less expensive than subways but only carry about 40,000 passengers per day while subways carry up to 200,000 passengers per day and attract development and investment.

Expansion of the subway system will also reduce auto traffic especially if adequate parking is provided at stations. In the long term, subways are the most effective form of public transit as they move a greater number of people and compete with the private automobile. Toronto has not built a new subway extension since 1980, except for the short Sheppard line and the Spadina line extension into Vaughan, now under construction.

Subways can be built in stages with the use of funding from new development. At least two kilometres of subway and one new station could be constructed every two years. Underground subways cost $200 million per kilometre to construct while surface LRT costs $100 million per kilometre to construct. However, the double cost of subways provides capacity to carry five times as many people as LRT. Contingency costs for inflation should be no more than 10%.

Rapid Transit proposals:

• Eastern extension of the Bloor-Danforth Subway (Line 2) from Kennedy Station to link with an extended Sheppard Subway north-east of the Scarborough Town Centre.

• Western extension of the Bloor-Danforth Subway (Line 2) on the surface from Kipling to Sherway Gardens, ultimately continuing west to Hurontario Street in Mississauga.

• Completion of the Sheppard Subway (Line 4) east from Don Mills to north of the Scarborough Town Centre to meet the extended Bloor-Danforth Subway, ultimately continuing east to Meadowvale Road, supported by intensification of development around the Scarborough Town Centre.

• Extension of the Sheppard Subway (Line 4) west from Yonge to Downsview. The Sheppard Subway could eventually be extended west to Pearson International Airport and then southerly to Kipling Station on the surface in an existing hydro corridor. The Sheppard Subway would ultimately connect across the entire City.

• Construction of a 'U'-shaped Downtown Relief Subway (Line 5) through the central core under Queen Street, possibly utilizing the existing unused east-to-west station under Queen Station. The route would swing north under Pape Avenue on the east side and along the Kitchener GO rail corridor on the west side. These two sections stretching to the north would be initially built to Bloor Street in the west and to Danforth Avenue in the east, and later extended further to Eglinton Avenue.
• Northern extension of the Yonge Subway (Line 1) from Finch to Richmond Hill Centre.

• Construction of the Eglinton-Crosstown LRT line from Pearson International Airport in the west to the University of Toronto Scarborough Campus in the east, as planned.

• Introduction of a jitney service, particularly in the suburbs, to collect people from their neighbourhoods and transport them to rail transit stations, thus making driving to a station unnecessary.

• Replacement of Central Area streetcars with new double-length trolley buses with the same carrying capacity as streetcars, using overhead electric wires but with no tracks. This would eliminate the cost of track replacement, reduce downtown traffic congestion and improve the safety of passengers who can board the vehicle at the curb instead of the centre of the road, which can be dangerous.

The existing Line 4 Sheppard Subway, opened in 2002 from Yonge to Don Mills, is 5.5 km in length and cost $900 million to build which is approximately $170 million per km. Factoring in inflation, over 10 years, subways today would cost about $200 million per km.

A tunnelling expert has estimated that completion of the Line 4 Sheppard Subway from Don Mills to McCowan (9 km) would cost approximately $1.9 billion; and the Line 2 Bloor-Danforth Subway (Kennedy to Sheppard East – 7 km) would cost $1.3 billion. This would be a total of $4.4 billion for all three subway extensions.

Findings of the 1985 ‘Network 2011’ TTC Study

• Subways operate at approximately 38 kilometres per hour compared to the assumed 27 kilometres per hour for LRT, thereby providing significant travel time savings in the order of 40%.

• A subway has negligible effect on the road system after the initial construction period, while a partially grade-separated LRT system would have unacceptable impacts on the road capacity along Sheppard Avenue.

• Compared to subway, a partially grade-separated LRT would have significant impacts on abutting residential and commercial lands in terms of residential and commercial properties displaced and noise and vibration effects.

Transit Projects Around The World

In European cities such as London and Paris, light rail transit is only built in low density outer lying areas of these cities which feed into an already-extensive subway system, which is also being extended.

In Paris, another 200 km of fully automated subway at a cost of subways $160 million/km is being planned. Metrolinx’s price for the replacement of the Scarborough RT with an LRT is $335 million. Toronto LRT would carry less than 1/5 the number passengers than the Paris subway would carry. Additionally, Barcelona, Spain is constructing subways for $95 million/km. Taipei,
Taiwan has constructed 20 new subway lines in the last 10 years at a similar cost. This leaves the accuracy of the cost figures from Metrolinx in doubt, which may have been inflated to make LRT more attractive.

'Smarttrack'

In October 2014, Mayor John Tory introduced 'Smarttrack' which was a high speed above-ground rail, similar to those existing in London, U.K., using existing rail lines with frequent local stops like a subway. His plan was to run it along the Stouffville GO rail line south from Markham, through Scarborough, and then west along the Lakeshore GO rail line, through Union Station in downtown Toronto, and then northwest along the Kitchener GO rail line to Eglinton Avenue connecting to the Eglinton-Crosstown Light Rail Line. It would run across the entire city with more than 15 stops and take seven years to build. 'Get Toronto Moving' supports this plan.

GO TRAINS

Since, much of Toronto’s traffic commutes from outside the city, 'Get Toronto Moving' advocates for greater use of the GO train commuter rail system which utilizes existing railway lines. The system should be greatly expanded and run in both directions all day every 15 to 30 minutes. This is a far more cost-effective way of providing extensive fast rail transit across the Greater Toronto Area than the construction of light rail lines as currently proposed by Metrolinx.

Currently, there are seven GO rail lines with limited service in all directions from Union Station in downtown Toronto, connecting Toronto with Hamilton, Milton and Kitchener in the west, Barrie, Richmond Hill and Stouffville in the north and Oshawa in the east. Additionally, there is the new Union to Pearson Rail link, now under construction, running along the Kitchener GO rail line. These should all be expanded to two-way, all day service running every 15 to 30 minutes and a new Crosstown GO rail line from The Junction area of West Toronto northeast to Markham and the Pickering Airport via Summerhill Station should be constructed.

This system should be extended with additional new services, utilizing existing railway lines, to provide a continuous two-way all day network which connects Toronto with Niagara in the south, Brantford and Cambridge in the west, Orangeville and Alliston in the northwest, Beaverton and Uxbridge in the northeast and Peterborough and Cobourg in the east. An express train route from Union Station to the new Pickering Airport should also be constructed.
ROADS

Toronto has not built any major roads since 1971 when construction of the Allen Expressway was cancelled. The only new road to be built since then was Black Creek Drive and that was constructed by the Provincial Government in 1982. The lack of road construction has been due to political reasons. Toronto's traffic has grown three times since the 1970's and congestion levels are reaching gridlocked proportions. It is time for Toronto to start building roads again in addition to subway construction, but on a moderate scale and underground to preserve neighbourhoods. Roads are also needed to carry goods and connect Toronto with other cities throughout southern Ontario. New roads are not a thing of the past as cities in China, India, Chile and Australia are building them today.

Traffic sitting idling in gridlock produces nine times the pollution than traffic travelling at 100 km/h. New highways would vastly reduce idling pollution levels in local residential neighbourhoods. With traffic travelling at high speeds along the highways, concentrated pollution levels would be quite low. These routes would pull through traffic out of the nearby neighbourhoods and make the local streets safer for residents, pedestrians, cyclists and children going to school.

There are much better ways to construct highways in the City - and that is with the use of tunnels under existing corridors. They can also be paid for entirely with private funding, recouped through tolls, like Highway 407, which can also control the amount of traffic on them.

Road Proposals:

Cross-Toronto Tunnel

A continuous six-lane tunnelled highway should be constructed from Highway 401 at Highway 2A in the east to Highways 400, 427 and 402 in the west. This route would be entirely privately-financed, privately-constructed and tolled. It would be built in stages over several years starting from the east. The provincial Government should lease the right-of-way under the Metrolinx GO Lakeshore East and Kitchener rail corridors to a private company which would assume construction and maintenance of the entire route.

The tunnel route would consist of two sections: one in the east and one in the west.

The tunnelled route in the east should extend west from Highway 2A at the Highland Creek bridge, entirely in a 23-km tunnel, under Kingston Road to Guildwood GO Station and then continuing west under the Lakeshore East GO rail line to the Gardiner Expressway at the Don River. Access can be provided at Morningside Avenue, Markham Road, Birchmount Road, Victoria Park Avenue and Greenwood Avenue. No properties are required for the route as it would be entirely tunnelled within the Metrolinx rail corridor and under Kingston Road. The route would be built in sections and would be privately financed and tolled.

The tunnelled route in the west should extend northwest from the Gardiner Expressway at Strachan Avenue under the Kitchener GO rail line and Union-Pearson Express rail line to Eglinton Avenue...
at Black Creek Drive. It would then split into two branches: one continuing north under Black Creek Drive and one continuing west under Eglinton Avenue to Highway 427 and eventually to Highway 403 in Mississauga. Black Creek Drive is experiencing severe congestion because it is carrying highway traffic and the road is too small with signalized intersections. The tunnel would solve this problem by moving the traffic underground. Black Creek Drive, immediately above, could then be downgraded and become more of a local road serving the local community. It would be relieved of the heavy 400-bound traffic that it carries now. Access from the tunnel would be provided at Bloor Street, St. Clair Avenue, Eglinton Avenue and Lawrence Avenue. The western branch would provide an underground express link to Highways 427 and 403. The tunnel would be privately financed and tolled.

Eventually, the two sections of the tunnel could be linked up in the middle by moving the elevated Gardiner Expressway underground, either under the Metrolinx Lakeshore rail corridor or under the lake. This would make the route into one continuous tunnel across the City and remove the elevated Gardiner Expressway. However, this is a more long-term consideration.

Other Road Proposals include:

- Removal of streetcars on Kingston Road between Coxwell and Victoria Park Avenues and on Gerrard Street between Coxwell Avenue and Main Street. A one-way system should then be introduced for westbound traffic on Gerrard Street and eastbound traffic on Kingston Road between Coxwell Avenue and Danforth Avenue and Kingston Road. Kingston Road will have to be extended from Eastern Avenue to Lake Shore Boulevard and Gerrard Street will have to be extended from west of Clonmore Drive to Danforth Road at Danforth Avenue. This will provide a much-needed traffic corridor to the east connecting the Gardiner/Lake Shore corridor to the wider Kingston Road in Scarborough.

- Filling in 9 missing links in the arterial road grid system - 20 km of new road links:
  - Rathburn Road bridge over Etobicoke Creek into Mississauga.
  - Meadowvale Road bridge over Highway 2A and north to Steeles Avenue.
  - Keele Street extension to Weston Road from Rogers Road.
  - A new bridge over CN/CP rail to connect Roncesvalles Avenue with Old Weston Road.
  - Direct Kingston Road to Lake Shore Boulevard connection west of Coxwell Avenue.
  - Lawrence Avenue East connection at Bayview Avenue.
  - Danforth Road extension to Gerrard Street East.
  - Extension of Weston Road from Royal York Road to Islington Avenue.
  - Extension of Morningside Avenue to Steeles Avenue.

- Removal of streetcars from downtown streets and their replacement with electric trolleybuses with the same seating capacity as streetcars. Trolleybuses can pull to the curb, not interrupting traffic flow and making it safer for passengers to embark.

- No more traffic lanes to be converted to bicycle lanes on major arterial roads. Bicycle lanes should only be installed on collector and residential streets and where two traffic lanes in each direction can be maintained.
• Level crossings at railway lines with gates and warning bells should be removed and replaced with underpasses and overpasses to improve safety and traffic flow.

• Inexpensive multi-storey parking garages should be constructed at public transit hubs such as Yorkdale, Eglinton West, Yonge-Sheppard, Yonge-Eglinton, Yonge-Bloor, Dundas West, Greenwood, Kennedy and Scarborough Centre stations and the proposed Sherway Gardens station.

• Once streetcars have been replaced with electric trolleybuses, downtown streets should become a network of one-way streets to improve traffic flow.

• Synchronization of all traffic signals for continuous green lights and installation of SCOOT technology at all intersections to time the length of lights based on traffic levels.

**Elevated Gardiner Expressway**

As stated previously, the long-term goal of this plan is to move the elevated Gardiner Expressway underground as the final part of the Cross-Toronto Toll Tunnel. However, in the near future, the rehabilitated elevated expressway can serve as the connecting highway to the western and eastern sections of the tunnel, to be joined underground later.

This plan supports the City's current plans to totally rehabilitate the western and central sections of the existing elevated Gardiner Expressway. It also supports the 'hybrid' plan for the eastern section which would relocate it closer to the parallel railway lines east of Cherry Street. This plan opposes removal of any part of the expressway and its replacement with a surface signalized boulevard due to the increase in traffic congestion which would result from this action. Opportunities must be taken to landscape around the expressway to mitigate the effects it has on the surrounding properties.

**Underground Automated Highways**

As new technologies emerge, a new tunnelled highway in Toronto will eventually evolve into an Underground Automated Highway for driverless cars. Post-2030 it seems likely we'll see the beginnings of an underground automated highway (UAH) network emerge, one that may extensively under-grid many of our major cities by the mid-21st century. The degree of emergence of this new system may depend on the way a number of important local contingencies play out, including our own insight (early or late) into the unique advantages of this system, and the strength of our political resolve to set up test systems. However, this is inevitably coming to cities as traffic gridlock gets worse. These three technologies are becoming more common: tunnel boring systems, automated highway systems, and zero emission fossil fuel and fuel cell vehicles. The convergence of capacities in these three technologies will create a transportation option that looks much more resource and capacity optimized than any other 21st century solution that has been proposed. The Cross-Toronto Tunnel will be constructed with the technology for driverless cars installed, along with bright LED lighting simulating sunlight making the driving experience bright and safe.
BICYCLE TRAILS

Construction of a new 100-kilometre network of continuous well-lit off-road bicycle trails cleared of snow in the winter. This is currently the policy of the City of Toronto.

Bicycle Proposals:

Bicycle transportation must be accommodated in the safest possible way — and without impeding traffic — by providing separate rights-of-way for bicycle commuters and recreational cyclists. In essence, a third transportation corridor needs to be established — the bicycle trail. It is recommended that a continuous 100-kilometre grid of north-south and east-west bicycle and in-line skate trails be constructed to cover the entire Toronto area that would link up all of the current discontinuous cycle trails across Toronto into one integrated and continuous network throughout the entire city. This grid would decrease the need for congestion-causing bicycle lanes on busy downtown roads while providing improved access to city destinations by cyclists. These trails should be lit with small street lights at night for continuous safety.

New bike lanes on roads would be provided along residential streets only and avoid arterial roads. Exceptions to one-way traffic could apply to such cycle lanes. The selected trail routes would meet with arterial roads at signalized intersections to facilitate safe crossings. Available corridors in ravines and valleys, hydro rights-of-way could be used to create a continuous and interconnected bike trail network across the city.

Bike lanes would only be approved on arterial roads if they can be added without the removal of traffic lanes, such as slightly narrower traffic lanes to allow for 1 metre (3 feet) bike lanes to be added. A minimum of two traffic lanes in each direction must be maintained on all arterial roads. No traffic lane is to be converted to a bike lane. Separate trails are preferred as they are safer.

These new bicycle routes will increase cyclist safety because they will be separated from motorized traffic along some of the most beautiful green routes in Toronto. Traffic laws must be enforced for cyclists for safety.
FUNDING

No new taxes or ‘revenue tools’ should be or need to be introduced. The Canada Pension Plan Investment Board has $150 billion available and the Ontario Teachers Pension Fund Investment Board has another $117 billion available to invest for a total of $267 billion from both funds available for investment in infrastructure. Tolls could be implemented on the newly-constructed highways only. This would pay for their construction and maintenance and provide additional funding for transit construction. Ontario takes in $8 billion annually in gasoline tax. At least $1 - $2 billion of this should be dedicated to transportation per year. Additionally, development fees and property taxes from new high-density development at transit hubs and along subways can be applied to transit. Tolls on all of the new tunnelled highways will also provide ongoing revenue.

Transit hubs as new downtowns should be created at Scarborough Town Centre, North York Centre and at Sherway Gardens in Etobicoke with construction of new tall condominium towers and increased density around subway junctions. Derelict industrial buildings could be replaced with dense condominium towers for both residential and office space. This would create thousands of jobs in the Toronto area and would provide the density to support subway extensions to serve it. The annual $500 million of new property tax from the transit hub development would pay for subway, GO train and road extensions within ten years. Transportation construction should then continue on a permanent basis using this new revenue. Air rights could be sold above existing and proposed subway and GO train stations for development which would pay for construction of the stations, which is the most expensive part.
TORONTO TRANSPORTATION HISTORY TIMELINE

1954 Yonge Subway (Union Station to Eglinton Station) opens March 30
1957 Gardiner Expressway opens QEW to Jameson Avenue
1961 Don Valley Parkway opens Bloor Street to Eglinton Avenue
1962 Gardiner Expressway opens Jameson Avenue to York Street
1963 Don Valley Parkway opens Eglinton Avenue to north of Lawrence Avenue
University Subway (Union Station to St George Station) opens February 28
1964 Gardiner Expressway opens York Street to Don Valley Parkway
Don Valley Parkway opens Bloor Street to Gardiner Expressway
1966 Gardiner Expressway opens Don Valley Parkway to Leslie Street
Don Valley Parkway opens Lawrence Avenue to Sheppard Avenue
Spadina Expressway opens Wilson Heights Boulevard to Lawrence Avenue
Bloor-Danforth Subway (Keele Station to Woodbine Station) opens February 25
TTC streetcar phase-out plan by 1980 approved in conjunction with Queen Subway plan
1967 Eastern extension of Gardiner Expressway (Scarborough Expressway) approved
GO Transit formed – Lakeshore GO line opens
1968 Bloor-Danforth Subway extensions to Islington and Warden Stations open May 10
1969 Spadina Expressway renamed as William R. Allen Expressway; construction halted pending a review; low pressure sodium lighting introduced on to Allen Expressway
1971 Construction of Allen Expressway south of Lawrence Avenue cancelled by Province
1972 TTC streetcar phase-out plan abandoned
1973 Yonge Subway extension to York Mills Station opens March 30
1974 Eastern extension of Gardiner (Scarborough) Expressway shelved but corridor retained
Yonge Subway extension to Finch Station opens March 29
Georgetown GO line opens; Queen Street Subway proposal shelved
1975 Low pressure sodium lighting introduced on to all Toronto municipal expressways
1976 Allen Road opens Lawrence Avenue to Eglinton Avenue
1978 Spadina Subway (St George Station to Wilson Station) opens January 27
Richmond Hill GO line opens; Double-decker GO trains introduced
1980 Bloor-Danforth Subway extensions to Kipling & Kennedy Stations opens November 21
1981 Milton GO line opens
1982 Black Creek Drive opens to Weston Road; Allen Road opens north to Dufferin Street
Bradford and Stouffville GO lines open
1985 Scarborough RT (Kennedy Station to McCowan Station) opens March 22
‘Network 2011’ subway plan for Eglinton, Sheppard and Downtown Relief lines adopted
1986 Sheppard Subway from Downsview to Scarborough Town Centre approved
1987 North York Centre Station opens June 18
1989 High Pressure Sodium lighting introduced on to all Toronto municipal expressways
1990 Harbourfront streetcar (Union Station to Queens Quay & Spadina) opens June 22
1994 New Official Plan deletes Richview and Scarborough corridors preserved for expressways
1995 Construction of Eglinton West Subway started and then cancelled by Province
1996 QEW, Highway 27 and Highway 2A transferred from the Province to the City
Spadina Subway extension to Downsview Station opens March 31
1997 Spadina streetcar (Spadina Station to Union Station) opens July 27
2000 Harbourfront streetcar extension to Exhibition opens July 21
2001 Elevated Gardiner Expressway from the Don River to Leslie Street demolished
2002 Sheppard Subway (Sheppard-Yonge Station to Don Mills Station) opens November 22
2003 ‘Transit City’ light rail transit (LRT) plan approved and adopted
2006 St. Clair streetcar (St. Clair Station to Bathurst) opens
2007 Georgetown GO line extended to Kitchener, Bradford GO line extended to Barrie
2009 St. Clair streetcar (Bathurst to Gunns Rd.) opens; GO Transit merged with new Metrolinx
Construction of Union-Pearson express rail link along Kitchener GO rail line begins
Extension of Spadina Subway line to Vaughan construction begins
Underground section of Eglinton-Crosstown LRT construction begins
2013 Council approves extension of Bloor-Danforth Subway to Sheppard Avenue
2014 Mayor John Tory introduces his new ‘Smarttrack’ high-speed rail plan with frequent stops through
Toronto from Markham to Mississauga
Numeric designation introduced for Toronto’s subways (Lines 1, 2, 3 and 4)
2015 Union-Pearson express rail link along Kitchener GO rail line opens
2016 Bloor-Danforth Subway extension is to be made express to Scarborough Town Centre only
Eglinton-Crosstown LRT is to be extended east to the University of Toronto Scarborough Campus
2017 Spadina Subway Extension to Vaughan Corporate Centre opens
Eglinton-Crosstown Light Rail Transit from Mount Dennis to Laird Drive opens