



TRANSPORT ACTION ONTARIO

(formerly Transport 2000 Ontario)

*Advocating for Sustainable Public and Freight
Transportation*

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RESPONSE TO: TRANSPORT CANADA NEEDS ASSESSMENT STUDY – PICKERING LANDS, 2010

February, 2014

EXECUTIVE SUMMARY

In 1972, Transport Canada acquired 7,530 hectares of mostly farmland in Pickering for the purpose of developing a new airport to meet projected capacity needs for the Greater Toronto Area and the Golden Horseshoe between 2027 and 2037. Public opposition led to the shelving of the plan in 1975. However, preparation for the airport involved the expropriation of homes that were then rented back to the owners. These homes subsequently deteriorated and left communities in tatters.

The issue was raised again in 2004 when, at the request of Transport Canada, the Greater Toronto Airport Authority released a study entitled "*Pickering Airport Draft Plan Report*." Transport Action Ontario, under its former name, Transport 2000 Ontario, critiqued the report under the title "*A New Airport at Pickering: A Needs Assessment*."¹ Many of the arguments against the project remain valid today.

In 2011, Transport Canada released a second report entitled "*Needs Assessment Study – Pickering Lands*," which favoured the construction of the airport.

In June, 2013, the federal Minister of Finance re-announced the airport plan with a different configuration of land: approximately one-third going to the airport, and the other two-thirds divided between the new federal Rouge Park and other development.

Transport Action Ontario opposes the Pickering airport plan for the following key reasons:

1. A significant part of Toronto's air travel is short haul domestic travel within the Windsor – Quebec City corridor. This demand can readily and cost-effectively be met by intercity rail. Experience in Europe and the North East USA has shown that upgraded rail, if done right, is preferred for trips under about 1000 km.
2. Air travel is a heavy emitter of greenhouse gases.
3. Adding to airport infrastructure will render Canada's failed commitment to reduce greenhouse gas emissions even more unattainable.

¹ Transport 2000's response to the 2004 Pickering Airport Draft Plan Report was entitled, *A New Airport at Pickering a Needs Assessment*. It should not be confused with Transport Canada's *Needs Assessment Study – Pickering Lands, 2010*. The above report is our response to the Transport Canada 2010 document.

4. The prediction that Pearson Airport will reach capacity (55M passengers) in 13 to 23 years is doubtful.
5. As the price of jet fuel increases, the cost of air travel will continue to increase.
6. Ground transportation to the proposed Pickering Airport will increase urban sprawl
7. The Pickering airport will be built on hectares of mostly prime farmland. To take quality agricultural land out of production flies in the face of the sensible trend to grow food locally, support farm families and reduce long-distance, polluting transport of food by air.

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1. Background

In 1972, the federal government announced its intention to build an airport on mostly farmland in the area of the City of Pickering. The rationale was that Pearson Airport would run out of capacity between 2027 and 2037 to serve Greater Toronto and the Golden Horseshoe. The project met with much resistance both locally and by environmental groups, as well as by the Ontario government that refused to provide roads or sewers to service the site. The project was shelved in 1975. However, damage to the local communities was permanent, as expropriated homes that were rented back to the owners deteriorated and communities were left in tatters.

The plan surfaced again in November, 2004, when, at the invitation of the federal Minister of Transportation, the Greater Toronto Airport Authority (GTAA), which operates Pearson Airport, released a study entitled “*Pickering Airport Draft Plan Report*.” The report “...set out a concept for an airport that could be developed incrementally on the Pickering lands over the next 20 years.” In 2011, Transport Canada released a second report entitled “*Needs Assessment Study – Pickering Lands*” (2010), which favoured the construction of the airport.

Not much action was taken until June, 2013, when the federal Minister of Finance re-announced a somewhat smaller airport plan with one-third of the lands going to the airport, one-third to the Rouge Urban National Park, and the remaining land to be designated for other development.

2. Transport Action Ontario (TAO) opposes this project for the following reasons:

2.1 Short haul domestic air travel from Toronto (Quebec City-Windsor corridor) is significant.

A far superior alternative to an airport at Pickering exists in Canada’s railways, since over 10% of airline travel to/from the Pearson and Billy Bishop airports in the Toronto area are to close destinations. Those destinations should be served by higher-speed, electrified rail in the Quebec City-Windsor corridor.

A significant portion of short-haul air travel in the Quebec City-Windsor corridor centers in Toronto’s Pearson and Billy Bishop airports. In 1999, Statistics Canada produced a report on air travel to/from Pearson within that corridor: *Air Carrier Traffic at Canadian Airports, cat. no. 51-203-XWE, 1999* (Please see below).

Air Traffic Volumes by City-Pair – Thousands of passengers. Statistics Canada, 1999.

Montreal – Toronto 1261.4
 Ottawa – Toronto 725.9
 Quebec – Toronto 115.2
 Toronto – Windsor 113.5
 Montreal – Quebec 49.9
 London – Toronto 42.4
 London – Ottawa 38.9
 London – Montreal 35.3
 Ottawa – Quebec 29.1
 Montreal – Windsor 21.4
 Ottawa – Windsor 17.5
 Montreal – Ottawa 16.3
 Hamilton (partners n/a) – 48,287
 Total - 2,515,087 , of which 90% involves Toronto

Toronto-Ottawa-Montreal Triangle Air Travel

Updated data from Statistics Canada are not available. Nevertheless, the figures below are higher today given the addition in 2006 of service by Porter Airlines from the Billy Bishop Toronto Island Airport. This second table was supplied by a member of the Toronto Board of Trade.

Source: Member, Toronto Board of Trade.

Segment	Two-Way Travel		Year-over-year % change
	July, 2009-June, 2010	July, 2010-June, 2011	
Toronto (Pearson)-Ottawa	1,164,600	1,166,300	+ 0.15
Toronto (Island)-Ottawa	428,900	537,000	+ 25.20
Toronto-Ottawa Total	1,593,500	1,703,300	+6.89
Toronto (Pearson)-Montreal	1,799,000	1,824,500	+1.42
Toronto (Island)-Montreal	472,700	630,500	+33.38
Toronto-Montreal Total	2,271,700	2,455,000	+8.07
Montreal-Ottawa Total	266,800	261,300	-2.06
Total Travel	4,132,000	4,419,600	+7.00

In total, there are almost 4 million air trips a year between Toronto and Ottawa or Montreal, and likely over 4.5 million trips in the corridor.

2.2 The rail alternative for Quebec City-Windsor corridor travel is practical and cost-effective

Rail would serve this large travel population more efficiently with its origins and destinations from downtown to downtown. A shining example of this is the Eurostar train that takes passengers from downtown London to downtown Paris in 2.15 hours, and to Brussels in 1.15 hours. Both routes are faster than trips to these destinations by air. Eurostar's phenomenal popularity increased its market share as much as 80% and has forced British Airways and Air France to reduce their service in those corridors. A commitment by the federal government to upgrade VIA service in the Quebec City-Windsor corridor, *if done right*, would reduce the need for a new airport. It would also drive economic growth in the region.

A realistic and appropriate federal transportation policy should manage demand for air travel by offering the sustainable alternative of higher (125mph (201km/h)) or high-speed (125-220mph (201-354km/h)), electric rail in several corridors in Canada that can support this mode. Rail is more environmentally sustainable and more economically efficient than air travel for short and medium distances based on current technologies. Such distances are easily included within the Quebec City-Windsor corridor, 710mi/1150km. Bringing VIA service in the corridor up to international standards is a more economical prescription for meeting south-central Ontario's transportation needs.

Research provided by TAO director, Dr. Avrum Regenstreif,² (attached) calculated the cost of electrified, higher speed double-tracking, including related infrastructure between Montreal and Toronto, at between \$6.339B (low estimate) to \$15.90B (high estimate). In comparison, a new airport complex at Pickering could cost two to three times as much as Pearson's Terminal One, which in today's dollars would come to approximately \$10B.

The need to transfer short-haul passenger travel from air to rail is emphasized by Patterson and Woodmansey in Energy Sources, V. 15, 1993, "*Potential environmental impacts related to proposed runway expansion at Toronto's International Airport.*"

"Transfer of the short-haul passenger load to alternative modes of transportation could potentially free enough runway capacity at the airport so that the increased demand for air travel for long-haul flights could be met without runway expansion and without increasing the total number of aircraft movements through LBPIA [Pearson Airport]"

2.3 The prediction that Pearson will reach capacity (55M passengers) in 13 to 23 years is doubtful.

Transport Action Ontario questions the claim in the *Needs Assessment Study – Pickering Lands* (hereafter referred to as *The Study*) that the Pickering airport will be needed sometime between 2027 and 2037. The GTAA's 2012 Annual Report makes many references to "becoming more competitive." Furthermore, passenger traffic has not increased substantially. According to the GTAA's 2012 Annual Report:

Passengers:
2003: 24,739,312
2010: 31,937,805

² This analysis was provided by TAO director Dr. Avrum Regenstreif, Ph.D, Uran Planning, and B. Architecture. Among many positions, Dr. Regenstreif sat on a Tri-Level Airport Planning Advisory Committee for the Winnipeg Area Airport Systems Study, 1973-75. The full cost estimate for an electrified railway in the corridor is attached.

The Study's claim of the limited future capacity at Pearson is also weak for the following reasons:

- The private Buttonville airport in York Region served general aviation³ in the region. The GTAA cancelled its subsidy to Buttonville in April 2009 citing a lack of need for extra capacity.
- The Airport Management Council of Ontario that represents Ontario's smaller airports believes there is sufficient excess capacity within its group to absorb displaced Buttonville traffic.
- Contrary to its own claimed need, Transport Canada's scenario in the executive summary of *The Study* could remove corporate jets/general aviation traffic from Toronto Pearson, thus raising its passenger capacity to 60M.

Pearson Airport also has sufficient capacity for its significant air cargo traffic. Its air cargo rate has decreased from 6.7 % in 1993 to 5.3% in 2003, according to *The Study*. It calculated the utility rate at Pearson at 40% and at Hamilton, the second air cargo airport in the region, at 60%. It stated categorically: "Pearson's existing cargo facilities exceeds current demand by a considerable margin, therefore [there are] no plans to expand, but GTAA's recent purchases of the former Boeing lands north of one of the air cargo terminals provide opportunities for additional space if needed."

2.4 As the price of jet fuel increases, the cost of air travel will continue to increase.

According to figures made available by the U.S. Department of Transportation, "*Annual Crude Oil and Jet Fuel Prices*," a barrel (42 U.S. gallons) of jet fuel has increased from \$72.03 in 2005, to \$128.35 in 2012. The fact that rail gives more bang for the oil buck is widely known, but bears repeating. A 150-seat airplane has a fuel consumption rate of 44.7 passenger-miles per gallon. By comparison, a train of five coaches with at least 300 passenger seats has a fuel consumption rate of 292 passenger-miles per gallon (Transport 2000 statistics). Another statistic that also takes into account average occupancy, *knowledgeproblem.com*, cites person-miles per gallon at 71.6 for passenger train vs 42.6 for airplane. There is no need to build infrastructure based on an increasingly difficult to access and costly resource when the sustainable alternative is obvious. The rest of the world gets it and is building more rail – this year, high-speed trains will be operating in nearly 24 countries, while Canada, shockingly out of step, starves and shrinks its passenger rail system.

2.5 Air travel is a heavy emitter of greenhouse gases.

The respected International Panel on Climate Change, in its latest report on September 30, 2013, verified that human activity has produced the climate changes we experience today. Furthermore, gases emitted in the upper atmosphere have a greater warming effect than gases emitted at lower altitudes. Although aircraft builders are making major investments in more efficient vehicles, fleets are not changed frequently and the increased efficiency will therefore not produce a major improvement. According to the International Civil Aviation Organization, global international aviation emissions are projected to be around 70% higher by 2020 compared against 2005, even if fuel efficiency improves by 2% per year. Air travel is the second greatest producer of transportation greenhouse gas emissions after the private car.

Canada has failed in its international commitment to reduce greenhouse gases by 17 per cent from 2005 levels by 2020. Building a new airport rather than increasing and improving rail service will push that goal further out of reach.

Aircraft emissions are becoming more problematic to the industry as responsible organizations address the issue. The European Commission now includes commercial airlines in its Emissions Trading System within and between EU countries. In October 2013, the International Civil Aviation Organization

³ Transport Canada defines general aviation as private, commercial, government and military traffic.

Assembly agreed to develop a global, market-based mechanism to address international aviation emissions by 2016, and to apply it by 2020.

Adding to airport infrastructure in an era of undeniable climate change is inadvisable when a sustainable alternative can be provided.

2.6 Ground transportation to the proposed Pickering Airport will increase urban sprawl.

The *Pickering Airport Draft Plan Report*, 2005, devotes almost four pages to a list of highway expansion projects required to serve the facility. Increased highway space will lead inevitably to urban sprawl and its offspring, traffic congestion and air and water pollution. Urban sprawl is universally recognized as a scourge in North America. Building this airport will prove a setback in the battle to limit growth of sprawl in southern Ontario. If a facility requires newly built roads to serve it, and those roads are sprawl producers and polluters, then alternatives to the facility should be given priority.

2.7 Construction of an airport at Pickering will take fertile agricultural land out of production.

The majority of land in the area is Class 1 or 2 agricultural. Taking this land out of production accelerates the already destructive decline of land available for cultivation in Canada. Ontario, which has more than one-half of Canada's Class 1 agricultural land, has allowed more than eleven percent to be gobbled up by urbanization. A recent Statistics Canada report states:

“This has forced farmers to bring lower quality land under cultivation to meet the growing demand for agricultural products. Lower-quality land is often unsuitable for stable, long-term agricultural production. . . Production on poorer quality land may also be more environmentally harmful, as it is often susceptible to soil damage resulting in erosion, and requires greater use of fertilizers and pesticides.”

(Statistics Canada. *Rural and Small Town Canada Analysis Bulletin*, vol. 6, No. 1, Jan. 2005. The Loss of Dependable Agricultural Land in Canada)

Furthermore, as agricultural land becomes urban land, agricultural products have to be shipped from further afield, thus adding to shipping traffic and pollution.

2.8 An airport at Pickering will produce jobs, but at a price.

Admittedly, airports generate jobs both directly and indirectly. However, the view that jobs must always trump environmental concerns is shortsighted and dangerous since it makes no provision for experimentation and innovation. Infrastructure that is environmentally benign can also produce significant numbers of jobs if given the opportunity and support.

2.9 “Demand” for air travel is an induced demand

Transport Action Ontario questions the “demand” or “needs” explanation for government choices of infrastructure. Travelers do not “need” a particular mode of transportation; what they need is the best way to get from point A to point B. The infrastructure offered is what they have to use when not offered an alternative. The belief that certain modes of transportation are more popular than others and therefore should be supplied is seriously flawed. “Build it and they will come” is the explanation for this phenomenon. In other words, provide air travel and neglect alternative forms of transportation, and the public will need to fly. Build an efficient rail network and travelers will ride.

3. Conclusion

Existing airports should continue to serve, and to concentrate on, long-haul continental and inter-continental travel. Since air transport is a heavy polluter and land consumer, transportation investment should concentrate on more sustainable modes of travel. Canada's federal government should support and promote rail as the mode of choice for short and medium distance passenger transportation and for a larger portion of freight transport.

4. Distribution List

Hon. Lisa Raitt, MP
Hon. Glen Murray, MPP
Hon. Jim Flaherty, MP
Chris Alexander, MP
Joe Dickson, MPP
Corneliu Chesu, MP
Hon. John McCallum, MP
Paul Calandra, MP
Michael Chan, MPP

Helena Jaczek, MPP
Frank Klees, MPP
Olivia Chow, MP
David McGuinty, MP
Green Party of Ontario
Green Party of Canada
Land over Landings

RAILWAY ELECTRIFICATION ESTIMATE : Montreal – Toronto

Dr. Avrum Regenstreif

Railway Mile Distance: Approximately 300 miles Double Track.

The following infrastructure estimates include:

(1) New Right of Ways (ROWs)

It is assumed that an additional two tracks will be added to the existing double track CN line in place between this prime city pair to respond to rapidly expanding growth in passenger demand along the “Lakeshore corridor” if higher speed rail is introduced. The current cost for double tracking two new higher speed tracks, located next to or near the two existing tracks is estimated at \$ 2.5 M / track mile. Therefore, new double track line will be \$5M/ track mile. Then, 300 miles of new double track line will cost at least \$1.5B, (low range) exclusive of high speed switches, new sidings in existing rail stations etc. and \$7M /double track mile, or \$2.1 B (including allowance for selected high speed switches and key sidings) This will also include provision for new bridges or viaducts at Trenton, Napanee, and Shannonville, and a possible new viaduct, to skirt some low lying areas, and private rural properties between Cornwall (i.e. Summerstown) and Coteau Junction.

(2) Catenary and related support structures:

The low range for new catenary wiring and related structures is \$240,000 /track mile, with a high range of \$900,000 for four tracks / mile. Then 300 double track miles will cost \$144 M, and a four track corridor at least \$288M.

(3) Low Clearances:

Low clearances is an estimate category which identifies signal stanchions, overhead bridges, and other existing structures already in place along the rail line which must be raised or widened either in height or width to ensure that electrified rail lines will be well clear of such obstructions so that electrified MSR, and eventually HSR trains will be able to clear. *This estimate category does not include grade separation of new or existing railways and highways, which is dealt with under a separate category, [see Item (8)].* For low clearances, \$1.6 B is the low range estimate for this total figure and \$4B is the high range figure.

(4) Substations:

On electrified lines, electricity is fed into or out of the catenaries at electrical substations, approximately 40 miles apart, or closer, resulting in at least 80 stations to cover the 300 + mile distance. The low range estimate is \$400M and the high range is \$800 M.

(5) Power Transmission Lines:

This category is assumed to be carrying smaller levels of power demand from many smaller sustainable electricity sources than was anticipated when this analysis was first undertaken in 1999. The low range is estimated to be \$160M, and the high range \$320M

(6) Signal Modifications (including In – cab signaling and system controls).

The range of figures indicated in this category, do not include in-cab controls within locomotives themselves, since these are considered to be a component of rolling stock (e.g. internal locomotive equipment). Low range is \$72M., and high range is estimated to be \$160M

(7) Communications:

Since this analysis was first undertaken in 1999, a virtual revolution in low cost communication, including a variety of new, portable systems has occurred, including further development of the technology of fibre optics. Consequently, these figures appear relatively low and may be too low. Further analysis may be required, to develop more precise figures, for this component. For the present, the numbers indicated for high and low ranges should be broad enough to suffice. Low range \$3M and high range is \$14M

(8) Grade Separations:

It is estimated that at least 350 level crossings exist between Toronto and Montreal. Although some might be closed and roads redirected, for purposes of this analysis, it is assumed that new, complete grade separations will be established at this number of crossings. At a current estimated figure of \$10M - \$30M / overpass or underpass, (with clearance adequate for 2 - 4 tracks), then low range is 350 x \$10M = \$3.5B, and high range is \$10.50 B.

TABLE 1: COST OF COMPONENTS FOR ELECTRIFICATION OF A 300 + MILE RAIL LINE : Montreal –Toronto

	LOW RANGE	HIGH RANGE
(1) NEW RIGHT OF WAYS	\$ 1.5 B	\$ 2.1 B
(2) CATENARY	144 M	288 M
(3) CLEARANCES	600 M	1.5B
(4) SUB-STATIONS	400 M	800 M
(5) TRANSMISSION LINES	160 M	320 M
(6) SIGNAL MODIFICATIONS	27 M	60 M
(7) COMMUNICATIONS	8 M	32 M
(8) GRADE SEPARATIONS	\$3.5 B	\$10.50 B

TOTAL	\$6.339 B	\$15.90 B

The comparative cost of a new air terminal at Lester Pearson International Airport, TERMINAL 1, including: Terminal One’s associated parking garage system, and a new “vermicelli job” on the connecting roads to and from Hwys 401, 409, 427, 27, and Airport road, including connection to and from existing airport access roads serving Terminal 3. These connections were already extant and were unchanged, after 2004 and current spending on rail transit options was never included until the past few years. Therefore, the bill to the public for the new Terminal 1and its associated paraphernalia was at least \$5.5 B, (2004 dollars). This is roughly equivalent to \$10 B current (2013) dollars.

There is no reason to believe that even a modest strategy for a new airport complex, at Pickering, would not cost at least twice – three times as much as Pearson’s Terminal 1, given the wide range of environmental protection required to overcome Pickering’s serious intrinsic site problems. Also required at North Pickering will be: new runways, taxi ways, parking aprons, aircraft defrosting sites, hangars, control tower(s), ground control and security infrastructure and related buildings, cargo terminal(s), at least one power generating station, airside and groundside lighting, security fencing, independent airport emergency fire fighting facilities building (s). Most important, all or most of the above investments which were not included in the Terminal 1 project, will be required at North Pickering, whether the airport is intended and /or designed for GA, Commercial, Commercial Chartered aircraft, Aircraft Servicing and / or Manufacturing, or for Military, Police and / or other government services.

The comparison between more investment in another airport for the GTHA vs new higher speed rail infrastructure linking Montreal and Toronto is very clear. If there are sufficient funds to finance a new GTHA airport, for which the need is highly dubious, then there must first be sufficient funds to finance new higher speed intercity railway infrastructure. This has already been shown to be desperately needed, and can more efficiently, effectively and affordably serve a far larger population (e.g. 50% of Canada’s population and a major component of its economic base currently located in southern, and eastern Ontario, and Quebec), as well as better serving transportation needs of eastern Canada.

Prepared by Avrum Regenstreif, Ph.D., Chair, HSR Committee, TAO.