

Cleveland-London-Toronto *high-speed ferry-rail link*



2015



Cleveland-London-Toronto high-speed ferry-rail

- Overview of concept
- History
- Justification
- Concepts
- Next steps



Cleveland-London-Toronto ferry-rail

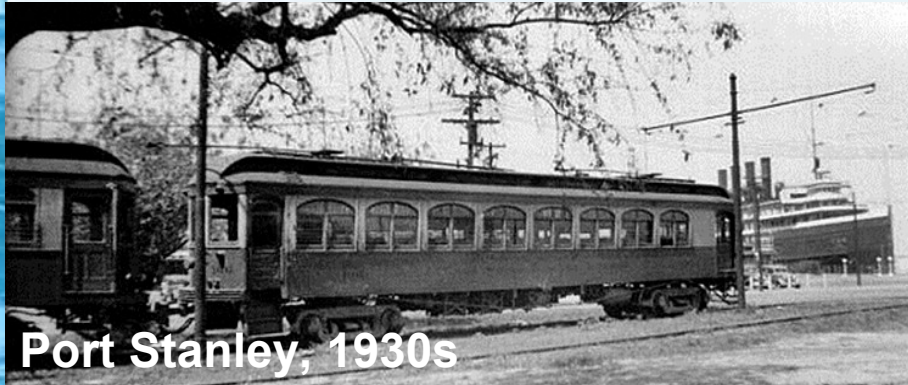
Overview of Concept

- Ohio & Ontario are top trade partners
- Existing travel is time-consuming, expensive
- Opportunity: Ontario's rail revolution
- Opportunity: new ferries avg 30-40 mph
- Ferry/rail: Cleveland-Toronto 3½- to 5-hour trip
- Round-trip fares of \$160-\$200 (1/3 of air fares)



Cleveland-London-Toronto ferry-rail

History



Port Stanley, 1930s

Make Your Trip More Enjoyable by a Refreshing Night on Lake Erie
(Your rail ticket is good on the boats)

Thousands of east and north bound travelers say they wouldn't have missed that cool, comfortable night on one of our fine steamers. A good bed in a clean stateroom, a long sound sleep and an appetizing breakfast in the morning!

Steamers "SEEANDBEE" — "CITY OF ERIE" — "CITY OF BUFFALO"

Daily, May 1st to November 15th

Leave Cleveland - 9:00 P.M. } Eastern Time } Leave Buffalo - 9:00 P.M.
Arrive Buffalo - 7:30 A.M. } Standard Time } Arrive Cleveland - 7:30 A.M.

Connections for Niagara Falls, Eastern and Canadian points. Ask your ticket agent or tourist agent for tickets via C & B Line. New Tourist Automobile Rate—\$10.00.

Send for free sectional puzzle chart of the Great Ship "Seeandbee" and 32-page booklet.

The Cleveland and Buffalo Transit Co.
Cleveland, Ohio

The Great Ship "Seeandbee"—Length, 500 feet; Breadth, 98 feet 6 inches.
Fare \$5.50



Cleveland, 1913



St. Thomas, 1955

Cleveland-London-Toronto ferry-rail

Today

- Digital revolution transforming how we live, travel
- Large urban investments in Toronto, Hamilton, Kitchener, London & Cleveland
- Economic opportunity through sustainability
- Low-mileage lifestyles
- Modern application of historic, resource-efficient assets like waterways & railways



Cleveland-London-Toronto ferry-rail

Justification – the economy

- Business and tourism travel between Ontario and Ohio is significant
- Ohio is Ontario's 4th-largest export state (2015)
- Ohio is 2nd-largest importer state to Ontario
- This is despite travel routes & services that are indirect, slow and expensive



Cleveland-London-Toronto ferry-rail

Justification – travel comparisons

Downtown Cleveland to/from Downtown Toronto – Fall 2015

MODE	RT COST	TRIP TIME	FREQUENCY	ETC.
Air Canada	\$566 fare + \$30	2½-3 hours	5 daily round-trip nonstops	\$30 for park/taxi/train, 1-hour flight + 90-120 mins to/at/from airport
Other airlines	\$316 fare + \$30	7½-8 hours	require transfers at LGA, ORD etc	\$30 for park/taxi/train, 6-hour flight + 90-120 mins to/at/from airport
Greyhound	\$66-\$136	7-11 hours	5 daily RTs	All Greyhound trips require change of buses at Buffalo
Driving	\$99-\$119	5 hours	Anytime, weather & traffic permitting	Fuel: \$64, tolls: \$14, 24-hr parking: \$25-\$45
Ferry-Rail (*proposed)	\$162-\$194*	4 hours*	3-4 daily RTs*	Adjusted Bar Harbor-Yarmouth ferry data + VIA Rail Canada data + LON-TOR HSR study



Cleveland-London-Toronto ferry-rail

Justification – calculating the ferry/rail trip...

- Bar Harbor-Yarmouth high-speed ferry charged \$69 one-way passenger fare + \$10 security fee
- That was in 2008 for 115-mile trip (car + trailer cost \$115 more added + \$15 fuel surcharge)
- Cleveland-Port Stanley ferry est. at \$57 one-way or \$114 RT (adjusted for 85-mile distance & inflation)
- VIA Rail London-Oshawa \$48-\$80 RT 45-day advanced booking (Fall 2015)
- **TOTAL: \$162-\$194 round trip**



Cleveland-London-Toronto ferry-rail

Justification – recent services & studies – 1

- Bar Harbor-Yarmouth high-speed ferry: 1998-2009
- Boardings averaged 100,000-150,000/yr until 2005
- Boardings fell to 85,000 in 2008 & 77,000 in 2009
- Required public subsidies 2007-09
- Ended in Great Recession, declining tourism
- 2012 ferry study: Portland better USA terminal
- Has better transport, access to USA population



Cleveland-London-Toronto ferry-rail

Justification – recent services & studies – 2

- Cleveland-Port Stanley ferry planned for years
- All plans assumed a large, slow ferry carrying mostly people/cars but also 25,000 trucks/year
- Port Stanley favors tourism, opposes trucks
- Big ship = major dredging of Port Stanley harbor
- US Harbor Maintenance Tax: 0.125% tariff on value of imported cargo & fares for passengers arriving into USA

Cleveland-London-Toronto ferry-rail

Justification – recent services & studies – 3

- Cleveland-Port Stanley passenger traffic estimated at 250,000 boardings per year
- 250,000/year based on 4-hr trip CLE-Port Stanley
- Catamaran: 2-hour crossing, 1 ship 3-4 trips/day
- Ironically, 250,000 passengers would fill 3-4 daily cat round trips



Cleveland-London-Toronto ferry-rail

Justification – recent services & studies – 4

- Catamarans now in shallow western Lake Erie
- Jet Express: 42+ mph, 300,000+ passengers/year
- Tourist-only, runs early-May to late-October
- Slower car/passenger ferry runs April-December



Cleveland-London-Toronto ferry-rail

Justification– 2 revolutions HSCs/Ontario rail

- **High-Speed Craft (HSC)** monohull catamarans revolutionized short water trips since 1990s
- Use is expanding rapidly throughout the world
- Cats need less dredging, <10-foot draught vs. 20+ feet for larger, traditional ferries
- Twice as fast as traditional ferries
- A 300-foot cat can carry hundreds of passengers and dozens of cars into shallow ports



Cleveland-London-Toronto ferry-rail

Justification– 2 revolutions HSCs/Ontario rail

- **Ontario rail revolution:** 40% pop. growth by 2041
- Moving Ontario Forward: \$29 billion over 10 yrs for infrastructure projects. Another \$21 billion in 25 yrs
- The Big Move: \$16 billion for transit in GTHA
- VIA Rail upgraded Windsor-Chatham to 100 mph
- VIA's SW Ontario rail service expansion by 2016
- Environmental planning underway for Windsor-London-Toronto high-speed rail



Cleveland-London-Toronto ferry-rail

CONCEPTS: Considering the alternatives...

- Port Stanley has port facilities but are in need of improvement & possibly dredging.
- Port Stanley facilities now owned by City of Elgin.
- London & Port Stanley Railroad comes to within walking distance of Kettle Creek dock.
- L&PS train station is maintained for a tourist RR
- L&PS is mostly intact, needs major upgrading
- Port Stanley is 23 miles from London and VIA's Windsor-Toronto line.



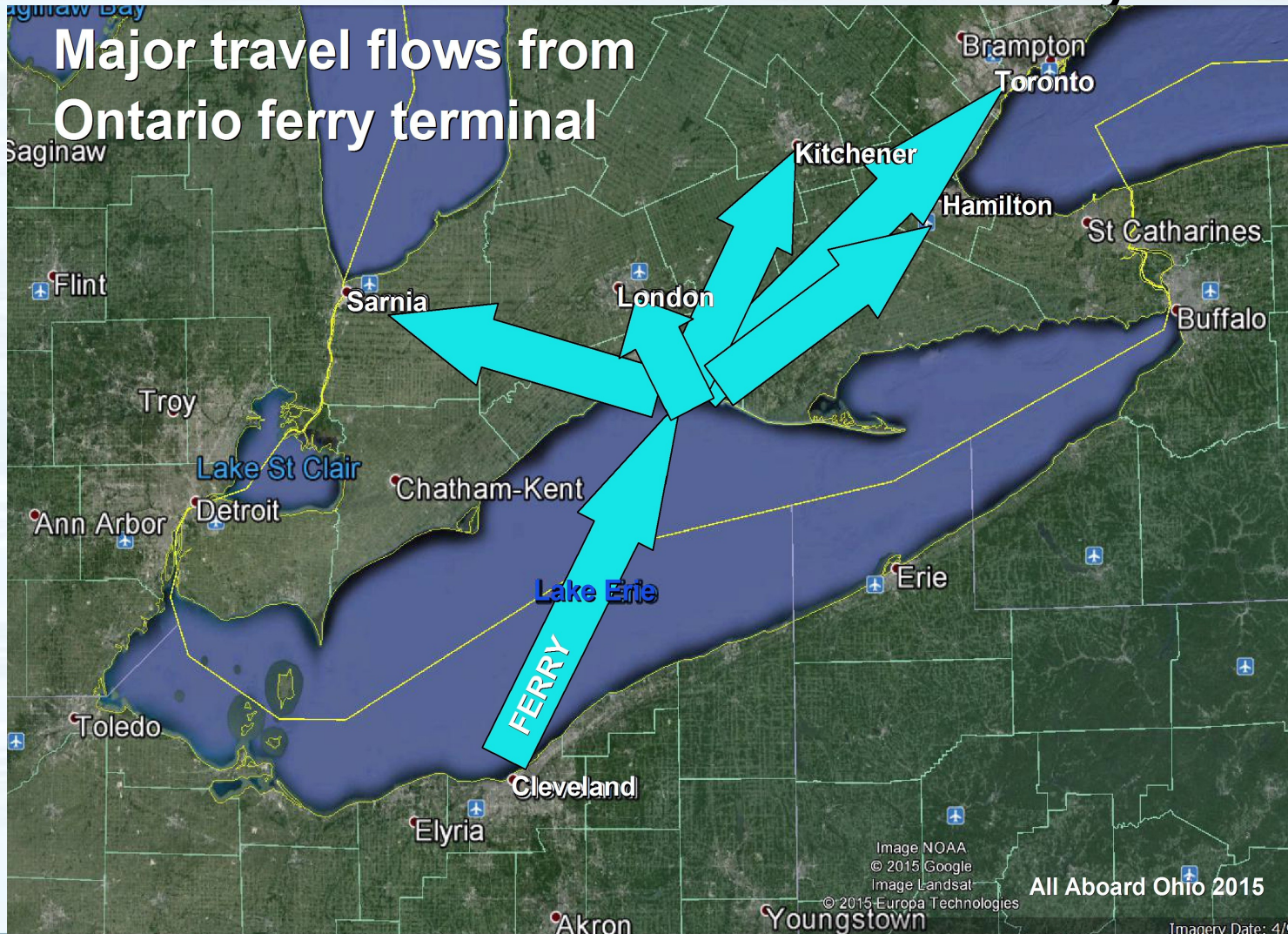
Cleveland-London-Toronto ferry-rail

Port Stanley appears to be the best option...

If Lake Erie can be crossed quickly (ie: 40+ mph), then a longer water route is less of a negative.



Cleveland-London-Toronto ferry-rail



Cleveland-London-Toronto ferry-rail

CONCEPTS – Continued:

Let's take a trip from Cleveland to Toronto by high-speed ferry and train via Port Stanley...



Cleveland-London-Toronto ferry-rail

DOWNTOWN CLEVELAND LAKEFRONT

Burke Lakefront Airport

North Coast Harbor

Lake Erie

Port of Cleveland

Downtown

Central Business District

Google earth

Cuyahoga River

Imagery © 2015 Google
© 2015 Google

Imagery Date: 6/14/2014 41°30'19.76" N 81°41'53.60" W elev 601 ft eye alt 8044 ft



Cleveland-London-Toronto ferry-rail

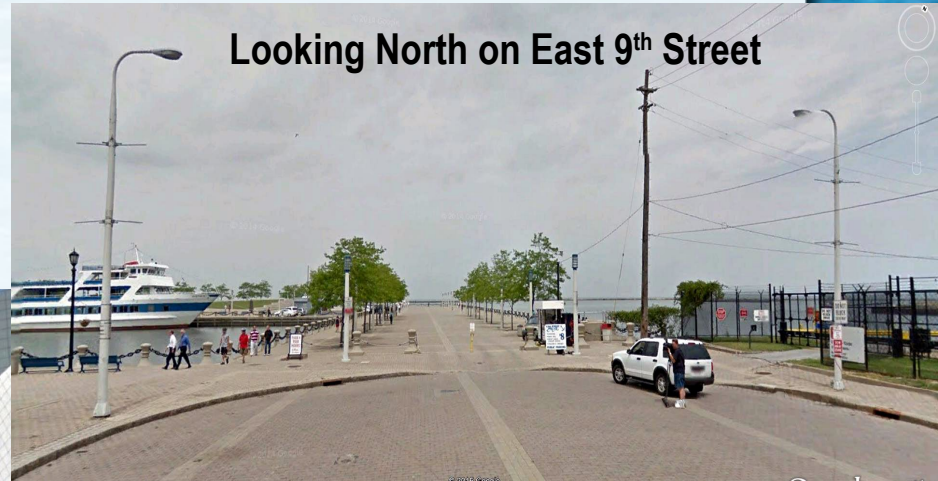
Cleveland North Coast Harbor area & access

RTA Rapid Transit System



Cleveland-London-Toronto ferry-rail

Cleveland North Coast Harbor area
Existing Conditions

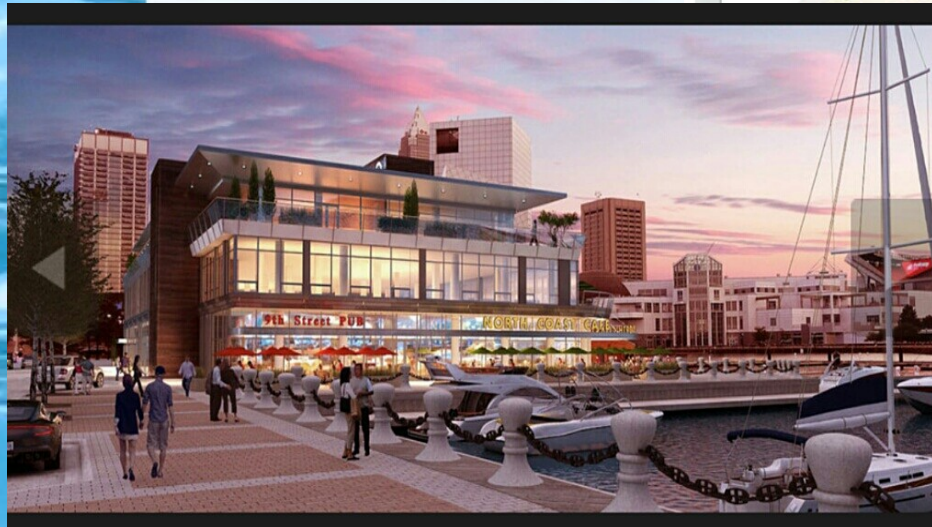
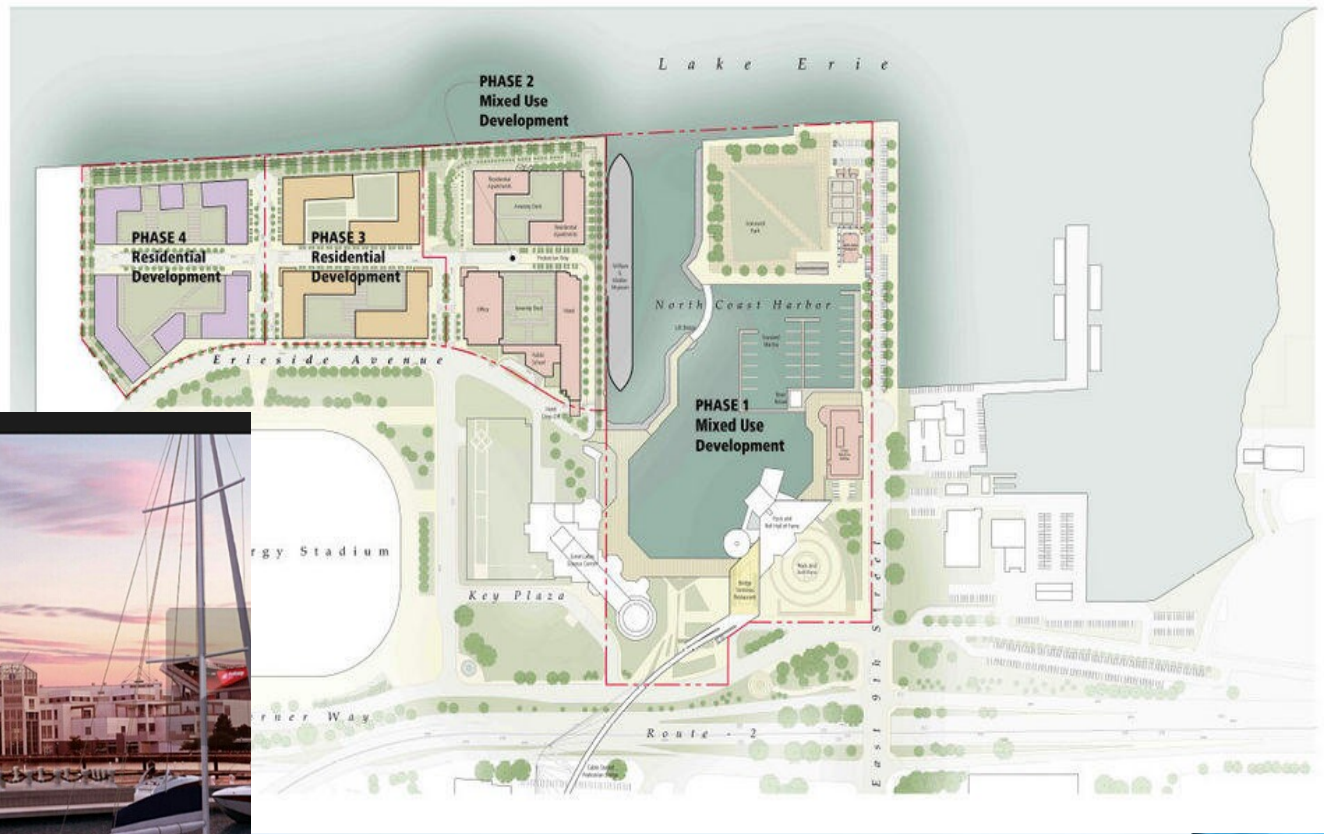


Looking South on East 9th Street



Cleveland-London-Toronto ferry-rail

Cleveland North Coast Harbor area Planned Development



Cleveland-London-Toronto ferry-rail

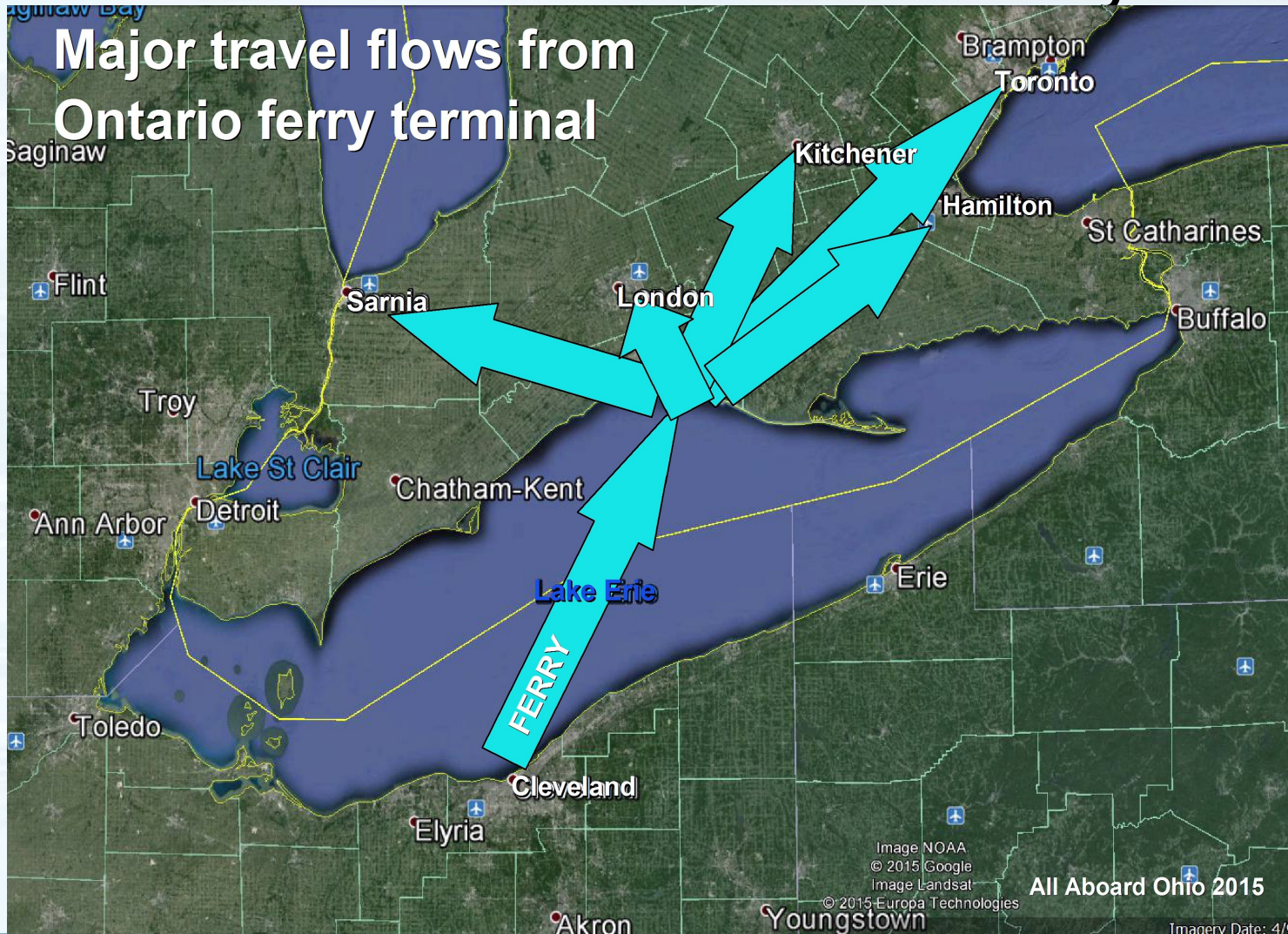


**Departure from the dock and
the vehicle loading platform**

Crossing the water at 45 mph!



Cleveland-London-Toronto ferry-rail



Cleveland-London-Toronto ferry-rail



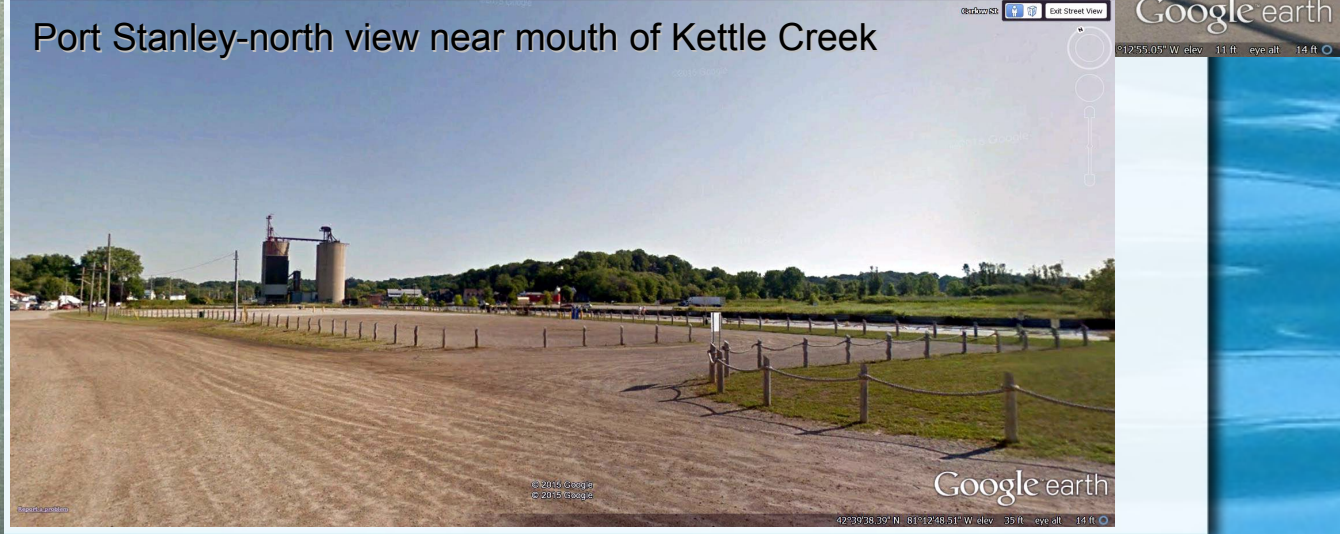
Port Stanley harbor (Kettle Creek mouth) aerial in 2005

Cleveland-London-Toronto ferry-rail

Port Stanley harbor in 2003 (looking south to Lake Erie)



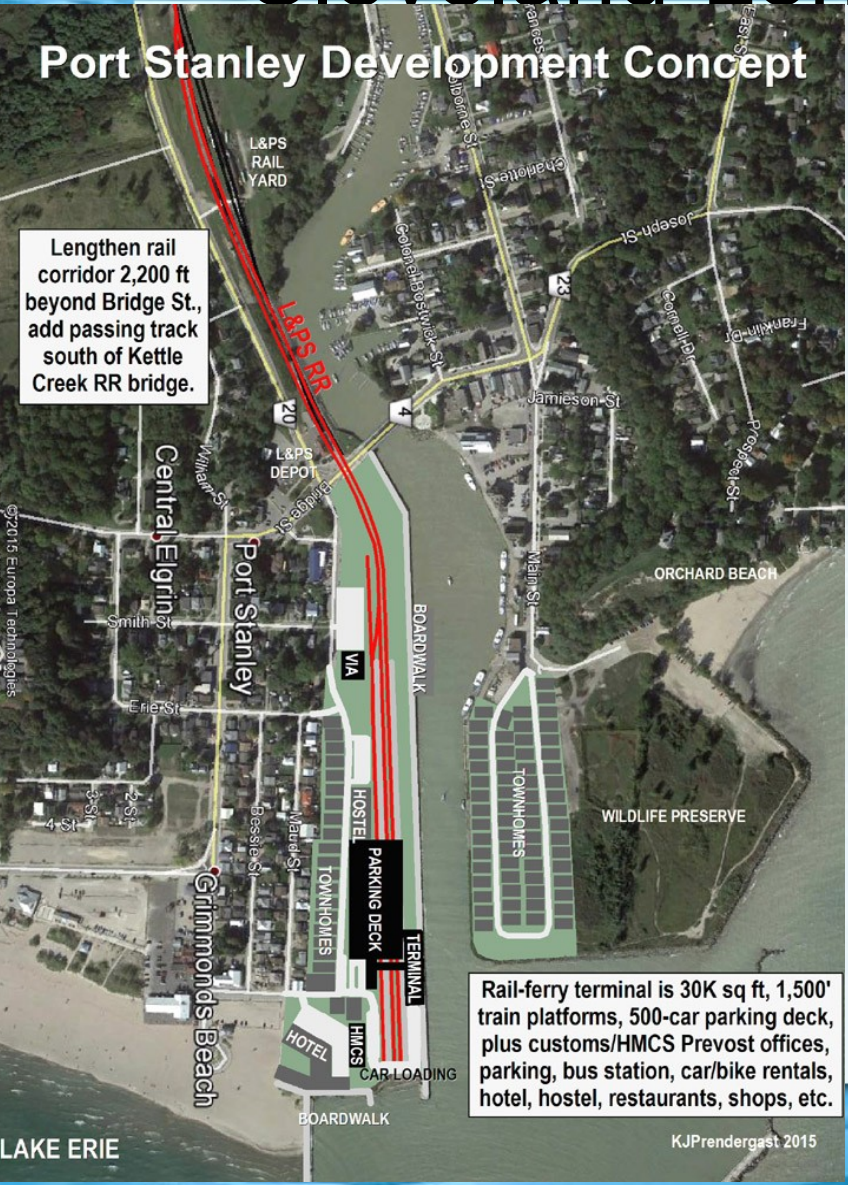
Cleveland-London-Toronto ferry-rail



Cleveland-London-Toronto ferry-rail

Port Stanley Development Concept

Lengthen rail corridor 2,200 ft beyond Bridge St., add passing track south of Kettle Creek RR bridge.



Rail-ferry terminal is 30k sq ft, 1,500' train platforms, 500-car parking deck, plus customs/HMCS Prevost offices, parking, bus station, car/bike rentals, hotel, hostel, restaurants, shops, etc.

Port Stanley harbor tomorrow?



Cleveland-London-Toronto ferry-rail

London & Port Stanley RR, key to CLE-TOR

- 23-mile-long rail line opened in 1856
- Electrified during London city ownership, 1914-1965
- Rail now divided at St. Thomas
- Canadian National owns north end (14 miles), Class 2 track
- Port Stanley Terminal Rail owns south end (9 miles), Class 1 track
- 2,300 feet of track removed north of downtown St. Thomas



Cleveland-London-Toronto ferry-rail

Restoring the rail – L&PS Corridor Project 1

- **2013:** St. Thomas depot built new, identical to 1914 depot
- \$1.7 million public-private partnership led by St. Thomas & Area Homebuilders Assoc.
- **2015:** \$600K to restore 2,300-ft gap in track, led by MP Preston & Mayor Jackson
- **2017:** restore passenger rail to London for “Canada 150”



Cleveland-London-Toronto ferry-rail

Restoring the rail – L&PS Corridor Project 2

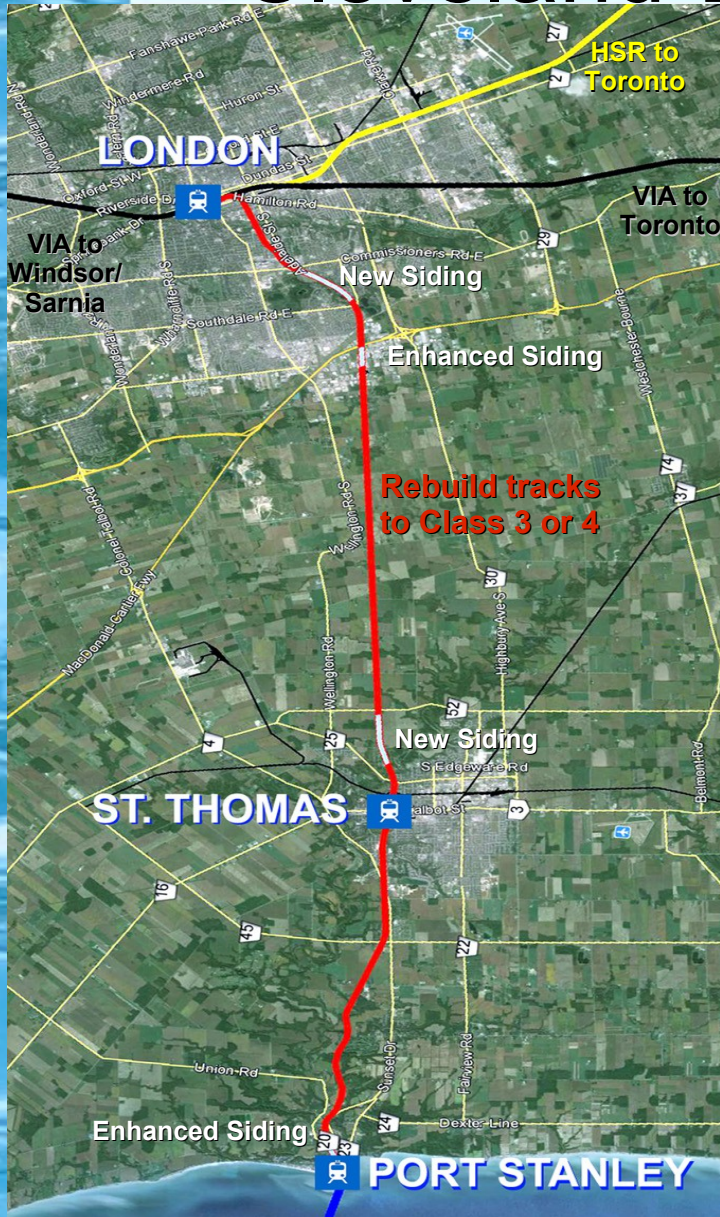


NORTH END
L&PS at Pond Mills Rd, London – June 2014



SOUTH END
L&PS at Karen St. by Elgin offices – July 2014

Cleveland-London-Toronto ferry-rail

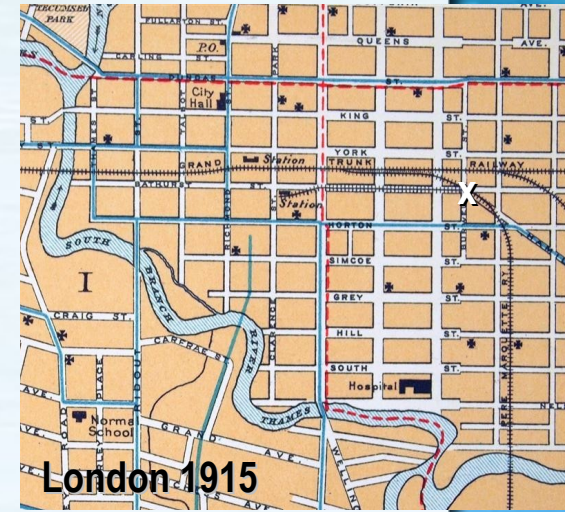


Taking the next steps...

- Consider single owner (public sector?) for all 23 miles
- St. Thomas & South: replace roadbed & tracks, add signals, crossing devices, bridge repairs
- St. Thomas & North: rebuild tracks with welded rail, lengthen crossing circuits, add signals
- Enhance Port Stanley station & train layover facilities, expand parking at St. Thomas

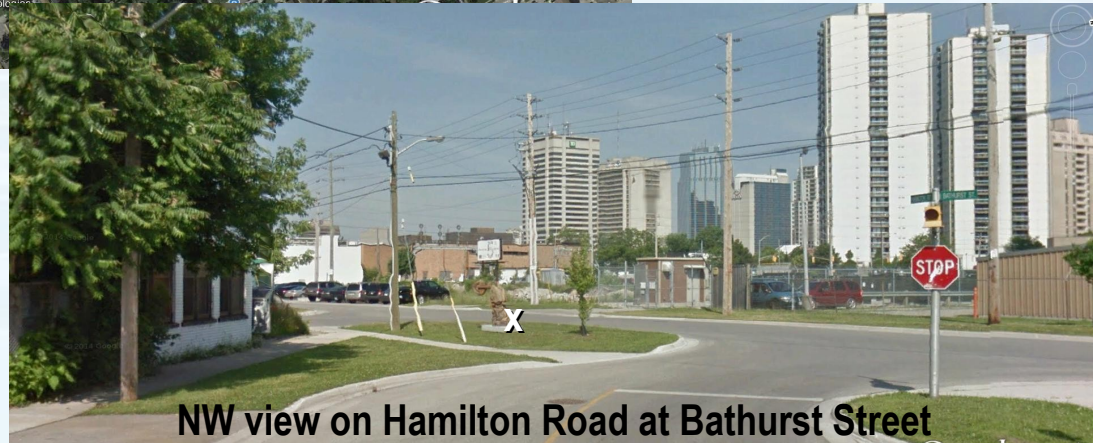


Cleveland-London-Toronto ferry-rail



X marks the same spot in graphics

**Taking the
next steps...
London access**



NW view on Hamilton Road at Bathurst Street

Cleveland-London-Toronto ferry-rail

London-Toronto – one of VIA's busiest routes

- **Via Burlington:** 4-5 daily RTs, 2¼ hours, 114 mi
- Toronto-Burlington (29 miles) to be electrified
- Burlington-London busy with CN freights
- **Via Kitchener:** 2 daily RTs, 3-1/3 hrs, 121 miles
- GO Transit bought Georgetown-Kitchener rail
- Portion of Kitchener route to be electrified
- Kitchener route serves Pearson via Etobicoke



Cleveland-London-Toronto ferry-rail

London-Toronto



VIA train EB from London



Maxim Skoropin 2015

Union-Pearson Express at Etobicoke



DMU-type proposed for new London-based trains

Cleveland-London-Toronto ferry-rail

Windsor-London-Toronto high-speed rail

- Environmental planning underway by Ontario Ministry of Transport
- New, direct right-of-way London-Kitchener + on/near GO Transit ROW Kitchener-Pearson-Toronto
- Alternative routing via Burlington to be evaluated
- Either routing would use GO's RER improvements
- Broad political support in Southern Ontario
- 125 mph options have 1.9 to 2.4 benefit:cost ratio
- 200 mph option has 3.1 benefit:cost ratio



Cleveland-London-Toronto ferry-rail

Greater Toronto & Hamilton Area – The Big Move



Cleveland-London-Toronto ferry-rail

Cleveland – Toronto high-speed ferry/train service

OPTIONS	MILES: water/existing rail/new rail ROW or HSR	CLEVELAND – TORONTO TOTAL TRAVEL TIME	CAPITAL COSTS Total & Portion attributable solely to Cleveland-Toronto*
1. Port Stanley using existing rail ROWs	85/138/0	5 hours, 10 minutes	\$187M/\$187M
2. Port Shrewsbury using mostly existing rail ROWs	56/188/5	5 hours, 20 minutes	\$442M/\$442M
3. Port Stanley with planned High-Speed Rail	85/23/114	4 hours, 10 minutes	\$2,919M/\$462M
4. Port Shrewsbury with planned High-Speed Rail	56/10/182	4 hours, 20 minutes	\$3,257M/\$500M
5. Port Shrewsbury with planned HSR & Shrews- bury-Thamesville HSR	56/0/187	4 hours, 5 minutes	\$3,735M/\$893M

Assumptions:

*Toronto-London-Windsor high-speed rail project to be decided regardless of Toronto-Cleveland project;
High-speed catamaran ship to be leased (otherwise add \$75 million purchase per ship);



Cleveland-London-Toronto ferry-rail

PROPOSED SERVICE SCHEDULES FOR DISCUSSION PURPOSES

Introduction – Phase ONE (60-95 mph top speed)

Cleveland ♦ Port Stanley ♦ London ♦ Aldershot ♦ Toronto

2	4,76	6	◀ Train Number ▶			1	3-73	5,75	
Daily	Daily	Daily	◀ Days of Operation ▶			Daily	Daily	Daily	
Read Down			Read Up						
6 25A	12 40P	5 50P	Dp	0	Cleveland, OH	Ar	11 05A	5 20P	10 20P
8 25A	2 40P	7 50P	Ar	85	Port Stanley, ON	Dp	9 05A	3 20P	8 20P
8 55A	3 10P	8 20P	Dp	0		Ar	8 35A	2 55P	7 40P
9 06A	3 21P	8 31P	Dp	9	St. Thomas, ON	Dp	8 24A	2 44P	7 29P
9 25A	3 40P	8 50P	Ar	24	London, ON	Dp	8 05A	2 25P	7 10P
9 30A	3 48P	8 55P	Dp			Ar	8 00A	2 16P	6 47P
		9 15P	Dp	43	Ingersoll, ON	Dp	7 40A		
		9 27P	Dp	52	Woodstock, ON	Dp	7 28A	1 44P	6 10P
10 25A	4 45P	9 54P	Dp	79	Brantford, ON	Dp	7 01A	1 17P	5 41P
10 55A	5 18P	10 23P	Dp	104	Aldershot, ON	Dp	6 31A	12 48P	5 11P
	5 32P	10 37P	Dp	117	Oakville, ON	Dp	6 17A	12 30P	
11 28A	5 57P	11 06P	Ar	138	Toronto, ON	Dp	5 53A	12 05P	4 35P

NOTE: assumes use of only one ship and one DMU train, with one backup train.

High-Speed Rail – Phase TWO (90-200 mph top speed)

Cleveland ♦ Port Stanley ♦ London ♦ Kitchener ♦ Aldershot-Hamilton ♦ Toronto

2	4	6	8	10	12	◀ Train Number ▶			1	3	5	7	9	11	
Daily	Daily	Daily	Daily	Daily	Daily	◀ Days of Operation ▶			Daily	Daily	Daily	Daily	Daily	Daily	
Read Down						Read Up									
6 50A	6 50A	12 00P	12 00P	5 00P	5 00P	Dp	0	Cleveland, OH	Ar	11 30A	11 30A	4 30P	4 30P	9 30P	9 30P
8 50A	8 50A	2 00P	2 00P	7 00P	7 00P	Ar	85	Port Stanley, ON	Dp	9 30A	9 30A	2 30P	2 30P	7 30P	7 30P
9 15A	9 20A	2 25P	2 30P	7 25P	7 30P	Dp	0		Ar	9 00A	9 05A	2 00P	2 05P	7 00P	7 25P
9 26A	9 31A	2 36P	2 41P	7 36P	7 41P	Dp	9	St. Thomas	Dp	8 49A	8 54A	1 49P	1 54P	6 49P	6 54P
9 37A	9 42A	2 47P	2 52P	7 47P	7 52P	Dp	20	Westminster-Rt401	Dp	8 38A	8 43A	1 38P	1 43P	6 38P	6 43P
	9 50A		3 00P		8 00P	Ar	24	London	Dp	8 30A		1 30P		6 30P	
	9 55A		3 05P		8 05P	Dp			Ar	8 25A		1 25P		6 25P	
10 05A		3 15P		8 15P		Dp	75	Kitchener-Waterloo	Dp		8 15A		1 15P		6 15P
10 15A		3 25P		8 25P		Dp	89	Guelph	Dp		8 05A		1 05P		6 05P
10 35A		3 45P		8 45P		Dp	124	Pearson Intl. Airport	Dp		7 45A		12 45P		5 45P
	10 15A		3 25P		8 25P	Dp	43	Ingersoll	Dp	8 05A		1 05P		6 05P	
	10 27A		3 37P		8 37P	Dp	52	Woodstock	Dp	7 53A		12 53P		5 53P	
	10 54A		4 04P		9 04P	Dp	79	Brantford	Dp	7 26A		12 26P		5 26P	
	11 25A		4 35P		9 35P	Dp	104	Aldershot-Hamilton	Dp	6 55A		11 55A		4 55P	
	11 39A		4 49P		9 49P	Dp	117	Oakville	Dp	6 41A		11 41A		4 41P	
10 50A	12 05P	4 00P	5 15P	8 00P	10 15P	Ar	138	Toronto, ON	Dp	6 15A	7 30A	11 15A	12 30P	4 15P	5 30P

NOTE: assumes use of only one ship and three DMU/EMU trains, with one backup train.

Cleveland-London-Toronto ferry-rail

Next Steps

- Restore 2,300-foot track gap in St. Thomas
- Upgrade rail infrastructure south of St. Thomas
- Public sector acquires London-Port Stanley rail corridor (city, province, crown corp, VIA?)
- Stakeholders sponsor feasibility study
- Introductory service using Jet Express or other fast ship, charter buses/tourist trains
- Test market, build operational knowledge

Cleveland-London-Toronto ferry-rail

That's our high-speed ferry/rail vision!



ALL ABOARD OHIO!

230 W. Huron #85.53
Cleveland, OH 44113
allaboardohio.org
1-844-464-7245

