George Massey Tunnel Replacement Project Review

By Douglas George Massey son of the late George Massey after whom the tunnel was named. August 24, 2015

Recognizing that the Provincial Government is determined to replace the George Massey Tunnel with a high level bridge in the Fraser River Delta, I would like to provide the public with a few facts that I researched from publications over the life span of the tunnel.

Why was a tunnel built instead of a bridge in the first place?

Schedule 2 to the Minutes of the General Purposes Committee meeting of Richmond City Council held on Monday, January 18, 2016.

They are as follows:

A tunnel was chosen because of the geology of the lower Fraser River delta. The lower Fraser River Delta comprised of Richmond, Sea Island, Delta, Queensborough, Pitt Meadows, South Surrey and Vancouver, started to form about 10,000 years ago, just after the Ice Age when the upper Fraser River Basin consisting of 234,000 km^2 (57,822,658 acres) or (90 square miles) was covered in ice. The sea was as far inland as Pitt Lake and extended 15-23 km (9-14 miles) westward into the Gulf of Georgia. When the ice melted off the upper Fraser basin, the materials of sand, gravel and clay flowed into the Gulf of Georgia at the rate of 3400 cm^3/S (120,069cubic feet per second) creating some 1000 km^2 (247,105 acres) of delta, with depth of anywhere from 500 m (1500 feet) to 1000 m (3000 feet), above bedrock.

Bogs and marshland were formed. The materials within them were rich in nutrients and energy, supporting the greatest salmon bearing river in the world and largest population of wintering wildfowl. Dikes were built to contain the materials, creating the most productive agricultural lands in Canada, doing this took up about 80 % of the Fraser delta, leaving only 20% to support the ecosystem of the Lower Fraser River. According to a Sediment Management in Lower Fraser River document of March 30, 2010, the natural flow of sediments down the Fraser River must be maintained in order to support that ecosystem and any premature removal of these materials whether it is sand or gravel must be continuously monitored to insure the survival of that ecosystem.

The George Massey Tunnel was designed and built by Christiani &Nielson Corporation from Denmark, the same people who built the Maas tunnel in Rotterdam, Netherlands 1937-1942. The difference was that the Maas tunnel had a tube for bicycles and pedestrians whereas our tunnel did not even though it was proposed in 1947.

George Massey Tunnel was completed in 1959 at a cost of $16,600,000 which is just over $35 million in today's dollars. The George Massey tunnel was built on 600 meters (1969 ft.) of sediment (sand) on top of bedrock as there was insufficient footing for a high level bridge.

Building the Maas River Tunnel proved to be more attractive financially than a bridge because the cost of building a bridge high enough would be prohibitive in order to avoid hindering the passage of ships to and from the largest port in Europe, Rotterdam. Port Metro Vancouver is calling for a 65 meter (213 feet) high bridge instead of the design proposed of 57 meters (187 feet).

In 2006 seismic upgrading of the George Massey Tunnel was completed at a cost of $20 million dollars. It consisted of making the 6 tunnel sections into one steel reinforced tube, attached to the ventilating towers on either side of the Fraser River. This would insure that the tunnel would not collapse if the underlying layer of sand was to liquefy. The pumping and emergency power systems were upgraded as well. In addition in 2009 an early warning system called "Shake Alarm" was installed on the George Massey Tunnel capable of detecting earthquakes with seconds to minutes of warning time, designed to close the gates at either end of the tunnel so that no one can enter if a dangerous quake was inbound, and those already inside can exit as normal before any shaking or movement begins.

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Further improvements costing another $17 million were scheduled for the George Massey Tunnel that would have improved the seismic protection around the approaches and the replacement of the ventilating equipment, but were cancelled when the government announced a new bridge crossing. A bridge that was to be 57 meters (187 feet) high, built on footings on top of 600 meters (1969 feet) of sand over bedrock, right near the present tunnel. One would have to ask how much safer this would be for a bridge, when studies showed that liquefaction would remove the sand from under the tunnel leaving it with no support despite being seismically upgraded.

The Alex Fraser Bridge is anchored on bedrock on one side of the Fraser River and supported on sand on the other side, leaving it also vulnerable to seismic liquefaction. In 1959 a Fraser Delta Geology: Hazard Assessment study by the provincial government stated that seismic upgrading was needed for all construction in the Fraser Delta, even the highways leading to our river crossings would be subject to seismic movement. To date there is no direct measurement of seismic vulnerability of the Fraser delta from strong motion recording.

The George Massey Tunnel was built below the Fraser River bottom and has at low water 33 feet (10m) over 1400 feet on either side of middle of channel and 42 feet (12.8 meters) over 700 feet over the middle of channel. At the time it was built it was deeper than all navigable river channels in the world.

Dredging of the Lower Fraser River to 11.5 meters with a minimum 2 hour window year round currently costs Port Metro Vancouver $15 million a year; they recoup only $10 million by selling the sand to cement makers and road builders. To deepen the Lower Fraser River to the 13.5 meters (44 feet) proposed by provincial government was estimated as a onetime cost of $175 million, which does not include the increased costs to maintain this depth. The provincial government did not mention the cost of removing the George Massey Tunnel or the lowering of any existing utility crossings. Nor was there any mention of the reinforcing of the dikes of Richmond and Delta.

In 2007, the provincial government (Pacific Gateway Strategy Action Plan) advocated the removal of the George Massey Tunnel and to deepen the Lower Fraser River channel to 13.5 meters (44 feet) so they can create a deep sea shipping channel and make the Lower Fraser River into a deep sea port facility right up to and beyond New Westminster. In order to recoup the costs of dredging to maintain the deeper channel, they proposed to reclaim marshland around the present islands in the Fraser and build more islands at the mouth of the Fraser for industrial purposes. All this despite the fact that Port metro Vancouver says that the George Massey Tunnel presently does not protrude above the Fraser River bed and the Steveston cut is more of a problem and the cost of removing the tunnel, lowering existing utilities and deepening the river would be extensive and potentially cost prohibitive.

In a report called "Sediment Management in Lower Fraser River on March 20, 2010" stated "Sediment removal that is not properly planned and/or executed can have immediate and serious adverse effects on fish population" and there should be a long term management programme initiated before additional sediment is removed by gravel or sand dredging.

The grade through the George Massey Tunnel is only 1:30 while the grade on the new bridge at 57 meters (187 feet) high is 5:0. The lower grade of a tunnel rather than a bridge would result in less fuel consumption for commuters. BC Hydro has recently announced that it is already seeking a new river crossing for the present transmission line that runs through the George Massey Tunnel and supplies power to Richmond, Delta and other parts of Greater Vancouver. This will result in greater expense to taxpayers.

The George Massey Tunnel built in 1959 has many years of life left regardless of what the Provincial government wants us to believe. In 2006 the provincial government spent $20 million for seismic upgrades, and installed a seismic "shakeproof" early warning seismic system, and planned to spend another $20 million for further upgrades to the ventilation and seismic upgrading around the approaches. In comparison, the Maas tunnel that was built in 1937-42 using the similar construction materials and methods of construction will be spending millions of dollars on a large scale renovation that will start in 2017 and conclude in 2019 to meet modern tunnel standards.

One would think that if the Dutch are willing to spend millions to renovate their 75 year old tunnel that the additional upgrades proposed the George Massey Tunnel being only 55years old, could still be upgraded and last for many more useful years and retain and maintain a close tie with the business and residential core of Richmond.

In conclusion, my point being that it would seem that building another modern tunnel near the present one, would be faster and safer to build. All parts could be built and purchased locally, have minimal disruption to the Fraser River and a greater resistance to seismic activity, than a high level bridge.
Further Richmond Council have stated that they would like to keep the tunnel and use it for another purpose, and they were opposed to any dredging to make the river deeper because of the ramifications it would have on the Fraser River's ecosystem that supports the fish and wildfowl of the Fraser River, agricultural land and create the need for extensive dike reconstruction.
It is ironic that this and previous Richmond Councils were also the strongest supporters when my father George Massey was advocating a new crossing to the extent they installed a monument on their side of the tunnel recognizing George Massey's achievement.

My reference sources are as follows:

1. Proposed Crossing of the Fraser River at Ladner, B.C. by Christiani & Nielsen Corporation, April 10, 1947.
2. Sustainable Dredging Program of the Lower Fraser River, Aug. 7, 2007.
3. Fraser River Dredging (Fraser Port Authority) Aug. 7, 2007#4. Fraser Delta Geology Hazard Assessment Nov. 1995
4. Sediment Management in Lower Fraser River, March 20, 2010
5. Sedimentary environments post glacial history of Fraser Delta, March 18, 1983
6. Journal of Commerce Sept 7, 2009 article British Columbia's Massey Tunnel was a cutting-edge endeavor.
7. Vancouver Sun article May 22, 2025 Port Metro wants Massey bridge higher to allow biggest LNG tankers: documents.
8. Article T&T North America march 2006: Seismic upgrade for Massey Tunnel
9. Delta Geology: Hazard Assessment November 1995 in the BC Professional Engineer.
10. Article George Massey Tunnel by Buckland & Taylor February 2015.
11. Letter from Port Metro Vancouver July 2015.
12. Article on Shakealarm June 2015 from Wikipedia.
13. Articles Maas tunnel; Rotterdam Wikipedia March 10, 2011
14. Sedimentary environments and postglacial history of the Fraser Delta and the lower Fraser Valley, March 18, 1983.
15. Article by Kenaidan Contracting Ltd. Re: Seismic upgrade George Massey Tunnel.
16. Massey Tunnel Project article April 16, 2013 by Richmond Garden City Conservation.
17. Sediment Management in Lower Fraser River March 30, 2010.
18. Articles on construction, maintenance and replacement George Massey Tunnel June 9, 2015 WIKI 2- Wikipedia Republished.
19. Vancouver Port Authority, Roberts Bank Container Expansion Coastal Geomorphology Study-Appendix C November 2004.
20. Article Business Vancouver April 21, 2014. Plan for deeper dredging in Fraser River could have high environmental price.
21. Request for proposal Fraser River annual maintenance dredging, August 18, 2010
22. Article Richmond Review Aug. 13, 2015 Province keeps Richmond in dark

The Vision to Build the George Massey Tunnel & the Road to its Removal: By: Douglas George Massey Jan 1. 2016. Page 1

The intention of this document is to show the intent from day one that any crossing of the Lower Fraser River, from the Gulf of Georgia to New Westminster, shall not and will not be granted approval unless it meets the approval of the present and future needs of Harbour Boards and industry, never mind the needs of the people, their environment, or the sustainability of the Lower Fraser River for fish and wildfowl.

The first person to meet that challenge was (Nehemiah) George Massey, who was born in Ireland in 1903 and had travelled the world on sailing ships before landing in Canada in 1923. Worked his way across Canada to Regina, Sask., where he established a business called Massey's Garage, married Doris Holtham and had two children, Doreen (Kushnir) and me Douglas George Massey. In 1936 he sold his business packed up the family and moved to Ladner. On the trip across the Ladner Ferry from Richmond he was known to say "what a wonderful place for a tunnel crossing". That same year he bought the original Ladner ferry landing property, at the foot of Delta St. on Chisholm St., and started his own business called Massey's Machine Shop and expanded from there.

(Nehemiah) George Massey continued to advocate for the replacement of the Ladner Ferry and one day John Guichon a local Councillor gave him a magazine from the Netherlands that described the Mass River Tunnel that had been built in the Netherlands, in1942, on similar topography of the Lower Fraser River. From there he proceeded to sell the idea of a tunnel to neighbouring municipalities and the Provincial government, until it was built and opened for traffic in 1959.

From the time the George Massey Tunnel was proposed by George Massey the government appointed New Westminster Harbour Board of 1913 (Renamed the Fraser River Harbour Commission in 1965) and their leaseholders with shipping facilities have opposed the idea of a tunnel, as they felt it would obstruct shipping and prevent them from expanding to handle larger an deeper ships. None of this happened, as the tunnel was built below the existing depth of the Fraser River and did not impede shipping or docking at facilities upriver from the tunnel.

Before and after the tunnel was built and In order for the Lower Fraser River to remain navigable for ships, dredging had to be maintained at 12.5m depth at low water with a 2 hour window in order for loaded ships to clear the river bed of the Fraser River at high tide: This, has led to dredging costs for 2014, of $15 million annually, of which only $10 million is recovered from the sale of sand. The remaining costs were charged as a dockage fee, to those with docking facilities on the Lower Fraser River by Port Metro Vancouver, who had taken over all local Harbour Commissions on the Lower Fraser River in 2008.

Port Metro Vancouver, Vice President Duncan Wilson, was quoted in a letter to the editor of Richmond Review on July of 2015, "The depth of the river is also a limitation. While the removal of the tunnel may create greater depth at that point in the river, the amount of dredging required on either side of the former tunnel would be extensive and potentially cost prohibitive." End quote.

The facts are: That In order for the proposed 14.5m depth to be achieved and maintained, the George Massey Tunnel would have to be removed along with GVWD 30" water main (costs yet to be determined) along with a one- time dredging cost of $200 million, and an estimated annual dredging costs of $30 million. There would be other costs, before any dredging to deepen the Lower Fraser River could take place:(1) The cost of a full hydrological study that would have to be undertaken, to determine what effects this would have on the sustainability of its ecosystem to support fish and wildlife. (2) The affects it would have on the existing dikes and the costs to rebuild them if necessary. (3) Determining if the deepening would result in the salinity advancing too far up river and affecting the ability of the farmers to use the water for irrigation.

Starting In March of 2005 an Action Plan to have the Lower Fraser dredged deeper, called the B.C. Ports Strategy, followed by Pacific Gateway Strategy Action Plan of April 2006 was initiated. This included, both senior level of government's Department of Transport, Municipalities, all the Port Authorities, Terminals, Railways, Trucking, that were involved in the movement of bulk goods. Under this plan they discussed the proposed Terminal 2 and the Fraser Surrey Docks. The Pacific Gateway Strategy Action Plan stated that unless "additional investments for capital dredging to increase the depth of the river to allow more of the larger ships to be accommodated" the feasibility of any expansions of terminals above the tunnel would be in jeopardy.

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They went on to say "Absolute constraints to increasing this channel depth exist because of the Massey Tunnel". The strategy to increase the depth of the Lower Fraser River would not be possible until a new crossing was built to replace the George Massey Tunnel.

Further on Feb.2, 2012, the B.C. Governments Department of Transportation met with Port Metro Vancouver, Surrey Fraser Docks, and Bridge Engineers, and Tran:Ex (A leading logistics company in the delivering of goods), to plan a strategy for the removal of the George Massey Tunnel and through Freedom of Information I was able to obtain copies of memos and e-mails to prove it.

On Nov. 19, 2012 they discussed the need to consider future new terminals. For example, liquid bulk tankers with large air draft requirements (e.g. LNG) and the expansion of the Auto Terminal, the VAFFC, Leigh and Richmond Properties, should also be considered.

Port Metro Vancouver was asked their opinion regarding what depth and heights they would require for larger ships to navigate to the industry and the docks above the tunnel, if a new crossing were to be built to replace the George Massey Tunnel.

In a memo on Dec. 4, 2012, they said " the depth should be 15.5m over 50 years and 18.5 over a 100 year old period", well beyond the initial proposal of 14.5 metres. In order to meet Port Metro's standards, it would require the removal of the George Massey Tunnel, the lowering of Greater Vancouver Water District 30" water main (costs yet to be determined) and one time dredging cost of $200 million and an annual dredging cost yet to be determined.

As far as a suggested bridge air draft (the clearance for a ship between the water line and the bridge deck), Port Metro requested it be at least 65 metres (213 feet) high rather than the proposed 57 metres (187 feet)proposed so as to allow for the biggest LNG tankers that could turn in the river.

This increased height to 65 (213 feet) requested by Port Metro Vancouver, would have no doubt, increase the $3.5 billion dollar cost of the bridge and affect its stability, requiring, adjustments to the design, as it only built on sand, and subject to seismic movement and liquefaction, and to reach bedrock, for more stability, they would have to go down some 600 metres (1969 feet) No mention as to who would pay for the extra costs. That is why a tunnel was chosen instead of a bridge in the first place. Was there ever a request for a bid on building another tunnel instead of bridge? If so, by whom and when?

A question needs to asked as to why would you encourage the establishment of an LNG storage terminal and shipping lane just upriver from the proposed new bridge crossing, when the Society of International Gas Tanker and Terminal Operators (SIGTTO) recommend avoiding construction of terminals on narrow inshore routes, near population centres and to stay clear of other marine traffic and to avoid the possibility of an explosion from an accident or a terrorist act at the LNG terminal or carriers during transportation under the bridge. (One LNG ship if exploded is equivalent to a small atomic bomb).

On March 21, 2013 a letter was written to the Executive Project Director of the George Massey Tunnel Replacement Project., by the Pacific Corridor Enterprise Council (the voice of cross-border business's in the Pacific Corridors since 1989, and another letter by Port Metro Vancouver on April 26, 2013 and on March 28, 2013 and April 26, 2013 all supporting the removal of the George Massey Tunnel and the deepening of the Fraser River.

Why are we still talking about the removal of the George Massey Tunnel and the dredging of the river when the costs to do so are extensive and prohibitive?

The only way the costs of deepening the Fraser River would not be a charge against present or future leaseholders with docking facilities on the Lower Fraser River, would be if Port metro Vancouver and their leaseholders were to lobby the Federal Government's Department of Transportation and Environment and ask them to absorb the excessive costs, by using taxpayer dollars to subsidize them. This is exactly what Fraser Surrey Docks a shipping terminal on the upper Fraser River and the Surrey Board of Trade did in 2014 when they went to Ottawa to try and get them provide the funding to offset the present and future costs of dredging. They were not successful at that time.

This would also have been a subsidy that would allow Surrey Fraser Docks, to load ships with U.S.A coal from Wyoming through the Fraser River Estuary.

As a result of this heavy lobbying from industry and with little or no input from Trans link of Greater Vancouver, or the public, Premier Christy Clark on September 21, 2013 announced the Replacement of the George Massey Tunnel and the construction of a high level bridge that would improve the access to industrial properties on the Lower Fraser River.

On Oct. 13, 2013 I wrote a letter to the George Massey Tunnel Replacement Project with some 14 questions to which were similar to the concerns and some of the questions that I have mentioned in this document.

Starting on Dec. 10, 2013 to Feb. 26, 2014 I received some e-mails, from different directors and consultants, representing the George Massey Tunnel Replacement Project, Port Metro Vancouver and the B.C. Government. They had discussed my questions in January of 2013 to determine how and who should answer my 14 questions (attached).

In one e-mail from Tran:Ex they said the George Massey Tunnel would be decommissioned and removed, restoring the riverbed to its original condition. It so happens, the river bed never changed once the tunnel was installed and was never an impediment for the shipping that was taking place at the time it was built.

The George Massey Tunnel would only be an impediment if and when Port Metro Vancouver and their Associates were given permission to dredge the Lower Fraser River deeper to 14.5 metres now and deeper in the future as the need arose, in their opinion.

All during these discussions there has been little to no discussion about the need for a new river crossing to alleviate the congestion for people and their vehicles. The, emphasis of all previous and present discussions has been on the moving of bulk cargo.

Any new crossing of the Lower Fraser River should be to improve the movement of people and not just to make it possible for the complete industrialization and dredging of the Lower Fraser River, at the expense of the river's ecosystem, that is so vital for its sustainability and ability to preserve its fish and wetlands that are so significant to the survival of the wildfowl and mankind.

Prepared by: Douglas George Massey, 875 Eden Crescent, Delta, B .C.

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Attachment of Questions submitted to The George Massey Tunnel Replacement Project on Oct. 13, 2013, by Douglas George Massey

To whom it May concern: the following are questions that need to be answered before they require the George Massey Tunnel to be removed, then the Fraser River to be dredged to accommodate the largest sea-going ships to dock at the Fraser Surrey Docks, or any Fraser River destination, are as follows:

(1)Why is there not a full Cost Benefit Analysis required, along with a full Environmental Impact Assessment, on the affects this would have on the Fraser River Estuary and its ability to remain a Wetland of International Significance for wildfowl and fish ?

(2)What are the projected costs of removing the George Massey Tunnel and who would be paying for it?

(3)What would the cost of deepening the Fraser River to the depth required for the deepest sea-going ships projects to dock on the Fraser above the George Massey Tunnel ?

(4)What are the annual dredging costs presently required to accommodate ships above the George Massey Tunnel?

(5)What did it cost to install the training walls that were part of the Trifurcation Project to direct as much of the flow of the Fraser River down the shipping lanes to reduce the amount of dredging required?

(6)What will be the additional costs to maintain the deeper channel proposed and who will pay for it?

(7)Will dredging still be subject to the Department of Fishery Dredging Guidelines, that prohibit, dredging, during salmon migration?

(8)What affects will this have on the wetland so important to the Pacific Flyway and the ecosystem so important to the migration of salmon?

(9)What affects will this have of the flow of water and silting of the other branches of the Fraser River?

(10)What affects will this have on the stability of the dikes protecting both Richmond and Delta and who will pay for any additional works required to reinforce them?

(11)How much more will it cost to elevate the proposed bridge to accommodate the larger ships proposed? And who will pay for this?

(12)Whatever the cost why are we using tax payers money to accommodate a private company like the Fraser Surrey Docks?

(13)Why are we proposing to deepen the Fraser River when Port Metro Vancouver is spending 2 billion dollars of tax-payers money to build the Roberts Bank Terminal 2 Container Project?

(14)Is the only reason for deepening the Fraser River to accommodate coal oil bearing ships to the Fraser Surrey Docks?

Answers to the above questions must be given with justification and proof that deepening the Fraser River is both economical and environmentally sound. Build a new bridge, but build it to accommodate people and rapid transit, not the Fraser Surrey Docks.

Douglas Massey

From: "Douglas Massey" <doumas@telus.net>
Date: January-13-16 12:32 PM
To: "Harold Steves" <haroldsteves@yahoo.com>; "Peter Vandervelden" <vandervelden.peter@gmail.com>; "Vicki Huntington" <bernadette.kudzin@leg.bc.ca>; "Otto Langer" <OttoLanger@telus.net>; "Carla Qualtrough" <carla@carlaq.ca>
Attach: Christiani & Nielsen Tunnel.docx
Subject: Fw: your email

Dear friend: This was in reply to an e-mail I sent on Jan. 12, 2016, copy attached. In reply, I corrected them on their reference to the District of Columbia. Though you find this of some interest.

From: Zijlstra, Rene
Sent: Wednesday, January 13, 2016 2:34 AM
To: doumas@telus.net
Cc: Wit, de, Hans
Subject: your email

Dear Mr. Massey,

Thanks for your email. We will respond to your request shortly.

We have visited the District of Columbia â€“ DOT in 2014 and made a presentation to them on immersed tunnels in general and the suitability of this technology for the George Massey tunnel replacement project in particular. At the time they seemed to be willing considering this alternative, while apparently we had sparked some ideas about benefits this technology could bring as compared to a bridge solution. We have not heard from the since and later found out about their apparent decision for a bridge solution.

I hope to be able to give you a more thorough response later this week.

Kind regards, RenÃ©

Ir. RenÃ© Zijlstra
Director Business Development
TEC Tunnel Engineering Consultants
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TEC Tunnel Engineering Consultants

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Douglas Massey

From: "Douglas Massey" <doumas@telus.net>
Date: January-12-16 10:25 AM
To: <info@TEC-tunnel.com>
Attach: George MasseyTunnel Replacement Aug 28.docx
Subject: George Massey Tunnel Brief

Dear Sir or Madame.
Sorry I forgot to attach the brief I referred to in my e-mail to you yesterday.
Hope you find it of some interest.
Best regards: Douglas George Massey, 875 Eden Crescent, Delta, B.C. Canada V4l1W6

Tunnel Engineering Consultants

P.O. Box 28013

3828 ZG Amerfoort

Jan 12, 2016

The Netherlands

Dear Sir or Madame:

My name is Douglas George Massey the son of the late George Massey after whom the George Massey Tunnel was named. A tunnel that was built across the Fraser River from Richmond to Delta, in 1959, fifty six years ago,

In case you did not know the Province of British Columbia is planning to build a $3.5 billion dollar ten lane high level bridge and remove the George Massey Tunnel, as they consider it nearing its life time and an obstacle to shipping. They want to remove the tunnel so they can deepen the Fraser River to accommodate deeper ships, despite the fact that they just spent $20 million dollars in seismic upgrading to the main tunnel in 2006 and planned a further seismic upgrade to the approaches costing a further $17 million dollars, which they abandoned when they suddenly announced they were going to build a bridge.

I am enclosing a brief that I assembled opposing the removal of the George Massey Tunnel that outlines the geological conditions and seismic liquefaction factors that resulted in the tunnel being built in the first place.

The Province of British Columbia did not price out the alternative costs of a modern tunnel across the Fraser River that would consider transit, motor vehicles pedestrians and cyclists that would meet the needs of the Greater Vancouver area for years to come.

Would you consider looking at whether the present George Massey Tunnel still has a life and whether another modern tunnel could be built in the same general area that would meet the future needs in the area?

Sincerely: Douglas George Massey, 875 Eden Crescent, Delta, B.C. Canada V4L1W6 Phone # (604) 943 2954