Planning for the Future

Phase 1: Understanding the Need
Consultation Discussion Guide

November | December 2012
Welcome

Thank you for participating in the Phase 1 consultation for the George Massey Tunnel Replacement. This Discussion Guide explores current and forecast conditions on the Highway 99 corridor around and through the George Massey Tunnel between Delta and Richmond and important factors to consider in planning for its replacement. The accompanying Feedback Form seeks your input on these considerations.

How to get involved and help plan your future:

- **Visit** masseytunnel.ca – read consultation materials and technical information
- **Attend** an open house – see schedule of events below
- **Attend** a stakeholder meeting – registration required; see details below
- **Read** this Discussion Guide and complete a Feedback Form (online or hard copy)
- **Sign up** to receive ongoing updates – see contact details below

Please submit your feedback by December 19, 2012.

**Public Open House Schedule***

<table>
<thead>
<tr>
<th>COMMUNITY</th>
<th>DATE</th>
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<tr>
<td>Delta</td>
<td>December 1, 2012 (Saturday)</td>
<td>10 a.m. – 1 p.m. Presentation at noon</td>
<td>Delta Town &amp; Country Inn 6005 Hwy 17</td>
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<tr>
<td>Richmond</td>
<td>December 4, 2012 (Tuesday)</td>
<td>6 p.m. – 9 p.m. Presentation at 8 p.m.</td>
<td>Signature Sandman Hotel 10251 St. Edwards Drive</td>
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<tr>
<td>Surrey/Cloverdale</td>
<td>December 6, 2012 (Thursday)</td>
<td>6 p.m. – 9 p.m. Presentation at 8 p.m.</td>
<td>Cloverdale Fairgrounds Alice McKay Building 6050A 176 Street</td>
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<tr>
<td>South Surrey</td>
<td>December 10, 2012 (Monday)</td>
<td>6 p.m. – 9 p.m. Presentation at 8 p.m.</td>
<td>Morgan Creek Golf Course 3500 Morgan Creek Way</td>
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<tr>
<td>Richmond</td>
<td>December 11, 2012 (Tuesday)</td>
<td>6 p.m. – 9 p.m. Presentation at 8 p.m.</td>
<td>Richmond Olympic Oval 6111 River Road</td>
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*Please visit masseytunnel.ca for the most current information.

**Stakeholder Meetings**

In addition to open houses and online consultation, stakeholder meetings are being held in November and December. These meetings provide an opportunity for more in-depth discussion with invited agencies and organizations representing local and regional business, environmental, transportation, agricultural and other interests. Due to space limitations, registration is required. For information, please contact us by phone or email.

**Web:** masseytunnel.ca
**Email:** masseytunnel@gov.bc.ca
**Phone:** 1-8-555-MASSEY (1-855-562-7739)
Planning for a Replacement

In response to growing concerns about the impact of congestion and recognizing the age and condition of the existing George Massey Tunnel, the B.C. Government announced in September 2012 that planning for a replacement would begin immediately. The Ministry of Transportation and Infrastructure is leading this process to determine the most appropriate solution to ensure Highway 99 continues to serve as a key component of the provincial transportation network.

Planning for a replacement will involve extensive technical and financial analysis, as well as consultation with Lower Mainland communities, businesses and other stakeholders.

Your Input is Important

Your input will help determine the collective interests that need to be considered in developing requirements and potential options for the George Massey Tunnel Replacement. The Ministry will consider input from this consultation in conjunction with existing provincial plans and priorities to develop a project scope and options for additional consultation and engagement.

Purpose of This Consultation

Phase 1: Understanding the Need discusses:

- Community and provincial interests, including peak period and non-peak period congestion reduction measures, economic development, goods movement, land use, agricultural and environmental protection, and community livability.
- Crossing design elements including the role of the Highway 99 corridor, access to designated growth areas, and the needs of all users, including car drivers, goods movers, transit riders, carpoolers, cyclists, and pedestrians.
- Benefits and opportunities of a new crossing.
- Connection to and support for local, regional, provincial and national growth and transportation plans.

Phase 2: Exploring the Options will discuss:

- Potential options based on input received in Phase 1 and additional technical analysis.

Your input will help determine the collective interests that need to be considered...
History

About the Tunnel

When the 629-metre-long George Massey Tunnel opened in 1959, it was considered an engineering marvel. Originally called the Deas Island Tunnel, it was the first project in North America to use immersed tube technology. Six concrete segments, each measuring 344 feet long and weighing 18,500 tons, were constructed on a dry dock on the shore of the Fraser River, then sealed and floated to the site where they were sunk into place, secured together and readied for use.

About 1,500 people worked on the original tunnel, which cost approximately $29 million to complete.

Queen Elizabeth opened the then state-of-the-art tunnel to overwhelming support. The tunnel was opened with a toll of 25 cents per car, which eventually increased to one dollar. Tolls were removed in 1964 when the majority of the tunnel’s construction costs had been repaid. George Massey himself paid the last toll.

Beginning in 1981, counterflow measures were introduced, using a reversible lane system, which continues to operate today, to increase traffic flow during peak traffic periods. Seismic upgrades were made in 2006, including installation of an advanced warning system.

Who Was George Massey?

The tunnel’s visionary, George Massey, immigrated to Canada from Ireland in the early 1930s. Mr. Massey’s vision for a tunnel began in 1936 on his first trip, by ferry, across the Fraser River to Ladner. For almost 20 years, Mr. Massey put his own time, energy and money into making an improved south Fraser crossing a reality.

Massey’s plans for the tunnel were inspired by the construction of the Maastunnel in Rotterdam, Netherlands. By 1956, with growing public support for a tunnel, Premier W.A.C. Bennett announced plans for its construction.

George Massey passed away in 1964, and in 1967 the Deas Island Tunnel was renamed in his honour to celebrate his decades of hard work and dedication in improving Metro Vancouver’s infrastructure.

How To Use This Guide

This Discussion Guide is designed to work in tandem with the Feedback Form, which includes questions related to each section of the Guide. Relevant Feedback Form questions are noted throughout the Guide. Consultation participants are encouraged to read each section of the Guide and then complete the same section of the Feedback Form before moving to the next section.

Your responses, combined with those of other participants, will help determine the importance of the range of community interests in designing a replacement for the George Massey Tunnel.
Travel Needs and Operating Conditions

**Significant Congestion**

The George Massey Tunnel is a key component of the regional and provincial transportation system. It serves thousands of daily commuters destined for some of the Lower Mainland’s busiest employment centres, including Richmond and Vancouver, as well as other parts of the region. The tunnel is also part of the primary north-south corridor linking Metro Vancouver to the Peace Arch border crossing and the Tsawwassen ferry terminal. It is an integral link between South of Fraser communities and the Vancouver International Airport (YVR), as well as the Canada Line rapid transit service to downtown Vancouver.

**Current Vehicle Demand**

The George Massey Tunnel is one of five Fraser River crossings in Metro Vancouver, carrying more than 80,000 vehicles each day. Rush hour demand at the tunnel exceeds capacity, and midday demand has grown to near capacity. This has significant impacts for commuters, goods movers and tourists. Morning rush hour lineups can extend as much as 1.5 to 5 kilometres long.

The annual cost of congestion in the tunnel was estimated at $66 million in 2008, and is expected to rise to $100 million by 2041.
Who Uses the Tunnel?

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<tr>
<th>Mode</th>
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<tbody>
<tr>
<td>Transit</td>
<td>1%</td>
</tr>
<tr>
<td>HOV</td>
<td>10%</td>
</tr>
<tr>
<td>Light Trucks</td>
<td>3%</td>
</tr>
<tr>
<td>Heavy Trucks</td>
<td>9%</td>
</tr>
<tr>
<td>Cars</td>
<td>77%</td>
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**Transit**
Transit comprises about 1 per cent of rush hour tunnel traffic, but carries up to 26 per cent of people travelling through the tunnel. Ten TransLink bus routes operate on the Highway 99 corridor, of which six use the tunnel, including the #351 from White Rock/South Surrey to the Bridgeport Canada Line station. These routes generate up to 40 buses per hour during the peak period.

**Carpoolers**
HOV users (carpool and vanpool) comprise about 10 per cent of rush hour tunnel traffic.

**Trucks**
Trucks represent 12 per cent of rush hour tunnel traffic. Light trucks making local deliveries are 25 per cent of this traffic, while the other 75 per cent are heavy trucks hauling goods and materials.

**Cars**
The remaining 77 per cent of tunnel users are single-occupant cars, with many travelling to or from the Richmond area.

**Cyclists and Pedestrians**
Currently, cyclists and pedestrians are not permitted to travel through the tunnel. There are no sidewalks, and the narrow shoulders and lanes and low light conditions make cycling unsafe. The Ministry of Transportation and Infrastructure operates a year-round shuttle service to transport cyclists through the tunnel and all TransLink buses operating on Highway 99 are equipped with bicycle racks.

Congestion at the existing four-lane tunnel has significant impacts for commuters, goods movers and tourists. Morning rush hour lineups can extend as much as 5 kilometres long.

**Origins and Destinations of Tunnel Users**
Opened in 1959 to provide access from the suburbs to downtown Vancouver, the tunnel now serves people with a wide area of origins and destinations. More than 55 per cent of northbound traffic in the morning rush hour exits Highway 99 within Richmond and 40 per cent of southbound traffic is destined for South Delta, including Port Metro Vancouver’s Deltaport Terminal.

**How do you use the tunnel?**
Please see questions 1 – 7 in your Feedback Form.
2011 MORNING RUSH HOUR TRIPS THROUGH THE TUNNEL

**SOUTHBOUND**

- **George Massey Tunnel**
- **RICHMOND** 64%
- **SOUTH DELTA** 50%
- **NORTH VANCOUVER / WEST VANCOUVER** 2%
- **NEW WESTMINSTER / BURNABY** 3%
- **NORTH DELTA / SURREY** 16%
- **LANGLEY** 5%
- **WHITE ROCK / SOUTH SURREY** 14%
- **OUTSIDE LOWER MAINLAND**: Northern Vancouver Island, Whistler, B.C. Interior

**NORTHBOUND**

- **George Massey Tunnel**
- **RICHMOND** 55%
- **SOUTH DELTA** 40%
- **VANCOUVER** 40%
- **BURNABY** 5%
- **NORTH DELTA / SURREY** 15%
- **SOUTH SURREY / LANGLEY** 40%
- **OUTSIDE LOWER MAINLAND**: Southern Vancouver Island, U.S.A., B.C. Interior
Current Condition of the Tunnel
The tunnel has been performing as an important transportation link across the Fraser River for more than 50 years. Built in the 1950s, it does not meet modern standards, and in 2006 a modest retrofit program was carried out. This program included structural repairs to tunnel walls and upgrades to ventilation systems, emergency pumps and power systems. In addition, an early warning system was installed to alert drivers in the event of significant seismic activity.

Life Cycle
The tunnel currently has another 10 to 15 years of serviceable life before many of the major operating systems, such as the electrical and ventilation systems, will need to be completely replaced.

Earthquake and Seismic Stability
As part of the retrofit program in 2006, strengthening of the tunnel sections and connections was carried out to improve seismic stability. In the future, stabilization of the ground around the tunnel will also be needed to meet modern standards for seismic performance.

Traffic Safety
The tunnel, including the Steveston Highway and Highway 17 interchanges at either end, experiences the highest rate of incidents along the Highway 99 corridor; significantly higher than the provincial or regional average. This is due in part to low ceilings, narrow lanes and shoulders, high vehicle volumes and rush hour counterflow conditions.

High accident rates combined with severely congested conditions significantly affect reliability of this corridor. As regular users can attest, one accident on this corridor can result in extensive traffic backups that last for hours. Similarly, the tunnel is an important alternate route for emergency response and traffic rerouting in the event of an incident on other Fraser River crossings.

Long lineups are causing congestion, negatively affecting trade and tourism and hindering planned employment growth and development in Richmond and Delta.
Limited Peak Period Growth
Despite significant population growth in South of Fraser municipalities as well as employment growth in Richmond and Surrey over the past 10 years, average annual daily traffic volumes through the tunnel have not grown substantially. This limited growth is attributed in part to the fact that the tunnel is already at capacity for a good portion of the day, and travellers divert to the Alex Fraser Bridge, as well as to improved transit service.

Significant Off-Peak Growth
Traffic patterns have changed significantly since the counterflow system was installed in 1981. A single traffic lane is no longer sufficient to manage typical off-peak direction volumes. Long lineups are causing congestion, negatively affecting trade and tourism and hindering planned employment growth and development in Richmond and Delta.

Local and Inter-Regional Trips
Two types of traffic use the tunnel: local traffic and inter-regional traffic, both competing for lane usage. As vehicles merge on and off the corridor, it creates lineups and delays. These conditions are increasing as Richmond’s role as an employment centre continues to grow.

Have you been stuck in traffic at the tunnel?
Please see questions 8–11 in your Feedback Form.
**Forecast Growth**

**The South Fraser Perimeter Road is expected to result in a change in travel patterns.** Phase 1 will open in 2012 and Phase 2 in 2013. Combined with the Golden Ears Bridge, this new route will provide service from Maple Ridge to YVR in less than 45 minutes, and is expected to redirect some regional traffic away from the Pattullo and Port Mann Bridges to the Alex Fraser and George Massey Tunnel crossings to access Richmond, YVR, UBC and southwest Vancouver.

In the future, numerous planned developments are expected to have a significant effect on crossing demand at the George Massey Tunnel. Currently, it is expected that travel demand on the Highway 99 corridor will increase by 36 per cent by 2021 and another 50 per cent from 2021 to 2031. These forecasts consider the following planned or proposed developments:

- **South Surrey and White Rock’s population growth,** which is forecast to grow from less than 87,000 in 2006 to more than 137,000 by 2031.

- **Richmond’s population growth** of almost 40 per cent between 2006 and 2031, reaching 252,000.

- Numerous proposed **commercial/residential developments** in Delta, South Surrey and the Tsawwassen First Nation.

- **Proposed growth in container capacity** at Port Metro Vancouver’s Roberts Bank terminal is expected to more than double by 2030.

- **YVR’s emerging aerotropolis,** with plans to develop a business park with 1 million square feet of space on the northeast edge of Sea Island. YVR forecasts a doubling of passenger, aircraft and cargo demands at YVR over the next 20 years, increasing to an estimated 33.4 million passengers, 484,000 aircraft arrivals and 500,000 tonnes of cargo annually.
Community, Provincial and National Interests

The Ministry of Transportation and Infrastructure is committed to a comprehensive planning and consultation process to develop the most appropriate and balanced response to addressing congestion and safety challenges associated with the current George Massey Tunnel. The following section lays out the key interests that have been identified to date as part of other regional and provincial planning processes, as well as ongoing dialogue about transportation priorities in our region.

**Congestion Reduction**

- **Increased Capacity** – Even with doubling of transit, and modest increases in other modes, additional capacity for cars will be required to accommodate all of the projected growth for the area.

- **HOV** – Improvements to HOV capacity will be needed to help accommodate the projected 50 per cent growth in demand on the Highway 99 corridor by 2013.

- **Transit** – Although transit vehicles account for just 1 per cent of the vehicular demand through the tunnel, the percentage of people using the tunnel on these buses ranges from 17 to 26 per cent. Use of shoulder bus lanes has helped increase ridership. Enhanced transit service on the Highway 99 corridor could be a meaningful catalyst for further increases.

- **Cycling and Walking** – TransLink’s recent 2011 Trip Diary Survey confirmed that cycling is at its highest levels yet. While cycling as a percentage of trips is highest in Vancouver proper (12.1 per cent), the Richmond and Delta area is second at 3.4 per cent.
Economic Development, Trade and Goods Movement

Metro Vancouver is an important economic gateway to the Asia-Pacific region. Currently, 80,000 jobs in the Lower Mainland – about 1 in 12 – rely on Port Metro Vancouver, directly and indirectly; many of these jobs are highly paid, benefiting workers and their families throughout Metro Vancouver. Key factors to consider include:

- **Commercial and Industrial Development**
  - **Richmond** is an important manufacturing, warehousing and distribution centre and a major employment centre in the region. Richmond’s position as a job generator is expected to continue.
  - **Delta’s** Tilbury and Sunbury industrial areas, which currently are underdeveloped due to access constraints, are expected to grow to their full potential in the future as a result of the South Fraser Perimeter Road, which is expected to bring 3,500 new long-term jobs to Delta.
  - **Surrey**’s Employment and Lands Strategy calls for significant industrial and commercial development in areas that the tunnel serves. As in Delta, the South Fraser Perimeter Road is expected to bring 3,500 new long-term jobs to Surrey.

- **Growth in Marine Shipping** – From exporting Canadian coal and forest products to importing mobile devices and foodstuffs from around the world, Port Metro Vancouver’s container traffic is an essential component of our transportation system. With a draft of 11.5 metres (the distance between the waterline and the bottom of a ship’s hull), the existing tunnel represents an impediment to expanded trade at Fraser Surrey Docks and points east along the Fraser River. This is because many of the newer ocean-going vessels are too large to pass over the tunnel. As a result, container trade expansion is limited to places like Roberts Bank in Delta and Vancouver’s South Shore. A new crossing provides the opportunity to open the way to new trade expansion locations.
Land Use Impacts
Metro Vancouver’s approved land use in areas that the tunnel and Highway 99 corridor serve includes general urban, agricultural, industrial and conservation/recreation. Most of the land immediately adjacent to the tunnel is agricultural and actively farmed.

With the volume of traffic travelling to and from the Richmond area, the existing George Massey Tunnel crossing is ideally situated. However, designing and constructing a replacement crossing in the same location as an existing one can be difficult. On the other hand, any new crossing location would need to be considered in the context of existing land use, access routes, origin and destination patterns, private property impacts and municipal development considerations.

Environmental Protection
Protecting our environment is important. When it comes to the George Massey Tunnel, key environmental protection considerations include:

- **Air Quality and Emissions** – In 2007, the B.C. Government set a bold target to reduce greenhouse gas emissions in British Columbia by 33 per cent by 2020. Some of this reduction will come from cleaner fuels, but some will also come from reducing congestion-related idling, and reducing our dependency on the single-occupant vehicle.

- **Fish and Wildlife Habitats** – The lower Fraser River provides important fish and wildlife habitats. Any in-river or shoreline work will have potential impacts, for which mitigation measures will need to be identified and addressed.
Agricultural Land Protection
Richmond and Delta are important agricultural areas. All tunnel replacement options would need to consider any effect on agricultural land and would be subject to review by the Agricultural Land Commission.

Recreation and Health
Highway 99 and the tunnel provide access to a variety of recreation and conservation areas on both sides of the Fraser River. The lower Fraser River is also an important area for water recreation and sport fishing. Several marinas operate on either side of the tunnel. In-river construction for a crossing has the potential to temporarily affect recreational access and, in the long term, may open up new access for land-based recreational areas.

Community Livability
Community livability interests are also important considerations in developing new infrastructure. When it comes to the tunnel, key potential interests include:

• **Accessibility** – Having safe, reliable access to and within communities is important for development and for creating a sense of community. Construction of a replacement crossing provides an opportunity to address underserved access and mobility needs, such as improving cycling and pedestrian options. Consideration must also be given to ensuring that a new crossing and related accesses do not cut off or impede existing local access routes.

• **Visual Impacts** – The existing crossing has limited visual impacts. If a new bridge was constructed to replace the tunnel, it would potentially have visual impacts for nearby communities. If constructed at the current location, visual impacts potentially would be limited, since land on Highway 99 between the Steveston and Highway 17 Interchanges is primarily agricultural, industrial and conservancy. However, Steveston and Ladner communities would likely see changes in viewscapes.

• **Noise** – Noise levels associated with the existing tunnel are limited to the approaches. Noise impacts associated with a replacement crossing could vary depending on form, size and proximity to communities. Construction of a replacement crossing would also result in temporary noise increases in the area.
Heritage and Archaeology
The lower Fraser River is an important area for First Nations. Consideration of potential archaeological sites and traditional use of land and water, including consultation with First Nations and heritage groups, will be an important part of determining the most appropriate solution to replace the tunnel.

Affordability and Cost
The consultation and planning process will help confirm the scope, cost and affordability of the replacement project. Typical construction cost estimates for a crossing of this nature, including building approach lanes, improving connections at either end and considering potential future transportation needs, such as dedicated lanes for transit or other vehicles, would be significant.

Considering the importance of the tunnel and its age, doing nothing is not an option. Once we better understand the need, we will be in a better position to determine the cost and then consider appropriate funding sources.

What do you think?
Please see questions 12–13 in your Feedback Form.
Towards a Solution

The Ministry of Transportation and Infrastructure has a mandate to develop innovative, forward-thinking transportation strategies that move people and goods safely, and grow our provincial economy. Improving vital infrastructure is a key goal, along with enhancing the competitiveness of B.C.’s transportation industries, reducing transportation-related greenhouse gas emissions, and providing B.C. with a safe and reliable highway system.

Provincial and Regional Plans

A number of existing provincial and regional plans provide context for determining the most appropriate solution for a replacement of the existing tunnel. These include:

- The BC Jobs Plan is a comprehensive plan to expand and align skills training programs with economic opportunities to develop more skilled, high-paying jobs in B.C.

- The Provincial Transit Plan has set a goal for increasing transit share in Metro Vancouver from 11 to 17 per cent by 2020.

- Transport 2040 is TransLink’s long-range transportation strategy to keep people and our economy moving, strengthen our communities and protect the environment. The plan focuses on providing opportunities for people to limit automobile use.

- Metro Vancouver’s Regional Growth Strategy: Metro Vancouver 2040 – Shaping our Future provides a framework on how to accommodate the people and jobs that are expected to come to Metro Vancouver in the next 30 years in a way that enhances the livability and sustainability of the region. For example, Metro Vancouver 2040 targets two-thirds of growth in urban centres and other transit-accessible locations, protects industrial lands and provides guidance on transit infrastructure investment.

- Port 2050 – in 2010/11, Port Metro Vancouver undertook a planning process that considered four potential future scenarios. Coming out of this process, a new vision and mission were developed. Port Metro Vancouver’s mission is to lead the growth of Canada’s Pacific Gateway in a manner that enhances the well-being of Canadians, and its vision is to be the most efficient and sustainable gateway for customers, benefiting communities locally and across the nation. Port Metro Vancouver’s Land Use Plan indicates that Roberts Bank will be a primary focus for the Port’s container growth strategy, including the development of a new container terminal and associated transportation infrastructure.

Plans for a tunnel replacement will be developed in consideration of public and technical inputs as well as the following provincial responsibilities:

- The Agricultural Land Reserve (ALR) is a provincial zone in which agriculture is recognized as the priority use. Farming is encouraged and non-agricultural uses are controlled. The Agricultural Land Commission administers this land preservation program.

- B.C. Environmental Assessment Act – Construction of a replacement for the tunnel would require environmental assessment review to ensure that it meets the province’s goal of environmental, economic and social sustainability, and it may also require federal environmental review. The assessment process is also needed to ensure that the issues and concerns of the public, First Nations, interested stakeholders and government agencies are considered.
Alternatives Considered To Date

New Crossing of the South Arm of the Fraser River
The Ministry retained Ward Consulting Group in 1991 to consider the need for and potential forms of future expansion of the George Massey Tunnel. Five options were considered, including no expansion, additional tunnel capacity at the existing location, a new bridge in line with No. 5 Road in Richmond, and a new bridge in line with 72nd Street in Delta and No. 8 Road in Richmond. The report recommended new tunnel capacity at the existing crossing for the short term, and a new 72nd Street/No. 8 Road crossing for the long term. Over the past 20 years, significant development has taken place that has changed collective travel needs, and this report’s conclusions may no longer be applicable.

New Crossings of the North and South Arms of the Fraser River
The Ministry retained Reid Crowther & Partners and Ward Consulting Group in 1995 to consider the need for and potential forms of future additional capacity across both arms of the Fraser. Twelve preliminary options were shortlisted to three and a preferred option was identified. The preferred option included expanding the Oak Street Bridge to five lanes, adding a new tube at the existing George Massey Tunnel, upgrading Highway 99 between Highway 17 and the Oak Street Bridge, and constructing a new crossing at Tree Island to provide additional capacity across the Fraser River between Highway 91 in Richmond and Marine Way in Burnaby. HOV and transit expansion were a key component of the recommended option. Over the past 15 years, significant development has taken place that has changed collective travel needs, and this report’s conclusions may no longer be applicable.

Gateway Program Definition
As part of planning for the Gateway Program in 2003, the Ministry retained Steer Davies Gleave to consider the travel demand effect of various potential upgrades to the Lower Mainland regional traffic network. At the George Massey Tunnel, adding a new two-lane tube next to the existing tunnel was considered as part of an upgraded Highway 99 capacity from four lanes to six lanes. The analysis concluded that improvements to the Port Mann and Pitt River crossings as well as construction of the South Fraser Perimeter Road were a higher priority. As these Gateway projects are nearing completion, it is time to revisit the need for improvements at the George Massey Tunnel.
Key Design Considerations

The following draft design considerations have been identified for use in developing potential options for replacing the George Massey Tunnel. These reflect the tunnel’s importance to the community, provincial and national interests described in previous sections of this Discussion Guide, as well as best practices in design engineering.

1. **Alignment with Community, Regional and National Objectives** – including concentrating growth in designated areas and providing access to regional town centres.

2. **Support for Transportation Alternatives** – including access to transit, cycling and walking, and lane allocation to facilitate these alternatives.

3. **Congestion Reduction** – including improved safety and travel time reliability.

4. **Jobs and Economic Growth** – including access to employment centres, facilitating gateway integration and providing access to YVR, BC Ferries, and land- and marine-based port facilities.

5. **Climate Change Adaptation and Environmental Protection** – including flood protection, vehicle emissions management, and conservation of fish, wildlife and their habitats.

6. **Agricultural Lands** – preservation and support for agricultural access.

7. **Community Livability** – including property, visual and noise impacts, as well as community access.

8. **Cost** – including capital cost, technical viability, time to implement and impacts to road users during construction.

*What do you think?*

*Please see questions 14 – 17 in your Feedback Form.*
Next Steps

Projects of this scale can take up to 10 years to plan and deliver, including consultation, environmental, technical and financial analysis, and an environmental assessment review, followed by procurement and construction. By starting now, we maximize the potential to make the best decisions to benefit all British Columbians.

The Ministry of Transportation and Infrastructure will consider input from this phase of consultation in conjunction with existing provincial plans and responsibilities to develop a vision and design criteria for the replacement crossing. This information will then be used to develop a short list of potential replacement options for additional community input and feedback during Phase 2: Exploring the Options in early 2013.

*Please see questions 18 – 29 in your Feedback Form.*

Stay Involved

Thank you for your interest in the George Massey Tunnel Replacement Project. Please remember to sign up to receive planning updates and notice of future consultation opportunities. To register for the database:

**Web:** masseytunnel.ca  
**Email:** masseytunnel@gov.bc.ca  
**Phone:** 1-8-555-MASSEY (1-855-562-7739)

Please submit your Feedback Form by December 19, 2012.
For more information:
Web: masseytunnel.ca
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c/o 7351 Vantage Way, Delta, BC V4G 1C9
Attention: George Massey Tunnel Replacement Project