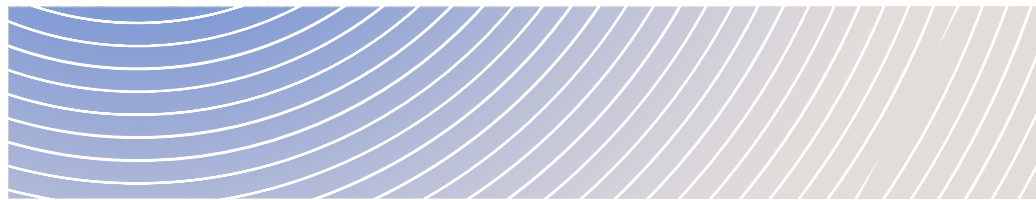


Analysis Report



WHETHER TO DESIGNATE THE **SURREY LANGLEY SKYTRAIN PROJECT**
AND BROADWAY SUBWAY PROJECT IN BRITISH COLUMBIA

September 28, 2020



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Purpose

The Impact Assessment Agency of Canada (the Agency) prepared this report for consideration by the Minister of Environment and Climate Change (the Minister) in deciding whether to designate the Surrey Langley SkyTrain Project (the SkyTrain Project) and the Broadway Subway Project (the Subway Project) pursuant to section 9 of the *Impact Assessment Act* (IAA).

Projects

Surrey Langley SkyTrain Project

The SkyTrain Project, proposed by the South Coast British Columbia Transportation Authority (TransLink), is the construction and operation of a new transit project located in Surrey and Langley, British Columbia (B.C.). As proposed, the SkyTrain Project would extend the existing Expo Line by 16 kilometres along Fraser Highway, from King George SkyTrain Station to Langley City Centre. It would include eight additional transit stations, three bus exchanges and a new operations and maintenance centre.

The SkyTrain Project is expected to be constructed in two stages. Stage 1 of the SkyTrain Project is a seven-kilometre elevated extension of the existing Expo Line along Fraser Highway from the existing terminus at King George Station to 166 Street in Fleetwood, Surrey, B.C. Stage 2 of the SkyTrain Project would be the extension on an elevated extension the remaining nine kilometres to Langley City Centre in Langley, B.C.

Broadway Subway Project

The Government of B.C. is undertaking the construction of the Subway Project located in Vancouver, B.C. The Subway Project would consist of a 5.7-kilometre extension of the existing Millennium Line SkyTrain, starting at VCC-Clark SkyTrain Station, running along Great Northern Way and Broadway, and terminating at West Broadway Avenue and Arbutus Street. It would include a 700-metre elevated guideway, a five-kilometre underground subway, and six new underground stations. In the future, it is planned that the extension could continue to the University of British Columbia campus.

Context of Request

On June 29, 2020, the Minister received a request to designate under subsection 9(1) of the IAA for the two projects from a member of the public. The letter included a request that the impact assessments of the projects include a Life Cycle Assessment in accordance with the International Organization for Standardization's "ISO 14000" standard. The requester expressed concerns about the projects' higher costs and higher electricity consumption and greenhouse gas emissions relative to at-grade alternatives.

Surrey Langley SkyTrain Project

The Agency received input from TransLink regarding the SkyTrain Project, its potential adverse effects, proposed design and mitigation measures, and its view that the SkyTrain Project should not be designated.

The Agency also received advice from Fisheries and Oceans Canada, Environment and Climate Change Canada, Infrastructure Canada, and B.C.'s Environmental Assessment Office. B.C.'s Environmental Assessment Office shared the Agency's request with B.C.'s Ministry of Environment and Climate Change Strategy, and B.C.'s Ministry of Forests, Lands, Natural Resource Operations and Rural Development. The Agency did not receive a response from these ministries on the SkyTrain Project.

Broadway Subway Project

The Subway Project has been subject to extensive consideration by the Government of B.C, which includes public and Indigenous engagement, outreach, and analysis of impacts. As a transit project, it has garnered a high degree of public interest and views, and the province has posted substantial information about the project publicly, including an announcement on September 3, 2020, about the start of the construction phase of the Subway Project. The Agency relied on this publicly available information and additional information provided by B.C.'s Transportation Investment Corporation to inform its view that the carrying out the Subway Project has substantially begun pursuant to subsection 9(7)(a) of the IAA.

Project Context

Project overview

Surrey Langley SkyTrain Project

In 2014, the Metro Vancouver Mayor's Council identified 104 Avenue, King George Boulevard and Fraser Highway in Surrey, B.C. as priority corridors for rapid transit and decided to build 27 kilometres of Light Rail Transit to meet growing and projected ridership demand. However, following a change of municipal leadership in November 2018, the newly installed Surrey City Council voted in favour on an extension of the SkyTrain to Langley. In December 2018, the Metro Vancouver Mayors' Council on Transportation directed TransLink to proceed with planning and project development for the Surrey Langley SkyTrain Project. In January 2020, the Mayors' Council endorsed the SkyTrain Project Business Case.

The SkyTrain Project is an extension of the existing Expo Line SkyTrain along the Fraser Highway from the existing terminus at King George Station to 203 Street in Langley City Centre (Figure 1). The capital cost of the SkyTrain Project is estimated at approximately \$3.1 billion with project construction expected to result in 3,000 direct jobs. Current available funding (\$1.63 billion) enables construction of Stage 1 of the SkyTrain Project: approximately seven kilometres extension between the existing King George SkyTrain Station and the intersection of 166 Street and Fraser Highway in Fleetwood, Surrey, B.C. Advancement of the remaining portion of the SkyTrain Project, from Fleetwood, Surrey to Langley, B.C., is dependent on additional funding being available.

The SkyTrain Project aims to address climate change through investment in cleaner and more resilient transportation infrastructure, to stimulate local economies and create new jobs, to improve accessibility to employment and opportunities, to promote an increase in a wider range of housing options including rental housing, and to provide faster and more reliable transit service in the South of Fraser region. The value of enhanced economic productivity over the life of the Surrey Langley SkyTrain Project is estimated at \$255 million.

TransLink is undertaking an Environmental Screening Review for the SkyTrain Project to understand the potential project-related environmental and socio-economic effects and implement mitigation measures. This review provides opportunity for consultation with Indigenous groups, the public, stakeholders, and government agencies on the scope of the review and the methods for assessing effects.

Broadway Subway Project

The Metro Vancouver Mayors' Council's 2014 Mayors' Vision, which describes a 30-year vision for regional transportation growth in Metro Vancouver with spending priorities and funding mechanisms, identified the need for an expansion of public transit along the Broadway corridor, and determined that it would be constructed in two phases, the first being to Arbutus, and the second being to the University of British Columbia's Point Grey Campus.

The Subway Project is an extension of the existing Millennium Line SkyTrain and would run along Great Northern Way and Broadway Street from the existing terminus at VCC-Clark SkyTrain station to the intersection of West Broadway Avenue and Arbutus Street (Figure 2). The extension to Arbutus is expected to relieve congestion along the Broadway corridor, which is the busiest bus route in Canada, and is expected to save commuters around 30 minutes a day travel time. It is also planned to accommodate the one million new residents that Metro Vancouver expects to gain over the next 30 years.

The Subway Project is estimated to have a total capital cost of \$2.827 billion and anticipated to provide approximately 13,450 jobs through direct and indirect employment.

The Government of B.C. completed an Environmental Screening Review of the Subway Project in December 2019 that involved consultation with Indigenous groups, the public, stakeholders, and government agencies in identifying and understanding the potential project-related environmental and socio-economic effects and the approaches to mitigate these effects.

Project components and activities

Surrey Langley SkyTrain Project

The main construction activities associated with the SkyTrain Project includes:

- Pavement removal and concrete demolition;
- Road reconstruction;
- Drainage diversion and installation;
- Guideway installation and erection; and
- Rail and system installations.

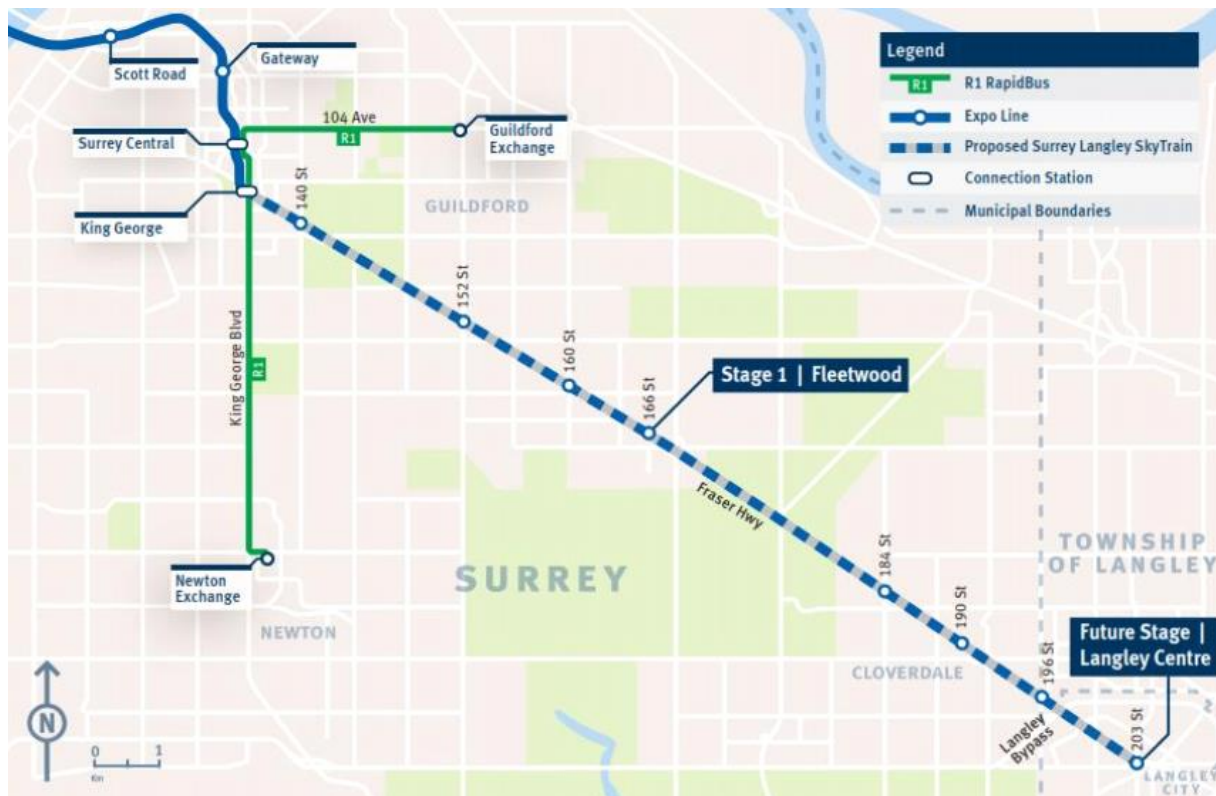


The main activities during the operation phase of the SkyTrain Project would be the operation of the SkyTrain, stations, and maintenance of tracks, stations, rail vehicles, etc. The SkyTrain Project will have a travel time of approximately 9.5 minutes from the existing King George Station to the new 166 Street Station in Fleetwood, Surrey, B.C. The SkyTrain headway is anticipated to be six to eight minutes during peak hours, and ten to 15 minutes during off-peak hours. In the long run, it is anticipated that during peak hours, one out of three Expo Line trains will go onto this new extension, with an average of approximately 4.5-minute headway through the existing Waterfront terminus station.

The SkyTrain Project components include:

- elevated guideway and supporting infrastructure with storage tracks on some segments;
- stations with platforms accessible by elevator and escalator from street level;
- SkyTrain vehicles similar to the models used on the existing Expo Line;
- a new transit exchange at the interim terminus in Fleetwood, Surrey, B.C.;
- operating systems including automatic train control, communication system, and security systems;
- power propulsion system with four propulsion power substations along the alignment, and power and communication ducts along the guideway; and
- roadway segments to be widened and/or reconfigured as needed to accommodate the guideway columns.

Figure 1: Project Location – Surrey Langley SkyTrain Project





Source: Surrey Langley SkyTrain Project Description, prepared by Hemmera Envirochem Inc. for TransLink, February 2020

Broadway Subway Project

The main construction activities associated with the Subway Project includes:

- site preparation including clearing and grading, ground improvement, demolition, and set up of temporary facilities;
- relocation of utilities;
- construction of the elevated guideway;
- excavation of tunnel, stations and ancillary facilities; and
- installation of underground components and systems.

The main activities during the operation phase would be the operation of the SkyTrain, stations, and maintenance of tracks, stations, rail vehicles, etc. The operation of the Subway Project will be integrated with the existing Millennium Line. Currently, the SkyTrain frequency on the Millennium Line ranges from three to four minutes during peak hours, to eight to ten minutes late at night.

The Subway Project components include:

- 700 metres of elevated guideway and supporting infrastructure situated between VCC-Clark SkyTrain station and Great Northern Way;
- tunnel running between Great Northern Way and Arbutus Street along Broadway;
- underground stations featuring platforms that will be accessible by elevator, stair and escalator;
- SkyTrain vehicles of the same model used on the existing SkyTrain system;
- a new bus exchange at Arbutus street and Broadway to provide connections between bus and SkyTrain;
- operating systems including automatic train control and communications system, which will be integrated with existing Millennium Line; and
- power substations, powered by a 12.5-kilovolt loop to be installed by BC Hydro.



Figure 2: Project Location – Broadway Subway Project



Source: Broadway Subway Project Environmental and Socio-economic Review, B.C.'s Transportation Investment Corporation, December 27, 2019

Analysis of Designation Request

Authority to designate the Projects

The *Physical Activities Regulations* (the Regulations) of the IAA identify the physical activities that constitute designated projects. The Projects, as described in the information provided by the proponents, are public transit developments that do not cross wildlife areas, migratory bird sanctuaries, protected marine areas or national parks. These projects also do not require 50 kilometre or more of new right of way or a new railway yard with a total area of 50 hectares or more. As such, these projects are not described in the Regulations.

Under subsection 9(1) of IAA the Minister may, by order, designate a physical activity that is not prescribed in the Regulations. The Minister may do this, if, in the Minister's opinion, the physical activity may cause adverse effects within federal jurisdiction, adverse direct or incidental effects, or the public concerns related to those effects warrant the designation.

However, under subsection 9(7) of the IAA, the Minister must not make the designation referred to in subsection 9(1) if the carrying out of the physical activity has substantially begun, or a federal authority has exercised a power or performed a duty or function conferred on it under any Act of Parliament - other than the IAA - that could permit the physical activity to be carried out, in whole or in part.

Surrey Langley SkyTrain Project

The Agency is of the view that the Minister may consider designating the SkyTrain Project pursuant to subsection 9(1) of IAA, because none of the limitations in subsection 9(7) apply.

First, the carrying out of the SkyTrain Project has not substantially begun. Second, no federal authority has exercised a power or performed a duty or function that would permit the SkyTrain Project to be carried out, in whole or in part.

Broadway Subway Project

The Agency is of the view that the Minister cannot designate the Subway Project pursuant to subsection 9(1) of the IAA due to the Subway Project having substantially begun, according to subsection 9(7)(a) of the IAA.

In September 2020, the Government of B.C announced that construction of the Subway Project would commence in the fall of 2020 with the goal of having the new line in service by 2025. To support this construction, early works have been progressing since early 2019 that comprise a suite of activities, including property and land acquisition, utility relocation (e.g. water and wastewater lines), trolley wire relocation, demolition of buildings, and site preparation. Additionally, the proponent has completed substantial in-ground works which are permanent and necessary for the Subway Project, including construction of infrastructure for tunnel boring machines and power propulsion substations with a combined cost of \$10.3 million. The Agency is of the view that these activities are substantive and demonstrate the proponent's efforts to advance the Subway Project both in terms of building infrastructure and obtaining relevant regulatory approvals.

Infrastructure Canada has confirmed to the Agency that they have disbursed nearly \$13 million toward early construction activities such as those indicated above, with more federal funding to be disbursed in fall 2020.

Given the Agency's view that the physical activity of the Subway Project is substantially begun, and therefore the Minister of Environment and Climate Change may not designate the Project under the IAA, no further analysis of the potential effects of the Subway Project is provided.

Potential adverse effects within federal jurisdiction

The Agency reviewed information provided by TransLink, other publicly available information on the SkyTrain Project, and input provided by the Government of B.C. and federal authorities.

There are no federal lands in the vicinity of the SkyTrain Project. The potential adverse effects within areas of federal jurisdiction identified by Federal Authorities include:

- effects on groundwater and surface water as it relates to fish and fish habitat;
- effects on migratory birds and their habitat; and
- greenhouse gas emissions.

The SkyTrain Project is situated in a highly urbanised area parallel to the existing Fraser Highway. Effects on migratory birds and their habitat is anticipated to be highly unlikely. Potential adverse effects would be limited through project design, the application of standard mitigation measures, and existing legislative

mechanisms. Annex I provides a summary table of the potential adverse effects, mitigation measures proposed by the proponent, and anticipated legislative mechanisms that would apply if the SkyTrain Project proceeds.

Potential adverse direct or incidental effects

Direct or incidental effects refer to effects that are directly linked or necessarily incidental to a federal authority's exercise of a power or performance of a duty or function that would permit the carrying out, in whole or in part, of a project, or to a federal authority's provision of financial assistance to a person for the purpose of enabling that project to be carried out, in whole or in part.

The SkyTrain Project as described may potentially require the exercise of the following federal powers, duties, or functions:

- An authorization under subsection 34.2(2)(b) or 35(2)(b) of the *Fisheries Act* may be required if the SkyTrain Project works cannot avoid, through implementation of avoidance and mitigation measures, the death of fish or harmful alteration, disruption or destruction of fish habitat.
- A Fish Collection Permit under the *Fisheries Act* for any fish salvage or sampling.
- Infrastructure Canada will be committed to providing federal funding to the SkyTrain Project under the Investing in Canada Infrastructure Program, subject to project approval.

The direct or incidental effects related to the described powers duties or functions would be limited or addressed through the due diligence of the federal authority.

Public concerns

The Agency is of the view that the public concerns known to the Agency do not warrant designation under subsection 9(1) of IAA.

TransLink conducted public engagement activities with the objectives to:

- inform the public about the rapid transit planning work related to the Fraser Highway, 104 Avenue and King George Boulevard corridors in Surrey, B.C.;
- gather feedback on opportunities, considerations, values and level of support for rapid transit planning on these corridors;
- ensure broad access to information; and
- maximize opportunities to engage.

The Agency reviewed the designation request and the following documents prepared by TransLink:

- *Surrey Langley SkyTrain and Rapid Transit Options on 104 Avenue and King George Boulevard: Engagement Summary Report*, published in May 2019; and
- *Surrey Langley SkyTrain and Rapid Transit Options on 104 Avenue and King George Boulevard, Phase 2 Engagement Summary Report*, published in January 2020.

The concerns expressed by the requester and members of the public include:

- greenhouse gas emissions associated with the SkyTrain Project design compared to alternatives;
- community safety and security;
- integration with infrastructure, parking, and walking and cycling pathways;
- access to residences, businesses, traffic, and public transit during construction;
- impacts on residences and businesses from traffic, noise, vibration, air pollution, and reduced visual quality;
- economic impacts, including housing affordability and tax increases;
- cost effectiveness of the SkyTrain Project design;
- impacts on wildlife, wildlife habitat, waterways, green spaces, and agricultural land;
- land use along SkyTrain corridor;
- station location and design; and
- importance of consultation with First Nations during Environmental Screening.

Some concerns expressed relate to certain adverse effects within federal jurisdiction, including greenhouse gas emissions, effects on aquatic resources, and with respect to the Indigenous peoples of Canada, the effects on the health, social, and economic conditions.

However, the Agency is of the view that these concerns can be addressed through the application of standard mitigation measures and existing legislative and regulatory mechanisms (see Annex II).

Potential adverse impacts on the rights of Indigenous peoples

The Agency is of the view that the potential adverse impacts on the rights of Indigenous peoples known to the Agency do not warrant designation under subsection 9(1) of IAA.

The proponent's First Nation Engagement Summary describes the Indigenous consultation undertaken by TransLink for the SkyTrain Project. It includes a summary of the proponent's approach to engagement and consultation, and summaries of the input provided by Indigenous groups between January and December 31, 2019. Details about how the input from Indigenous groups has been considered by the proponent and how it has influenced the SkyTrain Project and the Environmental and Socio-economic Review process are not included in this document, but will be included in the final version of the Environmental and Socio-economic Review Report which has not yet been released.

Engagement activities focused on sharing ongoing SkyTrain Project-related information, determining preferences with respect to engagement activities, identifying and responding to concerns and issues regarding the SkyTrain Project and Environmental and Socio-economic Review process, providing opportunities for participation in SkyTrain Project-related studies, requesting Traditional Knowledge, and obtaining input regarding environmental baseline reports.



Indigenous groups engaged included:

- Katzie First Nation
- Kwantlen First Nation
- Matsqui First Nation
- Sehmiahmoo First Nation
- Tsawwassen First Nation
- Musqueam Nation
- Stó:lō Nation
- Stó:lō Tribal Council

SkyTrain Project information was also shared with:

- Cowichan Tribes
- Halalt First Nation
- Kwikwetlem First Nation
- Lake Cowichan First Nation
- Lyackson First Nation
- Penelakut Tribe
- Seabird Island Band
- Shxw'ow'hamel First Nation
- Skawahlook First Nation
- Soowahlie First Nation
- Stz'uminus First Nation

Concerns raised by Indigenous groups include:

- project location overlapping Traditional Territories;
- employment, training and procurement opportunities;
- environmental protection of fish, fish habitat, water quality, and proposed mitigation measures;
- notification to Indigenous groups regarding Crown land acquisition;
- meaningful engagement and consultation;
- incorporation of Traditional Knowledge, place names, and traditional use information;
- cultural recognition, inclusion and celebration;
- collaboration with First Nations on habitat enhancement opportunities and participation in monitoring;
- methods of identification, removal, and disposal of contaminated sites and soils;
- protection of heritage and archaeology sites, and the process of artifact collection;
- impacts of construction in wetlands and potential offsetting;

- assessment standards and the ways the SkyTrain Project will consider minimizing vibration; and
- effects on bird nesting habitat.

Potential adverse effects within federal jurisdiction, as described in Annex I, that could impact section 35 rights include impacts on:

- environmental protection of fish, habitat, water quality, and proposed mitigation measures;
- protection of heritage and archaeology sites, and the process of artifact collection; and
- bird nesting habitat.

Prior to issuing a *Fisheries Act* Authorization, Fisheries and Oceans Canada has a legal duty to consult and, if appropriate, accommodate Indigenous groups if the proposed works might adversely impact section 35 rights. Disbursement of federal funding by Infrastructure Canada will also be subject to consultation with Indigenous groups as required under section 34 of the *Constitution Act, 1982*.

If Environment and Climate Change Canada is required to exercise a power or perform a duty or function under any Act of Parliament in relation to the Project to enable it to proceed, then consultation with affected Indigenous groups may also be required.

The Agency is of the view that while there is the potential for the SkyTrain Project to cause adverse impacts on section 35 rights, proposed mitigation measures and existing legislative mechanisms would include Indigenous consultation requirements and address impacts.

Regional and strategic assessments

Should a project be designated by the Minister, Environment and Climate Change Canada's Strategic Assessment of Climate Change would apply. The Strategic Assessment of Climate Change provides guidance related to climate change throughout the impact assessment process and outlines information that proponents would need to provide, including but not limited to, information on greenhouse gas (GHG) emissions, GHG mitigation measures, and climate change resilience. No other strategic assessments pursuant to section 95 of the IAA are relevant to the two projects.

There are no regional assessments pursuant to sections 92 or 93 of IAA that are relevant to the two projects.

Conclusion

The Agency is of the view that the SkyTrain Project does not warrant designation pursuant to subsection 9(1) of IAA. The potential for adverse effects, as described in subsection 9(1) of IAA, would be limited through project design, the application of standard mitigation measures and through existing legislative mechanisms (Annex I). The concerns expressed by the requester and those that are known to the Agency are expected to be addressed through provincial consultation and oversight processes pursuant to B.C.'s *Water Sustainability Act*, *Heritage Conservation Act*, *Petroleum Storage and Distribution Facilities Storm Water Regulation* under the *Environmental Management Act*, and *Wildlife Act* (Annex II).



To inform its analysis, the Agency considered the concerns in the requestor's letter to the Minister and sought input from the proponent, federal authorities and B.C. The Agency also considered the potential for the SkyTrain Project to cause adverse impacts on section 35 rights and is satisfied that existing legislative mechanisms would include Indigenous consultation and address impacts.



ANNEX I

Annex I: Analysis Summary Table – Surrey Langley SkyTrain Project

Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
<p>A change to fish and fish habitat, as defined in subsection 2(1) of the <i>Fisheries Act</i></p>	<p>Proponent</p> <p>Fisheries and Oceans Canada</p> <ul style="list-style-type: none"> No adverse effects were identified by Fisheries and Oceans Canada, but issuance of any relevant authorizations under the <i>Fisheries Act</i> would include conditions requiring avoidance and mitigation, offsetting, contingency, and monitoring measures. <p>Environment and Climate Change Canada</p> <ul style="list-style-type: none"> SkyTrain Project activities may have adverse effects on the quality of groundwater and surface water, and on hydrological regimes of watercourses and water bodies. Effects could occur through deposition of contaminants, soils, sediment, and airborne particulate matter to water; disturbance of soils, rock, and streambanks causing erosion; acid rock drainage, metal leaching, wastewater discharge, groundwater resurgence; and water impoundment, withdrawals, and disturbances to the natural flow of surface water. Environment and Climate Change Canada did not tie these effects to any specific fish, fish habitat, or Species at Risk. 	<p>Federal</p> <p><i>Fisheries Act</i> Subsections (34.2(2)(b) or 25(2)(b) <i>Species at Risk Act</i></p>
<p>A change to aquatic species, as defined in subsection 2(1) of the <i>Species at Risk Act</i></p>	<p>See “a change to fish and fish habitat, as defined in subsection 2(1) of the <i>Fisheries Act</i>” row.</p>	
<p>A change to migratory birds, as defined in subsection 2(1) of the <i>Migratory Birds Convention Act, 1994</i></p>	<p>Environment and Climate Change Canada</p> <ul style="list-style-type: none"> SkyTrain Project activities could have negative effects on migratory birds, including from mortality due to collisions, destruction of nests and eggs, contact with oil or chemical spills, and sensory disturbance (noise, light, and vibration) causing avoidance. Additionally, SkyTrain Project activities could have negative effects on wetlands and their ecological functions, such as through alteration of hydrological regimes essential for maintaining wetlands, which may impact the 	<p>Federal</p> <p><i>Migratory Birds Convention Act, 1994</i></p>

Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
	quality or availability of habitat for migratory birds who use the areas for breeding, migration, foraging, and resting.	
A change to the environment that would occur on federal lands	There are no federal lands in the vicinity of the SkyTrain Project.	
A change to the environment that would occur in a province other than the one in which the project is being carried out or outside Canada	<p>Environment and Climate Change Canada</p> <ul style="list-style-type: none"> The construction, operation, and decommissioning of the SkyTrain Project may result in greenhouse gas emissions. Additionally, climate change may affect the SkyTrain Project, possibly resulting in impacts to the environment. 	
Any change occurring in Canada to the health, social or economic conditions of the Indigenous peoples of Canada	<p>Environment and Climate Change Canada</p> <p>Accidents and malfunctions may occur, including spills of fuel or hazardous material, which could affect human health.</p>	
Adverse direct or incidental effects	<p>Proponent</p> <ul style="list-style-type: none"> The proponent has indicated it will seek a Fish Collection Permit under the <i>Fisheries Act</i> for any fish salvage or sampling, and a <i>Fisheries Act</i> Authorization for project construction activities with the potential to cause harmful alteration, disruption, or destruction of fish habitat. The proponent has indicated the <i>Fisheries Act</i> Authorization will be required, along with habitat offsetting. <p>Fisheries and Oceans Canada</p> <ul style="list-style-type: none"> Issuance of any relevant authorizations under the <i>Fisheries Act</i> would include conditions requiring avoidance and mitigation, offsetting, contingency, and monitoring measures. 	<p><i>Fisheries Act</i> Subsections (34.2(2)(b) or 25(2)(b) Fish Collection Permit</p>

Adverse Effect or Public Concern in Relation to Subsection 9(1) of the <i>Impact Assessment Act</i>	Effects and Mitigation Proposed by the Proponent and Advice from Federal and Provincial Experts	Relevant Legislative Mechanisms
<p>Public and Indigenous concerns related to the above effects:</p> <ul style="list-style-type: none"> • Preserving wildlife habitats during construction and operation • Protection of waterways • Impacts to wildlife and plant life from guideway placement • The protection of heritage and archaeological sites • Protection of fish habitat and water quality • Ensuring that there is mitigation for impacts to fish and fish habitat during all phases of construction and operation • Including the protection of water quality in both pre- and post-construction planning • Ensuring there is an adequate process in place regarding the collection of artifacts <p>Concerns regarding impacts to bird nesting habitat</p>	<p>Proponent:</p> <ul style="list-style-type: none"> • Regarding the requesters concern about the electricity consumption of the technology selected by the proponent, the proponent responded that it is not required to seek a permit for the decision on power technologies, and that the technology was selected after an alternatives assessment to be compatible with the rest of the TransLink system infrastructure, procedures, and training. • Regarding the requestors concern about greenhouse gas emissions associated with the selected project technology, the proponent responded that it is not required to seek a permit for greenhouse gas emissions associated with the SkyTrain Project, and that the SkyTrain Project will result in lower greenhouse gas emissions on a per-kilometer basis during construction than the at-grade alternative, and a greater reduction in greenhouse gases during operation. 	



ANNEX II

Annex II: Potential Federal and Provincial Authorizations Relevant to the Project – Surrey Langley SkyTrain Project

Authorization	Description
<p>Federal Fisheries and Oceans Canada Authorization under subsections 34.2(2)(b) or 35(2)(b) of the <i>Fisheries Act</i></p>	<p>The SkyTrain Project may require watercourse crossings or modification along Fraser Highway. If SkyTrain Project works cannot avoid, through implementation of avoidance and mitigation measures, the death of fish or harmful alteration, disruption or destruction of fish habitat then these would require authorization under subsections 34.2(2)(b) or 35(2)(b) of the <i>Fisheries Act</i>.</p>
<p>Federal Fisheries and Oceans Canada Fish Collection Permit pursuant to the <i>Fisheries Act</i></p>	<p>Project Contractor may need to perform fish salvage or sampling during construction. Permits are needed for any fish salvage or sampling.</p>
<p>Federal Environment and Climate Change Canada Migratory Birds Damage or Danger Permit pursuant to the <i>Migratory Birds Convention Act</i></p>	<p>Construction activities have the potential to affect migratory birds and their habitat.</p>
<p>Federal Environment and Climate Change Canada <i>Species at Risk Act</i> Permit</p>	<p>Construction activities have the potential to affect at-risk species and their habitat.</p>
<p>Provincial Fuel Storage Registration under the <i>Environmental Management Act</i>, issued by the Ministry of Environment and Climate Change Strategy</p>	<p>Registration of temporary on-site fuel storage may be required during construction.</p>
<p>Provincial Permits for heritage inspection, investigation or alteration under the <i>Heritage Conservation Act</i> issued by the Ministry of Forests, Lands, Natural Resources Operations, and Rural Development (Archaeology Branch)</p>	<p>The Project may conduct additional archaeological investigation depending on final design. Project construction has the potential to encounter chance finds of heritage and archaeological sites along the proposed alignment.</p>

Authorization	Description
<p>Provincial Permit or approval for changes in and about a stream and diversion of groundwater, under the <i>Water Sustainability Act</i>, issued by the Ministry of Forests, Lands, Natural Resources Operations, and Rural Development</p>	<p>Project may require watercourse crossings or modification along Fraser Highway. Change Approval required for relocation of streams (e.g., ditches) depending on final design and construction methods. "Change" includes any activity or construction within stream channel that may result in an adverse effect. Authorizations may not be applicable for construction dewatering.</p>
<p>Provincial Permit for protected wildlife or feature under the <i>Wildlife Act</i>, issued by the Ministry of Forests, Lands, Natural Resources Operations, and Rural Development</p>	<p>Project construction activities have the potential to affect designated species and protected habitat features. A general <i>Wildlife Act</i> permit is required for any trapping or handling of live wildlife (i.e., during salvages), including species at risk.</p>
<p>Provincial Permit or approval for Fish collection, under the <i>Wildlife Act</i>, issued by the Ministry of Forests, Lands, Natural Resources Operations, and Rural Development</p>	<p>Permit would be required by the contractor if fish salvage or sampling is required.</p>