MEMO

Date: January 7, 2022

From: Mike McLellan, Vice President, Project Development, GCT Global Container Terminals Inc.

To: Tracy Utting, Agency Review Manager, Review Panels Division, Impact Assessment Agency of Canada

Brendan Mather, Project Assessment Director, BC Environmental Assessment Office

Subject: **GCT Response to the November 8th Draft Joint Guidelines for the Proposed Deltaport Expansion Berth Four Project**

Contents

1 INTRODUCTION

GCT Canada Limited Partnership (GCT) has reviewed the Draft Joint Guidelines (Draft JGs) issued jointly by the Impact Assessment Agency of Canada (IAAC) and the British Columbia Environmental Assessment Office (EAO) on November 8, 2021 in respect of the proposed Deltaport Expansion Berth Four Project (DP4 or the Project). This memo provides GCT's preliminary feedback on key issues identified in the Draft JGs, including GCT's interpretation of the requirements and requested actions and/or updates to the Draft JGs for the IAAC and EAO's consideration. GCT is providing this preliminary feedback to align with the close of the formal public comment period on the Draft JGs and associated plans ending on January 7, 2022, prior to the issuance of the Notice of Commencement, Process Order and final JGs in mid-April.

GCT is committed to completing an effective and robust Impact Assessment (IA) of DP4 and continuing to work with provincial and federal regulatory authorities to ensure we have a clear understanding of the information requirements and assessment approaches in the JGs. Engagement to date with Indigenous nations, municipalities, the general public, and stakeholders has been key in gaining an understanding of the key issues associated with the Project, and we are committed to continued engagement and working collaboratively with the IAAC and EAO, as well as the Panel during the IA process.

GCT is also committed to developing long-term and mutually beneficial relationships with Indigenous nations. GCT will work closely with Indigenous nations to help ensure their meaningful participation in the DP4 IA. The issues raised in this memorandum are intended to clarify GCT's requirements for the DP4 IA as set out in the Draft JGs and should be read in the spirit of, and not to diminish, GCT's commitment to work collaboratively with Indigenous nations.

GCT has demonstrated these commitments through a proud history and a proven record of delivering economically, environmentally, and socially sustainable projects. Headquartered in Vancouver, British Columbia, GCT operates four Green Marine certified terminals in two principal North American ports. For over a century, GCT has sustainably grown with innovative technology and our industry-leading Global Commitment to the environment and community and have made historic investments in GCT Deltaport through the 2010 Third Berth Expansion Project (DP3) and the 2018 Rail Yard Expansion and Densification Project.

DP4 is a sustainable, incremental, and privately funded expansion of GCT's existing terminal footprint to add a fourth berth to deliver required capacity while minimizing impacts on our neighbours, the environment, Indigenous nations, and our workforce. We have been operating in Delta for more than 20 years and we understand the importance of conducting a robust IA which relies on both Indigenous Knowledge (IK) and Western science.

Key issues identified by GCT in the Draft JGs are listed below and described in detail herein:

- Scope of assessment for activities incidental to the Project, including road, rail, short sea shipping and the marina;
- Scope of assessment for accidents and malfunctions related to marine shipping;
- Scope of baseline studies to inform existing conditions;

- Duplication within Valued Components (VCs), and
- Indigenous Interests:
    - Clarity on consensus seeking;
    - Clarity on collaboration process;
    - Historical cumulative impacts on Indigenous interests; and
    - Agreement on mitigation measures.

GCT's approach to the DP4 IA will be guided by the policy context and guidance published by the IAAC and EAO, which contextualize and provide the appropriate goal posts within which to interpret the statutory framework and GCT's approach to satisfying its requirements in the Final Joint Guidelines (Final JGs).

2 SCOPE OF ASSESSMENT FOR ACTIVITIES INCIDENTAL TO THE PROJECT

2.1 Road and Rail Activities

GCT's Understanding

GCT's concerns related to our ability to complete a robust and defensible assessment of incidental activities associated with road and rail activities are documented in two memos previously submitted May 11 and August 25, 2021 to the IAAC and EAO that are publicly available on EPIC and the Registry.

At the request of the EAO and IAAC GCT has recently commissioned a more in-depth analysis entitled *Road and Rail Activities Incidental to the Proposed GCT Deltaport Expansion – Berth Four Project,* dated January 6, 2022 and included in Appendix A of this memo. It includes updated information and analysis on incremental road and rail traffic including:

- Road:
  - Updated truck and rail traffic forecasts for GCT Deltaport, including the DP4 expansion;
  - A review of port-related trucking and rail routes and highway and rail infrastructure; and
  - A summary of previous and proposed infrastructure improvements affecting the efficiency of regional road transport.
- Rail
  - Current rail infrastructure and operations;
  - Updated rail traffic forecasts on the Roberts Bank rail Corridor based on recent developments; and
  - An assessment of potential impacts of incremental DP4 traffic on rail capacity and road/rail traffic conflicts on the Roberts Bank Rail Corridor.

Current and forecasted GCT Deltaport truck traffic accounts for a relatively insignificant share of total traffic on regional roads, and the incremental traffic from DP4 will not result in an increased share of total traffic. Major investments close to the terminal and on the major routes for GCT Deltaport truck traffic south of the Fraser River have resulted in greatly improved truck access and reduced congestion at Roberts Bank.

Based on updated rail traffic forecasts, the incremental traffic attributable to the DP4 project will not require increases in rail capacity on the Roberts Bank rail corridor. Recent modelling of rail capacity forecasts that the Roberts Bank Rail Corridor will be either well below estimated capacity or within estimated capacity. GCT's updated forecast suggests that rail capacity on the existing corridor will be sufficient for anticipated demand until at least 2060. Based on the GCT forecast, there will be no increase in trains per day at these crossings by 2031. Start-up of the GCT DP4 project in 2033 will add an additional two trains per day.

Next Steps

Road

The BC Ministry of Transportation and Infrastructure (BC MOTI) has announced that a new, eight-lane immersed tube tunnel will replace the existing George Massey Tunnel on Highway 99. The new eight-lane tunnel will be in operation in 2030, prior to completion of the DP4 expansion. The new crossing should effectively mitigate current congestion issues, and the incremental traffic from the DP4 project is unlikely to significantly affect either the design or the outcome of the project. Based on a sample of VFPA truck GPS data, Deltaport truck traffic accounted for only 1.6% of daily George Massey Tunnel traffic in 2018, and less than 1% of total traffic in peak periods.

BC MOTI have indicated that further modelling should be undertaken when an updated version of the Regional Transportation Model is available and/or as the George Massey Crossing designs evolve in the future, to confirm the designs and findings presented in this report. GCT Canada would be happy to collaborate with BC MOTI in these efforts as required. Independent modelling of DP4 traffic impacts is impractical because BC MOTI is progressively upgrading the Regional Transportation Model for traffic forecasting and design of the Highway 99 crossing which will replace the George Massey Tunnel, and the outcome will depend on design decisions which have not been finalized.

Rail

Even with an anticipated increase in regional rail traffic by 2031, the Roberts Bank Trade Area study did not identify a pressing need for investment in rail infrastructure and noted the low benefit/cost ratios for investment due to relatively low road traffic volumes.

Requested Action

Based on this additional analysis, GCT reaffirms that the geographic extent for assessment of the road and rail traffic incidental to the project should be limited to the GCT Deltaport terminal lease boundary. GCT requests that the Final JGs define the scope of the IA accordingly.

2.2 Marine Shipping

GCT's Understanding

Based on past precedent established by previous projects assessment (Roberts Bank Terminal 2 (RBT2) and Trans Mountain Expansion Project) GCT acknowledges that the assessment of marine shipping incidental to the Project (specifically related to the movement of container ships) is complimentary to the Project and will be thoroughly assessed. Although these operations are outside of GCT's care and control, marine shipping vessels operate within designated shipping lanes within Canada's 12 nautical mile (nm) boundary and existing data and information exists to support and assessment of potential project adverse effects and benefits.

Next Steps

Accompanying this memo, and in response to the Draft JG's, GCT has drafted a separate supplemental memo entitled *"Deltaport Expansion Berth Four Project – Marine Shipping to 12 Nautical Miles"* (See Appendix B) that addresses in greater detail the proposed spatial scope of the project-related marine shipping assessment. The

memo provides a rationale for extending the assessment to the 12 nm limit of Canada's territorial sea in consideration of past precedent, the lack of designated shipping lanes outside of 12 nm, jurisdiction beyond Canada's territorial sea, and the challenges associated with conducting an assessment beyond 12 nm over a large area of deep water where there is very little data or information available. GCT will continue to collaborate in the development of regional initiatives and participate in Strategic Environmental Assessment (led by regulators). GCT is committed to engaging with Indigenous nations to collaborate on nation specific assessment of Indigenous Interests (that may extend beyond 12 nm) and other parties who are concerned about marine shipping activities incidental to the Project to find appropriate solutions to address their specific concerns.

Requested Action

GCT requests that the IAAC and EAO review GCT's appended supplemental memo and consider extending the marine shipping activities incidental to the Project to the 12 nm limit of Canada's territorial sea.

2.3 Other Marine Incidental Activities – Short Sea Shipping and TFN Marina

GCT also has concerns regarding the scope of the assessment proposed in the Draft JGs related to marine physical activities incidental to the Project. Section 16.1 of the Draft JGs currently states that "the Impact Statement must include a detailed description of the marine shipping incidental to the project, short sea shipping activities and vessel movements associated with the Tsawwassen First Nations marina within the geographic extent to be set by the Agency and EAO." This requirement includes specific details related to vessels, including but not limited to the type, size, weight, number, and anticipated frequency, routing, speed, and transit time along various segments of the routes. Section 16.5 also requires a description and evaluation of accidents and malfunctions associated with these incidental activities.

GCT's Understanding

GCT understands that Section 16.1 of the Draft JGs currently require an assessment of specific operational activities, including accidents and malfunctions associated with short sea shipping activities and vessel movements associated with the Tsawwassen First Nation (TFN) marina.

Due to the uncertain nature of short sea shipping activities including its current feasibility and future economic viability, operational geographic extent, and third-party operations, GCT foresees significant challenges in advancing an informative and defensible assessment of short sea shipping operational activities, including effects associated with accidents and malfunctions. If short sea shipping did become a viable option in the future, GCT would have no ability to direct or influence these operational activities which would be highly regulated by federal requirements including but not limited to the *Canada Shipping Act, 2001*.

Similarly, operational activities associated with the TFN marina are unknown at this time as discussions are ongoing with TFN about its design, their requirements, future ownership and management. Details associated with the number and type of vessels (commercial and/or recreational), their routing, speeds, size, weight and all other information requirements currently described in the Draft JGs are unknown to GCT. The TFN marina is being advanced for the benefit of TFN and their community, and GCT would have no ability to direct or influence their future activities, which are a Treaty right.

Next Steps

Due to the lack of operational information associated with short sea shipping and the TFN marina, and the inability to provide realistic forecasts, GCT proposes to focus the DP4 assessment on construction activities associated with both the short sea shipping berth and the TFN marina.

GCT will continue to engage with Indigenous nations and others who have expressed concerns about these incidental activities to understand their specific concerns and provide additional information, if and when it becomes available, including clarifying regulatory requirements and responsibilities for these incidental activities.

Requested Action

GCT requests that operational activities associated with short sea shipping and the TFN marina be excluded from the Final JGs, including requirements to assess accidents and malfunctions. The focus of the assessment should be on construction activities where activities and interactions associated with the Project can be more accurately assessed.

3 SCOPE OF ASSESSMENT FOR ACCIDENTS AND MALFUNCTIONS RELATED TO MARINE SHIPPING

GCT acknowledges that accidents and malfunctions associated with marine shipping (despite being incidental to DP4 and outside GCT's care and control) should be assessed based on applicable law and guidelines, including the principles relied upon in similar relevant projects. However, there are requirements within the Draft JGs that seem unnecessary for a container terminal. The requirements are also over and above those placed on the RBT2 Project.

GCT's Understanding

The Draft JGs imply that new modelling and survey are required which does not account for the extensive body of work undertaken, including for RBT2 and the Trans Mountain Expansion Project and ongoing work by Transport Canada, through the Cumulative Effects of Marine Shipping and other initiatives. This would be an inefficient use of resources, lead to unnecessary review time by Indigenous nations and regulators and potentially result in inconsistencies in results and findings.

Next Steps

GCT is seeking revision to the Draft JGs to clarify that where the Final JGs require modelling or survey, that existing modelling results and data can be used to meet these requirements. The requirements for additional modelling and data will be determined in consultation with regulators and Indigenous nations based on results of the, yet to be completed, detailed quantitative risk assessment (QRA) specific to the Project and to fill gaps that are not covered by existing modelling and data. GCT is preparing workplans for engagement with Indigenous nations and regulators to define the scope of the QRA, data collection and modelling. The detailed requirements for additional data collection and modelling should be defined through that process not at this early stage within the Final JGs.

Requested Action

GCT request changes to Section 15 of the Draft JGs related to accidents and malfunctions that provides flexibility for GCT to utilize existing data and modelling in the region to support the assessment of spills of petroleum and hazardous and noxious substances that will be carried by vessels within the study area and undertake additional survey and modelling only where gaps exist. The associated text in Section 16.5 should also be modified to acknowledge existing mapping that GCT may acquire to avoid or reduce the requirement for additional shoreline classification surveys.

4 SCOPE OF BASELINE STUDIES TO INFORM EXISTING CONDITIONS

4.1 Schedule Considerations

GCT's Understanding

GCT understands the importance of collecting sufficient data to inform existing conditions and to complete a robust assessment and help inform decision making by regulators and Indigenous nations. The Roberts Bank area has been studied extensively over the past decades and an abundance of existing data and information exists to inform existing conditions and seasonal variability. However, the Draft JGs imply in some cases that multiple years of additional data should be collected. GCT notes the importance and value of building on existing data and knowledge to determine what or if additional data collection is required. This is not consistently acknowledged in the Draft JGs and repeating existing studies would be an inefficient use of resources and would impact the Project schedule. Given the extensive body of existing data, one year of field studies, supported by existing data is, in GCT's view, generally appropriate and will avoid conflict with the regulated timelines associated with the *Impact Assessment Act,* i.e., this will allow GCT to submit a draft Impact Statement within three years of the Notice of Commencement and issuance of the Final JGs.

Next Steps

GCT is preparing detailed workplans to fill data and information gaps that will be shared with and engaged upon with Indigenous nations and regulators, a process that has already begun. Feedback on workplans will also include requests for IK in addition to Western science. GCT has made formal requests to obtain existing data from relevant sources such as the VFPA, and initiated data requests via meetings and engagements with various Federal Authorities including Environment and Climate Change Canada, Health Canada, Natural Resources Canada, Parks Canada and Fisheries and Ocean Canada. These data requests are ongoing and GCT is confident that the information obtained will be sufficient to meet JG requirements in addition to completing one year of field studies specific to DP4.

Requested Action

GCT requests confirmation that any requirements within the Final JGs for baseline data for existing conditions can include existing data obtained by GCT that meets the standards prescribed in the Final JGs. Furthermore, GCT requests that Regulatory Authorities support GCT in obtaining the existing data that is relevant to the assessment of DP4.

4.2 Scope and Methodology Considerations

GCT's Understanding

Certain specific scope and methodology requirements in the Draft JGs are too detailed and there is inconsistency across VCs. These sections could be interpreted in a manner that makes the IA impossible to complete within the timelines of the assessment and would result in an inefficient use of resources at significant costs.

A specific example is provided under Appendix 6 of the Draft JGs, *Additional Guidance, Birds and their Habitat*, where there is a requirement for GCT to "include avian monitoring frequency on a daily basis during spring migration". The level of detail is unprecedented, unrealistic and cost prohibitive for a study of this nature, especially when considering the potential impacts associated with DP4. The Draft JGs also states a spatially dispersed stratified random sampling approach should be used rather than alternatives such as the intensive inter-causeway method being considered by GCT. This is in much greater detail than the requirements defined for other VCs.

Similarly, the below statement outlined in Appendix 6 of the Draft JGs related to fish and fish habitat (pg. 228) causes concern for GCT, as well as similar statements included in the birds and their habitat, species at risk, fish and fish habitat, wetlands, and the atmospheric environment sections:

- "baseline measurements of contaminants should be provided for the complete fish food web (including water, invertebrates, prey fish), and include carbon and nitrogen stable isotope measurements in fish and the complete fish food web. These measurements should then be used to inform the assessment of effects from contaminants, including bioaccumulation of contaminants, in fish."

DP4 will not involve discharges to the environment of biomagnifying substances. Biomagnifying substances, if present in sediments from historical industrial activities, could theoretically be liberated and potentially made more bioavailable through dredging during construction of DP4. GCT appreciates the importance of assessing these potential effects, however based on existing studies and the short duration of dredging, such an intensive and costly data collection program is not warranted. GCT is planning a similar approach to that performed for the RBT2 Environmental Assessment, which involved co-located sediment and invertebrate tissue sampling (i.e., bivalves and crabs). This sampling is expected to better describe the potential risk of project-related impacts on marine organisms from sediments disturbances during dredging. Food web modelling would be undertaken for specific contaminants and species (e.g., PCB contamination in Southern Resident Killer Whale), depending on the results of sediment sampling and the associated potential effects. This is consistent with previous Environmental Assessments, including RBT2.

GCT believes there are other methodologies that can support the assessment and that the Final JGs should allow for flexibility in methodology, as for other VCs.

Next Steps

GCT is continuing to advance workplans for field surveys and will continue to engage Indigenous nations and regulators on those plans prior to implementation.

Requested Action

The Draft JGs, including section 8.4 (Assessment Methodology for Existing Conditions), should be updated to provide flexibility in assessment methodologies for requirements associated with various VCs in sections 9, 10 and 11 of the Draft JGs to achieve the objectives set out in the Draft JGs, rather than defining unprecedented levels of additional survey effort.

5 DUPLICATION OF VALUED COMPONENTS

"Marine Fish and Habitat" was proposed as a Valued Component (VC) by GCT (see appendix 1 of the Draft JGs), this has been changed to "Marine Fish and Fish Habitat" in Section 9.9 and an additional VC entitled "Marine Vegetation and Wetlands" has been added in Section 9.11 the Draft JGs issued by the IAAC and EAO.

GCT's Understanding

GCT understands that the wording may have been changed to reflect federal terminology and overlapping responsibilities of DFO and ECCC. However, GCT is of the opinion that fish and fish habitat should be under one VC, because it is more efficient, will result in a better assessment if they are combined, and will link more seamlessly with *Fisheries Act* and *Species at Risk Act* requirements that will be critical to the Impact Assessment. GCT understands that DFO would support this approach.

This would not mean that other VCs could not rely on output from the combine "Marine Fish and Habitat" VC (e.g., assessing biofilm, birds or wetlands at an ecosystem level, as per the Draft JGs). The "Marine Fish and Habitat" VC would inform the assessment of other VCs, as noted in the Draft JGs, Appendix 1, Figure 2 VC/Element linkage matrix. GCT considered this carefully and specifically named the VC "Marine Fish and Habitat" rather than "Marine Fish and Fish Habitat" to acknowledge the importance of marine habitats to birds.

There is also duplication of scope between the VCs as currently described in the Draft JGs. The subcomponents: eelgrass; macroalgae; intertidal marsh; sandflat; mudflat; and shallow subtidal, listed within the Draft JGs are required to be assessed under both VCs to meet differing requirements. This would be inefficient, complex and provide no additional value.

Next Steps

GCT would appreciate further discussion with IAAC, EAO, DFO and ECCC on how best to structure the IA VCs, and looks forward to reviewing the feedback from Indigenous nations and others through comments provided on the Draft JGs.

Requested Action

GCT's preference is to use the "Marine Fish and Habitat" and excluded the VC entitled "Marine Vegetation and Wetlands" in Section 9.11 to avoid duplication.

6 INDIGENOUS INTERESTS

GCT's objective is to engage with, empower, and, by working with the IAAC and EAO, support Indigenous nations to conduct their own assessments. GCT will work to achieve a deep level of collaboration and meaningful engagement with Indigenous nations. As a core principle, GCT will empower and resource Indigenous nations that are planning to conduct their own assessments or participate in the DP4 IA. GCT will also request to use available IK and other applicable information from Indigenous nations, and where required provide resourcing support to obtain such information through agreements.

6.1 Clarity on Consensus Seeking

Whereas EAO guidance (2018) places responsibility for consensus building with the regulator, Section 5.2.1 Record of Engagement may be seen to shift the requirements for consensus seeking further to the proponent, stating that GCT's engagement record should demonstrate that GCT "sought to build consensus and obtain the agreement of Indigenous nations regarding information presented in the Impact Statement."

GCT's Understanding

GCT understands that IAAC views consensus seeking in the same way as EAO but sees it as an evolving goal, not a formalized legislative requirement or defined term. IAAC sees the DP4 IA as an opportunity for GCT to work collaboratively with regulators on consensus seeking. EAO similarly frames consensus seeking as a part of GCT's relationship building with Indigenous nations. GCT understands that consensus seeking is the regulator's responsibility, but EAO delegates certain procedural aspects of that responsibility to the proponent.

GCT's understanding of its obligations are that it will continue to engage as it has proposed through the Early Engagement Plan, and support the Crown in seeking to achieve consensus amongst Indigenous nations.

Next Steps

IAAC and EAO's positions on consensus seeking leave a considerable degree of ambiguity about how IAAC understands consensus seeking, how much of its responsibility EAO and IAAC intend to delegate to GCT, and how lack of response on consensus seeking engagements could affect the IA schedule. GCT will continue to take reasonable steps to work with regulators to seek consensus with Indigenous nations on the DP4 IA.

Requested Action

Update the Draft JGs to clarify and define responsibilities for consensus seeking with Indigenous nations. While GCT recognizes that practically consensus seeking is a shared responsibility between the proponent and the regulators, GCT requests that IAAC and EAO clarify and expand upon the role of the Crown and its obligations and responsibilities.

6.2 Clarity on Collaboration Processes

GCT understands that the JGs require engagement with Indigenous nations to request feedback on proposed IA methodologies and contribute to or lead authorship of the Indigenous interests sections of the DP4 Impact Statement. The Draft JGs state that GCT cannot default to sole authorship and must request and facilitate Indigenous nations' collaborative authorship.

Section 12 (Assessment of Impacts on Indigenous interests) states that: "Ideally, each nation-specific assessment should be done in a way that works best for nations such that the nations set the methodology, do the analysis and provide their conclusions on each requirement included in the definition of Indigenous interests." For GCT, Indigenous-led assessments are preferred, therefore, attempts to complete Indigenous-led assessments must be made and thoroughly documented. Approaches that are not full Indigenous-led assessments but include Indigenous nation input on IA methodology may be the outcome for some Indigenous nations. If Indigenous nation-led authorship is not possible, GCT will support collaborative authorship or will complete proponent-led authorship. The record of GCT's engagement with Indigenous nations will explain GCT's approach.

GCT's Understanding

GCT understands that while the collaborative authorship requirements primarily apply to the Indigenous interests sections, the Draft JGs also prescribe a two-way information flow between the VC and Indigenous interests sections. GCT will demonstrate how IK, Western science, and Indigenous nation's input informed the VCs. The two sections will be interwoven so the Panel can move back and forth between the VC and Indigenous Interests sections to easily understand the inputs and linkages.

Next Steps

GCT will continue engagement efforts to gather Indigenous nations' input on VCs and Indigenous Interests assessment methodologies.

Requested Action

Revisions to the Draft JGs to include provisions for how to address situations where Indigenous nation-led or collaborative authorship requirements may not be achievable. This language should state that if Indigenous nations are unable to author or contribute to collaborative authorship of the Indigenous Interests assessment sections, GCT will author the Indigenous Interests assessment using the best available sources and describe its engagement efforts as documented in the engagement log.

6.3 Historical Cumulative Impacts on Indigenous Interests

The Draft JGs include a new Section 12.2 Cumulative Impacts on Indigenous Interests, which requires GCT to preface the Section 13 Indigenous Interests assessment chapters with an analysis of past conditions that supported the meaningful exercise of Indigenous rights. This requirement is intended to establish the context of existing cumulative impacts on Indigenous interests before considering project-specific impacts. It requires GCT to evaluate how current conditions may be constraining an Indigenous nation's ability to pursue their Indigenous interests.

This requirement is linked to a new and broader requirement articulated in Section 12.3 Existing Conditions that the proponent assess the Project's impacts on Indigenous nations' efforts to restore traditional practices and access to the resources required to support those practices.

GCT's Understanding

GCT understands that the most important consideration is to assess historical baselines which pertain to the Project and to use information provided by Indigenous nations about historical and existing cumulative effects. For example, an 1800s baseline for an Indigenous nation's mountain land use would not be relevant for the DP4 project, while an 1800s baseline for fishing off Robert's Bank would be relevant and required. GCT understands that IAAC and EAO expect GCT to provide Indigenous nations with funding to use historical and existing cumulative effects information in the IA when an Indigenous nation has gathered that information.

In response to historical and existing cumulative effects, Indigenous nations have initiated revitalization efforts to improve their ability to exercise their Indigenous Interests. GCT understands that IAAC and EAO expect GCT to collect data on the Project's potential impacts on revitalization efforts identified as key issues by Indigenous nations. An example would be an activity currently not practiced due to historical cumulative effects, which Indigenous nations are working to revitalize.

Next Steps

GCT will continue engagement efforts to request Indigenous nations' input to identify historical cumulative effects on Indigenous interests and efforts to revitalize traditional practices, which relate to the DP4 IA.

Requested Action

Revisions to the Draft JGs to reflect that GCT will engage with Indigenous nations to identify the context of existing cumulative impacts on Indigenous interests and efforts to revitalize traditional practices as they pertain to DP4. If Indigenous nations are unable to author or contribute to collaborative authorship, GCT will author these sections using the best available sources and describe its engagement efforts as documented in the engagement log.

6.4 Agreement on Mitigation Measures

Section 12.4.1 Mitigation and Enhancement Measures of the Draft JGs require impacts to be carried through the rest of the assessment of project impacts on Indigenous interests when Indigenous nations do not agree with GCT's proposed mitigation measures. In alignment with this requirement, GCT will work with Indigenous nations on mitigation measures and will consider their input on the likelihood of proposed measures effectively preventing residual impacts.

GCT's Understanding

GCT understands that if an Indigenous nation disagrees with the efficacy of a given mitigation measure, GCT should carry the impact through the rest of the assessment of Project and cumulative impacts on Indigenous interests. GCT will also discuss points of disagreement on the efficacy of the mitigation measure and how impacts are characterized in the Indigenous nation-specific assessments in Section 13. GCT understands that it may be necessary to work with the Indigenous nation to develop other mitigations and proposed solutions. These proposed solutions will support the Review Panel's public interest decision, which will consider the Project's impacts on Indigenous interests.

If all or many Indigenous nations disagree with a proposed mitigation, then GCT may reconsider the proposed mitigations or add additional mitigations (preferably developed in collaboration with Indigenous nations). GCT may also add a discussion in the relevant VC section explaining why Indigenous nations disagree with GCT's VC conclusions. GCT recognizes the importance of drafting a nuanced Impact Statement that presents both GCT's and Indigenous nations' understanding of the Project's impacts and the efficacy of proposed mitigations.

***Next* Steps**

Authorship or collaborative authorship of each Indigenous Interests chapter will be scheduled to support targeted engagement with Indigenous nations (that choose to participate) on proposed mitigation measures.

Requested Action

Revisions to the Draft JGs to clarify that points of disagreement on the efficacy of mitigation measures and how impacts are characterized will be addressed in the Indigenous nation-specific assessments in Section 13 rather than in the VC section, and provide clarity on the threshold at which GCT must reconsider proposed mitigations for the VC assessment.

7 CONCLUSIONS

GCT is committed to continued engagement with Indigenous nations as well as municipal, provincial and federal regulatory authorities to effectively satisfy the direction and requirements of the JGs. However, there are a number of requirements in the Draft JGs that GCT views can be interpreted as unnecessarily prescriptive, unrealistic in-terms of scope and schedule, impractical, and unreasonably beyond the anticipated requirements for a project of this nature considering past precedent. To meet the purposes of the Impact Assessment Act (IAA) and the Environmental Assessment Act (EAA), the Draft JGs ought to be clarified and amended as necessary.

The JGs show that the need for Indigenous engagement and collaboration is continuing to evolve for provincially and federally regulated projects. GCT is committed to collaboration and engagement with Indigenous nations and to support them, in coordination with the IAAC and the EAO, in conducting their own assessments, where so desired by the Nation. GCT also supports Canada and British Columbia's deep commitment to reconciliation, which includes the procedural reconciliation embedded in the IAA and the EAA. The Impact Statement will reflect the documented decisions, preferences, and responses GCT receives from Indigenous nations.

GCT recognizes that meeting the requirements in the JGs will place substantial resourcing demands on Indigenous nations to contribute to the IA process and collaborative authorship and GCT will work with regulators to support adding the necessary capacity. GCT is appreciate of, and looking forward to reviewing, the comments submitted during the public comment period. We are committed to assessing and managing potential adverse effects within our care and control, enhancing positive effects where possible, and fostering a meaningful, transparent, and efficient IA that advances the purposes of the IAA, EAA, and reconciliation.

Sincerely,

<Original signed by>

Mike McLellan
Vice President, Project Development
GCT Global Container Terminals Inc.

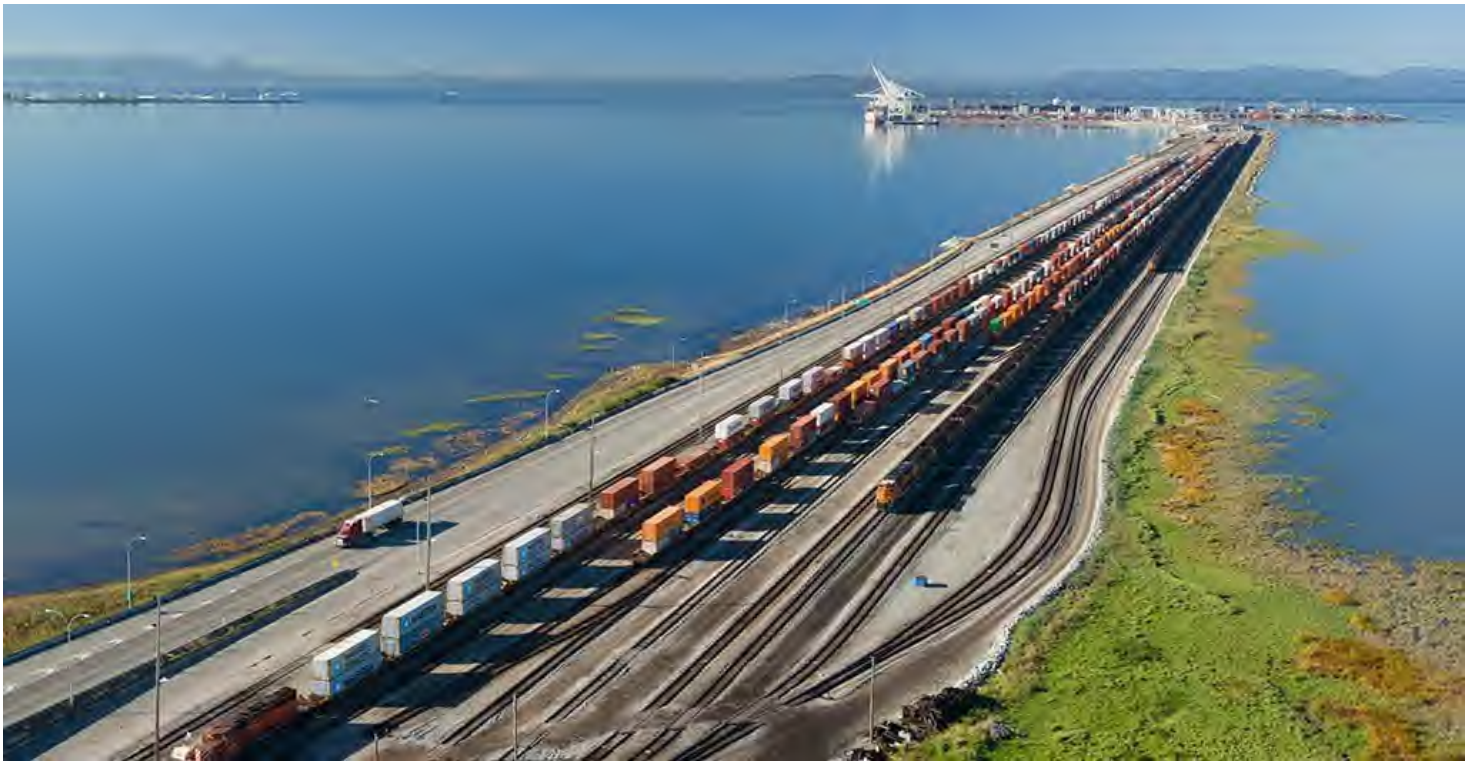
APPENDIX A

GLOBAL CONTAINER TERMINALS CANADA

GCT Deltaport Expansion- Berth Four Project

Road and Rail Activities Incidental to the Proposed GCT Deltaport Expansion – Berth Four Project

January 6, 2022



Davies Transportation Consulting Inc.

Road and Rail Activities Incidental to the Proposed GCT Deltaport Expansion - Berth Four Project

Table of Figures

1 Overview

This Memo is an update to GCT's two memos on this topic dated May 11, 2021 and August 25, 2021 which were previously submitted to the Impact Assessment Agency of Canada and the B.C. Environmental Assessment Office. It includes updated information and analysis on incremental road traffic attributable to the GCT Deltaport DP4 project and potential cumulative impacts, including:

- Updated truck and rail traffic forecasts for GCT Deltaport, including the DP4 expansion.
- A review of port-related trucking and rail routes and highway and rail infrastructure.
- A summary of previous and proposed infrastructure improvements affecting the efficiency of regional road transport.
- An assessment of potential impacts of incremental GCT Deltaport DP4 traffic on rail capacity and road/rail traffic conflicts on the Roberts Bank Rail Corridor.

Based on this analysis, GCT Canada submits that the geographic extent of the road traffic impacts to be considered in the environmental review process should be limited to the GCT Deltaport terminal lease boundary because:

- Current and forecast GCT Deltaport truck traffic accounts for a relatively insignificant share of total traffic on regional roads, and the incremental traffic from DP4 will not result in an increased share of total traffic.
- Major investments close to the terminal and on the major routes for GCT Deltaport truck traffic south of the Fraser River have resulted in greatly improved truck access and reduced congestion at Roberts Bank.
- The BC Ministry of Transportation and Infrastructure (BC MOTI) has announced that a new, eight-lane immersed tube tunnel will replace the existing George Massey Tunnel on Highway 99. The new eight-lane tunnel will be in operation in 2030, prior to completion of the DP4 expansion.
- The new crossing should effectively mitigate current congestion issues, and the incremental traffic from the DP 4 project is unlikely to significantly affect either the design or the outcome of the project. Based on a sample of VFPA truck GPS data, Deltaport truck traffic accounted for only 1.6% of daily George Massey Tunnel traffic in 2018 and less than 1% of total traffic in peak periods.
- BC MOTI have indicated that further modelling should be undertaken when an updated version of the regional transportation model and/or as the George Massey Crossing designs evolve in the future, to confirm the designs and findings presented in this report. GCT Canada

would be happy to collaborate with BC MOTI in these efforts as required. Independent modelling of DP4 traffic impacts is impractical because BC MOTI is progressively upgrading the Regional Transportation Model for traffic forecasting and design of the Highway 99 crossing which will replace the George Massey Tunnel, and the outcome will depend on design decisions which have not been finalized.

GCT Canada submits that the geographic extent of the rail impacts to be considered in the environmental review process should be limited to the GCT Deltaport terminal lease boundary because:

- Based on updated rail traffic forecasts, the incremental traffic attributable to the DP4 project will not require increases in rail capacity on the Roberts Bank Rail Corridor. Recent modelling of rail capacity by Mott MacDonald for VFPA using the Port's sophisticated rail simulation model forecasts that the Roberts Bank rail corridor will be well below estimated capacity based on a traffic forecast of 82.0 million tonnes per year for Roberts Bank terminals.[1] GCT's updated forecast of total tonnage for 2060 based on Westshore traffic and GCT Deltaport container traffic (with the DP4 expansion) is 63.8 million tonnes (26.0 million tonnes of coal, 4.5 million tonnes of potash, and 33.3 million tonnes of containers[2]) which suggests that rail capacity on the existing corridor will be sufficient for anticipated demand until at least 2060.
- A study to identify and recommend mitigation measures for road/rail conflicts in the Roberts Bank Trade Area was done for the Gateway Collaboration Transportation Forum by CH2M and Urban Systems in 2015.[3] The study identified four locations on the Roberts Bank rail corridor as potential candidates for grade separation projects. Train traffic along the corridor was forecast to increase by 100% or 14 trains per day[4] by 2031. Even with an anticipated increase in rail traffic of this magnitude, the RBTA study did not identify a pressing need for investment in any of these projects and noted low benefit/cost ratios for all of them due to relatively low road traffic volumes. Based on the GCT forecast, there will be no increase in trains per day at these crossings by 2031. Start-up of the GCT DP4 project in 2033 will add an additional two trains per day, with an incremental increase in delays for road traffic of less than 7 minutes at each crossing.

1 Gateway Rail Assessment 2030 Executive Summary p.5.

2 Based on VFPA statistics on container traffic by tonnes and TEUs in VFPA's Statistics Overview 2020 (7.7 tonnes per TEU).

3 Roberts Bank Trade Area Study Executive Summary CH2M and Urban Systems for Gateway Collaboration Transportation Forum April 2016.

4 "Trains per day" indicates the number of one-way train trips in both directions over a specific line segment in one day.

2 ROAD TRAFFIC

2.1 SUMMARY AND CONCLUSIONS

The information and analysis in this section includes updated information and analysis on incremental road traffic attributable to the GCT Deltaport DP4 project and potential cumulative impacts, including:

- An updated truck traffic forecast for GCT Deltaport, including the DP4 expansion.
- A review of port-related trucking routes and highway infrastructure.
- A summary of previous and proposed infrastructure improvements affecting the efficiency of regional road transport.

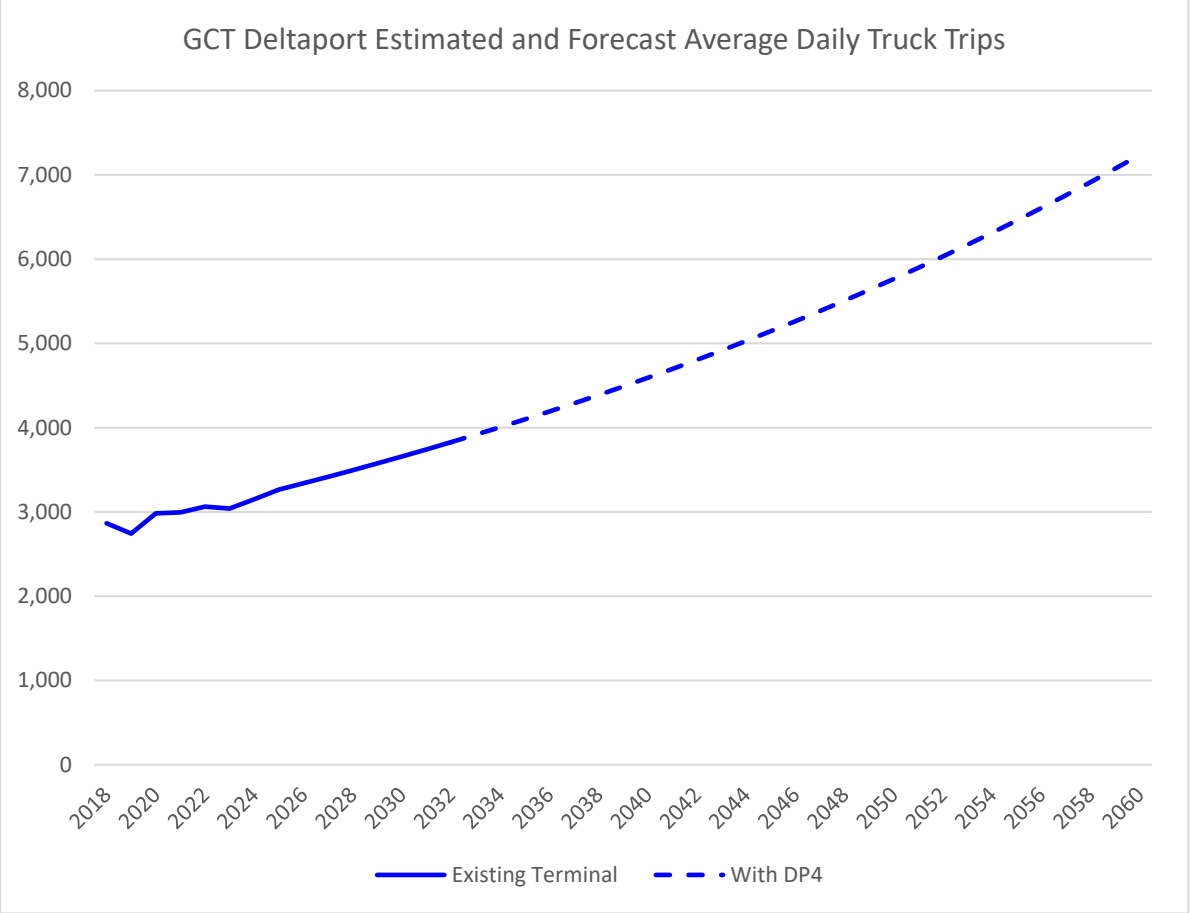
Based on this analysis, GCT Canada submits that the geographic extent of the road traffic impacts to be considered in the environmental review process should be limited to the GCT Deltaport terminal lease boundary because:

- Current and forecast GCT Deltaport truck traffic accounts for a relatively insignificant share of total traffic on regional roads, and the incremental traffic from DP4 will not result in an increased share of total traffic.
- Major investments close to the terminal and on the major routes for GCT Deltaport truck traffic south of the Fraser River have resulted in greatly improved truck access and reduced congestion at Roberts Bank.
- The BC Ministry of Transportation and Infrastructure has announced that a new, eight-lane immersed tube tunnel will replace the existing George Massey Tunnel on Highway 99. The new eight-lane tunnel will be in operation in 2030, prior to completion of the DP4 expansion.
- The new crossing should effectively mitigate current congestion issues, and the incremental traffic from the DP 4 project is unlikely to significantly affect either the design or the outcome of the project. Based on a sample of VFPA truck GPS data, Deltaport truck traffic accounted for only 1.6% of daily George Massey Tunnel traffic in 2018, and less than 1% of total traffic in peak periods.
- BC MOTI have indicated that further modelling should be undertaken when an updated version of the regional transportation model and/or as the George Massey Crossing designs evolve in the future, to confirm the designs and findings presented in this report. GCT Canada would be happy to collaborate with BC MOTI in these efforts as required. Independent modelling of DP4 traffic impacts is impractical because BC MOTI is progressively upgrading the Regional Transportation Model for traffic forecasting and design of the Highway 99 crossing which will replace the George Massey Tunnel, and the outcome will depend on design decisions which have not been finalized.

2.2 GCT DELTAPORT ROAD TRAFFIC

Estimated and forecast average weekday truck traffic to and from the GCT Deltaport container terminal is shown below. Truck trips are estimated based on actual and forecast gate moves for containers delivered and received by truck, multiplied by a factor of 1.63 to account for two-way truck moves.[5] Truck traffic growth attributable to DP4 occurs beginning in 2033. Traffic is anticipated to reach approximately 7,000 one-way trips (3,500 trucks) per day by 2060.

Figure 2-1 GCT Deltaport Estimated and Forecast Truck Trips per Day 2018 – 2060.



5 The 1.63 factor is based on the findings of the Container Capacity Improvement Program Road Traffic Distribution Report prepared for VFPA by Delcan, Worley Parsons, Collings Johnston and Mainline Management September 27, 2012 (p. 9) which assumes 37% dual transactions (i.e. trips picking up and dropping off a container) and 63% single transactions (trips either picking up or dropping off a container). This factor was also used in the 2015 RBT2 Environmental Impact Statement (Appendix 4-D of the Roberts Bank Traffic Matrix (Delcan 2015).

2.3 ROADS AND TRAFFIC ROUTES

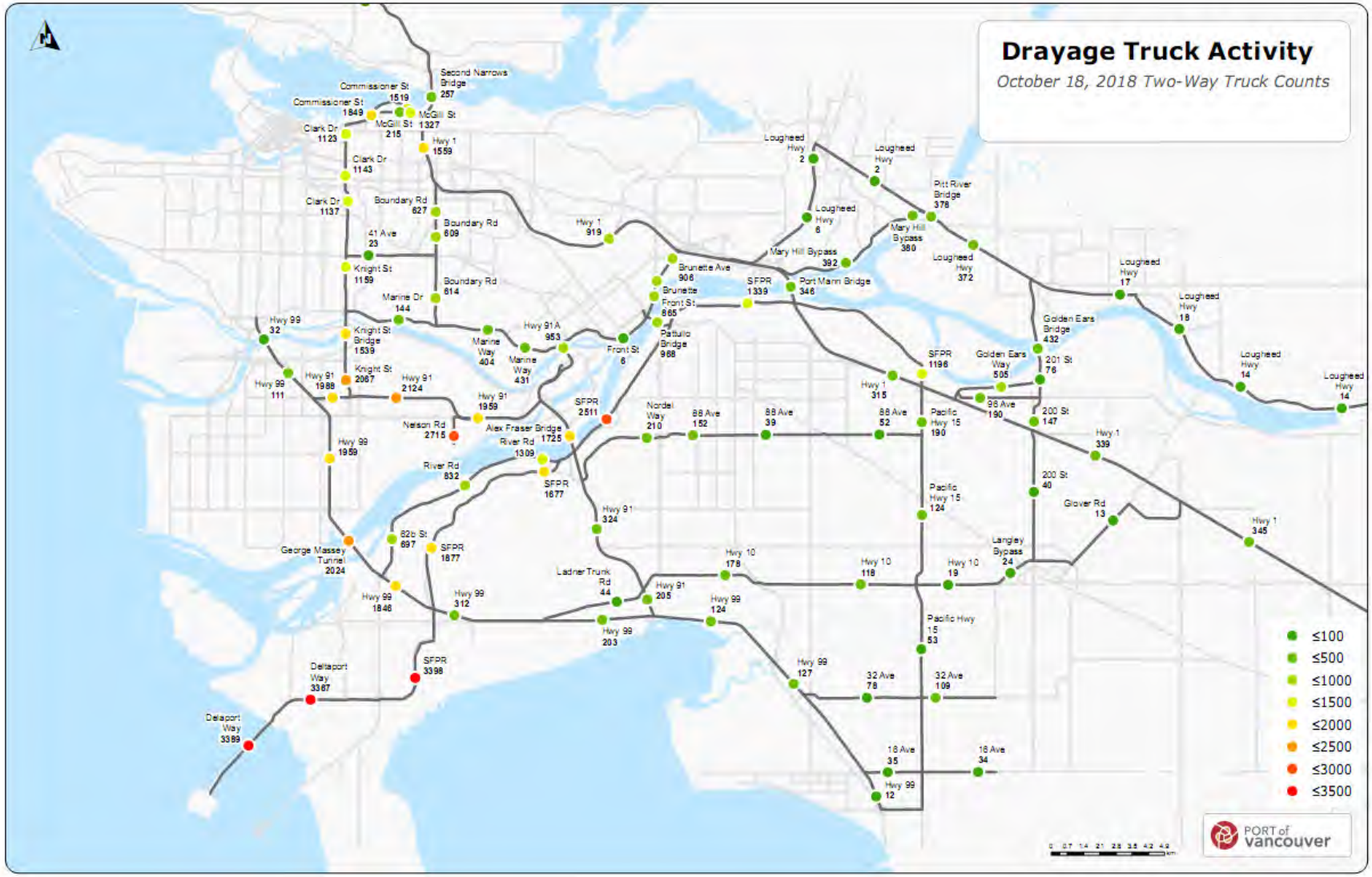
All trucks licensed to serve Port of Vancouver terminals are required to install a Global Positioning System (GPS) transponder which enables tracking of truck movements. The primary purpose of truck tracking is to monitor turn times at the container terminals (i.e. the time required to pick up or drop off a container). Terminal operators are required to compensate drivers for excessively long turn times. The GPS system is maintained by VFPA and generates complete data on all container truck movements within (and outside) the Lower Mainland.

The figure below shows the distribution of container truck traffic based on VFPA's GPS data for October 18, 2018. October 2018 was identified as a peak shipping month by the VFPA and was used to evaluate container truck traffic activity through the George Massey Tunnel (GMT) and other crossings in response to a request by the Impact Assessment Agency of Canada for the Environmental Review of the proposed RBT2 container terminal at Roberts Bank.[6]

The highest concentration of container truck traffic is on the Deltaport causeway, Deltaport Way and the South Fraser Perimeter Road (Highway 17) west of Highway 99. Other heavily used routes include Nelson Road (access to VFPA's Richmond Logistics Hub, which contains a concentrated cluster of container-handling facilities) and the South Fraser Perimeter Road between the Alex Fraser and Patullo bridges. There is a significant volume of traffic at the George Massey Tunnel and Alex Fraser Bridge crossings.

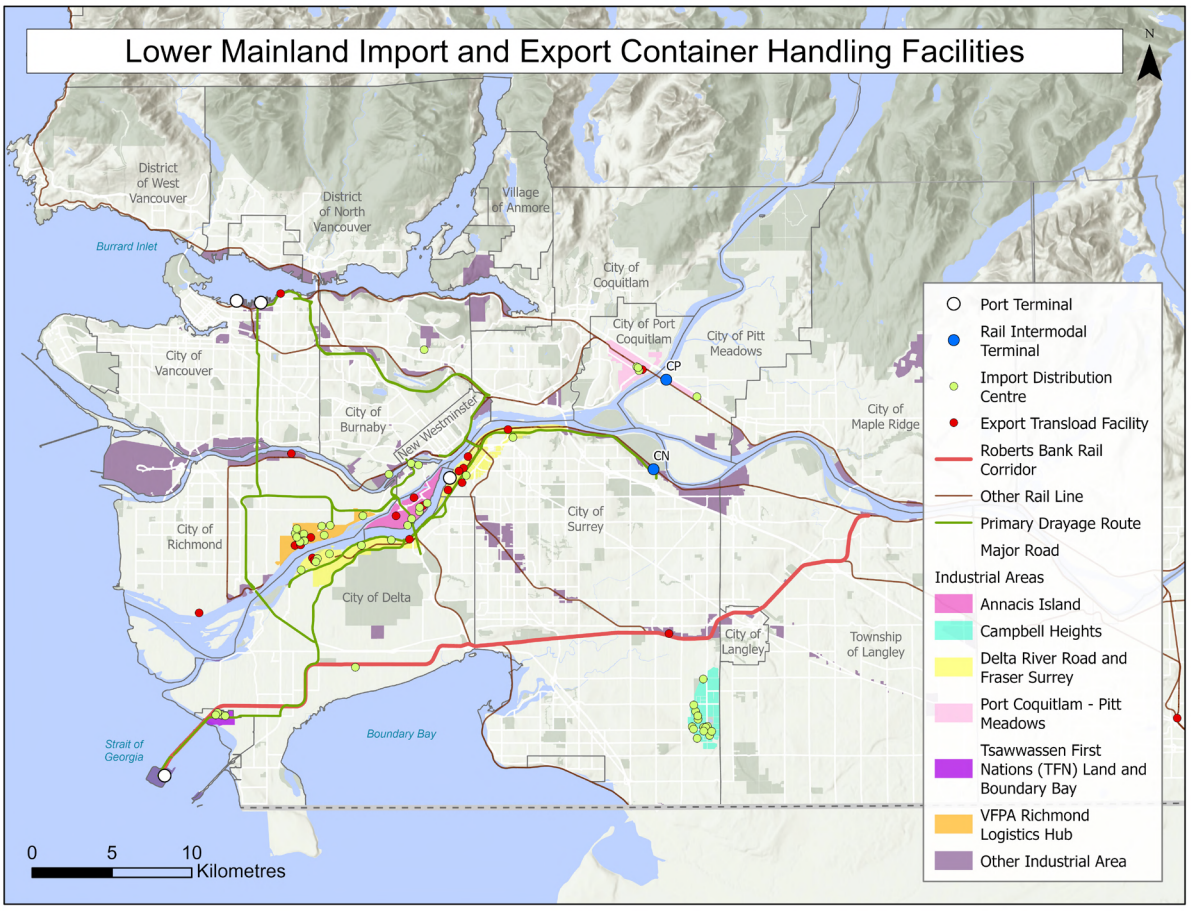
6 Undertaking #3 – Traffic Projections through George Massey Tunnel Roberts Bank Terminal 2 Project Vancouver Fraser Port Authority May 29, 2019 https://iaac-aeic.gc.ca/050/evaluations/document/130049

Figure 2-2 Port Drayage Truck Traffic on the Lower Mainland Road Network 2018.



The primary influence on traffic patterns is the location of container handling facilities which receive loaded import containers from the port terminals and/or dispatch loaded export containers to the port terminals. Locations of major facilities are shown in the figure below.

Figure 2-3 Lower Mainland Import and Export Container Handling Facilities.



Historically major nodes for container trucking have included:

- VFPA's Richmond Logistics Hub on the north shore of the main channel of the Fraser River.
- Delta River Road and Fraser Surrey on the south shore of the Fraser River.
- Annacis Island.
- The CN intermodal terminal in Surrey.
- The CP intermodal terminal in Pitt Meadows.

Recent expansion in the Lower Mainland has occurred in several areas, including the 1,900-acre Campbell Heights industrial business park in South Surrey; the initial 90-acre Phase 1 development of the 300-acre Deltaport Logistics Centre on Tsawwassen First Nations (TFN) lands close to Deltaport in Delta; and infill and redevelopment along River Road in Delta following completion of the South Fraser Perimeter Road linking Highway 1 to Deltaport at Roberts Bank.

The availability of industrial land for development of new logistics facilities is limited. Metro Vancouver's 2020 Industrial Land Inventory found that "there are few vacant sites available for 'trade -oriented' logistics users, namely large sites with minimal constraints and close to major transportation infrastructure."[7]

Potential future areas for expansion of logistics facilities include:

- The Richmond Industrial Center[8] is being developed to the west of the existing VFPA Richmond Logistics Hub.
- VFPA has purchased a 230-acre parcel of agricultural land (Gilmore Farm) north of the existing VFPA Richmond Logistics Hub which may be developed for industrial use in the future.
- The City of Surrey recently moved to redesignate 617 acres of rural land in South Campbell Heights to industrial use.
- Further development on TFN lands close to Deltaport.

2.4 TERMINAL AREA

Congestion due to trucks queuing at Deltaport has occurred in the past. A number of operational and infrastructure improvements have been made to avoid congestion including:

- Routine night gates and changes to the truck appointment system implemented in 2014 have significantly reduced truck waiting times at the terminal. The Port of Vancouver's GPS Weekly Turn Time Report by Terminal for the week of December 4-11 shows average Total Turn Times at Deltaport of 48 minutes, of which Staging Turn Time (queuing outside the terminal) accounts for 18 minutes and Terminal Turn Time (processing time inside the terminal) accounts for 29 minutes.[9]

- Construction of the Deltaport Truck Staging Facility. The new facility has the capacity to accommodate up to 140 trucks, including early arrivals. The facility includes a secure vehicle access gate requiring a valid Port Pass, a commercial vehicle safety and enforcement area for truck safety inspections, a new highway exit ramp to facilitate access from Highway 17, and an additional road exit to allow traffic access onto Deltaport Way.[10] Total cost of the facility was approximately $18 million. Since the facility opened in the summer of 2020, the facility has been sparsely used, indicating that truck operations at GCT Deltaport remain generally fluid, but the facility is available when the need arises.[11]

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7 Metro Vancouver 2020 Regional Industrial Lands Inventory: Technical Report Metro Vancouver Regional Planning March 2021 p. 84.

8 "Richmond Industrial Centre to deliver 3M sq ft in Metro Vancouver" Real Estate News Exchange Nov. 15, 2021 https://renx.ca/3m-sq-ft-richmond-industrial-development-metro-vancouver/

9 "GPS Weekly Turn Time Report by Terminal" VFPA https://www.portvancouver.com/wp-content/uploads/2021/12/Dec-14-2021-GPS-Weekly-Turn-Time-Report-by-Terminal.pdf

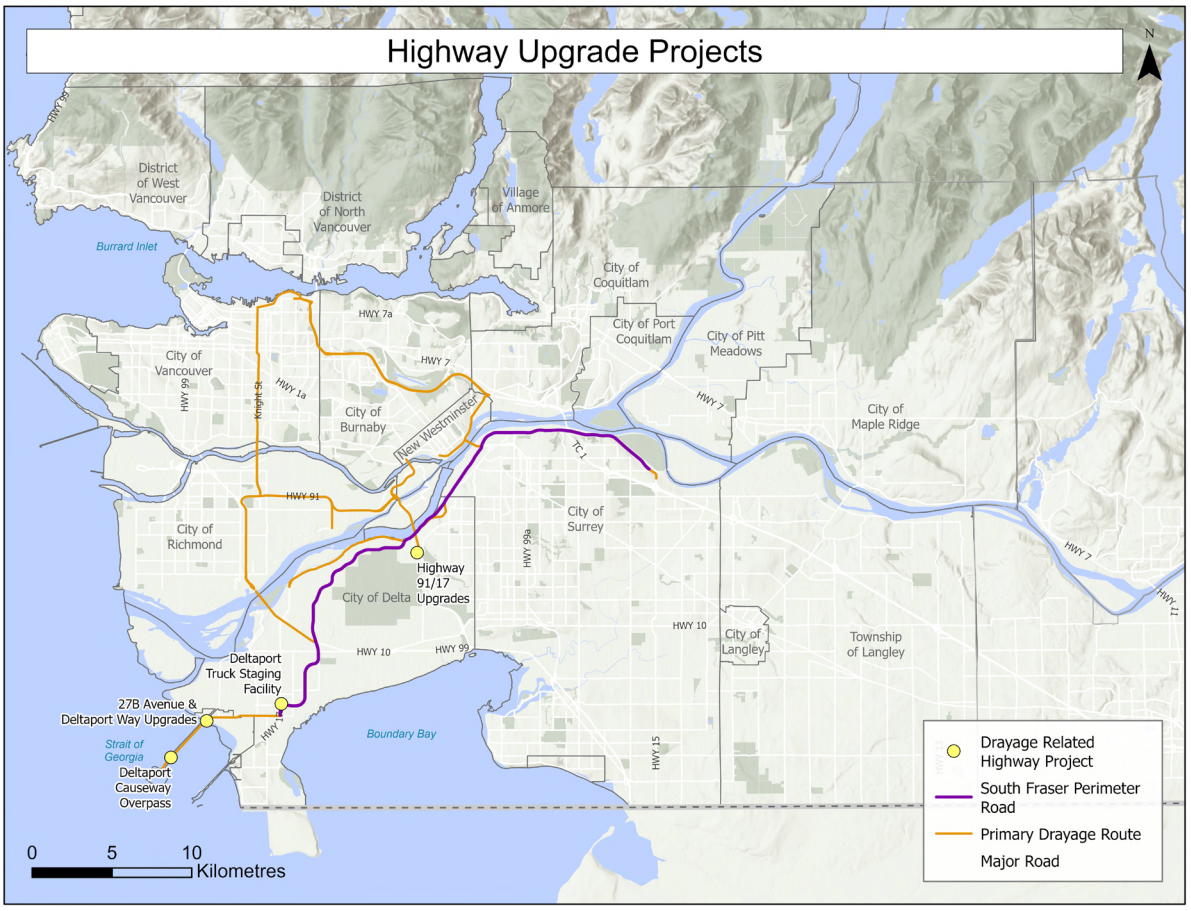
10 "Deltaport Truck Staging Facility" VFPA https://www.portvancouver.com/projects/road-and-rail/deltaport-truck-staging-facility/

11 "$18 million Delta port truck staging facility mostly empty" Vancouver is Awesome April 23, 2021 https://www.vancouverisawesome.com/local-news/18-million-delta-port-truck-staging-facility-mostly-empty-3654544

2.5 MAJOR HIGHWAY IMPROVEMENTS

There have been major investments in highway infrastructure south of the Fraser River which have improved road access to GCT Deltaport.

Figure 2-4 Major Upgrades to Drayage Routes.



These major projects include:

- South Fraser Perimeter Road: The South Fraser Perimeter Road (SFPR) project involved the construction of a new four-lane route, approximately 40 kilometers in length, located on the south side of the Fraser River. The road extends from the existing Highway 17/Deltaport Way interchange, through Delta and Surrey, and along the south bank of the Fraser River, with connections to Highways 1, 15, 17, 91, 99 and the Golden Ears Bridge. The total capital cost was budgeted at CDN$ 1.3 billion. Construction was completed in December 2013. The SFPR was renamed Highway 17 on completion. It provides rapid access from Deltaport to major container-handling facilities south of the Fraser River and to the CN intermodal terminal in Surrey.

- Completion of the Deltaport Causeway Overpass as part of the Deltaport Terminal, Road and Rail Improvement Project in 2014. Construction was overseen by VFPA and the project cost was $44.7 million.

- Highway 91/17 and Deltaport Way Upgrade Project: The Highway 91/17 and Deltaport Way Upgrade Project is a combination of improvements to the existing Highway 91, Highway 17, Highway 91 Connector and Deltaport Way to improve safety and efficiency. These upgrades will improve local and commercial travel time and reliability in the area, reduce conflicts between commercial vehicles and other traffic, and support community and economic development. They also complement Alex Fraser Bridge upgrades and 72nd Avenue Interchange improvements. The Highway 91/17 and Deltaport Way Upgrade Project includes:

    - Highway 91 at Nordel Interchange—upgraded ramps to and from Delta, improved acceleration and deceleration lanes and additional through-lanes for Nordel Way traffic crossing over Highway 91.

    - Highway 91 Connector at Nordel Way intersection upgrades—combination of direct access roads and additional turning lanes to remove one signal light and improve all movements, including significantly improved access to and from the Nordel Way commercial vehicle inspection station and truck parking area.

    - A new interchange at Highway 17 and Highway 91 Connector (Sunbury) and improvements to the River Road connection—replace the existing signalized intersection and eliminate the need for an at-grade rail crossing to access the highway.

    - Intersection improvements at Highway 17 at 80thStreet (Tilbury)—upgrade the connection from 80th Street to Highway 17 westbound, to improve merging and reduce queuing.

    - 27B Avenue to Deltaport Way access improvements—providing a smoother, safer merge for westbound traffic.

    - 27B Avenue upgrades between Deltaport Way and 41B Street—roadway widening and upgrading in cooperation with Tsawwassen First Nation (TFN) to improve access to industrial lands and the Canadian Border Service Agency's container examination facility.

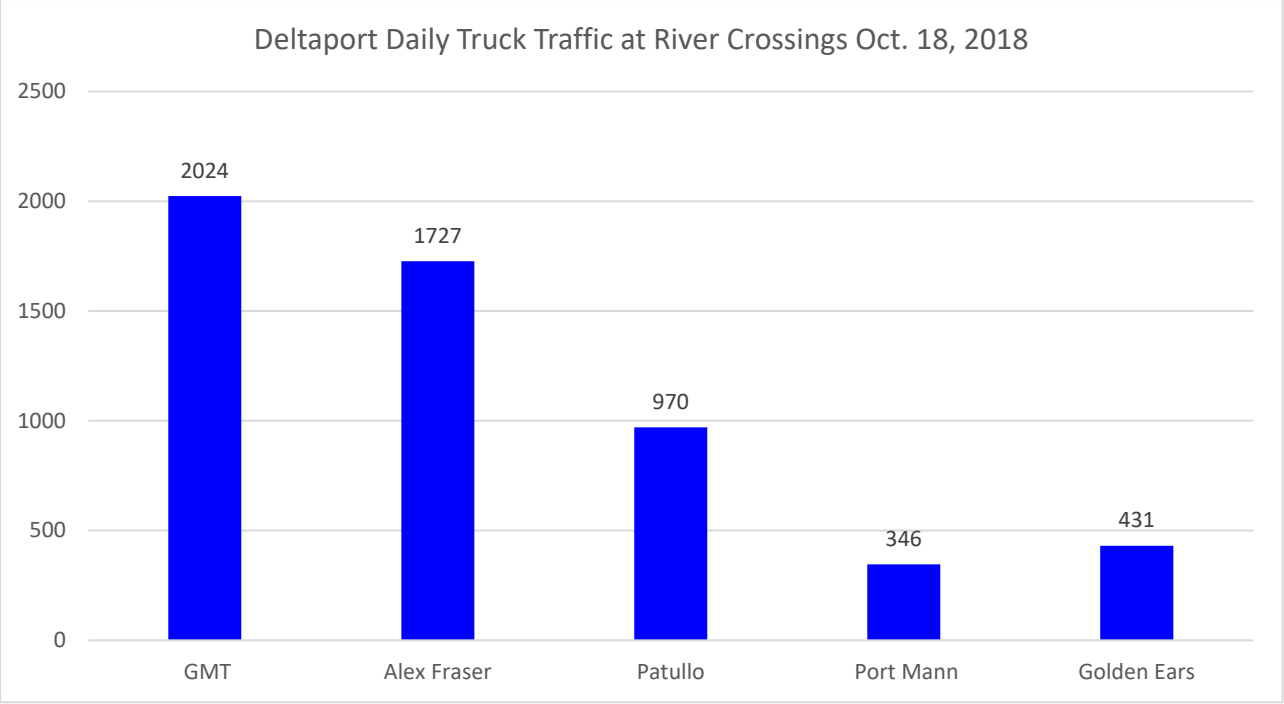
These projects can be viewed as enhancements to the South Fraser Perimeter Road project (now Highway 17). Of these projects, the last two (27B Avenue projects) are being undertaken primarily to benefit port truck traffic at Deltaport and the newly developed Tsawwassen First Nations industrial lands. The cost of the entire project is estimated at CDN$ 260 million. Construction began in spring 2020.

2.6 RIVER CROSSINGS

The distribution of port-associated truck traffic among the river crossings on October 18, 2018 is shown below.[12]

12 Source: Undertaking #3 – Traffic Projections through George Massey Tunnel

Figure 2-5 Port-Associated Daily Truck Traffic at River Crossings October 18, 2018.



The primary crossings for port-related truck traffic are the George Massey Tunnel (GMT) and Alex Fraser Bridge, which account for 37% and 31% respectively. Total port-related truck trips accounted for 2.3% of total traffic at the George Massey Tunnel. Truck trips through the George Massey Tunnel to and from Deltaport on the same day totalled 1404, accounting for 69% of port-related trips and 1.6% of total traffic.[13]

Potential congestion at the George Massey Tunnel was the only significant road traffic issue identified by the federal environmental review panel for Roberts Bank Terminal 2, which recommended that proposed improvements to the Highway 99 crossing be expedited if the Roberts Bank Terminal 2 project proceeds prior to 2030.[14]

The BC Ministry of Transportation and Infrastructure (MOTI) announced on August 18, 2021 that a new eight-lane immersed tube tunnel will replace the existing George Massey Tunnel on Highway 99, providing a toll-free crossing that aligns with regional interests and an active

13 Undertaking #3 – Traffic Projections through George Massey Tunnel

14 Federal Review Panel Report for the Roberts Bank Terminal 2 Project Prepared by the Review Panel for the Roberts Bank Terminal 2 Project March 27, 2020 p. 341.

transportation connection across the Fraser River. Improvements to the highway corridor near the crossing will begin later this year. The new eight-lane tunnel will be in operation in 2030, with the cost estimated to be $4.15 billion.[15]

Traffic modelling for the new crossing project has been undertaken for BC MOTI using an advance copy version of the Regional Transportation Model Phase 3 (RTM3) as the basis for developing traffic forecasts for the George Massey Crossing. A base year of 2017 has been developed with available land use and traffic count information. Horizon years of 2035 and 2050 have been developed based on land use forecasts developed by Metro Vancouver as part of their Regional Growth Strategy.[16]

Forecasts of annual daily traffic for the new crossing have not been released. However, forecasts of AM and PM peak period traffic have been released. Only a very small portion of daily Deltaport truck traffic transits the George Massey Tunnel during peak periods. Based on the October 18, 2018 data sample, peak hour movements through the George Massey Tunnel accounted for only 1.9% of total Deltaport truck traffic for both AM and PM peak periods. Assuming this pattern remains constant, the table below shows estimated Deltaport truck traffic shares of AM and PM peak traffic on the existing crossing (2017) and the proposed 8-lane crossing (2035), based on the BC MOTI forecasts.[17]

15 “George Massey Crossing” BC MOTI https://engage.gov.bc.ca/masseytunnel/

16 Traffic And Geometrics Technical Report Draft Part 1 British Columbia Ministry of Transportation and Infrastructure George Massey Crossing Technical Services December 16, 2019 p. 21.

17 Model results are taken from Traffic and Geometrics Technical Report Draft Part 1 Technical Memo: GMC Traffic Forecasts (Revised Draft) | Prepared for GNEC / Stantec Project: GMC Long Term Options Evaluation Table 2: 2035 Traffic Forecasts for South of Fraser Crossings p. 24 Technical Memo: GMC Traffic Forecasts (Revised Draft) | Prepared for GNEC / Stantec Project: GMC Long Term Options Evaluation. Time intervals for the peak periods used for the modelling are 07:30 to 08:30 for the AM peak and 16:30 to 17:30 for the PM peak. The data available for Deltaport truck traffic is hourly; peak period traffic was estimated by taking the average of the 07:00-08:00 and 08:00-09:00 periods for the AM peak, and the average of the 16:00-17:00 and 17:00-18:00 period for the PM peak.

Figure 2-6 Deltaport Truck Traffic Share of Peak Period Traffic at the Highway 99 Fraser River Crossing 2017 and 2035.

Deltaport Truck Traffic Share of Peak Period Traffic at the Highway 99 Crossing of the Fraser River 2017 and 2035					
2017 Total Traffic			2035 Total Traffic		
Total Traffic	Deltaport Trucks (2018)	DP Share	Total Traffic	Deltaport Trucks	Deltaport Trucks Share
6890	64	0.9%	8580	77	0.9%
7880	64	0.8%	9780	77	0.8%

Modelling to date suggests that some traffic is likely to shift from the Alex Fraser Bridge when the new crossing is completed, and this may occur with container truck traffic as well. In any case, the new crossing should effectively mitigate current congestion issues, and the incremental traffic from the DP 4 project is unlikely to significantly affect either the design or the outcome of the project.

BC MOTI have indicated that further modelling should be undertaken when an updated version of the regional transportation model and/or as the George Massey Crossing designs evolve in the future, to confirm the designs and findings presented in this report. GCT Canada would be happy to collaborate with BC MOTI in these efforts as required.

3 RAIL TRAFFIC

3.1 SUMMARY AND CONCLUSIONS

The information and analysis in this section includes updated information and analysis on incremental rail activity attributable to the GCT Deltaport DP4 project and potential cumulative impacts, including:

- Current rail infrastructure and operations;
- Updated rail traffic forecasts on the Roberts Bank rail corridor based on recent developments; and
- An assessment of potential impacts of incremental GCT Deltaport DP4 traffic on rail capacity and road/rail traffic conflicts on the Roberts Bank rail corridor.

Based on this analysis, GCT Canada submits that the geographic extent of the rail impacts to be considered in the environmental review process should be limited to the GCT Deltaport terminal lease boundary because:

- Based on updated rail traffic forecasts, the incremental traffic attributable to the DP4 project will not require increases in rail capacity on the Roberts Bank rail corridor. Recent modelling of rail capacity by Mott MacDonald for VFPA using the Port's sophisticated rail simulation model forecasts that the Roberts Bank Rail Corridor will be either well below estimated capacity or within estimated capacity based on a traffic forecast of 82.0 million tonnes per year for Roberts Bank terminals.[18] GCT's updated forecast of total tonnage for 2060 based on Westshore traffic and GCT Deltaport container traffic (with the DP4 expansion) is 63.8 million tonnes (26.0 million tonnes of coal, 4.5 million tonnes of potash, and 33.3 million tonnes of containers[19]) which suggests that rail capacity on the existing corridor will be sufficient for anticipated demand until at least 2060.

- A study to identify and recommend mitigation measures for road/rail conflicts in the Roberts Bank Trade Area was done for the Gateway Collaboration Transportation Forum by CH2M and Urban Systems in 2015.[20] The study identified four locations on the Roberts Bank rail corridor as potential candidates for grade separation projects. Train traffic along the corridor was forecast to

18 Gateway Rail Assessment 2030 Executive Summary p.5.

19 Based on VFPA statistics on container traffic by tonnes and TEUs in VFPA's Statistics Overview 2020 (7.7 tonnes per TEU).

20 Roberts Bank Trade Area Study Executive Summary CH2M and Urban Systems for Gateway Collaboration Transportation Forum April 2016.

increase by 100% or 14 trains per day by 2031. Even with an anticipated increase in rail traffic of this magnitude, the RBTA study did not identify a pressing need for investment in any of these projects and noted low benefit/cost ratios for all of them due to relatively low road traffic volumes. Based on the GCT forecast, there will be no increase in trains per day at these crossings by 2031. Start-up of the GCT DP4 project in 2033 will add an additional two trains per day, with an incremental increase in delays for road traffic of less than 7 minutes at each crossing.

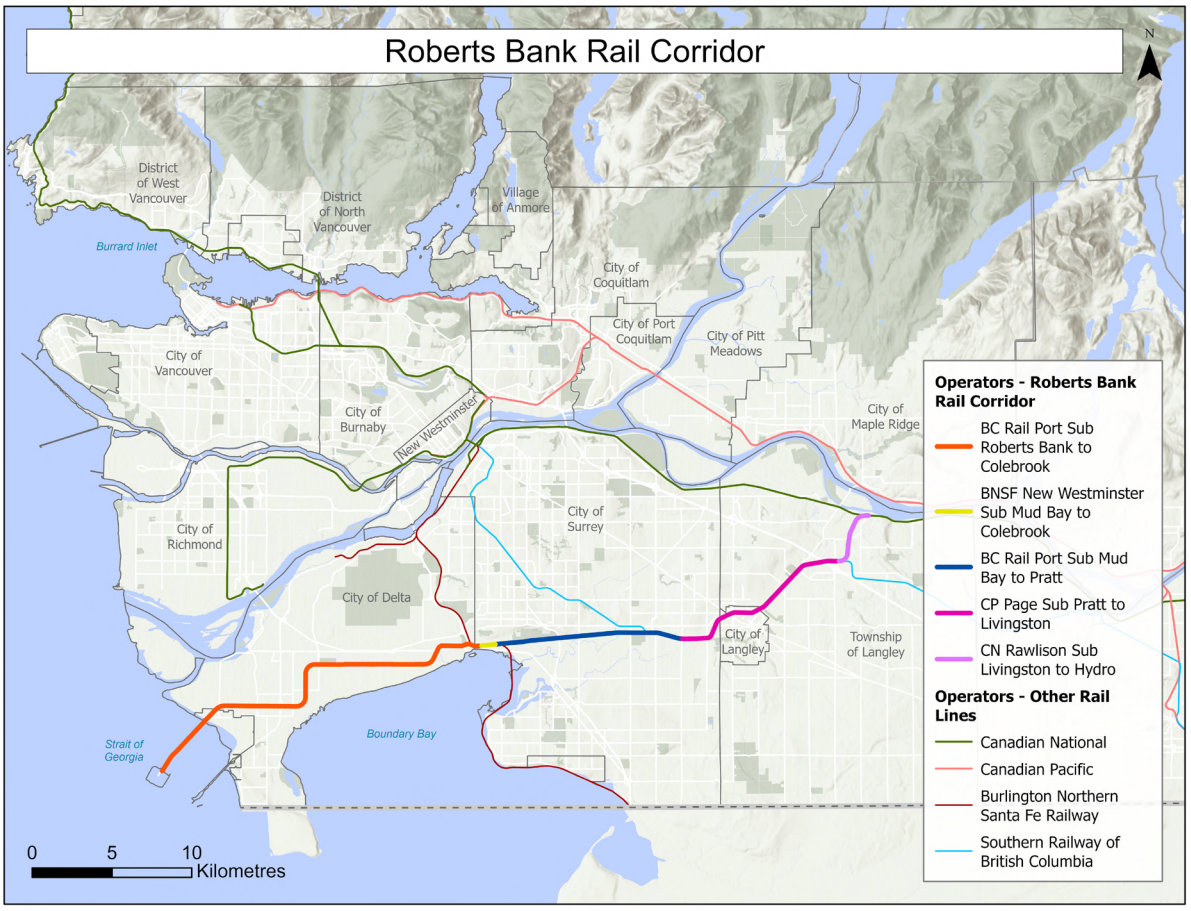
3.2 Rail Carriers and Routes

Rail traffic on the Roberts Bank Rail Corridor (RBRC) includes CN and CP intermodal service (container trains) for Deltaport and CN, CP and BNSF coal trains for Westshore Terminal. CN and CP westbound container and coal trains head southbound off the CN Mainline at Hydro and transit along the full length of the RBRC to Roberts Bank. BNSF coal trains cross the border at Blaine and travel along the BNSF line to Mud Bay and then connect westbound onto the RBRC to Westshore.

Both CN and CP mainline connections to the rest of Canada transit the Fraser Canyon. CN and CP implemented directional running in the Fraser Canyon between Boston Bar/North Bend and Matsqui in 1999 under a co-production agreement. Under the agreement all CN and CP westbound trains use the CN mainline tracks on the south side of the Fraser River, and all eastbound CN and CP trains use the CP mainline tracks on the north side of the river. Coal and container trains destined for Roberts Bank (Westshore Terminals and Deltaport) continue on the CN mainline for about 20 km from Matsqui to Hydro and then proceed on the RBRC to Roberts Bank.

The Roberts Bank Rail Corridor is a combination of five rail line segments as shown in the figure below.

Figure 3-1 Roberts Bank Rail Corridor.



The BC Rail Port subdivision includes a short section owned by BNSF (Mile 130.8 to Mile 131.5 of the New Westminster subdivision) at Mud Bay where BNSF northbound and southbound traffic crosses the east-west Port subdivision.

Figure 3-2 Roberts Bank Rail Line Segments.

Roberts Bank Rail Line Segments				
Operator	**Subdivision**	**Location**	**Miles**	**Traffic**
BCR	Port	Mud Bay to Roberts Bank	15.19	CN/CP/BNSF coal traffic and Deltaport container traffic
BNSF	New Westminster / Port	Mud Bay to Colebrook	0.65	All Westshore coal and Deltaport traffic; BNSF north-south traffic; Amtrak
BCR	Port	Pratt to Mud Bay	7.96	CN/CP coal traffic and Deltaport container traffic
CPR	Page	Livingstone to Pratt	7.27	CN/CP coal traffic and Deltaport container traffic; SRY traffic to/from Fraser Valley
CN	Rawlison	Hydro to Livingstone	2.47	CN/CP coal traffic and Deltaport container traffic

Train arrivals at Roberts Bank are coordinated by a combination of the carrier railways, (CN, CP and BNSF), BC Rail (BCR) and the terminals (GCT Deltaport and Westshore Terminals). All trains accessing and operating on the BCR track do so under the direction of BC traffic control located at the north end of the Deltaport causeway. This includes trains heading to Roberts Bank (Westshore and GCT Deltaport), trains transiting the BNSF rail line to or from New Westminster, and Southern Railway of BC (SRY) trains transiting the shared interurban track. Train sequencing on the entire length of the BCR track, including shared track, is coordinated through BCR. All three carrier railways and the terminals provide information (carrier, estimated time of arrival, train configuration (cars, locomotives, and product) to a shared database.

For departures, the outgoing rail carrier uses the information from the common database to determine the arrival time of the train in BCR's yard following unloading and a rail crew will be available to board the train and leave the yard again. Again, BCR is in control of when the train can access the outbound rail system from Roberts Bank.[21]

21 Westshore Terminals Limited Partnership New Cargo Project – Rail Operations Plan Document WTL10606-NV-038 https://www.portvancouver.com/wp-content/uploads/2021/10/20-209-New-Cargo-Export-Project-Rail-Operations-Plan.pdf

3.3 HISTORIC RAIL TRAFFIC ON THE ROBERTS BANK RAIL CORRIDOR

Estimates of traffic levels on individual segments of the Lower Mainland railway network based on 2017 rail waybill statistics were developed for Transport Canada by Davies Transportation Consulting Inc. (DTCI) in 2018[22]. The figure below shows estimates of average daily trains on the railway network for 2017.

Figure 3-3 Estimated Trains per Day on the Lower Mainland Rail Network 2017

Estimates of trains per day on the Roberts Bank rail corridor are shown below.

Figure 3-4 Estimated Trains per Day on the Roberts Bank Rail Corridor 2017

Roberts Bank Rail Corridor Trains Per Day 2017			
Operator	**Subdivision**	**Location**	**Trains per Day 2017**
BCR	Port	Mud Bay to Roberts Bank	18
BNSF	New Westminster/Port	Mud Bay to Colebrook	28
BCR	Port	Pratt to Mud Bay	14
CPR	Page	Livingstone to Pratt	16
CN	Rawlison	Hydro to Livingstone	16

22 Rail Activity and Capacity Issues in the Lower Mainland Area Davies Transportation Consulting Inc. for Transport Canada Economic Analysis March 31, 2018.

3.4 GCT DELTAPORT RAIL TRAFFIC

GCT completed a rail expansion project in early 2021, densifying Deltaport and increasing its overall terminal capacity to 2.4 million TEUs or 1.4 million container lifts. Today, Deltaport handles on average 4 trains per day, 2 for CN rail and 2 for CP rail. Total daily train output averages between 28,000 to 38,000 feet of import traffic each day. The Deltaport rail train plan for August 2021 is shown below.

Figure 3-5 Deltaport Train Plan August 2021

Deltaport Train Plan – August 2021			
RAILWAY	**TRAIN**	**RELEASE TIME**	*** PLANNED FOOTAGE**
CN	116	0600 hours	11,800 feet
CP	198	1200 hours	10,500 feet
CN	102/106/126	1800 hours	12,700 feet
CP	100	2359 hours	10,000 feet
		Total planned footage	**Up to 45,000 feet / day**

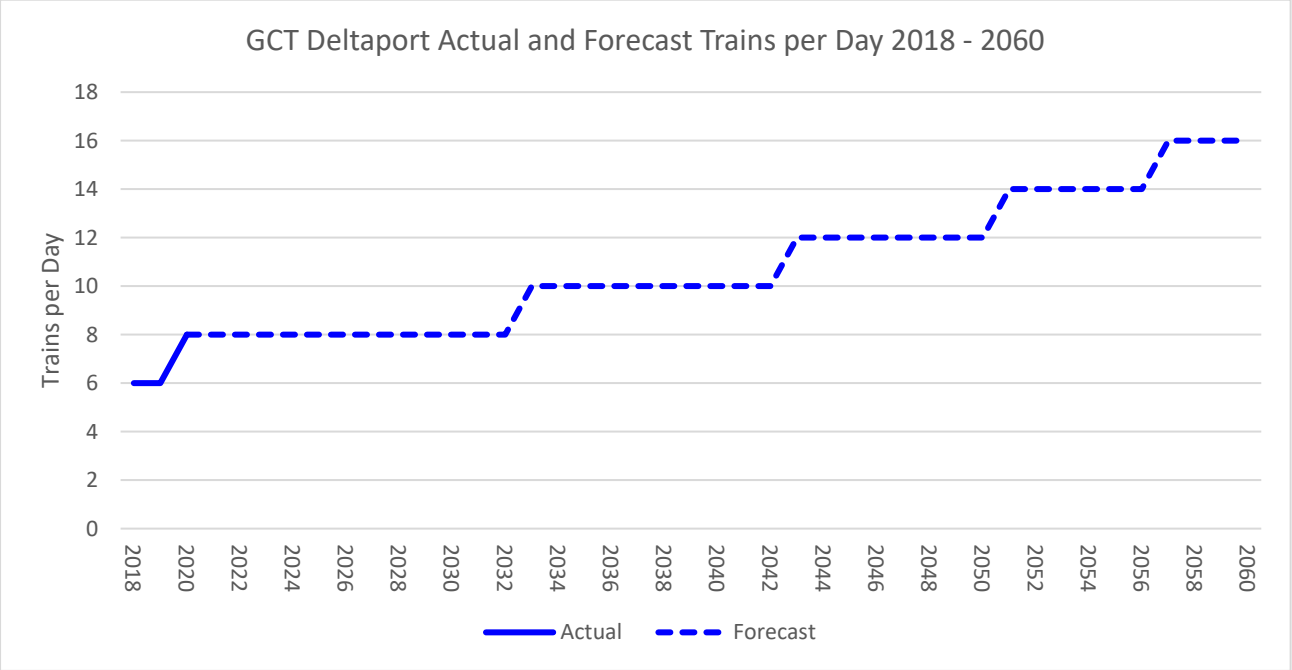
*Train length depends on rail car demand, rail car supply and other factors.

A forecast of GCT Deltaport rail traffic is shown below, based on the following assumptions:

- Total container traffic at GCT Deltaport increases from 1.8 million TEUs in 2021 to 2.5 million TEUs in 2035, 3.5 million TEUs in 2050, and 4.3 million TEUs in 2060 based on an anticipated annual growth in demand of 2.3%.
- Rail accounts for 66% of import traffic, based on historical trends.
- Average train length is 11,000 feet.

The resulting forecast is shown in the figure below. Based on anticipated demand growth, GCT Deltaport traffic is expected to increase to 10 trains per day by 2033, 12 trains per day by 2043, 14 trains per day by 2051 and 16 trains per day by 2057 when DP4 will be fully utilized.

Figure 3-6 GCT Deltaport Actual and Forecast Trains per Day 2018 - 2060



3.5 WESTSHORE TERMINALS

Coal

Total throughput at Westshore Terminals from 2011 to 2020 is shown below.

Figure 3-7 Westshore Terminals Coal Shipments 2011 - 2020

Westshore Terminals Coal Shipments 2011 - 2020 (million tonnes)										
	2011	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Steel-making	15.8	16	18.1	18.8	19.4	19.3	17.8	17.4	19.8	19.4
Thermal	11.3	9.8	11.7	11.5	9.1	6.3	11	12.8	11	9.6
Petroleum Coke	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3
Total	27.3	26.1	30.1	30.6	28.8	25.8	29	30.5	31	29.3

Teck Coal has been Westshore's largest customer. Teck Coal ships metallurgical ("steel-making") coal from its mines in Southeast BC. In 2020 Teck Coal accounted for 63% of Westshore's volumes (18.5 million tonnes). Teck's previous contract with Westshore committed them to ship 19 million tonnes per year at fixed rate. That contract expired in February 2021, and Teck's new contract calls for shipments of between 7.55 and 8.55 million tonnes from April to December 2021,

and thereafter between 5 and 7 million tonnes annually for five years.[23] This represents a reduction in Teck shipments of 12 to 14 million tonnes per year.

The diverted Teck tonnage will be handled at Neptune Terminals in North Vancouver and Ridley Terminals in Prince Rupert. Teck is a co-owner (46%) of Neptune Terminals, and the terminal has recently undergone a major expansion to increase coal capacity from 12.5 million tonnes to 18.5 million tonnes. Teck Coal signed a new agreement with Ridley Terminals in Prince Rupert to increase annual shipments from 3 million tonnes a year to 6 million tonnes, with an option to increase the volume to 9 million tonnes. Teck also signed a new contract with CN to handle their coal shipments from April 2021 to December 2026 following expiration of their contract with CP. CP will interchange traffic with CN in Kamloops.[24]

To date it appears that Westshore has substantially replaced the Teck shipments with thermal coal from other sources. Tonnage shipped in 2021 to the end of September was 22.4 million tonnes compared to 22.2 million tonnes in 2020. Of the tonnes shipped in 2021, 51% was metallurgical coal and 49% was thermal coal, compared to 65% and 35% respectively for 2020. Shipments of thermal coal by two of Westshore's U.S. customers accounted in aggregate for 28% of Westshore's throughput in 2020 (8.4 million tonnes). In its third quarter report Westshore announced a new contract with Global Coal Sales with a maximum term to 2035 which provides for a fixed loading rate with annual escalation. The current contract with Global Coal Sales expires in December 2021. Global Coal Sales markets coal mined by Signal Peak Energy of Montana.[25] Westshore also handles Montana coal for the Navajo Transitional Energy Company.

In the second quarter of 2021 Westshore entered into a revised shipping agreement with Coalspur Mines (Operations) Ltd. with respect to coal from its Vista Mine. This agreement has a term of four years and provides for fixed rates and increased minimum annual throughput volumes.[26] The Coalspur mine near Hinton, Alberta has a capacity of 6 million tonnes of thermal coal per year,

23 Westshore Terminals Investment Corporation Annual Information Form March 16, 2021 pp 3-4.

24 "CN Rail wins part of Teck coal shipping contract held by rival CP" Globe and Mail December 4, 2019 https://www.theglobeandmail.com/business/article-cn-rail-wins-part-of-teck-coal-shipping-contract-held-by-rival-cp/

25 Global Coal Sales Group http://globalcoalsales.com/

26 Westshore Terminals Investment Corporation Second Quarter Report https://www.westshore.com/pdf/finance/2020/q2.pdf

and an expansion to increase capacity to 13 - 15 million tonnes has been proposed.[27] Environmental approvals for the expansion project have not yet been obtained.[28]

The outlook for exports of thermal coal is uncertain. Prime Minister Justin Trudeau announced a plan to ban Canadian exports of thermal coal by 2030 on November 1, 2021.[29]

Potash Project

In July 2021, Westshore Terminals Investment Partnership announced a conditional agreement with BHP Canada to handle potash produced at a new mine under construction in Janzen, Saskatchewan. On completion the mine will have a capacity of 4.3 – 4.5 million tonnes of potash per year.[30] A portion of the existing capacity will be converted for potash handling by 2026.

In October 2021 Westshore applied to VFPA for a permit for the new potash facility. Proposed rail operations at the facility were described as follows:

> *Westshore will receive trains from BHP's Jansen mine consisting of 177 car unit trains of potash hopper cars (103 tonnes per car). Each train has a design capacity of 18,200 tonnes, resulting in approximately 240 to 250 trains per year or an average of up to 4.8 trains per week.*
>
> *At maximum coal capacity of 36 million tonnes per year, the number of trains would be approximately 2500 resulting in approximately 48 trains per week (13.7 (two-way) trains per day). With the introduction of potash, the annual number of trains at maximum capacity (31.5 million tonnes coal and 4.5 million tonnes potash) would be slightly lower at 2400.*[31]

27 "Feds urged to do own review of proposed coal mine expansion near Hinton" Global News July 15, 2020.

28 "Court quashes Coalspur order" Hinton Voice July 22, 2021.

29 "Canadian coal miners balk at export ban announcement" S & P Global Market Intelligence https://www.spglobal.com/marketintelligence/en/news-insights/latest-news-headlines/canadian-coal-miners-balk-at-export-ban-announcement-67460019

30 BHP website https://www.bhp.com/what-we-do/global-locations/canada-jansen-potash-project

31 Project and Environmental Review Application Report for New Cargo Export Project Westshore Terminals p. 30 https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/status-of-permit-applications/westshore-terminals-new-potash-export-project/

For purposes of comparison, the 240 to 250 trains per year of potash would amount to 1.4 (two-way) trains per day; and 2500 trains per year of coal would amount to 13.7 (two-way) trains per day. The combined total of 2400 trains per year would amount to 13.2 (two-way) trains per day.

3.6 RAIL TRAFFIC FORECAST

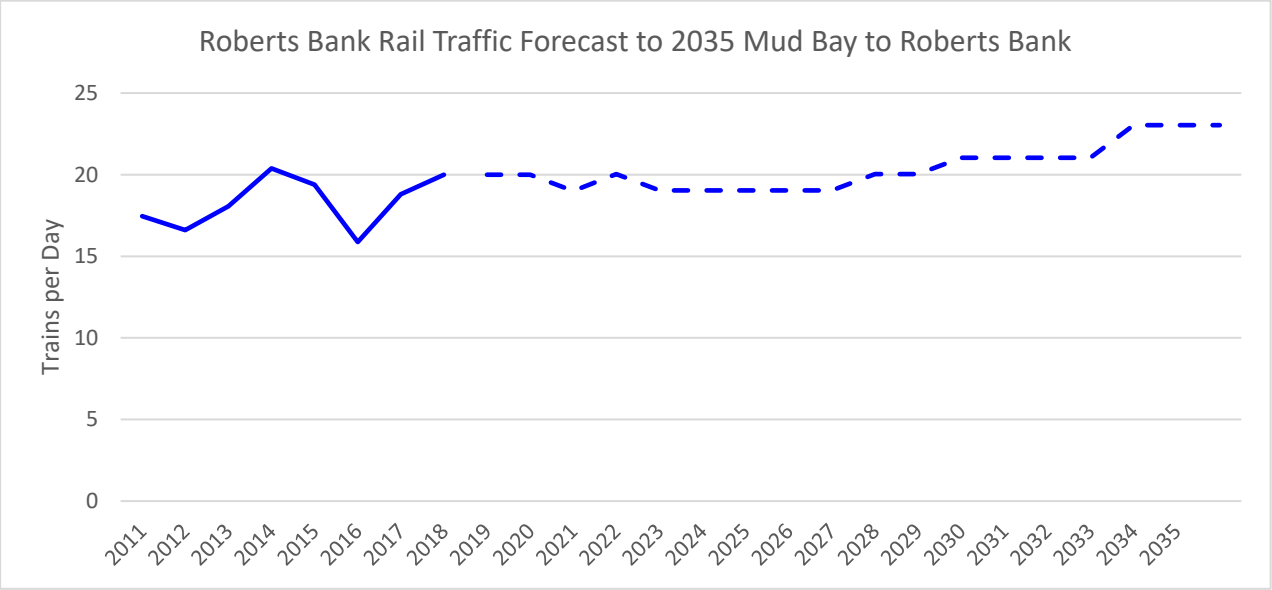
A forecast of Roberts Bank rail traffic to 2035 is shown below, based on the following assumptions:

- Westshore Terminals is substantially successful in replacing the lost Teck metallurgical coal shipments with thermal coal, for average coal traffic of 26 million tonnes per year to 2035.

- Shipments of BHP Canada potash begin in 2027 and ramp up to 4.5 million tonnes by 2029.

- GCT Deltaport traffic averages 8 trains per day, increasing to 10 trains per day by 2033 when traffic begins to exceed the terminal's current capacity of 2.3 million TEUs per year.

Figure 3-8 Roberts Bank Rail Traffic Forecast – Mud Bay to Roberts Bank



3.7 RAIL TRAFFIC BY LINE SEGMENT

A forecast of Roberts Bank rail traffic by rail line segment to 2060 is shown below. The forecast assumes thermal coal shipments of 19 million tonnes per year (of which 6 million tonnes originates in Canada and 13 million tonnes in the U.S.) and 6 million tonnes of metallurgical coal.

Figure 3-9 Roberts Bank Rail Traffic Forecast by Line Segment

Roberts Bank Rail Traffic Forecast by Line Segment (Trains per Day)									
	2017	2020	2030	2035	2040	2045	2050	2055	2060
Mud Bay - Roberts Bank	20	19	22	24	24	26	26	28	30
Mud Bay - Colebrook (BNSF)	30	25	32	34	34	36	36	38	40
Pratt - Mud Bay	14	15	14	16	16	18	18	20	22
Pratt - Livingston	16	17	16	18	18	20	20	22	24
Livingston - Hydro	16	15	14	16	16	18	18	20	22

3.8 RAIL CAPACITY

Gross tonnage[32] on the Roberts Bank rail corridor increased by 42% from 2006 to 2017.[33] This growth was accommodated through:

- Increases in siding and train lengths of between 20% and 40%. Coal trains are now 8,500 feet and container trains are now up to 12,000 feet in length.
- Purchase of light high-capacity aluminum railway cars with 32.5 tonne axle load for the coal haul resulting in a 16% increase in payload per wagon as compared to the previous steel wagons.
- Three and five rail car intermodal multipack wagons that improve payload/tare ratio.
- Close coordination in train dispatching to minimize train delay and plan maintenance windows.

The improvements highlighted above enabled the corridor to accommodate an increase of 42% in gross tonnage on the Roberts Bank section of the corridor from 2006 to 2017 while decreasing the number of trains per day by 12%; and a 3% increase in gross tonnage on the Pratt to Mud Bay section with a 34% decline in trains per day.[34]

32 Gross tonnage is the total weight of cargo, railcars and locomotives.

33 Source: BC Rail.

34 Rail Activity and Capacity Issues in the Lower Mainland Area p. 22.

Figure 3-10 BCR Port Subdivision Gross Tonnage and Trains per Day 2006 and 2017.

BCR Port Subdivision Gross Tonnage and Trains Per Day 2006 and 2017							
Roberts Bank				Pratt			
	2006	2017	% Change		2006	2017	% Change
Coal	30,913,026	47,751,014	54%	Coal	30,913,026	30,358,926	-2%
Container	13,746,542	15,744,052	15%	Container	13,746,542	15,744,052	15%
Total	44,659,568	63,495,066	42%	Total	44,659,568	46,102,978	3%
Trains/Day	18.0	15.9	-12%	Trains/Day	20.0	13.3	-34%
Source: BC Rail							
Historical data on trains/day in 2006 taken from Roberts Bank Rail Corridor Study							

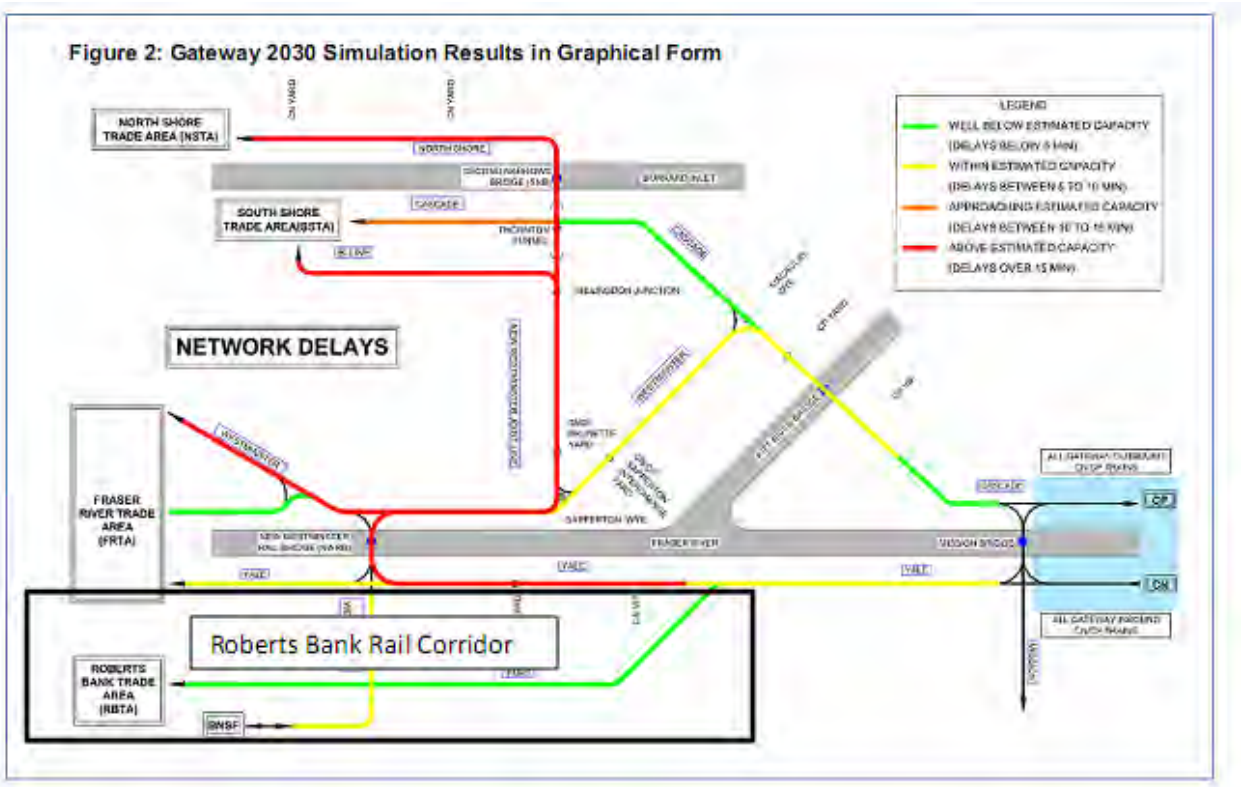
The Port of Vancouver has developed a Lower Mainland Rail Model over the past 15 years. The model has been continuously updated over that period, starting initially in early 2001. The model reflects the current rail network infrastructure and operations within the Port's major Trade Areas. During that time, various dynamic simulations of rail movements in the Lower Mainland have been completed using the Rail Traffic Controller ("RTC") modelling platform.[35]

VFPA's model was recently used to assess system-wide capacity of the Lower Mainland rail network in support of funding project applications under the National Trade Corridor Fund. The resulting forecast for 2030 is shown below in graphic form:[36]

35 Vancouver Fraser Port Authority Request for Proposal: #P170217-08 Gateway Rail Assessment 2030 January 2017.

36 Source: Gateway Rail Assessment 2030 Executive Summary Mott MacDonald for Vancouver Fraser Port Authority April 6, 2018 p. 7; reproduced in Summary of cost-benefit/impact analyses – projects and initiatives to be cost recovered through GIF2022 Vancouver Fraser Port Authority November 2020.

Figure 3-11 VFPA Rail Model Estimates of Capacity Utilization 2030



The results forecast that the Roberts Bank Rail Corridor will be well below estimated capacity based on a traffic forecast of 82.0 million tonnes per year for Roberts Bank terminals.[37] The total tonnage forecast for 2060 based on GCT's forecast of Westshore coal traffic and GCT Deltaport container traffic (with the DP4 expansion) is 63.8 million tonnes (26.0 million tonnes of coal, 4.5 million tonnes of potash, and 33.3 million tonnes of containers[38]) which suggests that rail capacity on the existing corridor will be sufficient for anticipated demand until at least 2060.

3.9 ROAD/RAIL CONFLICTS

3.9.1 ROBERTS BANK RAIL CORRIDOR GRADE SEPARATIONS

Prior to 2007, the Roberts Bank Rail Corridor had 38 at-grade crossings on public roads, and growing port traffic was resulting in significant delays to road traffic. In 2007, Transport Canada announced a federal contribution of CDN$ 75 million (US$ 70 million) under the Asia Pacific Gateway and Corridor Initiative for improvements to the Roberts Bank Rail Corridor. Transport Canada took a lead role in planning for the corridor, sponsoring the Roberts Bank Rail Corridor: Road / Rail Interface Study[39] and working with a large stakeholder group including the BC Ministry

37 Gateway Rail Assessment 2030 Executive Summary p.5.

38 Based on VFPA statistics on container traffic by tonnes and TEUs in VFPA's Statistics Overview 2020 (7.7 tonnes per TEU).

39 Roberts Bank Rail Corridor: Road / Rail Interface Study ND LEA Inc. Consulting Engineers for Transport Canada February 2007.

of Transportation and Utilities, Port of Vancouver, Translink, Greater Vancouver Gateway Council, five municipalities and four railways (CN, CP, Southern Railway of B.C., and B.C. Rail) to develop a plan and funding agreements. The final plan included construction of 14 grade separations along the corridor at a total cost of CDN $307 million. The locations are shown in the figure below.

Figure 3-12 Roberts Bank Rail Corridor Project [40]

The Roberts Bank Rail Corridor project effectively mitigated road/rail conflicts on high volume roads along the corridor.

3.9.2 ROBERTS BANK TRADE AREA STUDY

An updated study on the Roberts Bank Trade Area was done for the Gateway Collaboration Transportation Forum by CH2M and Urban Systems in 2015.[41] The purpose of the study was to identify potential issues and mitigating projects and senior government funding opportunities, focusing on identification and mitigation of road/rail conflicts and other network constraints.

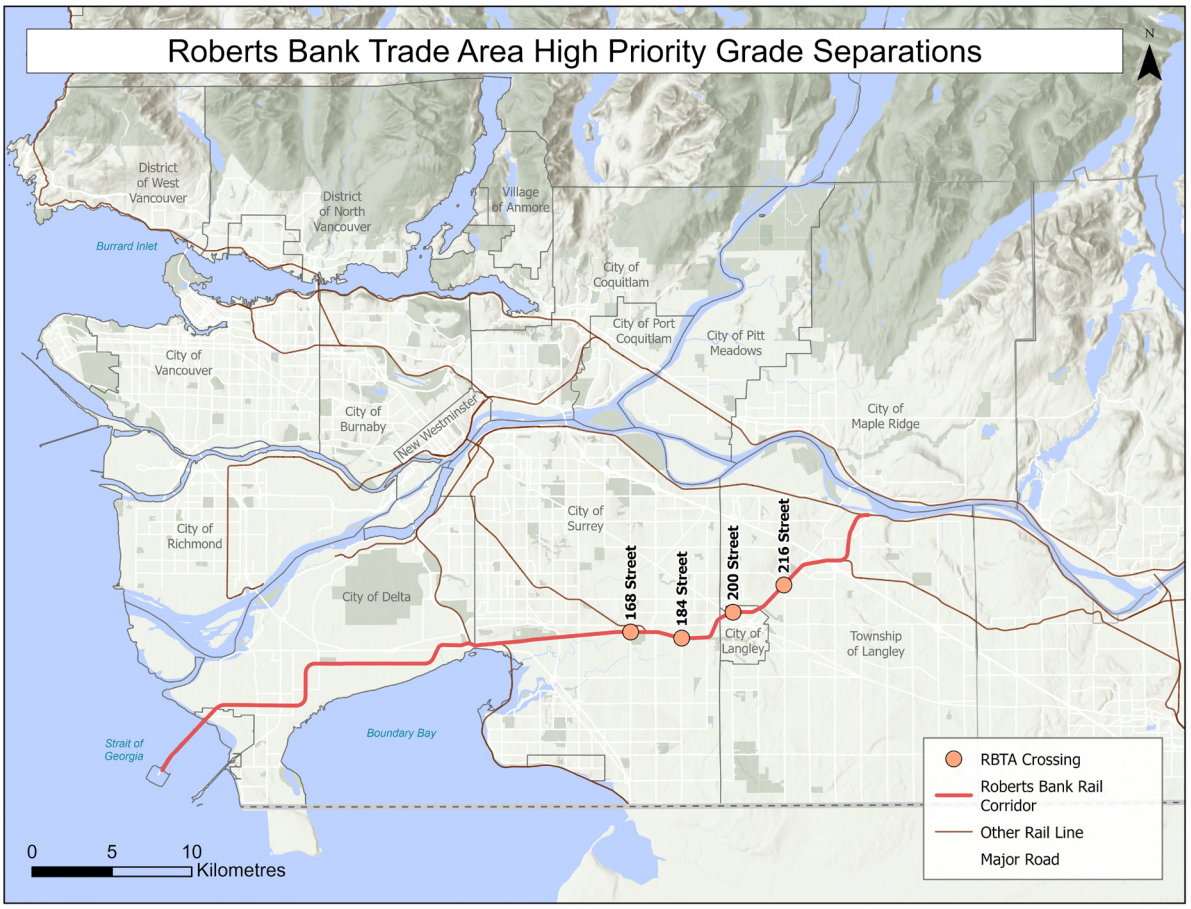
Within the Roberts Bank Trade Area, there are approximately 80 public crossings of minor and major roadways. Of these approximately 20 percent are located on arterial roads and highways (including the Major Road Network). A list of eleven potential grade separation projects was developed based on current and forecast exposure to road/rail conflicts (“Tier 1” locations). Of these, only five were retained for further evaluation. The others were screened for long term potential (projects that met the study criteria but could not be implemented within the next ten years) or screened out for reasons of technical feasibility, property impacts, or ineligibility based

40 Source: Roberts Bank Rail Corridor TP 14689 Transport Canada.

41 Roberts Bank Trade Area Study Executive Summary CH2M and Urban Systems for Gateway Collaboration Transportation Forum April 2016.

on the study criteria (i.e. they would not directly benefit international trade).[42] Four of the five retained projects are located on the Roberts Bank Rail Corridor: 168 Street and 184 Street in Surrey, and 200th Street and 216th Street in Langley. The 168 Street crossing is on the Pratt to Mud Bay segment of the Roberts Bank Rail Corridor; the others are on the Livingston to Pratt segment. The locations are shown in the figure below.

Figure 3-13 Roberts Bank Trade Area High Priority Grade Separations



The RBTA baseline rail traffic estimates and forecasts for the crossings are based on the VFPA rail simulation model.[43] For the Surrey crossings, the 2014 traffic estimates are similar to those from the 2018 Transport Canada study. For the Langley crossings, the RBTA estimates of trains per day is 6 trains per day higher than the 2018 Transport Canada study estimates of the traffic on other segments of the corridor. This is probably attributable to rail switching activity in the vicinity of the crossings rather than through trains.

42 Roberts Bank Trade Area Study Executive Summary p. 10.

43 Roberts Bank Trade Area Study Executive Summary p. 6

The RBTA study forecasts an increase of 14 trains per day throughout the corridor by 2031, based on Roberts Bank marine cargo forecasts of 3.5 million tonnes of coal at Westshore Terminals and up to 3 million TEUs of container traffic.[44] The GCT forecast for 2031 presented in this document is significantly lower due to the following assumptions:

- A reduction in coal traffic of four trains per day due to the reduction in Teck metallurgical coal traffic, partially compensated by increased shipments of two trains per day from increased thermal coal shipments from Canadian mines.

- An increase of two potash trains per day from the BHP potash mine in Saskatchewan by 2029.

Based on the GCT forecast, there will be no overall increase in trains per day at these crossings by 2031. Start-up of the GCT DP4 project in 2033 will add an additional two trains per day, with an incremental increase in delays for road traffic of less than 7 minutes.

Even with an anticipated increase in rail traffic of 14 trains per day (100%) by 2031, the RBTA study did not identify a pressing need for investment in any of these projects and noted the low benefit/cost ratios for all of them due to relatively low road traffic volumes.

44 Roberts Bank Trade Area Study Executive Summary p. 6.

4 REFERENCES

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5 GLOSSARY AND ABBREVIATIONS

Glossary and Abbreviations	
BC MOTI	British Columbia Ministry of Transportation and Infrastructure
BCR	BC Rail. BCR owns and manages operations on the Port Subdivision accessing GCT Deltaport and Westshore Terminals at Roberts Bank.
BNSF	Burlington Northern Santa Fe Railway.
CN	Canadian National Railway.
CP	Canadian Pacific Railway.
Deltaport DP4	GCT Deltaport Expansion - Berth Four Project.
Drayage	The transport of international or domestic cargo containers by truck.
Dual Transaction	Truck visit to a port terminal picking up and dropping off a container on the same visit.
Gate move	Movement of a loaded or empty container through the port terminal gate.
GMT	George Massey Tunnel.
GPS	Global Positioning System.
RBRC	Roberts Bank Rail Corridor.
RBT2	Proposed VFPA Roberts Bank Terminal 2 project.
RBTA	Roberts Bank Trade Area.
RTC	Sophisticated rail operations simulation modelling software used in VFPA's rail model.
SFPR	South Fraser Perimeter Road.
Single Transaction	Truck visit to a port terminal either picking up or dropping off a container.
SRY	Southern Railway of BC.
Staging Turn Time	Truck queuing time outside the terminal.
Terminal Turn Time	truck processing time inside the terminal.
TEU	Twenty-foot equivalent unit.
TFN	Tsawwassen First Nation.
Trade Area	VFPA has divided Metro Vancouver into four Trade Areas for purposes of infrastructure planning. GCT Deltaport is located in the Roberts Bank Trade Area.
Trains per day	The number of one-way train trips in both directions over a specific line segment in one day.
Turn Time	The time required to pick up or drop off a container at a port terminal.
Twenty-foot equivalent unit	Measure of cargo capacity of a standard 20 foot ISO international marine container (33,200 cubic metres).
VFPA	Vancouver Fraser Port Authority.

APPENDIX B

MEMO

Date: January 7, 2022

From: Mike McLellan, Vice President, Project Development, GCT Global Container Terminals Inc.

To: Tracy Utting, Agency Review Manager, Review Panels Division, Impact Assessment Agency of Canada

Brendan Mather, Project Assessment Director, BC Environmental Assessment Office

Subject: **Deltaport Expansion Berth Four Project – Marine Shipping To 12 Nautical Miles**

Contents

1 OVERVIEW

This memo provides further information on marine shipping as it relates to the proposed Deltaport Expansion Berth Four Project (DP4 or the Project) as requested by the Impact Assessment Agency of Canada (IAAC) and the British Columbia Environmental Assessment Office (EAO), to inform the scope of the Project assessment.

GCT Canada Limited Partnership (GCT) is proposing to use the 12 nautical miles (nm) territorial sea limit boundary when assessing the geographic extent of marine shipping incidental to the project. However, GCT distinguishes between the effects of the Project from the extent of the Project itself. GCT's objective is to work with Indigenous nations to assess the effects of the Project on their treaty or traditional territory, irrespective of whether such territory is beyond 12 nm.

The Draft Joint Guidelines state that:

"The Agency and the EAO have yet to determine the geographic extent of marine shipping incidental to the project, short sea shipping, and vessel movements associated with the Tsawwassen First Nation marina. In establishing the geographic extent for these physical activities, the Agency and EAO will consider comments received during the comment period, as well as comments received to date. To date, participants have indicated that the geographic extent of marine shipping incidental to the project should extend beyond the 12 nautical mile limit of Canada's territorial sea, such as to the 200 nautical mile limit of the Exclusive Economic Zone, and should also include Southern Resident Killer Whale critical habitat. The geographic extent of the assessment for these three physical activities will be outlined in the final Joint Guidelines. Once defined, the geographic extent of these three physical activities will be referred to as "the marine shipping area"."

Container ships travelling to the Project follow the routing for deep sea vessels travelling to Vancouver as defined by the international shipping lanes in the Strait of Juan de Fuca. Vessels enter and exit this shipping lane within the Strait of Juan de Fuca at Buoy J at the 12 nm limit (see Figure 1).

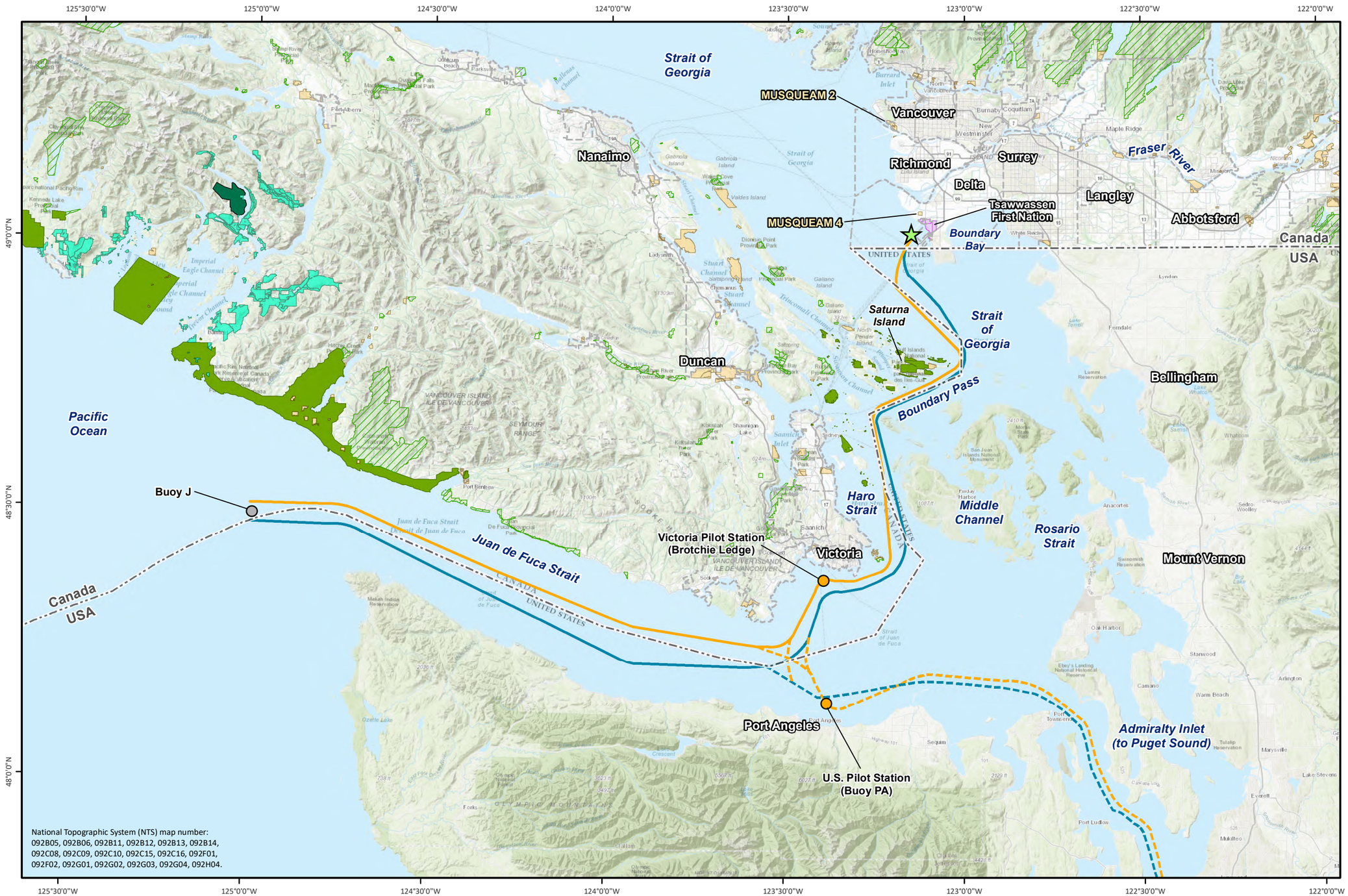
1.1 Objectives and Approach

The purpose of this memo is to describe GCT's approach for using the 12 nm limit (represented by Buoy J) for the DP4 Impact Assessment. GCT's approach is informed by, amongst other things:

1. Legislative and regulatory framework, including Canada's guidance, policies, and positions
2. Past projects and relevant case law
3. Indigenous interests and GCT's engagement principles and commitments

The approach recognizes the purposes of the *Impact Assessment Act* (the IAA), the relevant criteria for determining which activities are incidental to a project, and the spatial boundaries for the assessment, and the practical challenges associated with assessing potential environmental effects beyond 12 nm. This approach builds upon the existing issues and information raised and addressed in projects such as Roberts Bank Terminal 2 (RBT2) and Trans Mountain Expansion Project (TMEP).

Figure 1: Marine Shipping Route – GCT Deltaport Expansion Berth Four Project.



Legend

- DP4 Project Location
- First Nation Reserve
- Tsawwassen First Nation Land
- Maa-nulth First Nation Land
- Protected Areas
- Provincial Parks
- National Parks
- Municipal Boundary
- Pilot Station
- Outbound Shipping Route
- Inbound Shipping Route
- Outbound USA Route
- Inbound USA Route

0 5 10 20 km

N

Scale: 1:800,000

Projection: NAD 1983 UTM Zone 10N

Data Sources:

a) DP4 project footprint, Hatfield 2021, (based on Project components, Ausenco 2021).
b) First Nation Reserve and Municipal boundary, DataBC 2021.
c) Tsawwassen First Nation Land and Maa-nulth First Nation Land, Ministry of Indigenous Relations and Reconciliation.
d) Parks and protected areas, Ministry of Environment 2021.
e) Background, Topographic map, Esri Online Service.

National Topographic System (NTS) map number:
092B05, 092B06, 092B11, 092B12, 092B13, 092B14, 092C08, 092C09, 092C10, 092C15, 092C16, 092F01, 092F02, 092G01, 092G02, 092G03, 092G04, 092H04.

GLOBAL CONTAINER TERMINALS CANADA

GCT Deltaport Expansion Berth Four Project

K:\Data\Project\GCT10314-NV\A_MXD\AIR_TISG_Map_Template\GCT10314_Project_Location_Overview_20211115_v0_7_LC.mxd

2 LEGISLATIVE AND REGULATORY FRAMEWORK

The purposes of the IAA include protecting the components of the environment, and the health, social and economic conditions that are within the legislative authority of Parliament from adverse effects caused by a designated project, while establishing a fair, predictable and efficient process for conducting impact assessments that enhances Canada's competitiveness and that is conducted in a timely manner.

While Canada has certain rights beyond the territorial sea limit, the incidental activity that is at issue is marine traffic that has a certain level of proximity as well as possibly a causal connection between activities to DP4. To define the geographical extent of the Project, it is critical to establish the project location and the route of the marine traffic, both which are known, however the latter is only known up to Buoy J.

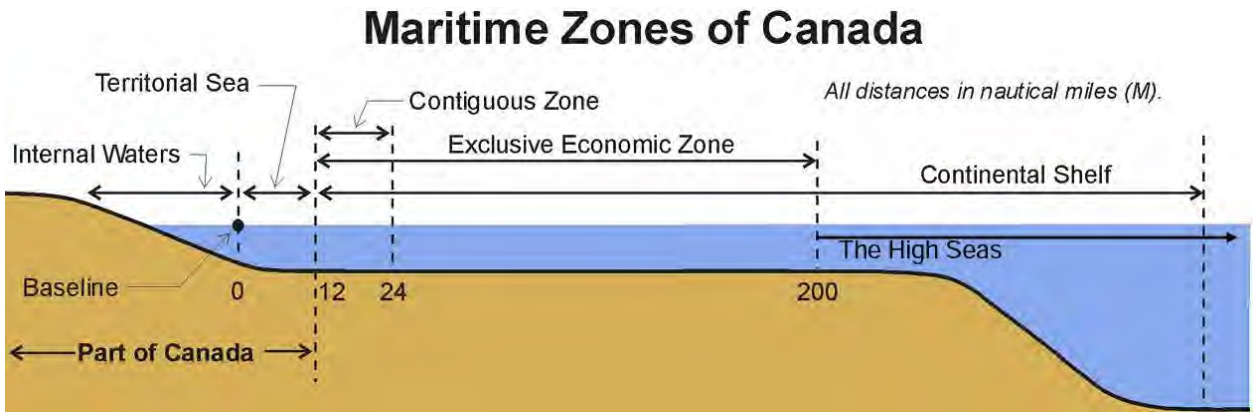


Figure 2: Maritime Zones of Canada (Source: Association of Canada Land Surveyors).

Buoy J marks the 12 nm limit of Canada's territorial sea, within which, a comprehensive legal and regulatory regime exists for marine shipping and related safety, security and environmental protection, including through the *Canada Shipping Act, 2001*. This includes the authority to impose mandatory vessel traffic practices and procedures within this area. Beyond Buoy J, there are no established shipping lanes. Canada has noted that as a result this poses a fundamental challenge to expanding the spatial extent of projects similar to DP4 beyond 12 nm, as such an expansion would result in speculative assessments that would be counterproductive to a meaningful evaluation of environmental effects of the project and will not enable an adequate evaluation of the technically and economically feasible mitigation measures.

A more exhaustive summary of the regulatory framework has been previously canvassed in publicly available documents such as the National Energy Board's (now known as Canada Energy Regulator) October 12 2018 decision regarding TMEP.

3 PAST PROJECTS AND RELEVANT CASE LAW

The IAA maintained the legislative principles and policy which provide guidance on the criteria for determining which activities are incidental to the project. For example, the *Guide to Preparing an Initial Project Description and a Detailed Project Description* provides similar guidance to the *Guide to Preparing a Description of a Designed Project under CEAA 2012* on factors to consider when assessing whether an activity is incidental to the designated project. Precedents established by project assessments under the *Canadian Environmental Assessment Act, 2012* and related case law, remain relevant, informative, and binding. Consistency of purpose is fundamental to maintaining the integrity of the impact assessment process.

In reviewing past practices of Canada in other environmental assessments that may be, in some respects, analogous to the Project, the scope of these assessments did not extend beyond 12 nm (see Table 1 below). In TMEP, the approach to define the spatial boundary of the project-related marine shipping assessment to 12 nm did not raise concerns when the Federal Court of Appeal considered the adequacy of Crown consultation, amongst other issues.

Table 1: Examples of Marine Assessment Boundaries from Other Projects.

Project	Scope of Marine Assessment
RBT2	Up to 12 nm
TMEP	Up to 12 nm
Cedar LNG	Less than 12 nm
St. Lawrence Fluorspar Marine Shipping Terminal Project	Up to 12 nm
Kwispaa LNG Project	Up to 12 nm
Pacific Future Energy Refinery Project	Up to 12 nm
Energy East Pipeline Ltd	Up to 12 nm

In addressing the identical issues raised by parties during the RBT2 environmental assessment process, Canada emphasized the regulatory landscape and practical and technical challenges in expanding the spatial extent of that project-related marine shipping beyond 12 nm based on the desire to preserve the integrity of the assessment regime. Canada emphasized the issues raised by the National Energy Board for TMEP including that:

- *"relevant case law suggests that the word "incidental" should be interpreted to require a "certain level of proximity as well as possibly a causal connection between activities and the designated project." The Board is not persuaded that a sufficient "level of proximity" exists once the tankers exit the territorial sea."*
- *The "geographic extent should not be so broad as to frustrate the CEAA 2012's purpose of timely EAs, or to produce results that are not useful in protecting the environment and reducing harm."*

- *"given that there are no defined shipping lanes in the EEZ – a vast area of ocean – no shipping "route" for the Project can be identified with any degree of certainty."*
- *"The lack of a certain route means, in turn, that appropriate spatial boundaries cannot be identified. It is not possible to predict the project-environment interactions and the full impacts of that project, nor can one adequately evaluate technically and economically feasible mitigation as required by the CEAA 2012."*
- *"Attempting to conduct an EA in the EEZ*
    - *Would produce speculative, as opposed to meaningful, information about project impacts and, accordingly*
    - *Would not be useful as a planning and decision-making tool for the [Government]*
    - *is a marked and material difference from marine shipping within the territorial sea limit."*
- *"incremental marine shipping within the EEZ is not "incidental" and should not be included in the "designated project."*
- *"although only Project-related marine shipping within the territorial sea is to be considered as part of the "designated project," effects from that shipping that occur outside of the territorial sea can still be considered by the Board, including certain trans-boundary effects."*

Furthermore, on March 8, 2019, the Honourable Catherine McKenna, the then Minister of Environment and Climate Change, echoing the reasoning the Board provided in the TEMP, amended the terms of reference to include Project-related marine shipping in the designated project associated with RBT2 "only to the 12 nautical limit of Canada's territorial sea" as described on the RBT2 Public Record. The Minister assessed and concluded that there was no legislative or policy rationale that would enable extension beyond the 12 nm limit and that doing so may frustrate the purposes of the relevant legislation.

4 INDIGENOUS INTERESTS AND GCT'S ENGAGEMENT APPROACH

The Indigenous nations that could potentially be affected by DP4 are the same as those that could be potentially affected by RBT2. Therefore, it is useful to review concerns about the assessment area raised by Indigenous nations with respect to RBT2. Several Indigenous nations raised concerns that by limiting the assessment area to 12 nm/Buoy J, the assessment would not adequately address their Indigenous interests. For example, the Maa-nulth First Nations supported extending beyond 12 nm by referring to the commercial fishing licenses they hold which are pursuant to a Harvest Agreement and that harvesting under these licenses extends beyond the 12 nm limit.

Going further, in their panel submission, the Cowichan Tribes, Halalt First Nation and Stz'uminus First Nation indicated that they would not consider their nations to have been properly consulted and accommodated if the assessment did not include impacts out to the limits of Canada's Exclusive Economic Zone (EEZ). Additionally, several Indigenous nations indicated that because traditional marine use studies were not completed, the Review Panel did not have sufficient information to adequately assess the full extent of potential effects from shipping on the Indigenous nations.

A table containing issues raised by Indigenous nations during the DP4 Detailed Project Description review process and GCT's response to these issues in respect of marine shipping is included in Appendix A of this memo. Appendix A also includes a summary of comments in relation to the RBT2 Marine Shipping Area and notes the number of additional Indigenous nations that DP4 and the Crown may need to engage with if the marine assessment is extended beyond 12 nm.

GCT is committed to working collaboratively with all parties to ensure an appropriately scoped Impact Assessment for the proposed DP4 Project. This will include ongoing engagement with:

- Regulators (Federal, Provincial, Municipal)
- Indigenous Nations
- Environmental Non-Government Organizations
- Local Communities

GCT will work with Indigenous nations to identify the environmental effects of the Project on their territories and the relevant measures to mitigate, avoid or offset such effects. This approach reinforces GCT's distinction between the effects of the Project from the extent of the Project itself.

4.1 Initiatives Outside the Impact Assessment Process

GCT is committed to working with regulators on Strategic Environmental Assessment (SEA) or Regional Initiatives as part of the larger marine shipping community. For example, GCT will actively work to support and influence third party operated vessels (outside GCT's ability to directly manage) to participate in programs listed below, and the development of additional regional initiatives concurrent with the Impact Assessment process and during operation of the proposed DP4 Project. These include, but are not limited to:

- IMO 2014 Guidelines on reducing underwater noise
  - 2014, IMO approved guidelines on reducing underwater https://www.imo.org/en/MediaCentre/HotTopics/Pages/Noise.aspx
- Salish Sea Initiative
  - Salish Sea Initiative | Pacific Region | Fisheries and Oceans Canada (dfo-mpo.gc.ca)
- Enhancing Cetacean Habitat and Observation (ECHO) Program
  - VFPA underwater noise reduction initiatives. The ECHO Program works collaboratively with its many partners and advisors to coordinate yearly voluntary initiatives focused on reducing the impact of commercial shipping on at-risk whales off British Columbia's southern coast.
- Green Marine
  - GCT is a signatory
  - Underwater Noise Performance Indicator's Objective:
    - Manage underwater noise sources during ongoing activities, development/construction, and/or port maintenance activities to reduce impacts to marine mammals.
    - 2021 criteria have 5 levels ranging from "Monitoring of regulations" through to "Offer a recognition program to ship owners for vessel noise reductions" (Level 3) and finally "Meet reduction targets on underwater noise." Including "Demonstrate continual improvement in implementing the Underwater Noise Mitigation and Management plan to utilize noise reduction solutions and technologies that reduce underwater noise." (Level 5)
- Western Canada Marine Response Corporation (WCMRC)
  - GCT is a voluntary subscriber

5 CONCLUSIONS

GCT is committed to ongoing engagement with regulators and Indigenous nations. We are confident in our ability to assess marine shipping to the 12 nm limit of Canada's territorial sea, but as Canada has previously stated extending the spatial boundaries of the project-related marine shipping beyond 12 nm will present challenges associated with assessment accuracy and lead to low confidence in Impact Assessments for both GCT and regulators.

The inclusion of marine shipping beyond 12 nm as activities incidental to the Project would set a precedent which would apply to all projects, including potentially impacting the projects referenced in Table 1. In response to effects of marine shipping generally, GCT recognizes and supports the ocean carrier industry and is also working collaboratively with regulators on long-term "regional assessment in the proposed project area or any relevant strategic assessments" (as framed in the Joint Guidelines) to continuously improve the management and regulation of marine shipping to 12 nm and beyond, as relevant. Therefore, extending the spatial extent of Project-related marine shipping to be considered as part of the designated project beyond the 12 nm limit of Canada's territorial sea is unreasonable, especially given the need to distinguish between the environmental effects of the designated project and the geographic extent of the designated project itself.

Sincerely,
<Original signed by>

Mike McLellan
Vice President, Project Development
GCT Global Container Terminals Inc.

APPENDIX A

Table A.1: DP4 Detailed Project Description Issue and GCT Response to Indigenous Nation comments on Marine Shipping.

Indigenous Interests and Issues Raised	GCT Response
Concerns about the current scope of the assessment, Tsleil-Waututh Nation requires the spatial scope of the assessment of impacts from marine activities associated with marine shipping extend to the 200 nautical mile limit from the coast to encompass all of Canada's exclusive economic zone, as well as all of SRKW critical habitat.	The spatial scope of the Impact Assessment will be determined by the IAAC and the BCEAO. Notwithstanding this determination, GCT will work with Indigenous nations to determine potential options to assess Project-related marine shipping effects in their traditional territory, which may extend beyond the spatial scope determined by the IAAC and the BCEAO. Such assessment will explore opportunities to partner with regulators and Indigenous nations on potential mitigation options and wider management initiatives.
Assessment should extend beyond the 12 nautical mile limit to 200 nautical miles. Impacts outside Esquimalt waters can impact Esquimalt too.	
Assessment should extend beyond the 12 nautical miles limit to 200 nautical miles. Scoping the assessment to include First Nations of Maa-nulth Treaty Society's territorial waters is necessary to adequately assess impacts of the Project on First Nations of Maa-nulth Treaty Society and to adequately consider the interconnectedness of all things. Having GCT advocate for such a scope is important to First Nations of Maa-nulth Treaty Society's early relationship with GCT. If GCT is indeed agreeable to an expanded scope, this needs to be reflected in regulatory documents.	

For comparison to DP4, below is a list of Indigenous nations that wished to expand the RBT2 assessment scope beyond 12 nm:

- Tsleil-Waututh (specifically requested extension to EEZ)
- Esquimalt (requested extension beyond 12 nm)
- Scia'new (Beecher Bay) (requested extension beyond 12 nm)
- Pauquachin (requested extension beyond 12 nm)
- Maa-nulth (specifically requested extension to EEZ)
- Cowichan Tribes (requested extension beyond 12 nm)
- Halalt (requested extension beyond 12 nm)
- Stz'uminus (requested extension beyond 12 nm)
- Lyackson (requested extension beyond 12 nm)

In addition, below is a list of Indigenous nations that expressed 'other' concerns regarding the RBT2 12 nm limit

- Pacheedaht (specifically requested extension to EEZ)
  - Considered a participant in the Final Panel Report and were trying to file a new Traditional Use Study in August 2019
- T'Sou-ke (specifically requested extension to EEZ)
  - Considered a participant in the Final Panel Report and also presented at public hearings
- U.S. Tribes (requested extension beyond 12 nm)
  - The Panel provided them with an opportunity to present their views, but RBT2 did not engage with them or consider their specific effects in the assessment

Table A.2: RBT2 Detailed Concerns Raised by Indigenous nation Related to the Marine Shipping Assessment Area.

Indigenous nations	RBT2	Detailed Concerns
Tsleil-Waututh	Extension to EEZ	• A large portion of critical habitat for the SRKW extends beyond the 12 nm territorial limit. • Concerned about the impact that marine shipping would have on the SRKW. • Impact of construction on loss of habitat for chinook salmon and other fish species. • Negative impacts could potentially end TWN's source of traditional maritime food. • Concerned about the impact on their rights, including the current, future and desired right to fish. • Generally, Port failed to address the extent of the potential impact on the Esquimalt Nation and their ability to exercise their treaty rights. • Failure to extend beyond 12 nm would be contrary to *CEAA 2012* (the applicable legislation at that time) and threaten the validity of the public hearings.
T'Sou-ke	Extension to EEZ	• Rely on territorial sea for social, cultural, and economic health. • Concerned about the impact of marine shipping on the SRKW's and about the impact on their Aboriginal title, rights and treaty rights. • Requested a Project-specific Marine Traditional Use Study to better understand and quantify the impacts of marine shipping and other Project-related impacts on T'Sou-ke.

Indigenous nations	RBT2	Detailed Concerns
		• Concerned that the Panel did not have critical information on the environmental effects of Project-related marine shipping on the SRKW population, and T'Sou-ke's use of lands and resources for traditional purposes.
Pacheedaht	Extension to EEZ	• Wished to seek consultation with the Crown about whether an assessment out to 12 nm would be sufficient, or if the assessment should extend to the EEZ at 200 nm.
Maa-nulth	Extension to EEZ	• A large portion of vessels calling on Roberts Bank will likely traverse their Treaty Fishing Areas which includes both Kyuquot Sound and Barkley Sound. • An assessment of only 12 nm will fail to capture the entirety of their Treaty Fishing Area and will fail to address their concerns regarding how to protect their treaty rights including: right to domestically harvest and trade fish, aquatic plants, wildlife and migratory birds. Their treaty rights further include a right to participate in fisheries-related management activities within the Treaty Fishing Area. • Project-related impacts including those related to Project-related vessel traffic and the generation of underwater noise, construction on loss of habitat for chinook salmon and other fish species, and impact of accidents and malfunctions including spills. • Wanted federal government to fund the Maa-nulth and other FN's to co-develop cumulative effects management plans for the Salish Sea, commit to a co-development process to design governance structures recognizing FN authority to manage regional cumulative effects, and commit to interim cumulative effects measures (i.e., regional studies or assessments). • Compliance with *CEAA 2012* and the Crown's duties require an assessment of Project-related marine shipping activities beyond 12 nm and into the EEZ. They cite the critical habitat area of the Northern and Southern Resident Killer Whales as a point of concern. • If their concerns remain unaddressed, RBT2 will not have the support of the Maa-nulth moving forward.
Esquimalt	Beyond 12 nm	• Similar as Maa-nulth

Indigenous nations	RBT2	Detailed Concerns
Scia'new (Beecher Bay)	Beyond 12 nm	• Similar as Maa-nulth
Pauquachin	Beyond 12 nm	• Similar as Maa-nulth
US Nations: Swinomish, Suquamish, and Tulalip	Beyond 12 nm	• Note these nations were not considered in the assessment. This may change given the recent discussions within government on the implications of the SCC decision. • Failure to assess beyond 12 nm will fail to capture the impact on their communities and directly interfere with their ability to access and harvest treaty-reserved resources.

If the DP4 marine assessment were to be extended from 12 nm to cover the EEZ, then, in addition to the 51 Indigenous nations (represented by 33 Indigenous organizations) currently being engaged by GCT for the DP4 Project, many additional Indigenous nations (see Table A.3 below) may also need to be engaged by GCT and consulted by the Crown.

Table A.3: Preliminary list of additional Indigenous nations that may need to be engaged if the scope of the DP4 assessment is extended past the 12 nm limit of Canada's Territorial Sea.

Indigenous nations on the West Coast of Vancouver Island	Indigenous nations on the East Coast of Vancouver Island	Indigenous nations within the Islands on the North East coast of the Island
Ahousaht First Nation	Da'naxda'xw/Awaetlala First Nation	Dzawada'enuxw First Nation
Ehatteshaht	Gwa'sala-'Nakwaxda'xw Band/Nations	Gwawaenuk Tribe
Hesquiaht	Homalco First Nation	Klahoose First Nation
Hupaċasath First Nation	K'ómoks First Nation	Kwiakah
Mowachaht/Muchalaht	Kwakiutl	Kwikwasut'inuxw Haxwa'mis First Nation
Nuchatlaht First Nation	Kwicksutaineuk-ah-kwaw-ah-mish	Mamalilikulla-Qwe'Qwa'Sot'Em Band/First Nation
Tla-o-qui-aht First Nation	Namgis First Nation	Tanakteuk Indian Band (Da'naxda'xw/Awaetlala)
Tseshaht First Nation	Nanoose First Nation	Tla'amin

Indigenous nations on the West Coast of Vancouver Island	Indigenous nations on the East Coast of Vancouver Island	Indigenous nations within the Islands on the North East coast of the Island
Yuu_u_i__at_ Government	Qualicum First Nation	Tlowitsis Tribe
	Quatsino First Nation	Tsawataineuk Indian Band (Dzawada'enuxw)
	Snuneymuxw First Nation	
	Tlatlasikwala First Nation	
	We Wai Kai Nation	