

THIS IS EXHIBIT "15"
Referred to in the Affidavit of
Michael Davies
Sworn before me this 26th
day of October A.D. 2017



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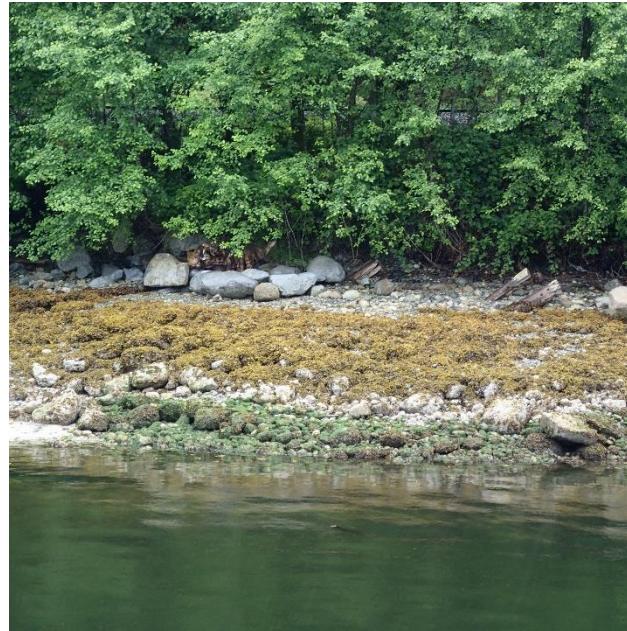
WESTRIDGE MARINE TERMINAL CONSULTATION
SUMMARY

WESTRIDGE MARINE
TERMINAL UPGRADE AND
EXPANSION PROJECT
APPLICATION TO VANCOUVER
FRASER PORT AUTHORITY



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DEFINITIONS AND ACRONYMS LIST

AAQ	ambient air quality
AB	Alberta
AEMP	Air Emissions Management Plan
ALARP	As Low as Reasonably Possible
API	American Petroleum Institute
AVICC	Association of Vancouver Island and Coastal Communities
BC	British Columbia
BCBC	BC Building Code
BCEAO	BC Environmental Assessment Office
CAC	Criteria Air Contaminant
CCG	Canadian Coast Guard
CEA	Canadian Environmental Assessment
CEAA 2012	Canadian Environmental Assessment Act, 2012
CNV	City of North Vancouver
COSBC	Chamber of Shipping for British Columbia
CPCN	Certificate of Public Necessity and Convenience
CPM	Computational Pipeline Monitoring
CRD	Capital Regional District
CSA	Canadian Standards Association
CVRD	Cowichan Valley Regional District
DFO	Fisheries and Oceans Canada
DNV	Det Norske Veritas
EA	Environmental Assessment
EAO	Environmental Assessment Office
ECA	Emission Control Area
ECCC	Environment and Climate Change Canada
EMP	Emergency Management Program
EMSW	Emergency Management Stakeholder Workshop
ENGO	Environmental Non-governmental Organization
EPP	Environmental Protection Plan
ERA	Ecological Risk Assessment
ERP	Emergency Response Plan
ESA	Environmental and Socio-Economic Assessment
Facilities Application	NEB Facilities Application for TMEP
FEMP	Fugitive Emissions Management Plan
FHA	Fraser Health Authority
FLoC	Frequency of Loss of Containment
FVRD	Fraser Valley Regional District
GHG	greenhouse gas
GRPs	Geographic Response Plans
HDD	horizontal directional drilling
HHRA	human health risk assessment
HMM	Hatch Mott MacDonald
HNS	Hazardous and Noxious Substances
ISLMS	Integrated Safety and Loss Management System
KMC	Kinder Morgan Canada Inc.
LFVAQCC	Lower Fraser Valley Air Quality Coordinating Committee
LGMA	Local Government Management Association
LMLGA	Lower Mainland Local Government Management Association
LRBW	Least Risk Biological Window
MIACC	Major Industrial Accidents Council of Canada

MLBs	mainline block valves
Moe	Ministry of Environment
MOU	Memorandum of Understanding
MRA	Movement Restricted Area
NBCC	National Building Code of Canada
NEB	National Energy Board
NFPA	National Fire Protection Association
NRD	Nanaimo Regional District
OPR	Onshore Pipeline Regulation
OSCAR	Oil Spill Containment and Recovery
PCEM	post-construction environmental monitoring
RDFFG	Regional District of Fraser Fort George
SBP	Surrey Bend Regional Park
SCADA	supervisory control and data acquisition
SEEMP	Socio-Economic Effects Monitoring Plan
SFPR	South Fraser Perimeter Road Highway
SLRD	Squamish Lil'ooet Regional District
TERMPOL	Technical Review Process of Marine Terminal Systems and Transshipment Sites
TIABC	Tourism Industry Association of BC
TLRU	traditional land and resource use
TMEP or the Project	Trans Mountain Expansion Project
TMPL	Trans Mountain pipeline
TMRU	traditional marine resource use
TNRD	Thompson Nicola Regional District
Trans Mountain	Trans Mountain Pipeline ULC
TRU	Thompson Rivers University
TWG	Technical Working Group
VCHA	Vancouver Coastal Health Authority
VFPA	Vancouver Fraser Port Authority or "the Port"
VOC	volatile organic compounds
WCMRC	Western Canada Marine Response Corporation
WMT	Westridge Marine Terminal

NOTE TO READER

Trans Mountain has implemented, and continues to conduct an open, extensive and thorough public consultation process, commonly known and referred to by the Trans Mountain Expansion Project team as stakeholder engagement. Vancouver Fraser Port Authority (VFPA) permit guidelines differentiate between stakeholder consultation and public consultation which has not been the Project team's approach to date. However, engagement activities outlined in this permit application and appendices will attempt to differentiate activities where feasible to facilitate the permit review.

For the purpose of this application, unless otherwise stated, the feedback reported in Technical Report TR-20 reports on engagement activities and any outstanding issues identified from May 2012 through to January 31, 2017.

1.0 STAKEHOLDER ENGAGEMENT

Trans Mountain Pipeline ULC (Trans Mountain) filed a Facilities Application with the National Energy Board (NEB) proposing to construct and operate TMEP which is regulated under the National Energy Board Act (NEB Act). As a designated project under the Canadian Environmental Assessment Act, 2012 (CEAA 2012) the Project requires a CEAA 2012 environmental assessment for which the NEB is the Responsible Authority.

In establishing the List of Issues for its review of the Trans Mountain Expansion Project (Project; Filing ID A3V6I2), the NEB included the potential environmental and socio-economic effects of marine shipping activities resulting from the Project, including the potential effects of accidents or malfunctions that may occur. In its subsequent Letter and Filing Requirements to Trans Mountain Pipeline ULC -- Related to the Potential Environmental and Socio-Economic Effects of Increased Marine Shipping Activities - Trans Mountain Expansion Project (Filing ID A53984), the NEB provided further direction regarding the marine aspects of the review, including:

- Consultation
- Description of the increased in marine shipping activities
- Geographic extent of the shipping activities
- Environmental and Socio-Economic Assessment
- Navigation Safety
- Mitigation Measures

To address these requirements, Trans Mountain filed, as part of the Application, Volumes 8A (Marine Transportation), 8B (Marine Environmental and Socio-Economic Technical Reports) and 8C (TERMPOL Reports) and this information has since been augmented by Technical Updates and Information Request responses. Each volume contains an NEB Filing Manual Checklist identifying where information may be found in the various volumes of the Application.

The NEB completed its review of the Project and issued a recommendation to the Governor in Council to approve the Project on May 19, 2016 subject to 157 conditions of approval (Filing ID A77045). On November 29, 2016 the Government of Canada announced approval of the Project. On December 1, 2016 the NEB issued the Certificate of Public Convenience and Necessity (CPCN) to Trans Mountain.

On January 11, 2017, the Province of British Columbia issued an environmental assessment certificate to Trans Mountain Pipeline ULC for the BC portion of the Trans Mountain Expansion Project. The Province acknowledge the NEB has the primary responsibility for ensuring the Project is developed, constructed and operated in a manner that is safe and secure, and protects people, property and the environment. The environmental assessment certificate included 37 conditions that are in addition to and designed to supplement the NEB 157 conditions. Conditions of approval can be found in Appendix C.

1.1 Purpose of this Report

On September 11, 2014, the VFPA was signatory to a Project Agreement¹ for TMEP in AB and BC with other federal departments as coordinated by the Federal Government's Major Project Management Office. The purpose of the agreement was to detail the federal review process with the NEB as the responsible authority for an environmental assessment (EA) pursuant to CEAA 2012 and for a hearing

¹ Project agreement can be found at the following link accessed Nov 25, 2016:
<https://mpmo.gc.ca/sites/mpmo.gc.ca/files/files/project-projet/pdf/TMX-eng.pdf>

process as defined by the NEB Act. VFPA participated in the NEB review process as an Intervenor and as such provided the NEB with expert input and regulatory review of components of the Project.

The NEB released its Report on the Trans Mountain Expansion Project (Filing ID A5A9H1) to the federal Governor in Council on May 19, 2016. In January 2016, the federal government announced it would take an additional four months (Federal Transition Process) to review the Project (*i.e.*, in addition to the planned three months), including conducting additional Crown consultation with Aboriginal groups and communities, and further stakeholder and Aboriginal engagement with communities potentially affected by the Project. The federal government approved the Project on November 29, 2016 and the NEB issued the CPCN on December 1, 2016.

Having received a CPCN from the NEB, Trans Mountain will submit a permit application to VFPA for review and issuance of necessary VFPA permits. This Report is intended to provide additional information to the VFPA to inform its decision-making process.

Section 2.0 of this Report summarizes the key issues raised by the stakeholders and communities through their written argument or other submissions to the NEB. As previous consultation filings in record show, the breadth of stakeholders engaged was broad; however, the engagement with stakeholders and communities considered applicable for the purposes of this permit review were determined in consultation with VFPA and are presented in Table 1.2-1.

**TABLE 1.1-1
STAKEHOLDERS AND COMMUNITIES APPLICABLE TO THE VFPA PERMIT REVIEW**

Consulted Municipalities/Regional Governments <small>* Denotes engagement on WMT Construction</small>	Consulted Stakeholders	Marine-Specific Consulted Stakeholders
<ul style="list-style-type: none">• City of Burnaby*• Village of Belcarra*• District of North Vancouver*• Metro Vancouver*• City of Port Moody• City of North Vancouver• City of Vancouver• District of West Vancouver	<ul style="list-style-type: none">• CP Rail• CN Rail• Shell• Island Tug & Barge• Vancouver Coastal Health Authority• Fraser Health Authority• Health Canada• BC Ministry of Forest, Land and Natural Resource Operations	<ul style="list-style-type: none">• Transport Canada (Navigation Protection Program)• Pacific Pilotage Authority• Council of Marine Carriers• BC Chamber of Shipping• Shipping Federation of Canada

This Engagement Report (Report) does not duplicate the information on the public record with the NEB, rather it is intended as an accompaniment to the information already on file. Section 1.2.3 of this Report provides additional information on stakeholders or communities who either chose not to submit written argument submissions to the NEB or were not active in the NEB Regulatory process. Many of the stakeholders or communities identified in Section 1.2.3 have provided input and worked collaboratively with Trans Mountain.

Appendix T of this Report provides a table of hyperlinks to the documents filed by the applicable stakeholders and communities who participated in the NEB hearing process as either an Intervenor or Commenter.

Appendix U of this Report provides a summary of key issues raised through the written argument or other submissions filed with the NEB by the applicable stakeholders and communities. Appendix U is not intended to be an exhaustive examination of all issues raised in the NEB's process, rather Trans Mountain focused on the issues raised through written arguments as a surrogate for the broader public interest within the scope of the VFPA's permit review. Appendix U also provides a status update

regarding the resolution of key issues raised and information on how those key issues will be addressed either through NEB condition or TMEP commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

1.1.1 NEB Decision – Views on TMEP's Consultation with Governments

In Section 4.2 of the NEB's Report on the Trans Mountain Expansion Project (Filing ID [A5A9H1](#)), the Board stated:

The Board regards engaging the public as an essential and ongoing activity throughout the Project's entire lifespan. Thorough and effective consultation requires a process that must provide timely, appropriate and effective opportunities for all potentially affected parties to learn about the Project, provide their comments and concerns, and to discuss how Trans Mountain could address them.

The Board is of the view that Trans Mountain has developed and implemented a broadly based public consultation program, offering numerous venues and opportunities for the public, landowners, governments and other stakeholders to learn about the Project, and to provide their views and concerns to the company.

Since a company's relationship with directly affected stakeholders will continue for several decades throughout the lifecycle of a project, it is critical for all parties to recognize and understand their respective roles and responsibilities for achieving effective dialogue during consultation, including those offered outside of the NEB hearing process. The Board expects affected parties, including municipalities, to engage with Trans Mountain by communicating their concerns to the company and making themselves available to discuss potential solutions. The Board observes with regret that not all municipalities accepted the opportunity to engage with the Trans Mountain effectively. In particular, the City of Burnaby declined a number of opportunities to engage with Trans Mountain. The Board is of the view that when municipalities decline opportunities to engage, this diminishes the quality of information available to both the company and the Board, and creates the potential that less than satisfactory solutions to municipal concerns may be the result.

The Board acknowledges the concerns raised by municipalities regarding ongoing consultation, particularly during the design and construction phase of the Project. Trans Mountain has committed to offer continued engagement opportunities to affected municipalities through the formation of technical working groups, with the stated goal to build trust and good relationships where the company operates. The Board views such working groups as useful opportunities to explore collaborative approaches through the design and construction phases of the Project, and to pursue ongoing dialogue. To facilitate the establishment and development of the technical working groups, the Board would impose Condition 14 requiring Trans Mountain to file with the Board, prior to commencing construction, the terms of reference for the technical working groups, to be developed in collaboration with participating affected municipalities, and facility owners and operators.

Although consultation with government authorities was initiated early in the process, the Board expects Trans Mountain to continue to offer opportunities for effective and timely consultation with government stakeholders, as appropriate, through the lifecycle of the Project in order to further identify and adequately address concerns regarding the Project's potential effects on governments, including municipalities. To facilitate Trans Mountain's ongoing consultation with government stakeholders, and to apprise the Board and all parties of the outcomes of this ongoing consultation, the Board would impose Condition 49 requiring Trans Mountain to file with the Board, reports of the meetings of the technical working groups. In the Board's view, this reporting would allow the Board and all parties to understand the outcomes achieved by the technical working groups, and provide for the transparent reporting to the Board of any potential issues regarding the design and construction of the Project. The reporting would also allow the Board and all parties understand how these issues have been addressed, to the extent possible, by Trans Mountain and the members of the technical working groups.

1.1.2 NEB Condition and Trans Mountain Commitment Compliance

On May 19, 2016, the NEB recommended the federal government approve the TMEP, subject to 157 required conditions that apply during various stages of the Project's life cycle, including before

construction, during construction and during operation of the pipeline. NEB conditions are designed to reduce possible risks identified during the Application process and ensure the pipeline is planned, built and operated safely. The requirements also ensure Trans Mountain protects the environment and respects the rights of those directly affected by the Project through construction, mitigation and into many years of operations.

The conditions, which would be enforced by the NEB, cover a wide range of topics, including:

- safety and integrity of the pipeline;
- emergency preparedness and response;
- protection of the environment;
- ongoing consultation with those affected, including Aboriginal communities;
- socio-economic matters;
- affirmation of commercial support for the Project prior to construction; and
- financial responsibility.

A complete list of the NEB's 157 conditions can be found in Appendix 3 of the NEB's report (see Appendix C). NEB imposed five overarching conditions, the effect of which, makes all commitments, plans or programs included, referenced, or agreed to on the hearing record, regulatory requirements of the NEB.

While commenting on TMEP's Consultation with Governments, Section 4.2 of the NEB's Report stated:

As discussed in Chapter 7, the Board would impose a condition requiring Trans Mountain to file with the Board an updated commitment tracking table prior to the start of construction (Condition 6). This update should include all commitments made to landowners and government stakeholders. The Board reminds Trans Mountain that even where commitments may not be specifically included in Trans Mountain's filings submitted pursuant to Condition 6, Trans Mountain would still be required to implement all commitments made in its Project application, or as otherwise agreed to in the evidence it filed during the hearing, or in its related submissions (Condition 2).

Trans Mountain has committed to continue consulting with and addressing issues raised by affected landowners, both before and after pipeline construction. The Board is of the view that an effective and responsive process for responding to issues that may be raised by affected landowners is an important part of the company's ongoing engagement with landowners. To that end, the Board would impose Condition 102 requiring Trans Mountain to confirm that it has created, and will maintain, a process/system that tracks Project-related landowner and tenant complaints or concerns and how Trans Mountain has addressed them, up until the Project is abandoned or decommissioned pursuant to the NEB Act. The Board would also impose Condition 99. Some groups were critical of the approach requiring Trans Mountain to maintain and file with the Board, records of its landowner and tenant consultations, and provide confirmation that it will make available to a landowner or tenant, upon request, a copy of the consultation records related to that landowner or tenant. The Board is of the view that these requirements would facilitate an effective and responsive process for responding to issues raised by landowners and tenants in order that potential concerns can be appropriately addressed, to the extent possible.

The Board is of the view that with Trans Mountain's commitments and the Board's recommended conditions, Trans Mountain can continue to effectively engage the public, landowners and other stakeholders, and address issues raised throughout the Project's operational life.

Trans Mountain remains committed to open and transparent dialogue with stakeholders who are potentially impacted by the Project. Interests and/or concerns identified during ongoing engagement with stakeholders will be reviewed and incorporated into Project planning and development as appropriate, prior to construction, and in compliance with the filing of relevant NEB certificate conditions.

1.1.3 BC Environmental Assessment

The Province of BC has issued an Environmental Assessment (EA) certificate for the Project with 37 specific conditions attached. The conditions are based on the NEB's report, the consideration of additional information and Aboriginal consultation to date. The conditions are legally binding and must be completed to ensure Aboriginal interests are accommodated and the Province is satisfied.

Of the 37 Conditions, two conditions relate to engagement and consultation: No. 3 – Consultation and No. 14 – Public Communications and Engagement (see Appendix V). These conditions are in addition to and supplement the 157 NEB conditions, ensuring engagement will continue and that consultation reports will be filed on a regular basis during and after construction.

As stated on page 24 of the BC EAO Assessment Summary Report (Appendix Y):

...EAO required Trans Mountain to submit a Stakeholder Engagement Report which summarized engagement with local and regional governments and municipalities, identified the key issues raised by stakeholders, particularly local and regional governments and municipalities throughout the process, and provided a status update regarding the resolution to these issues.

...Trans Mountain has committed to offer continued engagement opportunities to affected municipalities through the formation of technical working groups to support addressing the concerns raised by municipalities regarding ongoing consultation, particularly during the design and construction phase of the Project. To facilitate the establishment and development of the technical working groups, NEB condition 14 would require Trans Mountain to file with the NEB, prior to commencing construction, the terms of reference for the technical working groups, to be developed in collaboration with participating affected municipalities, and facility owners and operators. NEB condition 13 would require Trans Mountain to file with the NEB for approval, a plan for monitoring potential adverse socioeconomic effects of the Project during construction. NEB condition 131 would require Trans Mountain to file with the NEB, a report describing completed activities and observed outcomes of Trans Mountain's Marine Public Outreach Program, and any further planned activities for this program. The NEB had included several conditions regarding emergency planning, preparedness and response, as described in Section 7 of this report.

In addition, EAO proposes conditions that would require Trans Mountain to continue to engage until the end of operations, to establish and maintain a project website for sharing information, to provide EAO with reports on its public consultation...

Trans Mountain will continue its approach to transparent, regular engagement and ensure all requirements of the 37 Province of BC Environmental Assessment Conditions are met.

1.2 Stakeholder Engagement Overview

The Trans Mountain Expansion Project (“TMEP” or “the Project”), Trans Mountain Pipeline ULC (Trans Mountain) initiated its stakeholder engagement program as soon as the decision to proceed with the Project was announced in May 2012. Trans Mountain’s stakeholder engagement program has touched all aspects of the pipeline corridor and associated facilities, between Strathcona County, Alberta (AB) and Burnaby, British Columbia (BC). This includes Westridge Marine Terminal, (WMT) as well as the marine shipping corridor along BC’s south coast. Trans Mountain has sought feedback on the following:

- determining the scope of the Environmental and Socio-Economic Assessment (ESA);
- identifying potential mitigation measures to reduce environmental and socio-economic effects;
- identifying potential benefits associated with the Project; and

- routing or facility alternatives where it is not practical to follow the existing Trans Mountain pipeline (TMPL) right-of-way.

National Energy Board Consultation Filings

The feedback Trans Mountain received through its engagement and communications activities has been incorporated into the Project and has influenced the design of subsequent phases of engagement and communications. Trans Mountain's complete record of its stakeholder engagement and communications activities through the NEB hearing process can be found in the following documents:

- Volume 3A ([Filing ID A55987](#)) of the NEB Facilities Application (the Facilities Application), filed with the NEB on December 16, 2013, reported on Trans Mountain's stakeholder engagement activities for the period of May 2012 through to July 31, 2013. Trans Mountain engaged with stakeholders on all aspects of the Project including scope, routing, issues and stakeholder identification, appropriate engagement and communications methods, ESA, and regulatory timelines in preparation for submitting the Application to the NEB in December 2013.
- Consultation Update No. 1 and Errata ([Filing ID A59343](#)), filed with the NEB on March 20, 2014, reported Trans Mountain's ongoing engagement activities for the period of August 1 to December 31, 2013. Consultation Update No. 1 provided the final summary of engagement activities and issues addressed by Trans Mountain leading up to the submission of its Application to the NEB in December 2013, including terminals, reactivation, grasslands, economic benefits, and emergency management.
- Consultation Update No. 2 ([Filing IDs A62087](#) and [A62088](#)), filed with the NEB on August 1, 2014, reported on Trans Mountain's ongoing engagement activities for the period of January 1 to April 30, 2014. During this time, Trans Mountain continued to engage with stakeholders on routing, proposed reactivation, emergency management, and routing through/adjacent to provincial parks, as well as to respond to other issues as they arose.
- Consultation Update No. 3 (NEB Filing ID [A4H1W2](#) through [A4H1W7](#)), filed with the NEB on February 12, 2015, reported on Trans Mountain's ongoing engagement activities for the period of May 1 to December 31, 2014. During this time, Trans Mountain continued to engage with stakeholders through the initiation of Technical Working Groups (TWGs), and about employment and training, emergency management, economic benefits, procurement or business opportunities, park use and construction impacts, BC Parks Stage 2 Application, fisheries offsets, reactivation and community capacity building, Project status and updates, as well as respond to other issues as they arose.
- Consultation Update No. 4 ([Filing ID A72224](#)), filed with the NEB on August 20, 2015, reported on Trans Mountain's ongoing engagement activities for the period of January 1, 2015 to June 30, 2015. During this time, Trans Mountain continued to engage with stakeholders on emergency management, community capacity building, Environmental Protection Plan (EPP), socio-economic effects monitoring, construction impacts, Project status and updates, as well as respond to other issues as they arose.

Vancouver Fraser Port Authority Consultation Filings

Further engagement and communications documentation has also been provided to the Vancouver Fraser Port Authority (VFPA) as follows:

- Marine Consultation Summary No. 1 provided by Trans Mountain to VFPA on January 5, 2015, (which is also appended to Consultation Update No. 3 (National Energy Board [NEB] Filing ID [A4H1W5](#))). This summary reported on Trans Mountain's ongoing

engagement activities for the period of the Project's announcement in May 2012 to July 2014.

- Marine Consultation Summary No. 2 provided by Trans Mountain to VFPA on October 3, 2015 (see Appendix A). This updated summary of all marine-related consultation for TMEP includes all consultation on marine matters in the jurisdiction of PMV occurring from August 1, 2014 to June 30, 2015. Note this also includes discussions of relevance to VFPA jurisdiction along the Fraser River.

BC Environmental Assessment Office Consultation Filings

- An engagement summary of activities completed from July 1, 2015 through to June 30, 2016 was also filed with the BC Environmental Assessment Office (BCEAO) in September of 2016. The report was posted by BCEAO at the following link:
http://a100.gov.bc.ca/appsdata/epic/html/deploy/epic_document_459_41085.html

As with the previous reporting period for the VFPA, this summary does not include the engagement activities or outcomes of Aboriginal engagement, landowner negotiations or the engineering led discussions of Technical Working Groups with individual pipeline community municipalities and regional districts. Aboriginal engagement summary logs are submitted to the VFPA directly by the Trans Mountain Aboriginal Engagement Team.

Trans Mountain is committed to open and transparent dialogue with stakeholders who are potentially impacted by the Project and throughout the life of the Project. Interests and/or concerns identified during ongoing engagement with stakeholders will be reviewed and incorporated into Project planning and development as appropriate, prior to construction and in compliance with the filing of relevant NEB certificate conditions.

1.2.1 *Philosophy*

As identified in Section 1.2.1 in Volume 3A (Filing ID A55987) of the Facilities Application for TMEP, the Project team adopted Kinder Morgan Canada Inc.'s (KMC) Community Relations philosophy, which states:

At KMC, we believe Aboriginal communities, our neighbours, governments and local communities play an important role in how we conduct our business. Our success depends on earning the trust, respect and cooperation of all community members.

We are committed to respectful, transparent and collaborative interactions with communities to develop long-term effective relationships. To honour this commitment, we participate in local communities by hosting facility open houses, providing newsletters and Project updates, making safety and public awareness presentations, participating in community events, regulatory processes, and informal meetings.

1.2.2 *Guiding Principles*

As identified in Section 1.2.2 in Volume 3A (Filing ID A55987) of the Facilities Application, the following principles have been and will continue to be used to guide the stakeholder engagement program.

- **Accountability** – Address issues as they emerge. Trans Mountain believes that effective problem solving and mitigation strategies can be identified through engagement with stakeholders.
- **Communication** – Facilitate the involvement of stakeholders; listen and gather input, and work collaboratively to resolve concerns. Use multiple channels for communication to meet the communication needs of diverse stakeholder groups.
- **Local focus** – Seek local input and understanding of the region, its people, the environment, and reflect local values and attitudes in communications with stakeholders.

- **Mutual benefit** – Seek solutions to challenges that result in shared benefits for all interests.
- **Relationship building** – Instill confidence in the public by remaining committed to being a good neighbour with the goal of establishing and maintaining positive, long-term relationships with stakeholders.
- **Respect** – Respect individual values, recognize the legitimacy of concerns, and value the stakeholder input.
- **Responsiveness** – Utilize input and, where feasible, provide timely feedback to stakeholders on how their input has affected plans and decisions.
- **Shared process** – Design the TMEP Engagement Program based on public input, taking into consideration various stakeholder group interests, knowledge levels, time, and preferred method of engagement.
- **Sustainability** – Report on a triple bottom line of social, environmental and economic concerns raised, and identify how these concerns might be addressed.
- **Timeliness** – Initiate engagement processes as early as possible to provide adequate time for stakeholders to assess information and provide input.
- **Transparency** – Commitments made to stakeholders will be documented and carried out. When Trans Mountain is unable to act on input, an explanation will be provided.

1.2.3 Stakeholder Identification

Prior to launching a broad stakeholder engagement program, Trans Mountain consulted with local governments and community leaders to seek input on its program. These early conversations provided Trans Mountain with direction on areas of greatest interest to local communities, appropriate means of engagement for different communities and the identification of local stakeholders who should be engaged in the process.

In addition, through an evaluation of the proposed pipeline and marine corridors, Trans Mountain identified stakeholder groups that may have an interest in the Project. This information was originally provided in Table 1.3.1 in Volume 3A (Filing ID A55987) of the Facilities Application and is updated below in Table 1.1-1.

TABLE 1.2-1

IDENTIFIED STAKEHOLDER GROUPS FOR PIPELINE AND MARINE CORRIDORS

Stakeholder Type	Stakeholder Type Sub-categories
Government Authorities	<ul style="list-style-type: none">• Government of Canada (federal agencies)• Government of Alberta• Government of BC• municipal governments• regional governments• transit authority
Environmental Non-governmental Organizations (ENGOs)	<ul style="list-style-type: none">• local ENGOs• regional ENGOs• national ENGOs

Stakeholder Type	Stakeholder Type Sub-categories
Interest Groups	<ul style="list-style-type: none"> • chambers of commerce • economic development associations • recreation groups • labour groups • local and regional associations and organizations • business/industry associations • commercial fishing industry • local interest groups, including subject experts
Industry	<ul style="list-style-type: none"> • oil and gas industry • pipeline industry • potential suppliers and contractors • other infrastructure • terminal operators in Burrard Inlet (including other petroleum product terminals) • maritime industry, including marine pilots
Public	<ul style="list-style-type: none"> • public living or working in pipeline and marine corridor communities • public living outside of pipeline and marine corridor communities

To ensure communications and engagement opportunities met the needs and interests of local communities, engagement activities were divided into pipeline corridor communities (those potentially affected directly by the pipeline and associated facilities) and marine corridor communities (those potentially affected by the incremental increase in Project-related marine vessel traffic). This information was originally provided in Table 1.3.2 in Volume 3A of the Facilities Application, which identified the pipeline and marine corridor communities falling within Trans Mountain's five regions - AB, BC Interior, Lower Mainland/Fraser Valley, Mainland Coastal and Island Coastal. Table 1.1-2 of this Engagement Report (Report) is an updated listing of pipeline and marine corridor communities within the Province of BC associated with the Project.

TABLE 1.2-2

REGIONAL ALLOCATION OF PIPELINE AND MARINE CORRIDOR COMMUNITIES

Pipeline Corridor		Marine Corridor	
BC Interior	Lower Mainland/ Fraser Valley	Mainland Coastal	Island Coastal
<ul style="list-style-type: none"> • City of Kamloops • City of Merritt • Community of Avola • Community of Blue River • Community of Little Fort • Community of Vavenby • District of Barriere • District of Clearwater • Fraser Fort George Regional District • Thompson-Nicola Regional District • Village of Valemount 	<ul style="list-style-type: none"> • City of Abbotsford • City of Burnaby* • City of Chilliwack • City of Coquitlam • City of New Westminster • City of Port Coquitlam • City of Surrey • District of Hope • Fraser Valley Regional District (FVRD) • Metro Vancouver Regional District* • Township of Langley 	<ul style="list-style-type: none"> • Bowen Island Municipality • City of Burnaby* • City of North Vancouver (CNV) • City of Port Moody • City of Richmond • City of Vancouver • City of White Rock • Corporation of Delta • District of North Vancouver • District of Squamish • District of West Vancouver • Metro Vancouver Regional District** • Squamish Lillooet Regional District (SLRD) • University Endowment Lands/Metro Vancouver Electoral Area "A" • Village of Anmore • Village of Belcarra • Village of Lions Bay 	<ul style="list-style-type: none"> • Alberni – Clayoquot Regional District • Capital Regional District (CRD) • City of Nanaimo • Corporation of the City of Duncan • Corporation of the City of Victoria • Corporation of the District of Central Saanich • Corporation of the District of Oak Bay • Corporation of the District of Saanich • Corporation of the Township of Esquimalt • Cowichan Valley Regional District (CVRD) • District of Metchosin • District of North Saanich • District of Sooke • Islands Trust Areas • Nanaimo Regional District (NRD) • Sunshine Coast Regional District • Town of Sidney

Trans Mountain had almost 40,000 points of contact with stakeholder groups, government bodies and industry organizations to obtain input on the proposed Project. Stakeholders have participated in and provided feedback to Trans Mountain through a variety of opportunities including; however, not limited to, one-on-one meetings, online forums/surveys, open houses, neighbourhood information sessions, Emergency Management Stakeholder Workshops (EMSW), EPP Workshops, Socio-Economic Effects Monitoring Plan (SEEMP) meetings, TWGs and ongoing community conversations.

Engagement with pipeline communities have broadly discussed the greater terrestrial (pipeline and facility) Project impacts, and in the coastal communities such as those found within Burrard Inlet, engagement efforts have focused on maritime matters related to the incremental increase in tanker traffic and the expansion of Westridge Marine Terminal. A complete list of stakeholder and public engagement events regarding Westridge and marine transportation issues can be found in Appendix B.

Stakeholders have had the opportunity to provide feedback on the pipeline route, associated facilities and marine studies, as well as important issues related to the Environmental Socio-Economic Assessment (ESA). Trans Mountain has gathered informed input, identified issues or concerns and, where appropriate, incorporated the results of its engagement, including any recommendations from those engaged, into the plan.

1.2.4 *Engagement Activities Overview – July 1, 2015 to December 1, 2016*

As reported in Volume 3A of the Facilities Application, Phase 5 of the stakeholder engagement program is inclusive of engagement activities occurring from January 2014 through to in-service. Trans Mountain's ongoing activities during this phase of the stakeholder engagement program have and will continue to include:

- Sharing results of any new studies or work being completed on the Project;
- Communicating any changes and or updates to Project plans;
- Sharing information with stakeholders on the regulatory process; and
- Engaging on potential construction effects and mitigation measures.

As noted in Section 1.1.1 of this Report, Trans Mountain's complete record of its stakeholder engagement activities can be found in other reports filed with the VFPA as well as filings for the NEB and the BCEAO regulatory review processes. Those documents should be referenced as an accompaniment with this section.

This section of the Report provides an overview of engagement activities completed and any outstanding issues identified during the period of July 1, 2015 to January 31, 2017 with specific regard to Westridge Marine Terminal and the increase in associated marine vessel traffic with the Project. It should not to be considered a comprehensive Consultation Update, as has been provided to the NEB and referenced in Section 1.1 of this Report.

During this timeframe, Trans Mountain continued to provide timely information, as well as respond to and gather stakeholder feedback through in person interactions, its website, phone and social media channels. Engagement activities specific to topic areas applicable to the VFPA development permit are profiled in Sections 1.1.4.1 through 1.1.4.4 below.

1.2.4.1 *Westridge Marine Terminal Construction and Operations*

SEEMP

To inform requirements for NEB Condition No. 13 (a list of NEB Conditions available in Appendix C), Trans Mountain hosted three Socio-Economic Effect Monitoring Plan (SEEMP) workshops in the Lower Mainland Fraser Valley region between this Report's timeframe of July 1, 2015 and January 31, 2017. Two in person workshops were held in 2015 and a webinar was held on January 2017. The regional Health Authorities participated in both the Coquitlam July 15, 2015 workshop and January 16, 2017 webinar. Stakeholders with interests related to Westridge Marine and Burnaby Terminals were invited to

the Coquitlam workshop and the January webinar. The webinar held on January 16, 2017 provided a review of SEEMP content including indicators, how feedback received on indicators has been incorporated into the SEEMP and a rationale for non-inclusion of additional proposed indicators. The webinar is available in Appendix W.

Legacy Benefits

Trans Mountain continued to meet with local governments and other local stakeholder groups to discuss potential legacy benefits to local communities that could result from the Project. The Community Benefits program is discussed in Section 1.1.6.

City of Burnaby Preliminary Plan Application

At Trans Mountain's request, in August 2015, Trans Mountain met with City of Burnaby planning staff to obtain feedback on the City's Preliminary Plan Application process and documentation. The City provided information about the application drawing requirements, outlined the review process, timelines and fees.

Engagement and Communications Activities

In December 2015, Trans Mountain issued a letter to Burrard Inlet municipal and regional governments, locally elected provincial and federal government representatives, neighbours to Burnaby and Westridge Marine Terminals, as well as others who may be impacted by the expansion plans for the terminals in Burnaby. The letter provided an update on the regulatory review schedule, changes made to the Project as a result of input received to date and next steps for the Project. The letter welcomed those interested to contact the Project should they wish further information (see Appendix D for copies of the letters distributed to elected officials of applicable communities for this Report).

In June 2016, following a positive recommendation from the NEB, Trans Mountain invited municipal and regional governments, including those with interests in Westridge Marine Terminal to meet to discuss outstanding concerns.

In June 2016, in response to frequently asked questions and topics of concern identified in Burnaby and North Shore communities, Trans Mountain initiated a series of bi-weekly advertorials placed in the North Shore News and Burnaby Now newspapers. Copies of the advertorials and their production schedule are available in Appendix E.

In July 2016, Trans Mountain representatives met with senior staff at the District of North Vancouver. The District was provided with an update on the Project and an overview of the expansion of Westridge Marine Terminal. Staff expressed interest in construction details and methods of communications with District residents. Trans Mountain committed to continue sharing updates and information as it comes available related to construction. The Project will also engage directly with communications staff at the District once Trans Mountain's complaints process and communication plan are available for their review and comment (Q2 2017).

In September 2016, Trans Mountain issued invitations to stakeholders with specific interests and subject expertise in environmental topics related to the expansion to provide input to environmental plans related to the Project. The plans were posted online at different times between Q3 2016 and Q1 2017 and opportunities to ask questions or provide feedback were made available. A complete list of the environmental plans posted is available in Appendix F.

As described in Appendix B Trans Mountain participated in trade shows and community events to augment community and resident readiness for potential employment and procurement opportunities related to the Project, to increase TMEP visibility and to respond to questions or concerns about the Project.

Technical Working Groups

Trans Mountain continued to offer Technical Working Groups (TWGs) with local and regional governments along the pipeline corridor. These groups provide an opportunity for Trans Mountain's engineering, routing and construction planning and execution teams to work directly with the relevant

local and regional governments to refine Project plans and to address interests and concerns identified in the regulatory process or as they arise. Other technical experts are brought in as required.

Related to the Westridge Marine Terminal, Trans Mountain originally requested Metro Vancouver Regional District and the City of Burnaby form TWGs with Trans Mountain in Q1 2015. The City of Burnaby declined to participate. Based on the NEB recommendation in May 2016, these groups will continue as a requirement of NEB Condition No. 14 TWG – Terms of Reference and No. 49 TWG reports (see Appendix C). In Q3 2016, Trans Mountain requested regional and municipal governments in pipeline communities re-form TWGs, with a revised draft Terms of Reference (Appendix G shows an example of the TWG Terms of Reference information provided to municipalities). A meeting was held with the City of Burnaby on December 15, 2016 to review the request and determine how the City would like to be engaged going forward. A TWG has been agreed to by Metro Vancouver; the first meeting is scheduled for February 2017.

Online Engagement

In June 2016, Trans Mountain launched a series of online presentations to summarize current information related to the design and construction plans for the Burnaby and Westridge Marine Terminals, as well as the tunnel through Burnaby Mountain. The videos also provided stakeholders a digital forum to learn about Project updates and future engagement opportunities, to ask questions and to provide feedback. The online presentations were promoted through postcard delivery and posters to approximately 3,400 residents living near the terminals in Burnaby, to North Vancouver and to Belcarra. Other means of promoting the videos included an email to more than 130 Aboriginal groups and stakeholders, including local governments; a Trans Mountain blog post; and tweets to more than 3,100 direct followers. Advertisements in local newspapers on the North Shore (June 2016, circulation 62,000) and Burnaby (August 2016, circulation 47,000) also invited feedback to the online presentations. Through Trans Mountain's notification dissemination, the Mayor of Belcarra posted the information on his Mayor's page at <http://www.belcarra.ca/reports/vob-report-jun2016.htm>.

Since June of 2016, updates related to Westridge Marine Terminal have been made to the Project's website; for example, as a result of engagement activities in Q4 2016 and Q1 2017 the following pages in particular have been updated:

- <https://www.transmountain.com/reporting-back>
As of February 6, 2017:
 - Launched Dec 20
 - Sessions: 748
 - Unique Visitors: 333
- <https://www.transmountain.com/burnaby>
As of February 6, 2017:
 - Launched: March 15, 2015
 - Sessions: 51
 - Unique Visitors: 13
- <https://www.transmountain.com/terminal-engagement>
As of February 6, 2017:
 - Launched: June 11, 2016
 - Sessions: 138
 - Unique Visitors: 54

Information Tours

Trans Mountain hosted several tours and events at its Burnaby and/or Westridge Marine Terminals providing various groups of stakeholders an opportunity to visit the facilities and ask questions about the current operations and the Project, including fire safety and emergency response equipment. On May 26, 2016, Trans Mountain participated in the Canadian Chamber of Commerce's Resource Day of Action by

hosting a tour for Chamber members and affiliates at its Burnaby Terminal. The tour also highlighted information about WMT.

Workshops

On November 24, 2016 Trans Mountain hosted a stakeholder workshop to share information related to Westridge Marine and Burnaby Terminals about current detailed engineering design and construction plans. The meetings were independently facilitated over four to five hours each, with presentations to stakeholders by the subject matter experts in construction, environment and marine development. Breakout sessions and group discussions provided an opportunity to exchange information regarding construction plans and potential impacts, to discuss with stakeholders proposed mitigation measures, and seek input on environmental plans and a construction communication plan. All participants were provided a discussion guide and were encouraged throughout the workshops to provide their feedback verbally and/or by submitting a feedback form.

More than 100 stakeholders were invited by email to the two events followed by an email reminder as well as a follow up to those who signed up to attend. The WMT workshop event was attended by 16 stakeholders and five stakeholders attended the portion relating to Burnaby Terminal. All information presented at the workshop as well as a list of invited guests and attendees is available in Appendix H. The information presented at the workshop is available at <https://www.transmountain.com/reporting-back>.

Key feedback received includes:

- significant interest in monitoring birds for impacts from construction noise and air quality particularly seaward of WMT and at Maplewood Flats in North Vancouver, BC;
- interest in more information about lighting management and impact / mitigation on marine life and birds;
- consider means of discouraging colonization of dock structures with marine invasive species;
- convene meeting with Lower Fraser Valley Air Quality Coordinating Committee (LFVAQCC) early in Q1 2017, to review key air quality topics;
- suggestion to place an air monitoring station at Maplewood Flats, suggestion to review potential location for air monitoring station with LFVAQCC;
- consider integrating habitat enhancements at the combi-wall structure against the foreshore at the expanded WMT;
- consider soft shore (vs. rock reef) habitat offsets (based on pre-harbour development conditions);
- interest in habitat offset ratio (consider undertaking more than requirement);
- suggestion to do baseline tissue sampling of marine life;
- interest expressed in shore power access for tankers;
- consider innovation and new approaches for weed management;
- interest in noise management monitoring and response to complaints, innovation in noise control methods; and
- interest in community liaison role definition; hours of work; how Trans Mountain will work with local governments to share information.

Necessary follow up on these topics will occur in Q1/Q2 2017. In particular, a meeting with LFVAQCC is planned for February 2017 to review topics of mutual interest including the Air Emissions and Fugitive Emissions Management Plans for both Westridge Marine and Burnaby Terminals.

Public Information Session

A Public Information Session was held on January 4, 2017 for Burnaby stakeholders. The information session was a drop-in format between 6 and 8 pm featuring 25 storyboards (see Appendix X), handouts and two mapping/routing stations with Google Earth pipeline maps projected on large screens. TMEP subject matter experts from various disciplines, and the contractor, were present to answer questions/concerns from the public. All the material disseminated at the session has been posted to the Project's website – www.transmountain.com/burnaby.

The objectives of the information session were to: provide an opportunity for potentially impacted neighbours and stakeholders to learn more about engineering design and construction planning;

introduce the contractor developing the construction execution plans; and, gather feedback on stakeholder preferences for construction communication methods and impact mitigation. Each attendee was offered a Discussion Guide of information handouts (see Appendix X); similar to what was provided for the November 24, 2016 workshop.

The session was promoted with local newspaper advertisements in the Burnaby Now and North Shore News (December 21, 28 and 30, 2016), a promotional card was delivered to Westridge and Burnaby Terminal neighbours (December 19-21, 2016) and emails were issued to over 200 key stakeholders between December 19 and 21, 2016, with reminder emails sent on January 2, 2017. Over 100 people attended the event (some chose not to sign in). Many attendees took the opportunity to share their views on the Project, ask questions and have conversations with the TMEP technical experts. While many questions and concerns were raised and answered at the session, no new issues or concerns were identified which have not been previously addressed or discussed over the course of the Project as described in previously filed consultation summaries.

Key themes discussed with stakeholders at the event include:

- Safety: pipeline, tanker traffic, marine safety, fire safety at the Burnaby terminal and WMT
- Emergency Management: evacuation plans, pipeline and tunnel seismicity, and fire safety
- Construction: timeline, traffic disruption, and noise concerns
- Environment: impacts on environment and mitigation measures; impacts on marine life
- Communications and notifications to neighbours
- Concerns regarding views becoming obstructed at Westridge

Additional feedback was received via feedback forms and posters which included requests for weekly construction updates to neighbours, more information about emergency response and request for evacuation plans. Stakeholders identified email, social media, website, mail drops and newspaper ads as preferred methods of notification going forward.

Marine Fisheries Offsets

To further explore feedback on the proposal of marine fisheries offsets for WMT, the Project consulted with the Vancouver Fraser Port Authority as well as the Vancouver Aquarium. Overall considerations for marine safety and the long term colonization of the reef were key topics of interest. Vancouver Aquarium did not state their level of comfort or approval of the preliminary configuration specifically; however, one attendee at the meeting did suggest that generally the Vancouver Aquarium was keen to see habitat enhancements that would increase fish abundance. The Vancouver Aquarium provided guidance relevant to the design of the rock-reef complex, which was developed based on longstanding research and monitoring work by Vancouver Aquarium and their Coastal Ocean Research Institute. Key feedback includes advice regarding the type and size of rock to be used, the construction method as well as suggested interstitial spacing for colonization by adult rockfish.

Presentations

On January 19, 2017 the Project made a presentation to the Vancouver Fraser Port Authority's North Shore Waterfront Liaison Committee. The presentation provided an overview of the project, specifically construction of WMT expansion. Attendees asked questions about spill response, the availability of shore power and the breadth of NEB's 157 Conditions for the Project.

Alternative Locations: Westridge Marine Terminal

The investigation of alternatives to Trans Mountain's existing WMT has been a topic of interest since the Project was announced in 2012. In particular, on occasion stakeholders have suggested suggestion Trans Mountain should reconsider Delta as an alternative proposed location for its existing WMT. Trans Mountain completed a thorough investigation of alternative marine terminal locations prior to submitting its Facilities Application to the NEB. Based on the results of the investigation, Trans Mountain confirmed its existing WMT in Burnaby, BC is the safest and best location for its expanded terminal facilities. The NEB requested more information about Trans Mountain's consideration of alternative Terminal Locations in NEB IR 2.044a (Filing IDs [A3Z4T9](#) and [A3Z4V1](#)). The following is a summary of outreach undertaken

regarding alternative marine terminal locations (compilation of all materials provided to media and stakeholders below is available in Appendix I).

- October 2015, in response to articles in local media outlets, Trans Mountain responded with a clarification in the Delta Optimist, to the Corporation of Delta Mayor and Council, and to local MLA Vicki Huntington. The response indicated Trans Mountain was not considering a terminal location in Delta as part of its expansion Project.
- February 2016, Trans Mountain issued a clarification in the local paper and a clarification to Delta Mayor and Council
- Spring 2016, Trans Mountain reached out to local MLA Scott Hamilton and local MP Carla Qualtrough to offer briefings on the Project and the alternative terminal location study and outcome. Both briefings occurred during summer 2016.
- April 2016, Trans Mountain met with MP Terry Beech to provide a Project briefing. In this meeting, at MP Beech's request, Trans Mountain explained the alternative locations study. Further, at his request, in November 2016, Trans Mountain provided a package of information to MP Beech regarding the alternative terminal locations study.
- In addition responses have been provided in one-on-one meetings, presentations, media interviews and through the Project's communications channels including the website, blog and social media.

1.2.4.2 Emergency Management

In November of 2015, Trans Mountain met with the Tourism Industry Association of BC (TIABC) and the Wilderness Tourism Association (WTABC) to review their concerns highlighted in their letter of comment (Filing ID A4K5V3). Concerns included oil spills, emergency response capacity, the marine terminal location, risk of more vessels transiting the Second Narrows and how to prepare the industry for recovery from crisis situations. The former president of WTABC was present at this meeting, in his role as a spokesperson for the Concerned Professional Engineers, and also repeated some of the same concerns about terminal location as well as the risks of increase vessel transit through the Second Narrows Movement Restricted Area (MRA). A copy of Trans Mountain's response to the WTABC letter of comment is available in Appendix J.

In response to stakeholder requests, Trans Mountain continued to host Emergency Management Stakeholder Workshops (EMSWs) to explore a local sequence of events and local resources requirements in the event of a pipeline incident in a community. On June 15, 2016, Trans Mountain hosted an EMSW for WMT in Burnaby; with participation from north shore municipalities as well as the City of Vancouver (complete invitation list and the presentation is available in Appendix K). Trans Mountain continues with its Emergency Management engagement, meeting with Aboriginal responders one-on-one to discuss outstanding concerns.

Trans Mountain also conducted meetings with BC school district superintendents, emergency management staff and principals, to discuss and review draft Emergency Response Guidelines for Schools during a spill emergency. A copy of a letter sent to the Burnaby School District is available in Appendix L. These guidelines are part of the work Trans Mountain is conducting to enhance the emergency response program and will be made available for schools to add to their existing Emergency Management Plans.

In November 2015 and 2016 Trans Mountain also hosted a booth for the second and third years in a row at the annual Emergency Preparedness and Business Continuity Conference held in Vancouver, BC to help explain the Kinder Morgan Canada's (KMC) approach to emergency management and how communities will be engaged throughout the enhancement of the existing plans to meet the needs of the proposed expansion.

To meet NEB regulatory requirements, of the existing Trans Mountain system (TMPL), which stipulates a full-scale emergency exercise must be conducted every three years, Trans Mountain's held an exercise for a full-scale credible worst-case oil spill at WMT in October 2015. Over 200 individuals participated in the exercise, from KMC, Western Canada Marine Response Corporation (WCMRC), local, provincial and federal official, local Aboriginal groups, other first responders and key public safety and wildlife management agencies. Combined with the exercise, Trans Mountain facilitated a large-scale observer

program to increase stakeholder awareness of the Incident Command System, and provide behind the scenes access to the exercise, including guided tours and subject matter experts to answer questions throughout the day. Participant lists, information materials and notices to stakeholders are available in Appendix M.

Trans Mountain met with public health officials of the Fraser Health Authority (FHA) and the Vancouver Coastal Health Authority (VCHA) on September 30, 2015 to discuss concerns outlined in a letter submitted by local governments during NEB hearing process (part of Filing ID A4G5K5). On October 29, 2015 representatives from the Health Authorities (HAs) participated in the Westridge Emergency Response exercise. On October 30, 2015, VCHA and FHA sent Trans Mountain a letter outlining their concerns with the Project (Appendix N). The letter focused on the potential for human health impacts arising from oil spills affecting marine and fresh water. Trans Mountain responded to VCHA's concerns in a letter and briefing package address key interests dated December 16, 2015 (Appendix O)]. A second briefing package addressing additional health topics of interest is under development for distribution to all impacted BC and Alberta HAs in Q1 2017. This package will include an executive summary and related references filed with the NEB to assist HAs in understanding how each concern is being addressed by the Project.

1.2.4.3 *Marine Safety*

Trans Mountain requested a voluntary Technical Review Process of Marine Terminal Systems and Transshipment Sites (TERMPOL). A TERMPOL Review Committee (TRC) chaired by Transport Canada includes representatives of other federal departments and authorities with responsibilities related to safe marine transportation. The TRC reviewed submissions regarding the safety and risks associated with tanker movements to, from and around WMT resulting from the Project. The TRC released its findings in a report submitted to the NEB on December 11, 2014 which can be found on the Project and NEB respective websites (Filing ID, A4F8Z4). Trans Mountain has since featured many aspects of the TERMPOL Review Committee findings on the Project blog (see samples in Appendix P) as well as engaged with marine stakeholders on some of the follow up actions resulting from the TERMPOL Review Committee report recommendations.

In 2016, Trans Mountain met twice with ships' agents with responsibility for vessels calling at WMT. Issues reviewed included terminal expansion update, terminal security upgrades and updated enhancements to the vessel acceptance criteria.

Trans Mountain engaged with commercial fishery representatives in Burrard Inlet to review marine aspects of the Project and discuss any of their potential concerns. A presentation was made to Fish Safe Committee on September 17, 2015 and Trans Mountain met with senior managers of the Canadian Fishing Company (CANFISCO) and the Area B (Salmon) Harvest committee (Seiners) on January 25, 2016. Fishermen commented on safety of their operations in proximity to deep draft vessels, voluntary AIS tracking of small vessel craft, and restrictions they face operating in shipping lanes, particularly in the Strait of Juan de Fuca. Some expressed interest in a WCMRC Vessel of Opportunity (VOO) program and were open to re-engage since their participation in the Fisherman Oil Spill Emergency Team (FOSET). They were directed to WCMRC in follow up. A copy of the presentation notes for two of these meetings is available in Appendix Q.

In December of 2015 Trans Mountain reached out to terminal operators east of the Second Narrows in Burrard Inlet to offer an update on the Project and discuss any of their concerns (outreach materials and contact list are available in Appendix R). There was very low response to the offer compared to outreach efforts in 2013 and 2014 with this audience. A meeting was held with Island Tug and Barge on February 12, 2016 where a Project overview was provided and the available transit windows for shipping traffic through the Movement Restricted Area of Second Narrows was discussed along with portions of the TERMPOL filing (see Attachment 1 to Response to Port of Vancouver IR No. 1.2.1, filing ID A3X6V5).

Trans Mountain engaged with marine waterway regulators to review different iterations of boating safety material produced as part of meeting NEB Condition No. 131 (Marine Public Outreach Program, see Appendix S for a copy of the final poster. Regulators engaged through this process included Transport Canada, the Pacific Pilotage Authority, BC Coast Pilots, Canada Coast Guard, and the Port of Vancouver.

On a regular basis Trans Mountain participates in the Chamber of Shipping of British Columbia (COSBC) committees, Navigation and Pilotage Committee and Owners' Committee. As a result Committee members are provided updates on current Westridge Marine Terminal matters as well as Information about TMEP.

1.2.5 *Ongoing Engagement*

Trans Mountain's engagement is ongoing. Engagement and communications activities will continue as the Project proceeds through the approval process and the construction and in-service phases of the Project.

Engagement and communications activities will continue through a number of initiatives, including; however, not limited to, information sessions/open houses, workshops, one-on-one meetings/interactions, presentations, website, online feedback forms, printed materials, and digital media including social media. Trans Mountain will continue to share with stakeholders the results of new studies or work being completed, communicate any changes or updates to Project plans, share information with stakeholders on, including; however, not limited to, the regulatory process, employment and procurement opportunities, workforce hosting, Project information and engage on, including; however, not limited to, construction effects, mitigation measures, offsets, and potential community benefits. Activities planned for 2017 include:

- **Route Optimization (Q3 2016 to Q2 2017; ongoing through route hearings)** – Follow-up meetings will continue with local governments, neighbourhoods and stakeholder groups as needed regarding routing refinements such as pipe location in the proposed corridor, utility crossings, watercourse crossings, etc.
- **Technical Working Groups (TWGs ongoing through planning and construction as per NEB Conditions)** - As the Project transitions from detailed engineering to construction planning and execution, TWGs will continue to involve local governments and other key stakeholders. An updated draft Terms of Reference will continue the discussion focused on the resolution of outstanding concerns. These groups will continue as a requirement of NEB Condition No. 14 TWG – Terms of Reference and No. 49 TWG reports (See Appendix C).
- **Consultation on Environmental Management Plans (Q3 2016 to Q4 2017)** – Trans Mountain will be seeking input from appropriate government authorities, Aboriginal groups, landowner/tenants, subject experts and the public to help refine its plans and meet the conditions set out by the NEB in the following areas:
 - **Environmental Protection Plan** - overall plans for mitigating and addressing impacts of the Project.
 - **Wildlife** - detailed measures to protect specific species of wildlife along the pipeline corridor.
 - **Watercourses, water ecosystems and marine** - measures to protect rivers, streams and the marine environment.
 - **Vegetation** - management and protection of native plants, shrubs and trees.
 - **Air quality** - measures to maintain air quality and monitoring standards.
 - **Construction and workforce impacts** - plans for addressing specific impacts of construction and the construction workforce.
- **Training and Education (Q1 2017 to Q4 2017)** – engagement on the plan for monitoring the implementation and outcomes of Aboriginal, local, and regional training and education measures and opportunities for the Project. Measuring and reporting on the training and education will continue through construction to in service in 2019.
- **Pre-construction Engagement (Q4 2016 to Q2 2017)** – Ongoing engagement through TWGs, neighbourhood information sessions and online on topics such as construction planning, worker

accommodation, worker code of conduct, traffic planning, workforce accommodation, and economic and procurement opportunities.

- **Construction Readiness (Q2 2017 to Q3 2017)** – Ongoing engagement that would include advance notice of upcoming construction activities, economic opportunities associated with workforce hosting, procurement opportunities, and introduction of the Project community relations team for construction phases of the Project.
- **Municipal and Regional Government Engagement (Ongoing)** – In addition to engagement through TWGs, continue to meet with municipal and regional governments to provide updated Project information and to seek input into Project plans. These sessions will include briefings as requested.
- **Marine Engagement (Ongoing)** – Continue to engage with marine stakeholder and community interests to help inform them of potential effects of increased marine traffic associated with the Project. The three main topic areas include: 1) Marine Safety, 2) Construction and Operations of an expanded WMT, and 3) Emergency Response (enhancements to KMC's Emergency Response at WMT and enhancements to the Marine Spill Response Regime). Table 1.1-3 lists the topics to be addressed in ongoing Marine Engagement.

TABLE 1.2-3

TOPICS TO BE ADDRESSED IN ONGOING MARINE ENGAGEMENT

Marine Safety	Westridge Marine Terminal (WMT) Construction and Operations	Emergency Management
<ul style="list-style-type: none"> General updates on impact of TMEP to navigable waters Any specific locations where navigation could be affected Concerns raised by marine waterway users regarding project effects PPA boating safety campaign: "Safe Boating in Deep Sea Shipping Navigation Areas" Raise awareness of participants to TM's boating safety poster/s and other information; e.g. installation of navigation marks/aids. Vessel timing and scheduling with affected stakeholders (i.e. through Second Narrows) Potential effects of proposed Marine Fisheries Offsets on navigable waters Marine Mammal Protection Program (related to vessel strikes) Updated Tanker Acceptance Standard 	<ul style="list-style-type: none"> Light Emissions Management Fugitive Emissions management and Odours Air Emissions Management Traffic management & passing vessels Water Quality Marine Sediment Management Noise mitigation Aesthetics / Viewscape Construction EPP Marine Fisheries Offset Plan Processes for addressing complaints and notification Procurement, Employment and Training Opportunities 	<ul style="list-style-type: none"> Preparedness Enhancement of existing WMT ERP, Fire Plans and pre-fire plans Mutual Aid agreements Response Emergency Exercise and Training Program Full-scale Emergency Exercise with post exercise report reviewed by third party Collaboration with VFPA / WCMRC to explain existing response regime in Port jurisdiction Evacuation plans for WMT Volunteer Management WMT Fire Fighting Capacity WCMRC enhancements

- Marine stakeholders for the purposes of this Report are defined in Table 1.2-1. They include neighbours and municipalities and those who operate along the established shipping lanes where TMEP-related tankers will transit. Activities include engagement through the TERMPOL Review Committee, meetings with terminal operators in Burrard Inlet (east and west of second narrows), presentation to commercial fishers and through Trans Mountain's ongoing dialogue with the Chamber of Shipping for British Columbia (COSBC), shipping agents and other key associations in BC's shipping sector.
- **Construction Engagement (Q3 2017 - Ongoing)** – Continue to engage with local governments, stakeholders, landowners and residents throughout the duration of the construction program to ensure a proactive response to interests and concerns that arise during the construction phase.
- **Emergency Management Engagement (Ongoing)** – Continue to engage to meet the requirements of the NEB's Conditions relating to Emergency Management as well as KMC's commitment to ongoing improvement through the development of Geographic Response Plans (GRPs).
- **Jobs and Procurement Engagement (Ongoing)** – Continue to promote employment and procurement registries to maximize opportunities for Aboriginal, local, and regional individuals and businesses.

Trans Mountain will continue to provide opportunities for the public to learn more about Project's plan and provide feedback. These opportunities will vary and will be refined, however may include in person and

1.2.6 Community Benefits Memorandums of Understanding

In recognition of the potential for public inconvenience and temporary disruption associated with pipeline and facilities construction, Trans Mountain continued discussions with communities along the Project corridor regarding Community Benefit Memorandums of Understanding (MOU). Signed MOUs provide communities with benefits over and above the financial compensation for construction and operation of the pipeline and facilities through community lands. Table 1.1-4 provides an updated list of Community Benefit MOUs exceeding \$8.47 M that have been signed to date with communities in the Province of BC. An additional \$1.2 M has been committed for post-secondary education and training programs through the Education Legacy Program.

Trans Mountain has MOUs signed with all local governments from Edmonton to Abbotsford and Coquitlam. Outstanding community benefit MOUs in VFPA's jurisdiction include:

- City of Burnaby - Trans Mountain has attempted to initiate community benefit discussions with the City of Burnaby regarding Burnaby Terminal and WMT. The City has declined offers to engage on this topic. Trans Mountain remains being committed to ongoing discussions to resolve any remaining issues, and is open to meeting with the City of Burnaby;
- BCIT - Trans Mountain has also offered scholarship funding agreements to educational institutes along the pipeline corridor and is currently in discussions with BCIT about a scholarship proposal.
- City of Surrey and Langley Township - Community Benefit discussions are ongoing.

TABLE 1.2-4

BRITISH COLUMBIA COMMUNITY BENEFITS MEMORANDUM OF UNDERSTANDING AND EDUCATION LEGACY AGREEMENTS

Date	Community	MOU Amount	Benefit to Community
October 27, 2014	District of Hope, BC	\$500,000	• Improvements to a community spaces
November 6, 2014	District of Barriere, BC	\$290,000	• Improvements to trails, playgrounds and education funding
February 26, 2015	City of Kamloops, BC	\$700,000	• Variety of community beautification projects.
February 26, 2015	City of Merritt, BC	\$420,000	• Community infrastructure.
February 26, 2015	Thompson-Nicola Regional District, BC	\$845,000	• Investment in four electoral areas: – Area A: Vavenby, Birch Island and Blackpool — funds towards community parks. – Area B: Blue River and Avola — funds towards parks, trails, and education funding. – Area O: Little Fort — funds for road upgrades and landscaping. – Area P: Black Pines — funds for water infrastructure upgrades.
February 26, 2015	District of Clearwater, BC	\$390,000	• Variety of community projects, as well as funding for education and training opportunities.
February 26, 2015	Village of Valemount, BC	\$185,000	• Municipal infrastructure projects and local education programs.
April 7, 2015	Thompson Rivers University (TRU), BC	\$500,000	• Contribution over 20 years toward funding annual awards for students in Trades, Social Work and Applied Research programs, and the Environmental Science graduate program.
February 15, 2016	City of Abbotsford, BC	\$1.3 M	• Revitalization of the city-owned Ledgewood Golf Course.
July 22, 2016	City of Coquitlam, BC	\$1 M	• Funding improvements to Mackin Park.
August 17, 2016	City of Chilliwack, BC	\$1.2 M	• Funding a new Vedder Greenway Pedestrian Trail Bridge.
September 8, 2016	FVRD Area D	\$75,000	• Funding improvements to Thompson Community Park development and upgrades to Mount Cheam Trailhead parking lot
August 18, 2016	Camosun College	\$400,000	• Funding for bursaries and scholarships to the Camosun College Foundation's TRADEmark of Excellence Campaign as a supporter of Camosun College's Coastal Skills Initiative
November 2, 2016	Coquitlam Foundation	\$300,000	• Funding for scholarship program; for students of SD43 planning to attend identified programs at Douglas College, BCIT and JIBC

1.2.7 Project Changes Resulting from Stakeholder Engagement

Trans Mountain's complete record of its stakeholder engagement activities can be found in references listed in Section 1.1.1 of this Report. Throughout the regulatory process, Trans Mountain has engaged with municipal and regional governments, as well as key stakeholders to consider their interests and/or concerns in relation to ongoing Project planning and development. Table 1.1-5 of this Report highlights some of the major Project changes that have occurred as a result of input from municipal and regional governments on issues within the scope of the VFPA's permit review. Table 1.1-5 is not intended as an all-inclusive list of Project changes.

TABLE 1.2-5

PROJECT CHANGES RESULTING FROM STAKEHOLDER ENGAGEMENT

Stakeholder	Incorporation of interest
City of Kamloops Walnut Grove, Surrey Port Kells City of Surrey (Fraser Heights)	<ul style="list-style-type: none"> Rerouting to avoid residential areas.
City of Surrey	<ul style="list-style-type: none"> Commitment to investigate alternative routing alignment along South Fraser Perimeter Road to avoid Surrey Bend Regional Park
Northcliffe residents (near WMT)	<ul style="list-style-type: none"> Changes to layout of Westridge Marine Terminal (WMT) berths
City of Burnaby Northcliffe residents	<ul style="list-style-type: none"> Burnaby Mountain tunnel avoids impacts to City roads and residential area (approximate cost of \$100 M).
All municipalities	<ul style="list-style-type: none"> Risk Assessment to improve pipeline safety and provide additional safety measures above accepted Canadian Standards Association (CSA) Z662 Oil and Gas Pipeline Systems Code.
All municipalities	<ul style="list-style-type: none"> Trans Mountain will consult with municipalities, communities, and Aboriginal groups on the protection of municipal and community water sources. Trans Mountain will develop (through a physically-verified survey) and maintain an inventory of water wells within 150 m of either side of the centre line. In the event there are changes related to construction of the pipeline, Trans Mountain is committed to find out the reason why and replace the water well if a change in the water well is the result of construction. Furthermore, Trans Mountain has committed to work closely with the Province of BC to develop a Groundwater Monitoring Program to ensure the integrity of the water supply is maintained before, during and after construction.
Metro Vancouver	<ul style="list-style-type: none"> Additional Air Quality Modelling, controls and monitoring at WMT to control/reduce emissions.
Bowen Island Municipality/Islands Trust District of North Vancouver Metro Vancouver City of Vancouver City of North Vancouver North Shore Emergency Management Office City of Richmond City of Port Moody City of Burnaby Village of Belcarra Corporation of Delta Islands Trust City of Nanaimo City of Sidney Corporation of the City of Victoria District of Sooke	<ul style="list-style-type: none"> Through engagement with the marine community, different levels of government, Aboriginal groups and other key stakeholders, the Project has identified further precautionary risk control measures that will mitigate risk and address concerns due to increased tanker traffic. These include: <ul style="list-style-type: none"> Port Metro Vancouver will establish a shipping channel for East Burrard Inlet (east of Second Narrows Bridge) Laden tanker tug escort will be expanded to cover the entire tanker shipping route through the Strait of Georgia and between Race Rocks and the 12 nautical mile marker to assist with navigation as per Final Argument, Section 8.3, Social Aspects of Marine Shipping ESA Pilot disembarkation will take place near Race Rocks and not at Victoria (pilots have now been trained to disembark by helicopter) Enhanced Situational Awareness techniques will be applied that will require: <ul style="list-style-type: none"> Safety calls by pilots and masters of laden tankers Notices to industry issued by Pacific Pilotage Authority Tactical use of escort tug along shipping route Boating safety engagement and awareness program led by Pacific Pilotage Authority
District of North Vancouver City of Vancouver City of North Vancouver North Shore Emergency Management Office Islands Trust	<ul style="list-style-type: none"> Many concerns expressed over capacity of spill responders. Since the Application was filed, WCMRC has worked on geographic area response plans to identify site specific response techniques and proposed enhanced oil spill response regime for South BC coast. Once the Project is in-service, WCMRC has confirmed it would bring significant improvement in capacity and response time – benefiting all users and neighbours along the marine shipping corridor <ul style="list-style-type: none"> \$150+ million investment in WCMRC Creation of approximately 100 new jobs Establishing of five new response bases along shipping route – some of which will also have 24/7/365 response capability
Westridge Residents Burnaby District of North Vancouver	<ul style="list-style-type: none"> Over 20 layouts for WMT were considered as part of managing impacts to local neighbours as identified in open houses, small workshops and meetings with local residents. Key objectives for terminal layout include: <ul style="list-style-type: none"> provide the highest level of navigational safety, both for vessels berthing at WMT and for other vessels transiting the inlet or at one of the four anchorages nearby; provide three Aframax capable berths, allowing capacity for vessels to wait for cargo or transit windows and reduce pressure on the anchorages (and the number of vessel movements); allow the existing dock to remain in service during the construction of the new dock complex, and specifically until the new Berth 1 can be commissioned; minimize the overall footprint and the impact to community views; and, eliminate deep-water dredging and reduce the amount of dredging for the foreshore expansion.
District of North Vancouver Vancouver Fraser Port Authority	<ul style="list-style-type: none"> Lighting and energy efficiency of the proposed WMT As a result input received to minimize lighting as much as possible, the Project proposed a lighting plan with the following design considerations: <ul style="list-style-type: none"> Use of LED lights for outdoor area lighting to reduce glare and energy consumption Use of directional lighting, where possible, to reduce glare and skylight Achieve compliance with IESNA recommendation for rural and low density residential areas (Dark Sky Zone LZ1) Ensure lighting is appropriate for safe operation of the facility

Stakeholder	Incorporation of interest
Pacific Wildlife Foundation Village of Belcarra District of North Vancouver Pacific Salmon Foundation Vancouver Aquarium Pacific Salmon Foundation Marine Mammal Research Unit – Open Water Research Station, UBC City of Port Moody	<ul style="list-style-type: none"> Input gathered from municipal, academic, environmental stakeholders and Aboriginal groups identified salmon as an important consideration in habitat compensation for any fisheries offsets that could be required for WMT. As an interim measure, the Project committed \$50,000 in January 2015 to the Pacific Salmon Foundation for the enhancement of salmon habitat in Burrard Inlet. Discussions continue with the Pacific Salmon Foundation on ways to enhance the conservation of salmon as a legacy of the Project. The fisheries offset plan to be filed with the Fisheries Act Authorization permit does account for potential effects on juvenile salmon.
Wild Bird Trust Pacific Wildlife Foundation Bird Studies Canada	<ul style="list-style-type: none"> Feedback from environmental stakeholders and other local experts identified concerns for potential Project impacts to marine birds in Burrard Inlet. Trans Mountain in turn made a \$27,000 investment in marine bird mapping of Burrard Inlet – a co-investment with the VPPA who contributed the same amount. This enables GIS mapping of survey data which is now publicly available on the Pacific Wildlife Foundation website.
City of Vancouver District of North Vancouver / North Shore Emergency Management Office City of Richmond	<ul style="list-style-type: none"> Request for more participation in KMC emergency management exercises, initiated a very large observer program for WMT major exercise in October 2015
Village of Belcarra District of North Vancouver Lotus Sports Club	<ul style="list-style-type: none"> There were many concerns about the potential increase in interaction between tankers and recreational vessel traffic in Burrard Inlet. As a result, TMEP commissioned a recreational vessel traffic study – completed subsequent to filing of application (filed as part of Technical Update No. 2 filed in August 2014 – NEB Filing IDs A4A414, A4A415 and A4A416), now a Marine Public Outreach Program is required as per NEB condition No. 131 (see Appendix C for the condition.)

1.2.8 Stakeholder and Communities Not Identified in Section 2.0

Most stakeholders in pipeline and marine corridor communities in BC have engaged cooperatively with Trans Mountain in relation to the Project. Trans Mountain continues to work with communities and stakeholders to understand and resolve, where practical, any unresolved issues.

As part of the NEB regulatory process, Trans Mountain is reviewing commitments made to local and regional governments, Aboriginal groups and other stakeholders to identify any issues not addressed by the NEB's conditions for the Project. A preliminary review reveals the majority of issues have been addressed by NEB condition requirements. Trans Mountain will create, and make publicly available, a Commitments Tracking table outlining any issues not addressed through the conditions or management plans and their completion status as described in the requirements for NEB Condition 6. The Commitment Tracking Table will be updated monthly during construction and quarterly during operations until all commitments have been satisfied.

This section provides an overview of stakeholders and communities (listed alphabetically) from Table 1.2-1 not specifically identified in Section 2.0 as participants in the NEB process.

1.2.8.1 BC Ministry of Forests, Lands and Natural Resource Operations

BC Ministry of Forests, Lands and Natural Resource Operations (FLNRO) has been engaged as a future regulator for the project development activities at WMT. As described in Table 4.8.2 of Section 4.8 of the current draft of the Westridge Marine Terminal Environmental Protection Plan (dated November 2016),² the following permits could potentially be required from the BC Ministry of Forest, Lands and Natural Resource Operations (FLNRO):

- Heritage Conservation Act permits (e.g., Alteration Permit (Section 12) and Heritage Inspection Permit (Section 14))
- Scientific Fish Collection Permit.

² WMT Environmental Protection Plan was posted online for public review and comment on November 22, 2016 at the following link: <https://www.transmountain.com/westridge-epp>

In particular certain issues and mitigations of interest to BC FLNRO have been considered in Table 1.2.3-1. Trans Mountain will continue to engage with BC FLNRO as part of the pre-construction period of engagement, seeking input on Environmental Protection Plans and submitting all required permit applications for construction.

TABLE 1.2.8-1
BC FLNRO – OUTSTANDING ISSUES OR CONCERNS

Concerns or issues	Resolutions
Resource – specific mitigation measures for wildlife and wildlife habitat <ul style="list-style-type: none"> • A bald eagle nest is located adjacent to the southeast boundary of the Westridge Marine Terminal (WMT) 	<ul style="list-style-type: none"> • Surveys will be conducted to determine if active stick nests (e.g., bald eagle, great blue heron) are located in the area to be cleared or adjacent to the WMT, prior to the commencement of construction activities. <ul style="list-style-type: none"> ○ Surveys completed to date indicate one active bald eagle nest adjacent to the southeast boundary of the WMT, and no active heron colonies have been identified within the area. • Results of these surveys will inform the development of a Nest Management Plan which will provide mitigation options for identified nests. <ul style="list-style-type: none"> ○ Potential mitigation options may include pre-construction survey, wildlife monitoring, or deterring nesting to an alternate structure or location. Mitigation measures in the Nest Management Plan are being developed in consultation with BC MFLNRO and will be implemented prior to the commencement of construction activities at the WMT.
Archaeological/ Palaeontological Heritage Resources	<ul style="list-style-type: none"> • Follow applicable recommendations identified in the Archaeological Impact Assessment. Determine if the approvals from the appropriate Government authority are necessary prior to commencing any construction activity located within 30 m of a monument, archaeological site or burial ground. • Suspend work in proximity (i.e., within 30 m or other distance as specified in the applicable regulatory permit) to archaeological, palaeontological or historical sites (e.g., stone flakes, points, modified bone, pottery fragments and fossils) if discovered during construction. No work at that particular location shall continue until permission is granted by the appropriate Government authority. Follow the contingency measures identified in the Heritage Resources Discovery Contingency Plan (see Appendix B of the <u>WMT EPP</u> filed with the VFPA permit application). For known archeological sites: Trans Mountain will not permit topsoil/root zone material salvage and/or grading in proximity to known archaeological sites unless mitigation measures have been implemented, or otherwise approved by BC MFLNRO. • Trans Mountain will prohibit the collection of any historical, archaeological or palaeontological resources by Project personnel.
<ul style="list-style-type: none"> • Fire Suppression in the event of wildfire 	<ul style="list-style-type: none"> • The Construction Contractor will develop a Fire Contingency Plan (Volume 4C, Section 5.2.7 - Filing ID <u>A3S1L1</u>) and a Fire Prevention Plan (Volume 4C, Section 5.2.8 - Filing ID <u>A3S1L1</u>) with minimum guidelines in the TMEP Health and Safety Management Plan. This plan will be used in

	conjunction with the Fire Contingency Plan and the Fire Prevention Plan during all phases of construction.
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1.2.8.2 Chamber of Shipping British Columbia

The Chamber of Shipping BC (COSBC) applied to participate in the NEB regulatory process and received Intervenor status; however, COSBC did not participate in any information requests, provision of evidence or final argument as part of the TMEP NEB review. COSBC communicated frequently with TMEP representatives and often hosted meetings and other engagement opportunities with the marine community for TMEP. The Chamber has been an advocate for the marine regulatory and safety regimes, the importance of west coast access for Canada's petroleum exports, and they have helped to facilitate industry engagement around the potential impacts of shipping on marine mammals. The Chamber has expressed interest in the potential for enhancements to the safety regime and environmental performance of the sector, on the premise of also managing risk to the sector's trade performance and management of potential cost increases for its members. The issues and concerns raised by the Chamber of Shipping have largely been addressed through NEB Conditions 91, 131, 132, 133, 134, 144 as well as through dock design, the tug matrix consultation, modelling of marine traffic through the MRA (Second Narrows) and updates to the vessel acceptance criteria. Outstanding concerns are reviewed in Table 1.2.3 -1.

**TABLE 1.2.8-2
COSBC OUTSTANDING ISSUES AND CONCERNS**

Concerns or issues	Resolutions
Potential impacts to vessel movements in the harbor of increased vessel traffic through Second Narrows MRA	<ul style="list-style-type: none"> Substantial modeling has been carried out to assess the capacity of Second Narrows transits addressing all current and future forecasted traffic, including TMEP. Traffic forecasts were developed after consultation with terminals in the Port and verified by VFPA. Details of the modeling carried out so far can be found in Volume 8 of the Application and various information requests responded to throughout the NEB review. <ul style="list-style-type: none"> Trans Mountain shared a report entitled "TMEP Development Phase II Analysis of MRA Windows & Transit Opportunities" by Ausenco (see Attachment 1 to respond to Port of Vancouver IR No. 1.2.1, filing ID A3X6V5) and reviewed key findings in detail. VFPA is currently engaged in reviewing traffic and passage needs for the entire port and as part of that process is engaging with various port tenants and stakeholders. Trans Mountain is committed to supporting the VFPA in this area in order to ensure the continued safety and efficiency of transits by Trans Mountain tankers in accommodation with other port traffic.
Pressure on Indian Arm anchorage in terms of need by all types of deep sea vessels	<ul style="list-style-type: none"> Expanded WMT will allow straight out departure of Westridge vessels to Second Narrows. Trans Mountain will do everything possible to allow for direct arrival to terminal on inbound passage and mitigate additional pressure on current anchorages
Cost implications of marine regulatory changes to improve safety and environmental performance	<ul style="list-style-type: none"> Trans Mountain is committed to supporting continued improvements to the local marine safety regime and has provided funding support in the past towards various marine safety assessments and initiatives. Trans Mountain is not aware of any specific marine regulatory changes that would impact non-Trans Mountain traffic. Trans Mountain has committed to continuing to enforce its

	tanker acceptance criteria, which requires tankers and barges to be equipped, maintained and operated in accordance with international and federal regulations and best practices.
Cost and resource draw of marine mammal avoidance to shipping sector	<ul style="list-style-type: none"> This is being addressed by VFPA under its Enhancing Cetacean Habitat Observation (ECHO) Program, which is strongly supported by Trans Mountain through substantial funding arrangements. The ECHO program has successfully raised the awareness of the local marine community to the possible impact of shipping in general, not specific to a project, on marine mammals that are residents of this area, especially those species the Species at Risk Act (SARA) list. Together with Transport Canada, other regulators and stakeholders, the COSBC is a participant in the ECHO Program and is actively involved in mitigation measures that will be applicable to all members of the local marine industry.

1.2.8.3 CN Rail

CN Rail did not formally participate in the NEB regulatory process. TMEP has been in regular contact with CN Rail which has assets and rights-of-way that intersect with the existing Trans Mountain Pipeline as well as the corridor for the Project. CN Rail also operates the Rail Bridge at Second Narrows which must be raised for Project-related vessels to pass under for inbound and outbound transits calling at WMT. CN Rail has expressed interest in the potential impact of TMEP related vessel traffic on the operation of the CN Rail Bridge at Second Narrows, the potential for the Project to enable an efficiency review of the rail capacity of the bridge, the potential procurement opportunities for Project construction and the protection of CN Rail property and its workers proximate to Trans Mountain operations, in particular in the event of any construction activity or emergency incident related to the pipeline and or facilities. The concerns raised by the CN Rail have been addressed through NEB Conditions 60, 63, 89, 90, 126, 131 and 136.

TABLE 1.2.8-3
CN RAIL OUTSTANDING ISSUES AND CONCERNS

Concerns or issues	Resolutions
Potential impacts of increased vessel traffic through Second Narrows MRA Opportunities for project to help improve the rail car transit capacity of the Second Narrows CN Rail Bridge	<ul style="list-style-type: none"> Potential effects to the CN Rail bridge are discussed in Section 4.3.11.4.2 of Volume 8A (Filing ID A3S4Y3) TMEP undertook targeted engagement with CN Rail and other potentially affected terminals east and west of Second Narrows Using this feedback TMEP undertook analysis of possible impediments to rail traffic accessing Vancouver's north shore via CN Rail Bridge. Data was shared with VFPA and CN Rail as well as other potentially affected terminals east and west of Second Narrows. In accordance with recommendation from the TERMPOL Review Committee in their report (Recommendation 6) TMEP is continuing to work with VFPA to share vessel transit information and discuss the effects of the Project on available transit windows and the movement of vessels within the MRA Substantial modeling has been carried out to assess the capacity of Second Narrows transits accounting for all current and future forecasted traffic, including TMEP. Traffic forecasts were developed after consultation with terminals in the Port and verified by VFPA. Details of the modeling carried out so far can be found in Volume 8 of the

	<p>Application and various information requests responded to throughout the NEB review.</p> <ul style="list-style-type: none"> ○ E.g. a report entitled “TMEP Development Phase II Analysis of MRA Windows & Transit Opportunities” by Ausenco (see Attachment 1 to Response to Port of Vancouver IR No. 1.2.1, filing ID A3X6V5) was shared with VFPA and CN Rail as well as other potentially affected terminals east and west of Second Narrows. • TMEP is aware of ongoing initiatives on the part of CN and CP to improve the efficiency of rail traffic on the Seconds Narrows Rail Bridge, which will serve to improve rail capacity.
Protection of CN Rail property and CN Rail workers	<ul style="list-style-type: none"> • CN Rail is among the key stakeholder invited to emergency management consultation events as well as emergency exercises.

1.2.8.4 *Council of Marine Carriers*

The Council of Marine Carriers (Council) did not formally participate in the NEB regulatory process. Trans Mountain engaged with the Council as part of marine community engagement about the Project-related increase vessel traffic and the resources required to manage risks. The Council participated in group meetings including Risk Hazard Identification for TERMPOL assessments, review of the tug matrix and other opportunities to review marine safety regime enhancements. The concerns raised by the Council have largely been addressed through NEB Conditions 52, 53, 91, 131, 132, 133, 134, and 144. Outstanding concerns are reviewed in Table 1.2.3-4

TABLE 1.2.8-4
COUNCIL OF MARINE CARRIERS – OUTSTANDING ISSUES AND CONCERNS

Concerns or issues	Resolutions
Vapour recovery during loading of a vessel	<ul style="list-style-type: none"> • Vapour recovery is part of the terminal design considerations. New vapour recovery units will be installed to capture about 99.9 per cent of vapours, which will then be liquefied and injected back into the ships being loaded.
Consultation regarding pilot resources for the increase in TMEP related vessel traffic	<ul style="list-style-type: none"> • Engagement has been frequent and thorough with the Pacific Pilotage Authority and the BC Coast Pilots regarding possible resource demands if the Project proceeds.
Terminal location in Delta vs. Burrard Inlet	<ul style="list-style-type: none"> • As described in response to NEB IR No. 2.044a, alternate terminal locations were evaluated. WMT remains the safest and most environmentally responsible location to build the terminal.
Spill prevention with the increase in vessel traffic	<ul style="list-style-type: none"> • Trans Mountain has identified further precautionary risk control measures that will mitigate risk due to increased tanker traffic. Some of these measures have already been put into place and are not dependent on the proposed Expansion Project. These include: <ul style="list-style-type: none"> ○ VFPA intends to implement a channel design to ensure vessels can safely navigate in the vicinity of WMT and all the other deep sea terminals in the area. (east of Second Narrows Bridge) ○ Laden tanker tug escort through Burrard Inlet and English Bay has been further improved by having a tethered tug in attendance through English Bay till

	<p>the vessel is off Point Grey (Buoy QA). Although this had been proposed in the TMEP marine risk assessment to mitigate any additional risk posed by increased tanker traffic in Vancouver Harbour, this item has already been implemented as a result of ongoing dialogue and information sharing with PPA and BCCP.)</p> <ul style="list-style-type: none"> ○ Enhanced Situational Awareness techniques will be applied that will require: <ul style="list-style-type: none"> ▪ Safety calls by pilots and masters of laden tankers ▪ Notices to industry issued by Pacific Pilotage Authority ▪ Tactical use of escort tug along shipping route ▪ Boating safety engagement and awareness program led by Pacific Pilotage Authority ▪ Encourage use of Automatic Identification System (AIS) and radar reflector by smaller vessels ● TMEP will enable the investment of over \$150M in enhanced spill response including five new bases, over 100 new jobs and new vessels, including a permanent 24/7 base within Burrard Inlet.
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1.2.8.5 Canadian Pacific Rail

Canadian Pacific Rail (CP Rail) did not formally participate in the NEB regulatory process. Trans Mountain has been in regular contact with CP Rail which has assets and rights-of-way intersecting with the existing Trans Mountain Pipeline as well as the corridor for the Project. CP Rail has expressed some interest in the construction of the new dock complex proximate to the CP Rail tracks that traverse the WMT, as well as the potential impact of protest activity to CP Rail assets in the WMT area. CP Rail has also expressed interest in maximizing the rail traffic that traverses the CN Rail Bridge at Second Narrows; the increase in bridge raises that would have to occur with increase in vessel transits to and from WMT. The concerns raised by the CN Rail have been addressed through NEB Conditions 60, 63, 89, 90, 126, 131 and 136. Outstanding concerns are reviewed in Table 1.2.3-5.

TABLE 1.2.8-5
CP RAIL – OUTSTANDING ISSUES OR CONCERNs

Concerns or issues	Resolutions
<p>Potential impacts to rail traffic of increased vessel traffic through Second Narrows MRA (See 3.F.3: effects on traffic transiting the Second Narrows)</p> <p>Opportunities for Project to help improve the rail car transit capacity of the second narrows CN Rail Bridge. (See 3.F.4: impact of TMEP on the expansion of other products handled at VFPA</p>	<ul style="list-style-type: none"> ● Potential effects to the CN Rail bridge are discussed in Section 4.3.11.4.2 of Volume 8A (Filing ID A3S4Y3) ● TMEP undertook targeted engagement with CN Rail and other potentially affected terminals east and west of Second Narrows ● In accordance with recommendation from the TERMPOL Review Committee in their report (Recommendation 6) TMEP is continuing to work with VFPA to share vessel transit information and discuss the effects of the Project on available transit windows and the movement of vessels within the MRA, ● Using this feedback TMEP undertook analysis of possible impediments to rail traffic accessing Vancouver's north shore via CN Rail Bridge. Data was shared with VFPA and CN Rail as well as other potentially affected terminals east and west of Second Narrows.

	<ul style="list-style-type: none"> Trans Mountain will continue to offer meeting opportunities and updates to CP Rail officials, as requested and share any updates of interest.
Impact of protest activity on CP Rail assets and right-of-way	<ul style="list-style-type: none"> TMEP enjoys a good relationship with CP Rail and has invited CP Rail to emergency response workshops and exercises.

1.2.8.6 *Fraser Health Authority and Vancouver Coastal Health Authority*

WMT is in the jurisdiction of the Fraser Health Authority; however, the Vancouver Coastal Health Authority has interests and concerns related to the Project due to proximity to their jurisdiction and the shared air shed and marine waters. Neither Health Authority formally participated in the NEB regulatory process; however, some correspondence as well as a report co-authored by the Vancouver Coastal Health and the Fraser Health Authorities was submitted as attachments to some Information Requests received from Lower Mainland or Fraser Valley Municipalities during the NEB Hearing. Fraser Health and Vancouver Coastal Health Authorities identified their top five concerns in a report to the cities of Burnaby and Vancouver (see C69-44-21 - Health Impacts - VCH and FH to City of Vancouver and City of Burnaby – Filing ID A4L8H5). Trans Mountain met jointly with both Health Authorities early in the Project's development (January 2013) as well as September 2015 to review the findings of their reports.

Some of the issues expressed by Health Authorities are addressed through NEB Conditions 52, 89, 90, 123, 126, 129, 133, 134, 136, 141 and 153. An information package was provided to representatives of both health authorities in follow up to the September 2015 meeting addressing key concerns (see Appendix C). An additional briefing package is under development for distribution in Q1 2017.

TABLE 1.2.8-6
FRASER HEALTH AUTHORITY & VANCOUVER COASTAL HEALTH AUTHORITY – OUTSTANDING ISSUES OR CONCERNs

Concerns or issues	Resolutions
The need to model a large oil spill event in the Burrard Inlet	
The need to use a systems approach to assess the adequacy of spill prevention, response, and mitigation	
The capacity to monitor specific chemical substances released following a large oil spill and to track their dispersion in real time	See Appendix M for Trans Mountain's responses to the concerns and issues identified by Fraser Health and Vancouver Coastal Health
The need to include the local health authorities in the spill notification protocols	
The need for human activities and habitat baseline data to facilitate remediation decisions	

Table 1.2.3-6 will be updated to reflect any additional concerns prior to final permit filing.

1.2.8.7 *Island Tug and Barge*

Island Tug and Barge (ITB) did not formally participate in the NEB regulatory process. Trans Mountain engaged with ITB on a number of occasions as part of engagement with other terminals and marine operators east and west of Second Narrows. ITB expressed interest in any potential impacts of increased vessel traffic through Second Narrows from the anticipated increase in vessel traffic resulting from TMEP.

ITB also asked to be notified of procurement opportunities that could be available with the Project in future. At this time, Trans Mountain is not aware of any outstanding issues with ITB.

**TABLE 1.2.8-7
ISLAND TUG & BARGE – OUTSTANDING ISSUES OR CONCERNS**

Concerns or issues	Resolutions
Potential impacts to vessel movements in the harbor of increased vessel traffic through Second Narrows MRA	<ul style="list-style-type: none"> Trans Mountain shared a report entitled “TMEP Development Phase II Analysis of MRA Windows & Transit Opportunities” by Ausenco (see Attachment 1 to Response to Port of Vancouver IR No. 1.2.1, filing ID A3X6V5) and reviewed key findings in detail.
Future procurement opportunities	<ul style="list-style-type: none"> Trans Mountain advised ITB to sign up to the procurement database at www.transmountain.com/procurement to receive notifications about upcoming opportunities, including potential to provide future tug services.

1.2.8.8 Polygon Homes - Cates Landing

Polygon Homes did not participate in the NEB regulatory process. The Cates Landing development is unoccupied and currently under construction; with anticipated occupancy in fall of 2017. It is located along the waterfront in the District of North Vancouver (3919 Dollarton Highway). The property is adjacent to Cates Park, a co-managed park between the District of North Vancouver and the Tsleil-Waututh First Nation. Attempts to contact Polygon have not resulted in any meetings to date. Trans Mountain will ensure the developer (Polygon Homes) is provided with notification material as part of ongoing outreach and meeting requests.

1.2.8.9 Seaspan

Seaspan did not formally participate in the NEB regulatory process. Seaspan was part of meetings held with marine community members on a regular basis throughout the NEB application review process. The company was also included as part of TMEP’s engagement with terminal operators east and west of the Second Narrows in 2013. Seaspan is a major tug provider to all ships in the Port of Vancouver and regularly provides tug services to tankers. As such the company was invited to participate in developing tug-related requirements for the enhanced tug escort package committed by the Project. Seaspan remains interested in future procurement opportunities for their towage and barge businesses. They have also been part of the working group led by tug expert Robert Allan Limited, in the development of a “tug matrix” which will be used to determine new escort tug criteria for enhanced tug escort of Project vessels along the shipping route throughout the course of a year.

**TABLE 1.2.8-8
SEAS PAN – OUTSTANDING ISSUES OR CONCERNS**

Concerns or issues	Resolutions
Potential impacts to vessel movements in the harbor of increased vessel traffic through Second Narrows MRA	<ul style="list-style-type: none"> Trans Mountain discussed the issue during marine community meetings in which Seaspan, VFPA, Chamber of Shipping and other marine parties participated. Trans Mountain shared a report entitled “TMEP Development Phase II Analysis of MRA Windows & Transit Opportunities” by Ausenco (see Attachment 1 to Response to Port of Vancouver IR No. 1.2.1, filing ID A3X6V5) and reviewed key findings in detail. Seaspan provided letter of support based on their assessment of tanker movements. The letter can be found in Appendix A of the <i>Marine Traffic Report</i> filed with the VFPA

	WMT Project Permit application.
Future procurement opportunities	<ul style="list-style-type: none"> Trans Mountain advised Seaspan to sign up to the Project procurement database at www.transmountain.com/procurement to receive notifications about upcoming opportunities, including potential to provide future tug services.

1.2.8.10 Shell – Shellburn Marine Terminal

Shell did not formally participate in the NEB regulatory process. Meetings were held with Shell in 2013 as part of TMEP engagement with terminal operators east and west of the Second Narrows. Shell was interested in the detail of the proposal, and to learn of the potential implications of vessel transits on other vessel traffic that would need to transit the Second Narrows. Attempts have been made since 2013 to meet with Shell and provide updates, including the analysis of MRA windows and transit opportunities (Ausenco Report – Filing ID A3X6V5). Trans Mountain will continue to offer opportunities to engage, including invitations to stakeholder workshops on the environmental plans for WMT, as well as the emergency exercises. Trans Mountain is not aware of any outstanding issues with Shell at this time, however will continue to seek input by ways of meeting invitations and sharing of information via email.

**TABLE 1.2.8-9
SHELL – OUTSTANDING ISSUES OR CONCERNS**

Concerns or issues	Resolutions
Potential impacts to vessel movements in the harbor of increased vessel traffic through Second Narrows MRA	<ul style="list-style-type: none"> Trans Mountain is willing to meet and share a report entitled “TMEP Development Phase II Analysis of MRA Windows & Transit Opportunities” by Ausenco (see Attachment 1 to Response to Port of Vancouver IR No. 1.2.1, filing ID A3X6V5) and reviewed key findings in detail.
Mutual aid opportunities	<ul style="list-style-type: none"> In August 2016, Kinder Morgan Canada, Suncor Energy, Shell Canada and Imperial Oil entered into an agreement to form the Burrard Industrial Mutual Assistance Group (BIMAG) to commit to sharing emergency response resources, knowledge and equipment in Burrard Inlet, British Columbia.

1.2.8.11 Shipping Federation of Canada

The Shipping Federation of Canada (Federation) did not formally participate in the NEB regulatory process. Trans Mountain provided presentations and updates to the Federation during the Project's development and regulatory review. The Federation will continue to receive updates and opportunities to engage. Trans Mountain is not aware of any outstanding issues with the Federation.

**TABLE 1.2.8-10
SHIPPING FEDERATIONS OF CANADA – OUTSTANDING ISSUES OR CONCERNS**

Concerns or issues	Resolutions
Costs of regime improvements to shipping sector	<ul style="list-style-type: none"> Trans Mountain is committed to supporting continued improvements to the local marine safety regime and has provided funding support in the past towards various marine safety assessments and initiatives. Trans Mountain is not aware of any specific marine regulatory changes that would impact non-Trans Mountain traffic. Trans Mountain has committed to continuing to enforce its tanker acceptance criteria, which requires tankers and

	<p>barges to be equipped, maintained and operated in accordance with international and federal regulations and best practices.</p>
Public confidence in the tanker safety regime and West Coast spill response capability.	<p>Trans Mountain has invested considerable resources to amplify the work of different aspects of the maritime regime to deliver safe shipping and world class spill response. Examples of materials can be found in Appendix P. Features in these materials are key enhancements to the marine safety regime that have been or will be enabled by the Project's development.</p> <ul style="list-style-type: none"> • Trans Mountain has identified further precautionary risk control measures that will mitigate risk due to increased tanker traffic. Some of these measures have already been put into place and are not dependent on the proposed Expansion Project. These include: <ul style="list-style-type: none"> ○ VFPA will establish a shipping channel for East Burrard Inlet (east of Iron Workers' Memorial Bridge) ○ Laden tanker tug escort will be expanded to cover the entire tanker shipping route through the Strait of Georgia and between Race Rocks and the J Buoy at the western entrance to Juan de Fuca Strait (consistent with Final Argument – section 8.3, Social Aspects of Marine Shipping ESA) ○ Pilot disembarkation will take place near Race Rocks instead of Victoria (pilots have now been trained to disembark by helicopter) ○ Enhanced Situational Awareness techniques will be applied that will require: <ul style="list-style-type: none"> ▪ Safety calls by pilots and masters of laden tankers ▪ Notices to industry issued by Pacific Pilotage Authority ▪ Tactical use of escort tug along shipping route ▪ Boating safety engagement and awareness program led by Pacific Pilotage Authority ▪ Encourage use of Automatic Identification System (AIS) and radar reflector by smaller vessels • TMEP will enable the investment of over \$150M in enhanced spill response including five new bases, over 100 new jobs and new vessels
Navigation safety of smaller craft in the vicinity of g deep draft vessels.	<ul style="list-style-type: none"> • As per NEB Condition 131 – Marine Public Outreach Program – Trans Mountain has developed a marine safety campaign with materials targeted to recreational, tourism, commercial fishery and Aboriginal audiences. A copy of the material is available in Appendix S.

1.2.8.12 Transport Canada (Navigation Protection Program)

Transport Canada chaired the TERMPOL Review Committee (TRC), which undertook a technical review of the marine aspects of the Project, including review of the marine risks associated with marine transportation. Transport Canada issued a TERMPOL Report and provided it to the NEB as part of

Transport Canada's input to the regulatory process. The recommendations of the TRC may be considered as ongoing topics, which are currently being addressed.

TABLE 1.2.8-11
TRANSPORT CANADA NAVIGATION PROTECTION – OUTSTANDING ISSUES OR CONCERNS

Concerns or issues	Resolutions
TERMPOL Report recommendations as well as the NEB website (Filing ID, A4F8Z4)	<ul style="list-style-type: none">• Trans Mountain supports and agrees to adopt each of the 17 recommendations and 31 findings in the manner outlined in Trans Mountain Response to NEB IR TERMPOL Report and Outstanding Filings (Filing ID A4G3U5)

2.0 ISSUES RESOLUTION

As referenced in Section 1.2, this section summarizes the key issues raised by participants in the NEB process. For the purposes of this Report, outstanding issues were identified through their written argument and/or other submissions to the NEB. This Report does not duplicate the information on the public record with the NEB; rather it is intended as an accompaniment to the information already on file.

Trans Mountain will continue its engagement with all levels of government and key stakeholders. This will occur through one-on-one meetings, workshops and TWGs with local governments along the Project pipeline and marine shipping corridors.

2.1 Municipal and Regional Governments

Several municipalities and regional districts within BC participated in the NEB's hearing process either as Intervenors or through the Letter of Comment process. Trans Mountain will not attempt to re-summarize and address all the issues raised by municipalities and regional districts in this Report as this was undertaken through the NEB's process; see NEB filings for more detail. Appendix U provides a status update regarding the resolution of key issues raised and information on how those key issues will be addressed either through NEB Condition or TMEP Commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

2.1.1 *City of Burnaby*

Section 1.2.1 contains the NEB views on TMEP's Consultation with Governments and specifically comments on the fact not all municipalities accepted the opportunity to engage with Trans Mountain effectively. The City of Burnaby did; however, formally participate in the NEB's regulatory process as an Intervenor. The City submitted numerous Information Requests, various motions, and written final argument in the NEB's process. Appendix T provides a complete list of all of the documents filed on the NEB record by the City of Burnaby.

The City of Burnaby has concerns related to:

- community support and community concerns;
- impacts to community infrastructure and ongoing operation, as well as the costs associated;
- economic impacts to businesses affected by construction;
- costs incurred to municipality in the event of a spill;
- increased risk and consequences of spills and accidents as a result of the Project, including WMT;
- the financial, environmental and health impacts of a spill to the community;
- the ability for TMEP to respond in a timely manner and have the appropriate resources to response to an incident;
- risks associated with operational air emissions at WMT;
- impacts and risks of additional tanks at Burnaby Terminal;
- increased tanker traffic in Burrard Inlet;
- tanker traffic will increase "wave wash" which impacts marine invertebrates, and could cause impacts to rivers at the mouth of Burrard Inlet that are crucial for migrating salmon, including the Capilano, Seymour and Indian Rivers;
- their local by-laws;

- construction impacts to recreational use areas including land base areas and Burrard Inlet;
- operational impacts to protected species in Burnaby parks and conservation areas. These areas include fish-bearing waterways or conservation areas that are important for the habitat of migrating salmon, as well as Nooksack Dace and Cutthroat Trout;
- noise impacts to marine wildlife due to construction and its associated activities; and
- impacts to wildlife such as the Killer Whale, Great Blue Heron, and migratory birds.

In Appendix U, Trans Mountain provides a status update regarding these issues and how they will be addressed either through NEB condition or TMEP commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

2.1.2 *City of North Vancouver*

The City of North Vancouver (CNV) formally participated in the NEB regulatory process as an Intervenor. CNV submitted Information Requests, motions and written final argument in the NEB's process. Appendix T provides a complete list of all of the documents filed on the NEB record by the CNV.

The CNV has concerns related to:

- Trans Mountain risk assessments and emergency spill response;
- the potential environmental and socio-economic effects of the Project, including cumulative environmental effects that are likely to result from the Project, including those required to be considered by the NEB's filing Manual;
- methodology of Trans Mountain's oil spill analysis; the likelihood of spills associated with the Project;
- human health risk assessment (HHRA) adequacy and conforming to the requirements of the BC Ministry of Environment; HHRA does not refer to Health Canada guidance documents;
- the potential environmental and socio-economic effects of marine shipping activities that would result from the proposed Project, including the potential effects of accidents and malfunctions that may occur;
- spill model presented in the Application adequacy and the effects of a spill in the Burrard Inlet are likely to be much more significant than anticipated by Trans Mountain – specific concerns: (1) beaching algorithm in the model does not allow for refloating of oil that is beached; and (2) “unreasonable and inappropriate assumption” the containment boom at the WMT will always be in place and will be 100 per cent effective;
- risk of a marine oil spill occurring, thoroughness and adequacy of assessment in the Application, unacceptable such a spill, whether small or large, will have significant adverse impacts on its residents, environment, culture and economy;
- potential impacts of the Project on landowners and land use;
- high residential density near the waterfront; an extensive shoreline, the entirety of which is adjacent to the shipping route through Burrard Inlet to the WMT;
- a developed waterfront that includes numerous parks and open spaces, such as Shipbuilders' Square and the Shipyards, Lonsdale Quay, Waterfront Park, Kings Mill

Walk Park and Spirit Trail, all of which are highly valued by the community and used by residents and visitors;

- contingency planning for spills, accidents or malfunctions, during construction and operation of the Project; and
- safety and security during construction of the proposed Project and operation of the Project, including emergency response planning and third party damage prevention.

In Appendix U, Trans Mountain provides a status update regarding these issues and how they will be addressed either through NEB condition or TMEP commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

2.1.3 *City of Port Moody*

The City of Port Moody formally participated in the NEB regulatory process as an Intervenor. The City submitted Information Requests, motions and written final argument in the NEB's process. Appendix T provides a complete list of all of the documents filed on the NEB record by the City of Port Moody.

The City of Port Moody has concerns related to:

- potential impact of the Project, including an oil spill:
 - on environmentally sensitive areas including fish-bearing watercourses and riparian areas;
 - to marine wildlife due to tanker traffic;
 - on species at risk such as the Band-tailed Pigeon, Great Blue Heron, Pacific Water Shrew and Western Purple Martin;
 - on wildlife and wildlife habitat;
 - in Burrard Inlet;
 - on parks and recreation activities in the community;
 - on businesses and landowners;
- potential impacts of the Project to the Burrard Inlet Watershed, specifically the Noons Creek and Mossom Creek hatcheries and educational learning centres;
- adequacy of information provided to the City regarding the environmental impacts of a spill, both land and marine;
- marine safety including channel manoeuvering and anchorage design, berthing provisions, marine traffic controls, decision-making protocols for tankers (*i.e.*, weather conditions), tanker loading and unloading protocols,
- adequacy of mitigation plans for the Band-tailed Pigeon, Great Heron, or Western Purple Martin;
- potential municipal costs incurred as a result of an oil spill, including emergency response, communications, asset depreciation, and lost revenues from civic facilities;
- potential impacts to community resources during a spill;
- Trans Mountain's spill response capabilities;
- the ability for community first responders to respond to a spill;

- adequacy of information provided to the community regarding emergency response;
- the potential for bitumen to sink and the impacts associated with this;
- knowledge gap concerning other potential local government resources that would be needed to respond to an emergency;
- adequacy of emergency response protocols regarding security plans, plans for shoreline clean up, volunteer management protocols, and public communication procedures provided to the community;
- adequacy of a strategy to deal with potential health and safety hazards to first responders and volunteers during an emergency, as well as training; and
- adequacy of details about near shore long-term cleanup planning and procedures; or optimal cleanup measures for different timeframes and different types of location or products.

In Appendix U, Trans Mountain provides a status update regarding these issues and how they will be addressed either through NEB Condition or TMEP commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

2.1.4 *City of Vancouver*

The City of Vancouver formally participated in the NEB regulatory process as an Intervenor. The City submitted Information Requests, numerous motions and written final argument in the NEB's process. Appendix T provides a complete list of all of the documents filed on the NEB record by the City of Vancouver.

The City of Vancouver has concerns related to:

- Potential impacts of an oil spill within the Lower Fraser River Watershed on the environment, wildlife, fisheries, residents and businesses;
- risk and impacts associated with an oil spill in Burrard Inlet on the environment, fish, birds and other wildlife habitat, as well as businesses and residents;
- studies and risk assessment conducted regarding the impacts of an oil spill in Burrard Inlet or the Fraser River;
- its belief Trans Mountain has failed to identify and assess the risk posed by, or demonstrate preparedness to mitigate and respond to, the range of hazards that could impact the pipeline or terminal operations;
- its belief the Det Norske Veritas (DNV) risk assessment entirely omitted, without explanation, study Segment 2 (that part of Burrard Inlet situated between First and Second narrows) from the list of oil spill locations that were even considered by DNV for spill modelling and risk assessment;
- substantial increase in pipeline operating emissions and marine operating emissions and it questions an additional 590,000 barrels of oil per day could result in reduced emissions;
- its belief the Project impact on global GHG emissions will significantly increase the overall need for and costs of Vancouver's Climate Change Adaptation Strategy;
- impacts of multiple hazards such as, earthquake, flooding, extreme weather, wildlife, transportation accidents including marine transportation, and chemical and explosive hazards on TMEP's, as well as contractor's response capacity during a pipeline incident;

- control point plans and the capacity of Trans Mountain to respond to a pipeline rupture impacting the Fraser River or other water bodies;
- information regarding TMEP's ability to adequately respond to pipeline incidents due to a seismic event;
- potential gaps in data collection and information sharing between Unified Command members and the public;
- information regarding ERPs for a marine spill;
- response plans for or compensation process for damages from tankers caused by fire or explosion;
- assumption by Trans Mountain marine firefighting capacity suitable for dealing with a fire on a WMT tanker exists in Vancouver Harbour and is provided by the City of Vancouver;
- marine firefighting capabilities in marine communities;
- reliance on vessel captains to report a spill or incident and immediately initiate response by activating the agreement with WCMRC;
- potential financial burden to the city, its residents and businesses, including tourism, as a result of a spill;
- impact of a spill on the city's "brand";
- compensation for potential economic impacts of a spill;
- impacts to city's infrastructure as a result of a spill;
- potential risks to community first responders during a spill including air pollutants and injury; and
- potential health impacts of a spill including air pollutants.

In Appendix U, Trans Mountain provides a status update regarding these issues and how they will be addressed either through NEB condition or TMEP commitment compliance.

2.1.5 *District of North Vancouver*

The District of North Vancouver formally participated in the NEB regulatory process as an Intervenor. The District submitted Information Requests, motions and written final argument in the NEB's process. Appendix T provides a complete list of all of the documents filed on the NEB record by the District of North Vancouver.

The District of North Vancouver has concerns related to:

- sufficient boom or an adequate emergency response to prevent oil from reaching the Maplewood mudflats, an important bird conservation area;
- impacts of a spill on wildlife, including dedicated resources, anticipated significance and greatly increased if the event occurred during seasonal periods with high population levels;
- increase in marine activity, as well as the potential for spill events that will negatively impact District park environments and public usage as well as parks-related businesses;

- financial compensation for the District's economic losses arising from impacts to its parks and park users in the event of a spill in Burrard Inlet;
- provision of additional air quality monitoring for the District and development of a real-time plan to inform evacuation decisions;
- the behaviour and treatment of dilbit in the marine environment in the event of a spill;
- the speed of response in a pipeline incident; and
- development of a real-time plan to inform evacuation decisions.

In Appendix U, Trans Mountain provides a status update regarding these issues and how they will be addressed either through NEB condition or TMEP commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

2.1.6 *District of West Vancouver*

The District of West Vancouver formally participated in the NEB regulatory process as an Intervenor. The District submitted Information Requests, motions and written final argument in the NEB's process. Appendix T provides a complete list of all of the documents filed on the NEB record by the District of West Vancouver.

The District of West Vancouver has concerns related to:

- potential air quality impacts of the Project on the district and its residents, from additional marine shipping;
- potential increase Green House Gas Emissions as a result of the Project and the effects on climate change;
- shore power in at least one berth at WMT for tankers that have the capacity to utilize it;
- impacts of light and noise pollution to Burrard Inlet communities including West Vancouver due to increased marine traffic;
- the risk of a spill in Burrard Inlet or a spill in Vancouver Harbour or English Bay;
- its belief TMEP has not considered an appropriate "worst-case spill" at WMT;
- information regarding the cumulative impacts of smaller spills in Vancouver Harbour or English Bay;
- an adequate assessment of the potential impacts of a spill on Burrard Inlet, including spill modelling and trajectory, the range of weather and marine conditions that could happen during a spill event, and the health impacts;
- an adequate assessment of the ecological risks of a marine spill;
- impacts of a spill on wildlife and species at risk such as salmonids, marine mammals, Killer whales, and marine birds;
- West Vancouver supports evidence from Environment and Climate Change Canada to "develop "a marine bird baseline monitoring plan to describe species composition and their spatial and temporal abundance patterns that can be used to identify high consequence areas/habitats in the event of an oil spill";

- Its belief vessel traffic increase will be a major and significant contributor to cumulative oceanic noise levels that can harm whales and other wildlife through acoustic disturbance effects;
- an adequate assessment of human health risks, specifically the impacts of air quality and the health effects of air emissions, as a result of a spill;
- TMEP's ERP adequacy in addressing the inherent risks to local communities as a result of a spill in Burrard Inlet, diluted bitumen recovery along local shorelines, recovery of submerged or sunken bitumen, oiled wildlife response, roles of local governments in responding to a spill, timelines for response, and response capacity for a marine spill;
- increase in tanker traffic which will result in a higher risk of a spill, particularly in Vancouver Harbour;
- potential spills resulting from shipping or loading incidents at WMT potential to contribute to cumulative effects on water quality in Burrard Inlet;
- the effects of a spill of diluted bitumen potential to increase negative impacts to species within a system that is already stressed due to issues with water quality, bacterial levels, or low dissolved oxygen;
- economic impacts on local government and municipalities as a result of a spill;
- economic impacts to ocean-based economy as a result of a spill; and
- municipal compensation for costs associated with a spill do not cover full government and health authority costs.

In Appendix U, Trans Mountain provides a status update regarding these issues and how they will be addressed either through NEB condition or TMEP commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

2.1.7 *Metro Vancouver*

Metro Vancouver formally participated in the NEB regulatory process as an Intervenor and submitted Information Requests, motions and written final argument in the NEB's process. As described in Section 1.2.4.1 of this Report, a TWG has been formed with Metro Vancouver, meetings commencing in February 2017. Metro Vancouver also coordinated a group called the Lower Fraser Valley Air Quality Coordinating Committee (LFVAQCC). The LFVAQCC consists of federal, provincial and local government authorities with interests and regulatory oversight of air quality issues in the region. Appendix T provides a complete list of all of the documents filed on the NEB record by Metro Vancouver.

Metro Vancouver has concerns related to:

- impacts of a spill in Burrard Inlet;
- induced economic benefits from the Project are considered; however, belief induced impacts (costs) should be considered including induced GHG emissions and impacts from associated economic activities;
- design of the pipeline adequacy including seismic hazards;
- environmental impacts on air, land and water, due to emissions from pipeline and marine terminal facility operations, marine shipping activities and accidents or malfunctions;
- contingency planning in the event of a spill or accident during construction and / or operation of the Project;

- impacts to wildlife as a result of increased tanker traffic in Burrard Inlet;
- impacts to sensitive ecosystems, designated conservation areas, parks, fish-bearing waterways and habitat that supports Species at Risk, public recreation, tourism and fisheries;
- increase of Green House Gas Emissions as a result of the Project;
- pipeline and / or spill Impacts on liquid waste infrastructure;
- impacts of construction to Coquitlam Landfill;
- construction impacts to infrastructure and services including pipeline and Tanker impacts on existing water infrastructure; and
- current TMEP construction schedule may impact concurrent solid waste construction projects in Metro Vancouver.

In Appendix U, Trans Mountain provides a status update regarding these issues and how they will be addressed either through NEB condition or TMEP commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

2.1.7.1 *Village of Belcarra*

The Village of Belcarra participated in the NEB regulatory process as an Intervenor. Through numerous meetings and discussions, exchanges of letters between fall 2012 and spring 2014, and exchanges of Information Request documents and filings, they have expressed various concerns related to nuisance effects of increased vessel traffic, emergency management, and potential for environmental legacy for Burrard Inlet from the Project.

Belcarra has concerns related to:

- WMT tanker noise and light impact on surrounding residents;
- emergency response aspects including spill containment boom technology, location specific oil spill response plans, pre-staged equipment, response time;
- net environmental benefits for Burrard Inlet as a result of TMEP;
- safety concerns for small vessel craft sharing waterways with more Project-related tankers.

In Appendix U, Trans Mountain provides a status updated regarding any outstanding issues with Belcarra.

2.2 *Federal Government*

2.2.1.1 *Health Canada*

The Government of Canada formally participated in the NEB regulatory process as an Intervenor. In addition, Health Canada was a registered Commenter in the NEB process and filed a Letter of Comment on August 11, 2015 (Filing ID [A4S0Z6](#)). Trans Mountain also met with representatives of Health Canada in January 2013.

The Letter of Comment submitted to the NEB by Health Canada identified the following issues and concerns:

- dredging and impacts to water quality;
- health impacts of moving variety of products:
 - Impacts of a spill on human health and quality of life in coastal areas
 - Human health impacts related to spilled bitumen and dilbit);
- air quality during construction being assessed (See 1.D.3: Emissions from terminal construction);

- consider measures that can be implemented quickly and effectively to limit human exposures both in the short term immediately following a spill incident and in the long term such as that risks to human health are minimized;
- consider the possible lag times for contaminants to appear in the country foods, drinking water sources and other environmental media when developing chemical monitoring plans;
- identify the proximity of human receptors (permanent or seasonal residents) to a pipeline right-of-way as a key criterion for determining response times and actions, including Aboriginal communities who depend on the area for country foods and drinking water;
- ensure communication plans and health advisories are developed in consultation with communities and health authorities;
- characterization of health risks for any increases in NO₂, ozone and PM 2.5 should acknowledge health risks exist below ambient air quality guideline levels;
- air quality predictions and human health risk assessment should be considered interim results pending completion of engineering design; and,
- citing a study commissioned by Metro Vancouver, Health Canada is of the opinion the magnitude of air quality impacts of spills into the marine environment, may be greater than what was presented in TMEP's HHRA.

In Appendix U, Trans Mountain provides a status update regarding these issues and how they will be addressed either through NEB condition or TMEP commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

2.3 Other Stakeholders with Participation in the NEB Process

2.3.1.1 Pacific Pilotage Authority

The Pacific Pilotage Authority (PPA) formally participated in the NEB regulatory process as a Commenter, having submitted a Letter of Comment on June 18, 2015 (Filing ID A4Q7T1). The PPA has been engaged frequently as an integral member of the maritime community responsible for the safe navigation of vessels calling at WMT. Part of this includes an interest to educate other marine waterway users about ways to stay safe in the shared waters with deep draft vessels. Trans Mountain has also sponsored training for pilots to disembark vessels by helicopter in order for pilotage to be extended to Race Rocks; and not at Victoria.

In Appendix U, Trans Mountain provides a status update regarding these issues and how they will be addressed either through NEB condition or TMEP commitment compliance, or through Trans Mountain's ongoing engagement and issue resolution strategies.

Technical Report **TR-20**

Vancouver Fraser Port Authority Development Permit Application

Consultation Summary – Westridge Marine Terminal

Appendix A



Trans Mountain Pipeline ULC
Trans Mountain Expansion Project
Responses to Information Request from
Port Metro Vancouver

Reference:

On June 3, 2015, Port Metro Vancouver (PMV) requested Trans Mountain Pipeline ULC (Trans Mountain) (Lesley Matthews and Bikram Kanjilal) provide PMV with an updated summary of all marine-related consultation for the Trans Mountain Expansion Project (TMEP or the Project).

Request:

A summary of all consultation related to marine issues raised by stakeholders for TMEP. Trans Mountain agreed to provide a summary that includes all consultation on new marine matters in the jurisdiction of PMV that have occurred since the last consultation summary submitted to PMV in January 2015 (which covered the reporting period from May 2012 to June 30, 2014).

Response:

This updated summary of all marine-related consultation for TMEP includes all consultation on marine matters in the jurisdiction of PMV that have occurred from August 1, 2014 to June 30, 2015. Note this also includes discussions of relevance to PMV jurisdiction along the Fraser River.

This is an update to the consultation summary provided by Trans Mountain to PMV on January 5, 2015, also appended to Consultation Update No. 3 (National Energy Board [NEB] Filing ID [A4H1W5](#)).

A summary of the complete TMEP stakeholder engagement program is provided in the following documents:

- **Volume 3** (NEB Filing ID [A55987](#)) of the Facilities Application, filed with the NEB on December 16, 2013, reported on Trans Mountain's stakeholder engagement activities for the period of May 2012 through to July 31, 2013; Aboriginal engagement activities for the period of May 2012 through to September 30, 2013; and Landowner Relations for the period of April 2012 through to July 31, 2013.
- **Consultation Update No. 1 and Errata** (NEB Filing ID [A3Z8E6](#)), filed with the NEB on March 20, 2014, reported Trans Mountain's ongoing engagement and communications activities with Aboriginal groups, landowners and stakeholders conducted during August 1 to December 31, 2013.
- **Consultation Update No. 2** (NEB Filing ID [A62087](#)and [A62088](#)), filed with the NEB on August 1, 2014, reported on Trans Mountain's ongoing engagement and communications activities with Aboriginal groups, landowners and stakeholders conducted during January 1 to April 30, 2014.
- **Consultation Update No. 3** (NEB Filing ID [A4H1W2](#) through [A4H1W8](#)), filed with the NEB on February 12, 2015, reported on ongoing engagement and communications activities with Aboriginal groups, landowners and stakeholders conducted during May 1 to December 31, 2014.
- **Consultation Update No. 4** (NEB Filing ID [A4S7G2](#) through [A4S7G7](#)), filed with the NEB on August 20, 2015, reported on ongoing engagement and communications activities with Aboriginal groups, landowners and stakeholders conducted during January 1 to June 30, 2015.

As with the previous reporting period, this summary for PMV does not include the engagement activities or outcomes of Aboriginal engagement, landowner negotiations or the engineering led discussions of Technical Working Groups with individual municipalities and regional districts. Aboriginal engagement summary logs are submitted to PMV directly by the Trans Mountain Aboriginal Engagement Team.

**Trans Mountain Pipeline ULC
Trans Mountain Expansion Project (TMEP)
Responses to Information Request from
Port Metro Vancouver (PMV)**

This is a list of the abbreviations and acronyms used in this response.

Term	Meaning
BBOT	Burnaby Board of Trade
BC	British Columbia
BC EAO	BC Environment Assessment Office
BCIT	British Columbia Institute of Technology
BCCPA	BC Coast Pilots Association
BSC	Bird Studies Canada
BTEX	Benzene, toluene, ethyl benzene and xylene
CAPP	Canadian Petroleum Producers
CCG	Canada Coast Guard
CILTNA	Chartered Institute of Logistics and Transportation of North America
CMAQ	Community Multi-Scale Air Quality
CN	CN Rail
CNR	Canadian National Rail
CNV	City of North Vancouver
COV	City of Vancouver
COSBC	Chamber of Shipping of BC
COPC	Chemicals of Potential Concern
CSL	Canada Steamship Lines
DFO	Fisheries and Oceans Canada
DNV	District of North Vancouver
DWV	District of West Vancouver
EC	Environment Canada
ECHO	Enhancing Cetacean and Habitat Observation program
EMSW	Emergency Management Stakeholder Workshops
EPICC	Emergency Preparedness for Industry and Commerce Council
EPP	Environmental Protection Plan
EOC	Emergency Operations Centre
ERP	Emergency Response Plan
ESA	Environment and Socio-Economic Assessment
EVOS	Exxon Valdez Oil Spill
FVRD	Fraser Valley Regional District
GHG	Greenhouse Gas(es)
HHRA	Human Health Risk Assessment
ICS	Incident Command System
IHS	IHS Global Canada Limited
IMO	International Maritime Organization
IMT	Incident Management Team
INTERTANKO	International Association of Independent Tanker Owners
IOPC	International Oil Pollution Compensation Fund
ITOPF	International Tanker Owners Pollution Federation
KMC	Kinder Morgan Canada
LTMP	Long Term Monitoring Plan
LFVAQCC	Lower Fraser Valley Air Quality Coordinating Committee
MCTS	Marine Communications and Traffic Services
MEIT	Marine Emissions Inventory Tool
MLA	Marine Liability Act
MLA	Member of Legislative Assembly
MP	Member of Parliament

Term	Meaning
MRA	Movement Restricted Area
NEB	National Energy Board
NIBC	Nautical Institute – BC Chapter
ONC	Ocean Networks Canada
PMV	Port Metro Vancouver
PPA	Pacific Pilotage Authority
PSF	Pacific Salmon Foundation
PWLF	Pacific Wildlife Foundation
RAP	Reduced Activity Period
RGLOS	Regional Ground Level Ozone Strategy
RSA	Regional Study Area
SCAT	Shoreline Clean Up Assessment Technique
SOPF	Ship Source Oil Pollution Fund
SRKW	Southern Resident Killer Whales
TVAU	Tank Vapour Absorption Unit
TC	Transport Canada
TERMPOL	Technical Review Process of Marine Terminal Systems and Transshipment Sites
TMEP	Trans Mountain Expansion Project
TMPL	Trans Mountain Pipeline Ltd.
TRB	Transportation Research Board
UBCM	Union of BC Municipalities
US	United States
VCS	Vapour Control System
VEC	Vancouver Economic Commission
VEST	Volunteer Emergency System Team
VCU	Vapour Combustion Unit
VOC	Volatile Organic Compounds
VRU	Vapour Recovery Units
WCAC	Green Marine West Coast Advisory Committee
WCMRC	Western Canada Marine Response Corporation
WTABC	Wilderness Tourism Association of BC

1.0 MARINE ENGAGEMENT OVERVIEW – AUGUST 1, 2014 TO JUNE 30, 2015

Trans Mountain is committed to open, respectful, transparent and collaborative interactions with landowners, residents and stakeholders. Trans Mountain's corporate responsibility and regulatory obligation is to first minimize any potential impacts or damages to landowners, local businesses and the community including recreational areas to the extent practical by using and adapting responsive construction and operations practices; and second, provide mitigation to reverse or treat any remaining impacts.

Trans Mountain continues to expand its engagement and communications activities as needs require. Always responsive to the interests and concerns of stakeholders, the Stakeholder Engagement and Communications team continues to use various traditional and new engagement and communications tactics to ensure stakeholders have an opportunity to provide their feedback in forums that are most conducive to the stakeholder.

The following provides a highlight of marine engagement activities completed during the reporting period. During this reporting period, Trans Mountain continued to provide accurate and timely information, as well as gathering stakeholder feedback through a series of ongoing discussions, Community Conversations and Notifications. A more detailed consultation summary of Trans Mountain's marine-related activities are described in Appendix A. New interests and concerns received during this reporting period, and responses to those interests and concerns, are summarized in Table 1.5-1 of this report. The complete list of common concerns and responses is available in Table B-1 of Appendix B.

Engagement activities between August 1, 2014 and June 30, 2015 are described in the remainder of Section 1.0.

1.1 Community

1.1.1 *Westridge Neighbours*

Since August 1, 2014, Trans Mountain has emailed, met or spoke with representatives of the Westridge community in Burnaby, British Columbia (BC) to share updates about the Project and to seek their input on issues of concern going forward. During these conversations, the residents most often raised concerns about the routing of the delivery lines from Burnaby Terminal to Westridge Marine Terminal, noise from existing operations (*i.e.*, noise), and what impacts they could experience from the proposed expansion of Westridge Marine Terminal.

In January 2015, Trans Mountain mailed a letter to approximately 2,627 residents of Westridge and Burnaby Mountain neighbourhoods inviting neighbours to provide feedback on how they would like to be engaged in the Project going forward. A copy of the letter and the survey, as well as other correspondence with Westridge neighbours are contained in Appendix C. Since that time, Trans Mountain continues to correspond with these neighbours in an effort to keep them updated on the progress of the regulatory process and to advise of Trans Mountain plans to engage and communicate on construction activities in Q4 of 2015 and Q1 and Q2 of 2016.

1.1.2 *Neighbourhood Information Sessions*

Trans Mountain held neighbourhood information sessions to provide stakeholders in neighbourhoods near the proposed pipeline corridor with an update on the proposed Project and share information on environment and reclamation, and construction impacts. A neighbourhood information session was held for Trans Mountain's neighbours in Burnaby/ Coquitlam on June 3, 2015 where Project representatives of the marine development team were available to review marine aspects of the Project, including the expansion of Westridge Marine Terminal and the anticipated increase in vessel traffic calling at the terminal.

1.1.3 *Council and Staff, City of Port Moody, British Columbia*

On January 16, 2015, Trans Mountain provided a letter to the Mayor and Council of the City of Port Moody addressing concerns raised at a January 6, 2015 City of Port Moody Committee of the Whole meeting and in the City's Round 2 Intervenor Information Requests. Trans Mountain advised that it remains committed to open and transparent dialogue with local governments, communities and stakeholders who are potentially impacted by the Project. A copy of the letter is provided in Appendix D. Trans Mountain met again with the Mayor and Chief Administrative Officer (CAO) of Port Moody on April 8, 2015 to provide a general update.

1.1.4 *Mayor of Belcarra, British Columbia*

Mayor met with Project team members in person and by phone in follow-up to letters issued by the Mayor December 2014 and February 2015. The Mayor expressed concern over response time for marine oil spills, particularly in the aftermath of the Marathassa bunker fuel spill in English Bay in April 2015 (unrelated to Trans Mountain). The Mayor renewed his call for leading boom technologies and pre-planning for spill response based on geographically sensitive areas. The Mayor also sought an update on the Westridge Marine Terminal Fisheries Offset Workshop and how stakeholder input would be used.

1.1.5 *Mayor of White Rock, British Columbia*

On February 19, 2015, Trans Mountain met with the Mayor of White Rock, BC who expressed his support for the Project and expressed concerns about the increase in crude oil rail cars travelling through his community. He asked questions about tanker safety and proposed increase in vessel traffic. Information was shared about the TMEP recommended changes to the tanker safety regime.

1.1.6 *City of Burnaby, British Columbia*

Trans Mountain has documented multiple attempts to engage with the City of Burnaby with very little success at securing meetings. Feedback from any interaction with City of Burnaby staff and municipal officials is not consistent; however, the City has thoroughly engaged in the NEB regulatory review, submitting among the top number of Information Requests (IRs) received from local municipal Intervenors. The City identified in its evidence submitted to the NEB on May 27, 2015 that it is willing to undertake Preliminary Plan Approval (PPA) reviews for the Project. Trans Mountain intends to submit PPA applications for the elements of the terminal expansions that are within the City. Even though outside the reporting period, Trans Mountain submitted a letter to the City of Burnaby Planning Department to request a PPA meeting. This letter can be found in Appendix E. A meeting was held with Burnaby on August 5, 2015.

1.1.7 *Lower Mainland Local Government Association*

Trans Mountain participated in the annual Lower Mainland Local Government Association (LMLGA) conference held from May 6 to 8, 2015 in Harrison Hot Springs, BC. Trans Mountain has been a long time sponsor of the LMLGA conference and hosts a booth annually. Throughout the conference, Trans Mountain had informal conversations with various elected officials and other attendees which are reflected in the consultation summary. Conversations with attendees are recorded individually in the Consultation Summary found in Appendix A.

1.1.8 *Union of BC Municipalities Conference Held Between September 24 to 26, 2015*

Trans Mountain attended the 2014 Union of BC Municipalities (UBCM) conference in Whistler, BC from September 24 to 26, 2014. The conference is consistently well attended by municipal politicians in BC. The conference provided many opportunities to engage in discussions about the Project. Conversations and meetings with attendees are recorded individually in the Consultation Summary found in Appendix A. A number of energy-related resolutions were debated at UBCM, namely Resolution No. B-82 *Comprehensive Pipeline & Energy Transport Plan* opposing TMEP which was put forward by the City of

Burnaby (can be found in Appendix F). This resolution was not endorsed, unlike the 2012 UBCM resolution that passed (A8) opposing an increase in oil tanker traffic.

Late resolutions related to TMEP were also debated at the end of the conference (see Appendix G) which include: a request that BC Environmental Assessment Office (EA) undertake its own environmental assessment of TMEP (LR2), that TMEP be compelled to share emergency response information for submerged oil such as dilbit (LR3) and a motion to reinstate oral cross examination back into the NEB process (LR1). All three late resolutions passed, but Trans Mountain is encouraged to see in stead of opposition, the resolutions all point the way to requirements and/or conditions for BC municipalities to enable TMEP to proceed.

1.1.9 *Notification of Upcoming Engagement Activities*

On May 25 and 26, 2015, Trans Mountain provided locally elected officials and key staff with an update of upcoming engagement activities in each respective riding. Environmental Protection Plan (EPP) workshops related to the Fraser River Crossing were among the updates provided. Email notifications were sent to the affected constituencies; a sample copy of which can be found in Appendix H.

- MP, (Surrey) Fleetwood-Port Kells.
- MP, Port Moody-Westwood-Port Coquitlam.
- BC MLA, Burnaby North.
- BC MLA, Surrey Tynehead.
- City of Burnaby staff.
- City of Surrey staff.
- Metro Vancouver Regional District staff.

1.1.10 *Notification of Trans Mountain's Response to Information Request Round 2*

On February 18, 2015, Trans Mountain filed its response to Intervenor Information Request Round 2. Trans Mountain subsequently notified local governments that had filed Information Requests in Round 2, of the filing and provided an overview of the commonly asked questions that were outside the scope of the NEB's review.

The letters also emphasized Trans Mountain's willingness to engage in parallel with the NEB review process in order to most effectively address the common questions raised by Intervenors. Copies of each letter are provided in Appendix I and were sent to the following municipalities on February 19, 2015:

- | | |
|---------------------------|-------------------------------------|
| • City of Abbotsford | • City of Surrey |
| • City of Burnaby | • City of Vancouver |
| • City of Coquitlam | • City of Victoria |
| • City of Kamloops | • District of North Vancouver |
| • City of New Westminster | • District of West Vancouver |
| • City of North Vancouver | • Fraser Valley Regional District |
| • City of Port Moody | • Metro Vancouver Regional District |
| • City of Richmond | • Township of Langley |

1.1.11 *Response to Declaration of Non-Confidence*

On April 16 and 17, 2015, Trans Mountain responded to seven BC Mayors who were signators of a joint declaration of non-confidence in the NEB process. The declaration was released by the City of Vancouver on March 31, 2015 and was endorsed by Mayors of the City of Vancouver, City of Burnaby, City of North Vancouver, District of Squamish, Bowen Island Municipality, City of New Westminster and the City of Victoria.

In a written response to each Mayor issued April 27, 2015, Trans Mountain noted that the NEB process includes approximately 17 months of review and takes into consideration its Application, several rounds of questions from Intervenors and the NEB, one round of comments, as well as written evidence and oral evidence from Intervenors. Trans Mountain further noted that the NEB process includes some 400 Intervenors and 1,200 Commenters, local governments and many communities that are participating in the regulatory process in a formal manner. Copies of each letter are provided in Appendix J.

1.1.12 *City of Vancouver*

On March 4, 2015, Trans Mountain responded to a letter it had received from the City of Vancouver dated February 23, 2015. Trans Mountain expressed its disappointment with the City of Vancouver's refusal to engage further about the Project. Trans Mountain's response letter corrected information provided in the City of Vancouver letter including:

- ongoing engagement both within and outside of the regulatory process;
- NEB Draft Conditions for the Project related to emergency response; and
- filing of redacted copy of the existing Emergency Response Plan (ERP).

A copy of Trans Mountain's response letter sent to the City of Vancouver is included in Appendix K.

1.1.13 *Employment and Procurement Registry*

Trans Mountain is committed to maximizing opportunities for Aboriginal and local people to work on the construction of the Project. This includes marine-related products and services such as construction of the expanded marine terminal (e.g., dock work, marine diving and boats). Trans Mountain is working hard to identify individuals who are interested in working on the Project should it receive federal approval to proceed. Interested individuals are encouraged to identify skills and contact information in order to create a database of applicants available to work with contractors and employees for various job opportunities on the Project. As of June 30, 2015, the procurement registry had captured 1,121 individuals and businesses interested in providing good and/or services to the Project.

1.1.14 *Burnaby Board of Trade*

1.1.14.1 *Business Showcase*

On May 21, 2015, Trans Mountain participated in a Business Showcase at the Delta Burnaby Hotel and Conference Centre that was open to the business community and general public. At the event, Trans Mountain spoke with many of the more than 500 attendees to provide information about the Project and share information about procurement and job opportunities. Marine opportunities were of interest, as were concerns expressed to Trans Mountain related to emergency response and environmental effects of oil spills such as the spill into Burrard Inlet in 2007.

1.1.14.2 *Burnaby Board of Trade Review of Trans Mountain*

Burnaby Board of Trade (BBOT) conducted a review of TMEP which was released in January 2015 and can be found as part of NEB Filing ID [A4J1A8](#). The review acknowledges the need for greater access to international markets for Canadian oil products and supports responsible resource development, but also questions the current expansion plans as proposed, citing concerns with respect to the impact of seismic

activity on the pipeline, as well as the risk to Burnaby as the Project terminus – and whether the economic benefits outweigh those concerns. The review also cites the lack of a co-operative relationship between the Project proponents and key local stakeholders as an area of concern. The review addresses a large number of economic considerations that have been hot topics in the pipeline conversation, including market access, job creation, and tax revenues. It balances that discussion with consideration of pipeline safety and routing, shipping safety, spill response, and liability and responsibility.

1.2 Environment

1.2.1 Lower Fraser Valley Air Quality Coordinating Committee

Trans Mountain met with Metro Vancouver, Environment Canada and other stakeholders via the Lower Fraser Valley Air Quality Coordinating Committee (LFVAQCC) on September 25, 2014 and on November 13, 2014 to discuss air quality issues raised by them during the NEB process. Marine-related emissions were of most interest to the LFVAQCC. The meetings provided a good opportunity to review Trans Mountain air quality analyses in detail with regulatory bodies across many federal, provincial and regional jurisdictions. Among the over 30 action items for Trans Mountain as a result of these meetings – Trans Mountain agreed to consider an update to the photochemical modelling (also referred to as Community Multi-scale Air Quality [CMAQ] Model) incorporating the Marine Emissions Inventory Tool (MEIT) calculated marine emissions as developed by Environment Canada. As described in correspondence from Trans Mountain to Metro Vancouver (March 26 and May 26, 2015; see Appendix L), Trans Mountain agreed to collaborate with LFVAQCC on a work plan and has since provided them with draft work plan for comment. Metro Vancouver, on behalf of the LFVAQCC, declined to participate.

1.2.2 Marine Engagement - Underwater Noise and Marine Mammals

Trans Mountain has been conducting an active engagement program with marine communities and Aboriginal groups in southwestern BC and southern Vancouver Island for over two years. Trans Mountain has identified underwater noise and potential effects on marine mammals as a common concern related to the marine shipping sector. This is an issue not specific to the Project, but rather a shared concern across all marine development proposed to take place in this coastal area of BC.

Since Trans Mountain filed its comment to the Fisheries and Oceans Canada (DFO) Action Plan for the recovery of the Southern Resident Killer Whale in April 2014, the Project team has participated in several industry-led discussions about multi-party, collaborative measures to proactively attempt to mitigate the impacts of underwater noise on marine mammals. Trans Mountain is not leading these discussions, but rather helping to inform them by sharing details of the company's marine operations and participating in the discussions that will evolve new best practices in marine shipping.

1.2.3 Port Metro Vancouver, British Columbia

On January 9 and 26, 2015, Trans Mountain met with PMV regarding the Enhancing Cetacean and Habitat Observation (ECHO) Program.

The purpose of the ECHO Program is to better understand and manage the impact of shipping activities on whales throughout the southern coast of BC. The ECHO Program is a PMV-led initiative which has sought early input and advice from scientists, maritime industries, conservation and environmental groups, First Nations individuals and government agencies to help the ECHO Program focus efforts and set goals and objectives.

PMV has provided initial funding for the ECHO Program and is exploring opportunities for additional funding from government and industry. Trans Mountain acknowledges and supports PMV's vision to be recognized as a world class gateway by efficiently and sustainably connecting Canada with the global economy. Although out of this reporting period, Trans Mountain confirmed in August 2015 it is providing active financial support to the ECHO Program for its research initiatives, and upon completion of those, intends to include the results and recommendations as part of its Marine Mammal Protection Program. For more information on support of the ECHO Program, see Section 55.5 – Marine Mammals, Mitigation

Measures of Trans Mountain's reply evidence filed with the NEB on August 20, 2015 NEB Filing ID A4S7F0.

1.2.4 *Ocean Networks Canada*

On January 15, 2015, Trans Mountain met with Ocean Networks Canada (ONC) to review progress in marine observation technology for the Salish Sea. ONC also provided updates on new technologies for the study of sea state surface currents, marine mammal traffic and other factors in play to establish environmental baseline information in the Salish Sea.

1.2.5 *Bird Studies Canada and Pacific Wildlife Foundation*

In 2014, Trans Mountain engaged with Bird Studies Canada (BSC) to support a mapping study of marine birds in Burrard Inlet. PMV matched Trans Mountain's financial support for the mapping study, the results of which are to be made publicly available by BSC. Survey work to inform the study was completed by the Pacific Wildlife Foundation (PWLF); whereas BSC will complete the mapping portion by November 2015. In an effort to build on that work, on June 12, 2015 Trans Mountain kicked off a meeting with a BSC representative to review their current activities in marine bird surveys on BC's South Coast. Trans Mountain conveyed stakeholder and regulator interest in addressing some of the gaps of knowledge in marine bird activity. BSC shared a number of initiatives that are actively trying to address some of the same interests. On June 25, 2015, Trans Mountain also followed up with the president of PWLF to further discuss marine bird monitoring initiatives they would like to continue with, such as the BC Marine Bird Atlas. Discussions with these organizations and other stakeholders will continue in 2015 in an effort to address Trans Mountain's interest in more marine bird monitoring.

1.2.6 *Wilderness Tourism Association of British Columbia*

On April 15, 2015, the Wilderness Tourism Association of BC (WTABC) submitted its Letter of Comment (NEB Filing ID A4K5V3) to the NEB regarding the Project. Although outside the reporting period for this Update, on August 7, 2015 Trans Mountain provided WTABC with written clarification regarding statements made by WTABC in its Letter of Comment. A copy of Trans Mountain's response is included in Appendix M.

1.2.7 *Green Marine Conference and West Coast Advisory Committee*

1.2.7.1 *Green Tech*

Trans Mountain attended the Green Marine Green Tech Conference held in Seattle, Washington from May 27 to 29, 2015. As part of the conference delegate package, Trans Mountain provided attendees with a copy of its Westridge Marine Terminal Brochure, a copy of which is contained in Appendix N. Key topics on the conference agenda were underwater noise and air quality in maritime ports. Green Marine continues to grow its membership in North America. The conference location (Seattle, WA) provided good opportunities to meet with many US ports, terminals and ship operators, and to understand how other marine operations in North America are dealing with common environmental concerns from maritime shipping. Green Marine is a voluntary program that encourages leadership and best practice. The Conference provided many examples of leaders in the shipping sectors and opportunities to connect with them in a supportive setting.

1.2.7.2 *West Coast Advisory Committee*

Regional input is a core aspect of the Green Marine Program. Trans Mountain is a member of the Green Marine West Coast Advisory Committee (WCAC) which is chaired by the Prince Rupert Port Authority; bringing together industry stakeholders, legislators and environmental groups to provide input and advice on different aspects of the program's development. The multi stakeholder nature of the committee enables the WCAC to put forward performance criteria relevant to the transportation sector on the West Coast, while addressing real environmental issues through concrete (measurable) actions undertake by participating companies. In addition to the WCAC, there are two other advisory committees representing the St. Lawrence and the Great Lakes regions.

1.2.7.3 Underwater Noise Working Group

Kinder Morgan Canada is part of the Green Marine working group recently chosen by Transport Canada to “provide insight on underwater noise generated by shipping and its effects on marine life, along with potential solutions.” The committee has been working on the development of a new performance measure with criteria for mitigation of underwater noise effects of commercial shipping activity on marine mammals. It is expected the committee will provide Green Marine with draft performance indicator by Q1 2016. Subject to approval of the performance indicator, the first year of implementation by member companies will be voluntary. On July 27, 2015 Transport Canada announced it was contracting Green Marine to provide insight on underwater noise generated by shipping and its effects on marine life, along with potential solutions. As a member of the working group, Trans Mountain will continue to share information about its operations and contribute to collaborative discussions on solutions to mitigate and/or avoid impacts of underwater noise. More information can be found at <http://www.green-marine.org/wp-content/uploads/2015/07/GM PR TCNoise FINAL.pdf>

1.3 Safety and Emergency Management

1.3.1 Nautical Institute of British Columbia

At the request of conference organizers, Trans Mountain made two presentations at the Nautical Institute in Victoria, BC on May 7, 2015. The first presentation focused on quality assurance and provided information on preventative measures proposed, a review of spill response enhancement proposals and a review of the quantitative risk assessment. The second presentation was part of a panel discussion on port infrastructure. Trans Mountain spoke to more than 100 attendees about the improvements proposed at the Westridge Marine Terminal, the ways in which the port activities will interact with the Project, and the procedures used by departing vessels within the harbour area. Copies of the presentations are available in Appendix O.

1.3.2 Emergency Preparedness and Business Continuity Conference

Trans Mountain hosted a booth at the Emergency Preparedness and Business Continuity Conference, held from November 18 to 20, 2014 at the Wall Centre, Vancouver, BC. The following marine issues were identified by attendees of the conference who frequented the booth or engaged with Trans Mountain at the sessions:

- emergency response;
- risks associated with tanker traffic due to increased movement; and
- expansion of Puget Sound line.

1.3.3 Emergency Management Stakeholder Workshops Part 2

Trans Mountain continued its Emergency Management Stakeholder Workshops (EMSW) Part 2, which were half-day sessions with emergency managers and first responders. The agenda typically covered current operations and a brief overview of the Project. Attendees were presented with highlights of the current Community Awareness Emergency Response (CAER) program and then were led through a discussion to explore their interests and concerns about expanding the system and some early indications of what they would like to see considered as part of an updated ERP for the expansion.

The purpose of the EMSW Part 2 was to meet stakeholder interest in reviewing desktop scenarios that explored a local sequence of events and local resource requirements in the event of an incident in a community. EMSW Part 2 also provided Trans Mountain the opportunity to use its Emergency Management Plans in practice, and to develop a working relationship with pertinent stakeholders involved in initial emergency response.

In Consultation Update No. 3 (NEB Filing ID A4H1W2 through A4H1W8), Trans Mountain noted the City of Surrey, City of Coquitlam (Tri-Cities) and the Town of Hinton asked to postpone the discussion until

spring 2015. The City of Burnaby declined the EMSW Part 2 invitation, as did Metro Vancouver. Representatives from the Regional District of Fraser Fort George were invited to attend the Village of Valemount Part 2 EMSW but were unable to travel due to winter road conditions. Trans Mountain was able to reschedule EMSW with Coquitlam (Tri-Cities) during this reporting period.

1.3.4 *City of Surrey Fire Department*

In December 2014, the City of Surrey declined an invitation for EMSW Part 2 and requested it be postponed until spring 2015.

On March 10, 2015, Trans Mountain extended a subsequent offer to meet with Surrey first responders in April or May 2015. Surrey requested to postpone this request due to its status as an Intervenor in the regulatory process. Trans Mountain explained the purpose and intent of workshop and reiterated that participating does not jeopardize or replace the City of Surrey's position as an Intervenor. Surrey agreed to meet on May 12, 2015; however, requested the focus be solely on discussing the safety and security of the existing Trans Mountain Pipeline. A Kinder Morgan Canada (KMC) representative attended this meeting to address questions and concerns related to the existing system.

City of Surrey attended EMSW Part 2, Tri-Cities workshop on May 13, 2015 to listen to the discussion. Trans Mountain remains open to hosting a Part 2 EMSW with the City of Surrey and will continue to address questions and concerns. City of Surrey has invited Trans Mountain to attend a workshop they are sponsoring on September 15, 2015 regarding communication during pipeline emergencies.

1.3.5 *Part 2 EMSW, Tri-Cities*

On May 13, 2015 Trans Mountain hosted a Part 2 EMSW in the Tri-Cities area (Coquitlam, Port Moody and Port Coquitlam) with emergency first responders and planners. PMV and Western Canada Marine Response Corporation (WCMRC) also participated in the workshop to explain their roles in an emergency that could involve a spill into the Fraser River. A copy of the presentation is available in Appendix P.

1.3.6 *Fraser River Discovery Centre*

On May 12, 2015, Trans Mountain announced its investment in the Fraser River Discovery Centre's Phase 1 of the Working River Project, a world-class, education-based exhibit that will promote a factual understanding of the crucial economic role of the Fraser River while considering its environmental and socio-cultural values. Details of the announcement are provided on Trans Mountain's website at: <http://www.transmountain.com/uploads/working-river-project-moving-forward-with-an-investment-from-kinder-morgan-canada>

1.3.7 *Chartered Institute of Logistics and Transportation in North America Luncheon held on June 23 2015*

Trans Mountain attended the Chartered Institute of Logistics and Transportation in North America (CILTNA) luncheon presentation of Captain Gordon Houston on results of Federal Tanker Safety Review Panel recommendations. Captain Houston explained in detail the recommendations made by the panel, and he answered questions from the audience. The recent spill by the Marathassa cargo vessel of bunker fuel into English Bay was a frequent topic raised. Spill response times, response capacity and resources are among the key areas of interest.

1.3.8 *Clean Pacific Spill Response Conference held on June 17 and 18, 2015*

New technologies and best practices in emergency response for marine spills were the key topics featured at the Clean Pacific spill response conference in Vancouver, put on every two years by the Pacific States and British Columbia Oil Spill Task Force. Trans Mountain was one of the sponsors of the conference which saw attendance from across North America. The conference provided a great opportunity to network with spill responders, academics, scientists, regulatory agencies from both US and Canada and other interest groups involved in the spill response industry.

1.4 New Engagement Activities

1.4.1 *Telephone Town Halls – Marine Communities*

New this reporting period, Trans Mountain hosted a series of Telephone Town Halls to provide the residents in BC communities with an opportunity to ask questions regarding the Project of the President of KMC, Mr. Ian Anderson.

A computerized auto dialer in targeted BC communities notified stakeholders of the upcoming Telephone Town Halls and provided them with information on how to participate. Telephone Town Halls were hosted for communities along our proposed pipeline corridor:

September 16, 2014	Burnaby (6:30 pm) Coquitlam - Langley (7:45 pm)
September 18, 2014	Vancouver (6:30 pm) Abbotsford - Chilliwack (7:45 pm)
December 3, 2014	Burnaby (7:00 pm)

Telephone Town Hall participants were welcomed by a moderator and introduced to KMC President, Mr. Ian Anderson, who provided an initial update on the status of the Project. Trans Mountain answered as many questions from callers as time permitted. At the conclusion of each Telephone Town Hall, stakeholders were invited to remain on the line and leave a voice message with questions and or alternatively they could contact Trans Mountain directly at Info@transmountain.com or toll-free at 1-866-514-6700.

The first Telephone Town Hall, on September 16, 2015, covered the communities of Coquitlam, Surrey and Langley, with more than 2,000 stakeholders participating throughout the session. The second Telephone Town Hall covered the community of Burnaby with more than 5,000 stakeholders participating throughout the session.

Telephone Town Halls, on September 18, 2014, covered the communities of Vancouver with more than 11,000 participants and Abbotsford-Chilliwack with more than 1,000 participants. In total, more than 20,000 people participated over the course of the four sessions.

Following the demonstrations on Burnaby Mountain, an additional Telephone Town Hall was held on December 3, 2014 covering Burnaby with more than 5,000 participating.

Phone numbers called were land lines and those not on the Do Not Call List. In addition Trans Mountain promoted the December 3, 2014 telephone townhalls, through social media. Those without a land line and or on the Do Not Call List were encouraged to contact Trans Mountain to provide their phone number. These numbers were added to the auto dial list on the night of the telephone town hall. Any callers who did not get through to ask a question of Mr. Anderson during the town hall, were directed to leave a voicemail whereby Stakeholder Engagement and Communications team members returned approximately 200 voicemail messages within a two week period.

Recordings of each Telephone Town Hall are available on line through Trans Mountain's SoundCloud channel, with both featured clips and full recordings.

- Burnaby at <http://blog.transmountain.com/recap-burnaby-telephone-town-hall/>
- Coquitlam – Langley at <http://blog.transmountain.com/telephone-town-hall-surreylangley-coquitlam/>
- Vancouver at <http://blog.transmountain.com/telephone-town-hall-vancouver/>

- Abbotsford – Chilliwack at <http://blog.transmountain.com/telephone-town-hallabbotsford-chilliwack/Burnaby> Dec. 3, 2014 at <https://soundcloud.com/transmountain/telephone-town-hall-december-3-2014?in=transmountain/sets/telephone-town-hall-december-3-2014>

1.4.2 Twitter Town Halls

Also new this reporting period, Trans Mountain hosted Twitter Town Halls via our Twitter channel, @transmtn, providing stakeholders with an additional venue to ask questions of Trans Mountain.

For the first event on October 14, 2014, Trans Mountain created a hashtag for use in all tweets, #AskTransMtn, and asked those posing questions to use that same hashtag. This made tweets searchable for anyone to see. During the one-hour Twitter Town Hall, there were approximately 2,100 tweets and retweets using the hashtag #AskTransMtn, resulting in the hashtag trending in BC and in Canada during the Twitter Town Hall. Trans Mountain was pleased to see such high engagement through the use of the hashtag.

Of the 188 questions received, Trans Mountain focused its responses during the Twitter Town Hall on those questions that were relevant to marine safety. Over a one-hour period Trans Mountain responded to 30 questions. Following the Twitter Town Hall, Trans Mountain responded to the remaining questions on twitter.

Trans Mountain also provided a blog post with the answers to eight questions raised by the Dogwood Initiative. Those same eight questions were the focus of a large percentage of tweets submitted to the Twitter Town Hall. Trans Mountain responded to those who had tweeted or retweeted the eight questions posed by the Dogwood Initiative by providing a link to the blog post. Table A-1 in Appendix A includes all of the questions tweeted by participants and answered by Trans Mountain as a result of its Twitter Town Hall.

1.4.3 Regulatory Engagement / Process

Between May 2014, and as of June 30, 2015, Trans Mountain responded to more than 17,000 questions through the regulatory process, approximately 20% of which were related to marine topics of interest. All information requests asked by the NEB and registered Intervenors are available on the NEB's website at <http://www.neb-one.gc.ca/pplctnflng/mjrpp/trnsmntxpnsn/index-eng.html>

1.5 New Marine Issues Identified – August 1, 2014 to June 30, 2015

Much like the first report, this marine consultation summary update is presented in multiple parts.

- Table 1.5-1 below provides a summary of Trans Mountain responses to only the new marine issues that have not yet been reported in previous consultation summaries.
- Appendix A provides a summary of consultation activities and marine issues raised by stakeholder groups. Responses include a cross-reference to the commonly raised issues identified in Table B.1 as applicable, and any commitment or follow-up actions TMEP has made to date.
- Table B.1 in Appendix B provides the complete list of common marine issues compiled for all reporting periods since May 2012.

TABLE 1.5-1

NEW ISSUES, CONCERNS AND COMMON TRANS MOUNTAIN RESPONSES FOR THE MARINE CONSULTATION PROGRAM

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
1.0	Environment - Marine Impacts	<p>1.A.5 Underwater Noise/ Acoustic Environment</p> <p>As acknowledged by DFO, recovery of at-risk populations is a complex and multi-faceted problem, and integrated multi-party solutions are required across the maritime industry to manage effects on marine mammal species (NEB Filing ID A4LTZD4). Trans Mountain remains strongly supportive of a collaborative regional approach to the development of mitigation options for reducing risks to marine mammals.</p> <p>Trans Mountain's engagement efforts to date have identified many stakeholders in the marine shipping industry who are aware of the potential impacts and interested in finding solutions to benefit local marine biodiversity. Trans Mountain is involved with two key initiatives:</p> <ul style="list-style-type: none"> As stated in PMW's evidence (NEB Filing ID A4L6Q7), the ECHO Program seeks to better understand and manage potential underwater noise effects on cetaceans (<i>i.e.</i>, whales, porpoises and dolphins) resulting from commercial vessel activities throughout the southern coast of BC. Trans Mountain has entered into a multi-year funding agreement with PMW wherein Trans Mountain would commit to contribute funding to the ECHO Program to support its research and mitigation development initiatives. Westridge Marine Terminal is a member of Green Marine (green-marine.org), a voluntary environmental program where members commit to continuous improvement in the management of marine environmental impacts. Green Marine is actively facilitating underwater noise working group with shipping industry members from across Canada in an effort to drive new best practices and improve the shipping industry's ability to mitigate noise impacts to marine mammals. KWC is part of this Green Marine working group which has recently been chosen by Transport Canada to "provide insight on underwater noise generated by shipping and its effects on marine life, along with potential solutions." http://www.green-marine.org/MC-content/uploads/2015/07/GM_PR_TCclose_FINAL.pdf 	<p>Written evidence of DFO https://docs.neb-one.gc.ca/-/eng/jisaci.dll/fetch/2000/90464/90552/548311/95672/62392813/2449925/2450456/2785182/C97-2-2_.pdf</p> <p><u>Attachment 1 - Written Evidence of Fisheries and Oceans Canada - A4LTZD4.pdf?modified=2785183&amp;vernum=2</u></p> <p>More information on Trans Mountain's involvement in the PMW/ECHO Program can be found in response to NEB IR 6. 06.a (NEB Filing ID A4QQJ1)</p>
3.0	Marine Tankers	<p>3.A.7 Safety of oil transport by marine tanker vs crude oil rail cars</p> <p>Marine Transportation is considered a safe and cost efficient means of transporting oil products around the world. Tanker design, construction, maintenance and operating standards have evolved over many years and improvement is reflected in the very low number of oil spills from tankers, which statistic has trended significantly lower since introduction of double hull tankers and the phasing out of single hulls. Tankers are held to strict internationally quality standards mandated by the International Maritime Organization and Canadian Shipping Act and verified by Class Societies.</p>	<p>See Technical Report 8C-7 TERMPOL 3.9 – Ship Specifications (NEB Filing ID A3S4T2).</p> <p>The International Tanker Owners Pollution Federation (ITOPF) www.itopf.com</p>

TABLE 1.5-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
3.B.9	Demarcation of shipping routes in Burrard Inlet	<p>There is a long history of safe marine commercial activity within Burrard Inlet and similarly there is a long history of recreational vessel use in this area. All mariners are expected to adhere to established rules for ships and boats that ensure safety of all mariners. The safety regime in place today for both the existing tanker traffic, which includes traffic to the Westridge Marine Terminal, has been developed and continually improved since the terminal entered service in 1953. The regime is based on regulatory requirements, local experience and international best practices. It is comprehensive, well established, and has proven to be effective.</p> <p>Recreational boating is very popular on the coast of BC, especially the south coast and there are a large number of licensed pleasure crafts and pleasure craft operators. The statistics from 1999 to 2012 indicates there are 375,143 vessels, and 418,357 operator cards, which may also include vessels that are no longer in use. There is potential for over 5,250 boats at moorage within English Bay and Burrard Inlet. However there is a seasonal pattern to the use of these vessels and on average recreation boats spend a considerable time at berth.</p> <p>On average about 500 incidents are reported annually to Vancouver Marine Communications and Traffic Services (MCTS) and the majority of these incidents relate solely to recreational vessels.</p> <p>Transport Canada, Office of Boating Safety (OBS) is responsible for the development and implementation of pleasure craft regulations, standards, policies, enforcement and technical services pertaining to recreation boating. OBS provides regulatory training to enforcement agencies (e.g., RCMP, Conversation Officers, etc.); provides advice to enforcement officers, attend and/or lead regional enforcement working groups meetings; follow-up on close quarter situations or any incident upon request by the enforcement agencies on a case-by-case basis. The OBS also trains other stakeholders and partners in performing courtesy checks on safety equipment. Within the Port's jurisdiction, PMV's role regarding the management and monitoring of recreational vessels is limited to ensuring that navigation and environment are not being impeded or impacted. PMV does not monitor the movements of most pleasure craft, but if a boster is causing a navigational hazard, the PMV patrol boat will attend and address the issue. Marine units of the RCMP and Vancouver Police Department (VPD) enforce local laws pertaining to boating safety and other infractions like alcohol-related issues.</p> <p>The most challenging part of a tanker's sailing route from Westridge Marine Terminal¹⁷ is the start of its journey from the terminal through the Second and First Narrows in the Vancouver harbour area. The movement of large ships (including tankers) is strictly regulated and there are speed limits as well as pilots on board and tethered tugs that ensure these vessels are moved through the harbour with a high degree of control. This ensures that the probability of collision or wake or propeller wash damage is mitigated.</p> <p>Several recommendations are under review by the TERMPOL Review Committee that will, if accepted, further enhance safety of all mariners in the Central Harbour. This includes demarcation of a shipping route between the Second Narrows and Port Moody giving a wide berth to the expanded Westridge Marine Terminal. The dock complex itself will be provided with navigation marks and lights and the oil spill booms around the vessels will also be marked in a similar fashion. This will ensure that all marine users will be able to identify the area during day or night and keep clear.</p>	A Review of Marine Recreational Vessel Activities in Burrard Inlet (NEB Filing ID A4A44)

TABLE 1.5-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
3.B.10	TMEP proposed enhancements to tanker safety regime	<p>Trans Mountain has proposed additional measures that will further improve marine safety through accident prevention and reducing the consequences in the unlikely event one should occur. These recommendations can be found in Volume 8C as Technical Report TR 8C-12 TERMPOL 3.15 General Risk Analysis and Intended Methods of Reducing Risks (NEB Filing ID A3S5f4) and are expected to raise the level of care and safety in the study area to well above globally accepted shipping standards.</p> <p>The TERMPOL Committee Report endorsed the TMEP proposed enhancements, key amongst which are:</p> <ul style="list-style-type: none"> • Enhanced tug escort of laden oil tankers requiring a tug to accompany the tanker throughout its entire passage to the open ocean will prevent accidents. <p>A significantly enhanced spill response program implemented by WCMRC will reduce consequences. The enhanced program would more than double the area's response capacity and more than half the response times with a number of new bases to be located along the local shipping lanes.</p>	<p>Technical Report TR 8C-12 TERMPOL 3.15 General Risk Analysis and Intended Methods of Reducing Risks (NEB Filing ID A3S5f4)</p> <p>TERMPOL Review Process Report (NEB Filing ID A4F8Z4)</p>
6.0	Regulatory Process		
6.G	TERMPOL process	<p>The TERMPOL Review Process (TRP) is a voluntary process whereby Trans Mountain conducts a prescribed set of studies, described in TERMPOL Review Process 2001 (TP743E), and submits these to a TERMPOL Review Committee chaired by Transport Canada and includes representatives of other federal agencies. The purpose of the review in this case is to assess the safety and risks associated with tanker movements to, from and around Westridge Marine Terminal resulting from the Project. The review includes consideration of:</p> <ul style="list-style-type: none"> • Ship design and operation • Navigational and physical characteristics of the approaches to Westridge Marine Terminal • Terminal design and infrastructure • Risk and accident analysis along the transit route and at the terminal, and the related mitigating measures • Pollution prevention program • Contingency plans <p>The TERMPOL studies can be found in Volume 8C of the Facilities Application.</p> <p>The TERMPOL Review Committee report submitted to the NEB on December 11, 2014 can be found on the NEB website https://docs.neb-one.gc.ca/-/-/eng/1sap0/dl/fetch/20090464/90552/54831/1/956726/2392873/2449925/2451487/2884386/C3534-3_-TERMPOL_Report_December_11_2014_A4F8Z4.pdf?nodeid=2584073&vennum=2</p>	<p>TERMPOL reports in Volume 8C (NEB Filing IDs A3S4R4 through A3S5K1)</p> <p>TERMPOL Review Process Report (NEB Filing ID A4F8Z4)</p>
6.H	PMV permit review of Westridge Marine Terminal expansion	<p>The Westridge Marine Terminal is located within PMV. Under the Canada Marine Act, PMV sets rules and regulations within its jurisdiction focused on maintaining the safe and efficient movement of marine traffic and cargo. PMV's marine operation responsibilities include oversight on upgrade projects and permitting, as such PMV will conduct an environmental review of the proposed expansion for Westridge Marine Terminal following the NEB process.</p>	<p>See evidence filed by Port Metro Vancouver with the NEB as part of the TMEP hearing on May 26, 2015 (NEB Filing ID A4L6Q7)</p>

TABLE 1.5-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
6.1	Level of detail provided in IR Responses	<p>The NEB process has identified a very specific scope of issues they will evaluate for the facilities application; however, Trans Mountain made every effort to directly and thoroughly answer questions of intervenors and the NEB. If questions were asked that were outside the NEB's List of Issues, Trans Mountain acknowledged that in its responses but also attempted to provide the additional information. Trans Mountain has continued to engage with stakeholders in parallel with the NEB review process to provide stakeholders with opportunities to discuss issues of concern with Trans Mountain if they were not satisfied with the level of information provided through the NEB hearing.</p>	
8.0 Emergency Response	Public Availability of Trans Mountain ERPs (non-redacted)	<p>KMC acknowledges the interest of intervenors to seek more information about the existing EMP documents, and reference materials related to the Trans Mountain Pipeline system, which is why KMC filed a redacted copy of the existing ERPs publicly (NEB Filing ID A63573). In Ruling No. 50 (NEB Filing ID A4G519) the NEB determined that it was "satisfied that sufficient information has been filed from the existing EMP documents to meet the Board's requirements at this stage in the process."</p> <p>It is KMC's intent to continue to share unredacted versions of the EMP documents with agencies tasked with ensuring public safety. KMC's EMP is shared, tested and regularly exercised with federal, provincial and local agencies. The EMP meets regulatory requirements and KMC works with emergency planners and emergency responders to maintain relationships and to ensure their awareness of KMC's system, as well as mutual awareness of joint exercises and programs.</p> <p>The Application, Volume 7, Section 4.8 outlines the process to enhance KMC's existing emergency management programs (EMP) as they relate to the Trans Mountain Pipeline system to address the needs of the Project (Filing ID A3SAV5). The final programs will be developed in a manner consistent with the NEB's draft conditions of approval related to emergency response.</p> <p>Following receipt of a Certificate of Public Convenience and Necessity (CPCN) for the Project, KMC will file with the NEB a consultation plan related to KMC's EMP review that will include consultation scope, objectives, preliminary lists of regulatory authorities, communities, Aboriginal groups with whom KMC will engage, and a preliminary list of consultation locations and timing, as well as any other information that the NEB requires. The consultation plan will describe the methods that will be used to track commitments made during consultation and to incorporate them into KMC's EMP, including its ERPs. As part of this program KMC will periodically file reports with the NEB on progress of its EMP review including summaries of interested parties consulted and how their comments were considered.</p> <p>KMC will file with the NEB the revised ERP for the pipeline as part of the approval conditions for the Project. The plan will demonstrate KMC's ability to prepare for, respond to, recover from, and mitigate the potential effects of emergencies of any type related to the Trans Mountain Pipeline system. Filing of the ERP will include, for the NEB's consideration, a final report on the consultation process as well as confirmation that an independent third-party has reviewed and assessed the ERP and that KMC has considered and incorporated the comments generated by the independent review and assessment into the plan.</p>	<p>Redacted copies of KMC existing ERPs (NEB Filing ID A63573) NEB Ruling No. 50 (NEB Filing ID A4G519) Section 4.8 of Volume 7 (NEB Filing ID A3SAV5) Updated draft conditions of approval issued August 12, 2015: (NEB A4STG2)</p>

TABLE 1.5-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
8.G	Emergency Response times for marine oil spills	<p>Trans Mountain acknowledges that despite the substantial measures that will be in place to reduce the probability of an oil spill from a Project-related tanker (Section 5.3), it is necessary to have resources and plans to minimize the effects of an oil spill, make the best efforts to control the spread of oil, and ensure that clean up is timely and effective.</p> <p>WCMRCC and Trans Mountain consulted with spill and response organizations including other response organizations in Canada, the US and Norway. The equipment specifications associated with the proposed enhancements (including size, speed and capabilities) shall be determined in part from an assessment of response organizations and response equipment from around the world.</p> <p>Proposed improvements to WCMRC emergency response capacity, including spill response times, are outlined in Table 5.5.3 of Section 5.5.2 of Volume 8A.</p>	See Table 5.5.3 of section 5.5.2 of Volume 8A (NEB Filing ID A3S4Y6)
8.H	<p>Notification protocol for marine oil spills (specific to local gov'ts)*</p> <p>Note, this issue was raised in the context of a spill scenario discussion about a pipeline spill that reached the Fraser River. This is considered to be "marine" for the purposes of this consultation summary because it falls within the jurisdiction of Port Metro Vancouver. The difference being KMC would be the responsible party for a spill from the pipeline or from Westridge Marine Terminal. Spills from another source such as a tanker would involve a different responsible party. KMC can only speak to incidents where it would be the responsible party.</p>	<p>Immediate notification is a key element of any emergency response action. The health and safety of employees and the public is paramount and, as a result, immediate notification is essential.</p> <p>The first step in many incidents is to confirm that an emergency condition exists. Reports may come from a number of sources including automated detection systems, on-site KMC or other personnel, and members of the public and/or Emergency Services (Police, Ambulance, Fire).</p> <ul style="list-style-type: none"> • Notify the Control Centre and regional office/Qualified individual. • Dispatch field personnel to the site to confirm discharge and conduct preliminary assessment. • Notify their immediate supervisor and provide assessment results. <p>Depending on the situation, the appropriate actions taken by the Control Centre personnel may include, but are not limited to:</p> <ul style="list-style-type: none"> • Shut-down affected line segment if there is an indication of a leak • Isolate line segment • Depressurize line • Start internal and external notifications • Mobilize additional personnel as required. <p>For emergency incidents affecting the Fraser River or Burrard Inlet, KMC personnel would contact Canada Coast Guard and MCTS at 604.775.8920 and Port Metro Vancouver at 604.665.9086. All marine spills must be reported within one hour to MCTS for fan-out to other Federal Government agencies.</p> <p>The Transportation Safety Board / NEB 819.997.7887 and Emergency Management BC: 800.663.3456 would also be among the initial external calls made. The local 911 call centre will be notified of any incident to inform the call centre operators of the problem or potential problem so they do not allocate additional unneeded resources to the event.</p>	

TABLE 1.5-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	See above	Reference
8.H (cont'd)	See above	<p>Once notified, Emergency Management BC undertakes municipal notification, however there are many instances where Trans Mountain may have already been in contact with municipalities, such as when first responders are already on scene (e.g., through public notification of the incident).</p> <p>Local government representatives would be invited to participate in the response as part of Incident Command System (ICS). Depending on the incident and requirements, this will likely be into the command post, or other areas of the ICS response team. This is standard ICS operating practice and Trans Mountain responders are trained in ICS. Trans Mountain will not open Emergency Operations Centres (EOC) such as first responders are used to. The incident command post is initially at the scene then it will be relocated to a more appropriate facility offsite. As provided for in ICS, it is KMC's preference to enter into a Unified Command with the municipal, provincial and federal agencies to ensure a safe and thorough response to any emergency. This allows the communities to put forth their objectives and priorities along with other members of Unified Command.</p> <p>Notification protocols are among the topics Trans Mountain plans to engage on as part of the enhancement of the current Emergency Management Program to accommodate the proposed expansion. Engagement for the Emergency Management Program enhancement is ongoing with local first responders (fire, police and ambulance), health authorities, emergency managers, and other provincial and federal agencies as appropriate in each pipeline community.</p>		
8.I	PMV role in emergency response	<p>Answer provided by PMV at Tri-Cities EMSW at Fraser River Discovery Centre on May 13, 2015:</p> <ul style="list-style-type: none"> • PMV's role is to facilitate the safe and efficient movement of trade. • We are not first responders in an emergency. However, we do work with others in emergency situations and our 24/7 Operations Centre acts as a coordination hub for relaying information. • We maintain procedures, and have equipment and personnel in place to address a variety of emergencies both on land and on water. • If there was an incident on the Fraser River [or Burrard inlet] we would dispatch one of our operations vessels to be in the vicinity to assist if needed. • PMV would participate in the ICS structure. 		<p>PMV website: http://www.portmetrotvancouver.com/about-us/security-emergency/emergency-management/ Accessed August 14, 2015</p> <p>PMV website: Emergencies and Spill Response: http://www.portmetrotvancouver.com/about-us/topics-of-interest/emergencies-and-spill-response/ accessed August 31, 2015.</p> <p>PMV / CCG Letter of Understanding: http://www.ccg-gcc.gc.ca/independent-review-Marathassa-oil-spill-ER-operation#annexF Accessed August 31, 2015.</p>

TABLE 1.5-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
8.J	Wildlife recovery / emergency management	<p>Wildlife management is covered in the ERPs for the pipeline and facilities.</p> <p>In emergency response, a wildlife branch of the operations section forms within the Incident Command System. Generally, the best response strategy is to prevent wildlife from being impacted by the product via an effective monitoring, reconnaissance and hazing program. If wildlife impacts are unavoidable, proactive search and collection to quickly retrieve contaminated animals is imperative. The sooner an animal is brought into care for treatment, the healthier it is, and the faster it will progress through the wildlife care centre and return to the wild.</p> <p>For incidents involving the Fraser River or Burrard Inlet, our spill response contractors such as WCMRCC have hazing equipment that can be deployed.</p>	<p>Section 13.0 – Wildlife Care of Westridge Terminal ERP (NEB Filing ID A4D3F1)</p>
9.A	Opportunities for input on Marine Issues/Concerns	<p>Trans Mountain is committed to undertaking open and thorough engagement with Aboriginal groups and stakeholders along the pipeline route and marine corridor. Extensive dialogue with landowners, Aboriginal groups, government, communities and stakeholders will ensure these views are included in our plans and legacies for the proposed Expansion Project and Facilities Application.</p> <p>As part of the stakeholder engagement program, Trans Mountain has implemented, and continues to conduct an open, extensive and thorough public consultation process commonly known as stakeholder engagement. Stakeholder engagement touches all aspects of the proposed pipeline corridor between Strathcona County, AB and Burnaby, BC. The stakeholder engagement program was designed to take into account the unique and varying needs of the communities along the Project corridor, and to be responsive and adaptive to the feedback received throughout the various stages of the engagement program. In addition, the feedback received has been incorporated into the program and has influenced the design of subsequent phases of stakeholder engagement.</p> <p>In consideration of the potential impact to the marine environment from an increase in tanker traffic as a result of the Project, Trans Mountain has extended stakeholder engagement to include Aboriginal groups and coastal communities, beyond the pipeline terminus at Westridge Marine Terminal in Burnaby, BC. In recognition of this and the high level of stakeholder interest in marine shipments of petroleum products, Trans Mountain has engaged communities on Vancouver Island and the Gulf Islands along established marine shipping corridors transited by oil tanker traffic as well as communities in and around PMW.</p> <p>Engagement with pipeline communities has focused on maritime matters related to the proposed incremental increase in tanker traffic and the expansion of Westridge Marine Terminal. It has included aspects such as Traditional Marine and Resource Use (TMRU), emergency preparedness, spill response and Project-related opportunities.</p>	<p>Section 1.3 of Volume 3A (NEB Filing ID: A3S0R2) Design of Stakeholder Engagement Program Consultation Update No. 1 and Errata (NEB Filing ID A3Z8E6), filed with the NEB on March 20, 2014 Consultation Update No. 2 (NEB Filing ID A62087 and A62088), filed with the NEB on August 1, 2014 Consultation Update No. 3 (NEB Filing ID A4H1W2 through A4H1W8), filed with the NEB on February 12, 2015 Consultation Update no. 4 (NEB Filing ID A4S7G2 through A4S7G7), filed with the NEB on August 20, 2015</p>

1.6 Communication Activities Overview – August 1, 2014 to June 30, 2015

In support of ongoing marine engagement activities, the following communications initiatives ensured marine information was communicated to stakeholder groups thoroughly, in plain language, in a manner that maintained stakeholder relationships and built public acceptance for the Project.

1.6.1 Website Updates

A living communications tool, the Trans Mountain website, www.transmountain.com, continued to evolve and be updated with current Project information. In April 2015, Trans Mountain refreshed its website with an updated home page, additional topic specific landing pages and a revised navigational restructure. The primary goals of the website refresh was to make it easier to navigate, increase user interaction with the content, increase visual interest and simplify messaging.

Since the website was refreshed, it has received 25,585 unique visitors. Message blocks on the home page navigate visitors to topic specific pages that highlight important information (*i.e.*, marine safety, community engagement, Project benefits, maps, pipeline safety, environmental protection and jobs and vendors). Figure 1.4.1 provides a screen capture of the refreshed website.

1.6.2 Trans Mountain Updates

Trans Mountain continues to share news about the Project via its website through stories and articles published under Trans Mountain Updates. When applicable, this information was distributed via the Project's electronic newsletter, Twitter account and to the news media through the media relations program. Table 1.6-11 provides a list of the Trans Mountain Updates provided during the reporting period.

TABLE 1.6-1

TRANS MOUNTAIN UPDATES – MARINE-RELATED

Title	Date	Page Views
Reed Point Marina Supports Trans Mountain Expansion Project	August 7, 2014	178
A Visit With Sea Lions: Trans Mountain Learns More About Ongoing Research in Burrard Inlet	September 19, 2014	137
Taking Your Calls: On The Line for Telephone Town Halls with Ian Anderson	September 22, 2014	256
Wildfire fighter lands new career through Aboriginal surveyor program	January 5, 2015	270
PLAN AND PREPARE: Engaging Municipalities in Emergency Preparedness Procedures	January 8, 2015	84
Upgrades at the Westridge Marine Terminal to enhance leak detection capability	January 8, 2015	145
TERMPOL Review Committee supports several safety measures proposed by Trans Mountain	February 18, 2015	141
World-Class Computer Simulation Program Developed by Ausenco	March 3, 2015	252
Trans Mountain files responses to TERMPOL-related Intervenor information requests	March 17, 2015	58
Pacific Salmon Foundation – \$50,000 donation to help with enhancement of salmon habitat in Burrard Inlet	April 20, 2015	118
Westridge 2007 Spill: The Marine Environment Seven Years Later	April 22, 2015	183
The Great Salmon Send-Off	May 11, 2015	23
Maritime Energy Transport – Today and Tomorrow in the Pacific Northwest	May 11, 2015	40
Working River Project Moving Forward with an Investment from Kinder Morgan Canada	May 12, 2015	135
Westridge Marine Terminal Committed to Green Marine	June 3, 2015	54
Journalists take a close-up look at how Trans Mountain does business at its oil-handling facilities in Burnaby and Burrard Inlet	June 8, 2015	85
Clean Pacific Conference: Changing landscapes in rail, pipeline and vessel transport	June 24, 2015	44

2.0 MARINE ENGAGEMENT (ONGOING)

Trans Mountain's engagement is ongoing. Engagement and communications activities will continue as the Project proceeds through the NEB regulatory process and, if successful, the construction and in-service phases of the Project. Engagement and communications activities will continue through a number of initiatives, including but not limited to open houses, workshops, one-on-one meetings, presentations, website, online feedback forms, printed materials and digital media including social media.

Trans Mountain will continue to communicate any changes or updates to Project plans, and share information with stakeholders on topics such as the following:

- **Marine Industry (Q3 2015 to Q3 2016)** In September 2015 Trans Mountain will be making a presentation to the Fish Safe Advisory Committee about the marine aspects of TMEP including the projected increase in marine tanker traffic and the navigational mitigations that are being pursued to minimize risk from additional vessel traffic.
- **Completion of EPP Workshops (Q3/Q4 2015)** November 2015 Trans Mountain will finish a round of EPP workshops on the topic of Westridge Marine Terminal construction. A draft EPP for Westridge Marine Terminal was filed as part of the Facilities Application in Volume 6D (NEB Filing ID [A3S2S9](#)). EPP workshops include dialogue with subject matter experts, regulators, local stewardship and interest groups to seek input into reclamation and environmental protection plans for municipal and regional parks, fisheries and areas of local or regional environmental significance.
- **Emergency Management (Q3 2015 to Q3 2018)** Building on the success of the Tri-Cities emergency management workshop which also included participation from PMV and WCMRC, Trans Mountain will continue to host Emergency Management workshops with marine communities in Metro Vancouver and the Fraser Valley, focusing on the enhancement of the new Emergency Management Program. The engagement for the enhanced program will include a review of the Trans Mountain planning standard, and an emphasis on local inputs to enhanced geographic response planning.
- **Preconstruction Engagement (Q4 2015 to Q3 2016)** – Ongoing engagement on topics such as construction planning, worker accommodations, worker code of conduct, traffic planning, safety around camps and economic and procurement opportunities.
- **Construction Readiness (Q3 2016 to Q3 2017)** – Ongoing engagement that would include advance notice of upcoming construction activities, economic opportunities associated with workforce hosting, procurement opportunities and introduction of community relations staff for construction phases of the Project.
- **Municipal and Regional Government Engagement (Ongoing)** – Continue to meet with municipal and regional governments to provide updated Project information and to seek input into Project plans. These sessions will include briefings, as requested, for newly elected local government officials in BC.

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January 5, 2015

APPENDIX A

CONSULTATION ACTIVITIES FOR PMV FOR THE PERIOD OF AUGUST 1, 2014 TO JUNE 30, 2015
TABLE A-1

Stakeholder/Group Name	Comments/Concerns Expressed and Addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed	TNEP Response	Commitments/Follow-up Actions
FEDERAL CONSULTATION				
Port Metro Vancouver (PMV)	<ul style="list-style-type: none"> • Sought update on Westridge Marine Terminal offsets program including update on proposed intertidal reefs for Westridge Marine Terminal area (5.1.1 Westridge Offsets/Benefits - including Burrard Inlet; 5.1.2 Westridge Offsets/Benefits - incorporating stakeholder input). • General update on marine components of Project (9.1 Opportunities for Input on Marine Issues/Concerns) • Results of tanker movement studies (3.2 Ability of Vancouver Harbour, specifically Second Narrows, to safely accommodate more tankers); (3.1 Drafting) • PMV Permit Process (6.1 PMV permit review of Westridge Terminal expansion) • Results of tanker movement studies (3.4.1 Tanker Safety; 3.4.10 TNEP proposed enhancements to tanker safety regime) • Marine bird studies (See 1.A.3 Effects on Marine Birds (resident and migratory)) • Enhancing Oceans Health and Observation (ECHO) whale monitoring program (See 3.2 Impact of increases in tanker traffic on orca population; 1.A.5 Interim water noise/acoustic environment) • Vessel Traffic Analysis east of Second Narrows (See 3.2 Ability of Vancouver Harbour, specifically Second Narrows, to safely accommodate more tankers) • Recommended Marine Safety and spill response enhancements proposed by TNEP (3.1.10 TNEP proposes enhancements to tanker safety regime, 6.6 G Technical Review/Process of Marine Terminal Systems and Transhipment Sites (TERM/POL)) 	<ul style="list-style-type: none"> • Discussed plans for Marine Centre of Excellence • Interested in a safety brochure for Burrard Inlet like the Fish Safe one for the Fraser River • Safety brochure has been prepared by Pacific Pilots proposed by Bird Studies Canada • Provided overview of proposed programs under ECHO (addressing acoustic disturbance, physical disturbance, environmental contaminants, reduced prey availability) and description of funding needs for first 5 years of the program • TNEP outreach to Westridge neighbourhood regarding upcoming geotechnical drilling investigation • TNEP requested PMV pass on Westridge Neighbourhood to the community complaints line to help track notifications to the community complaints line to help track • Bulk Oil Cargo Fee for Westridge Marine Terminal • Bulk oil cargo handling fee for Westridge Marine Terminal is evaluated each year and printed in the Gazette. 	<ul style="list-style-type: none"> • Trans Mountain is supportive of an independent Marine Centre of Excellence • Authority • Trans Mountain agrees to support 50% of the cost for mapping of marine bird activities in Burrard Inlet as proposed by Bird Studies Canada • TNEP is supportive of the multi-stakeholder collaborative approach to the ECHO program and has pledged financial support for the program • TNEP requested PMV pass on Westridge Neighbourhood to the community complaints line to help track notifications to the community complaints line to help track • Trans Mountain Pipeline ULC Tariffs Applying on Petroleum - Tariff No. 97 is available online at http://www.kindermtn.com/content/tariffs/MEB_Tariff_No_97.pdf 	<ul style="list-style-type: none"> • See response to National Energy Board (NEB) Information Request (IR) No. 6.06 a) (NEB Filing ID 44QGJU) • TNEP advised the Project has already provided PMV with this information
Transport Canada	<ul style="list-style-type: none"> • Meeting of discuss EC/Canadian Wildlife Service & marine bird monitoring as part of the overall World Class / Tanker Safety Strategy. In an environmental emergency, EC's role is to provide specific information on birds and species at risk and species at risk response planning and response. This information supports the identification of high risk areas and informs emergency response and mapping of sensitive ecosystems. The focus of the meeting was to discuss logistics and alternatives for collecting data on marine birds (See 1.A.3 Effects on Marine Birds (resident and migratory)) 	<ul style="list-style-type: none"> • EC conducting a field project on marine bird monitoring above vessels up until March 31, 2015 • Ability of EC/Contractor to board marine vessels • Observational opportunity – transit time 	<ul style="list-style-type: none"> • Trans Mountain is willing to assist EC/contract observer to gain access to marine vessels. • It was discussed that the observer should be on the bridge of a vessel, and that using less logistically challenging but the same observational value • A transit from Westridge Marine Terminal to Victoria pilot station would be approximately 12 hours. Coordination of which transits and optimizing daylight hours would need to be completed to get the best data 	<ul style="list-style-type: none"> • Trans Mountain emailed EC in March 2015 follow-up on the pilot program. EC indicated it went well but no follow-up activities were required at this time
Environment Canada (EC)	<ul style="list-style-type: none"> • Meeting of discuss EC/Canadian Wildlife Service & marine bird monitoring as part of the overall World Class / Tanker Safety Strategy. In an environmental emergency, EC's role is to provide specific information on birds and species at risk and species at risk response planning and response. This information supports the identification of high risk areas and informs emergency response and mapping of sensitive ecosystems. The focus of the meeting was to discuss logistics and alternatives for collecting data on marine birds (See 1.A.3 Effects on Marine Birds (resident and migratory)) 	<ul style="list-style-type: none"> • Bulk Oil Cargo Fee for Westridge Marine Terminal • Bulk oil cargo handling fee for Westridge Marine Terminal is evaluated each year and printed in the Gazette. 	<ul style="list-style-type: none"> • Trans Mountain Pipeline ULC Tariffs Applying on Petroleum - Tariff No. 97 is available online at http://www.kindermtn.com/content/tariffs/MEB_Tariff_No_97.pdf 	
Member of Parliament (MP)	<ul style="list-style-type: none"> • In May 2015, Trans Mountain provided locally elected officials and key staff with an update of upcoming engagement activities in each respective riding (9.9 Opportunities for Input on Marine Issues/Concerns) • In May 2015, Trans Mountain provided locally elected officials and key staff with an update of upcoming engagement activities in each respective riding (9.9 Opportunities for Input on Marine Issues/Concerns) 	<ul style="list-style-type: none"> • EC conducting a field project on marine bird monitoring above vessels up until March 31, 2015 • Ability of EC/Contractor to board marine vessels • Observational opportunity – transit time 	<ul style="list-style-type: none"> • Trans Mountain is willing to assist EC/contract observer to gain access to marine vessels. • It was discussed that the observer should be on the bridge of a vessel, and that using less logistically challenging but the same observational value • A transit from Westridge Marine Terminal to Victoria pilot station would be approximately 12 hours. Coordination of which transits and optimizing daylight hours would need to be completed to get the best data 	<ul style="list-style-type: none"> • No response received
PROVINCIAL GOVERNMENT CONSULTATION				
Legislative Assembly (Member of Chilliwack-Hope)	<ul style="list-style-type: none"> • Expressed concerns about increase in tanker traffic and effects on air quality (in Fraser Valley) (See 1.D Emission Impacts from Vessels in Transit, 5.4.1 Human health impacts related to noise, air quality (normal operations and accidents) at Westridge Marine Terminal (WMT)) • Opportunities for ports to utilize shorepower? (See 2.C Impacts from terminal construction and operations on neighbours. Can shorepower be utilized?) • Destination of tankers after Westridge with expansion (7.3.2 Product Destination, 7.3.3 Support of Chinese Growth and Use of Petroleum) 	<ul style="list-style-type: none"> • Amount of time to load a tanker can tankers shut down their engines? Can they shut down their boles? • Destination of tankers currently WMT terminal/esign – number of berths, what is the increase in size; how many ships can be accommodated at one time • Will any shifting occur? • Would like better understanding of emissions from vessels Kinder Morgan Canada (KMC) oversight on tankers Vapour destruction - changes that will be made Engagement with Fraser Valley Regional District (FVRD) regarding marine emissions 	<ul style="list-style-type: none"> • Can tankers shut down their engines? Can they shut down their boles? • WMT terminal/esign – number of berths, what is the increase in size; how many ships can be accommodated at one time • Will any shifting occur? • Would like better understanding of emissions from vessels Kinder Morgan Canada (KMC) oversight on tankers Vapour destruction - changes that will be made Engagement with Fraser Valley Regional District (FVRD) regarding marine emissions 	<ul style="list-style-type: none"> • It takes 24 hours to load a tanker • Tankers shut down their main engines, and run a small auxiliary engine while at berth. Trans Mountain cannot tell tanks at its terminal to shut their boles off. • Trans Mountain has vessel acceptance criteria for any vessel calling at WMT. The criteria are mostly focused on safety, but there are some good neighbour aspects as well, such that tankers need to abide by the criteria to visit WMT facility. PMV recently updated their harbour operations requirements and TNEP requested that it consider noise, lights and odours. (See more information as per section 7.3 in common issues/response tab B-1). KMC should set expectations of vessel behaviour.) • Ships leaving Westridge are mostly destined to California. With expansion, increasingly to Asia • Westridge will expand from one to three berths. Less than 5% of the time will there be loading. Approximately one ship per day will move in and out of the east end of Burrard Inlet. (More information provided as per note 2 in common issues/response) • Tab B-1 Footprint of expanded inlet and new berths of WMT • No refining of petroleum occurs at WMT

TABLE A-1 Cont'd

Stakeholder/Group Name (cont'd)	Comments/Concerns Expressed and Addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed	TMEP Response	Commitments/Follow-up Actions
BC MLA Chilliwack (top)	<ul style="list-style-type: none"> See above 	<ul style="list-style-type: none"> see above 	<ul style="list-style-type: none"> Emissions from vessels is a separate study. There is a report that includes photochemical smog related to ships. These emissions were accounted for within 150 km. Ozone decreased in some areas, and increased in some areas in a very small way as a result of the project. We are doing analysis and may have an update as a result of the meeting next week. 	<ul style="list-style-type: none"> see above
BC MLA Burnaby North	<ul style="list-style-type: none"> In May 2015, Trans Mountain provided locally elected officials and key staff with an update of upcoming engagement activities in each respective riding. Opportunities for input on Marine Issues/Concerns. 		<ul style="list-style-type: none"> There is currently one Vapour Combustion Unit (VCU) at WMT. One new VCU will replace the current VCU – the new unit will be for occasional use when three tankers are being barged simultaneously (less than 3% of the time) and it will also provide back up to the Vapour Recovery Units due to marine traffic. 	
BC MLA Surrey Tynehead	<ul style="list-style-type: none"> In May 2015, Trans Mountain provided locally elected officials and key staff with an update of upcoming engagement activities in each respective riding. Opportunities for input on Marine Issues/Concerns. 		<ul style="list-style-type: none"> In May 2015, Trans Mountain has met twice with a joint group of air quality regulators named the Lower Fraser Valley Air Quality Coordinating Committee (LVAQCC), which includes Metro Vancouver, Fraser Valley Regional District, EC, BC Ministry of Environment and PMW. 	<ul style="list-style-type: none"> No response received
LOCAL GOVERNMENT CONSULTATION				
City of Richmond	<ul style="list-style-type: none"> TMEP offered project briefing to re-elected Mayor as well as Council or City staff. (See 1.0 - Environment; 3.A - Tanker Safety, 5.0 - Socio-Economic Benefits and Impacts, 8.0 - Emergency Response, 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP sent letter following filing of IR and offered to meet to discuss outstanding questions or concerns. (See 9.1 Opportunities for Input on Marine Issues/Concerns) City of Richmond expressed interest in meeting to discuss IR responses. (See 9.1 Opportunities for Input on Marine Issues/Concerns) Expressed interest in learning more about Emergency Management. (See 8.4 Desire to observe/participate in Emergency Response exercises; 8.5 Fraser River Spill Response; 9.1 Opportunities for Input on Marine Issues/Concerns) Spill response coordination (See 1.6 Coordination with local resources (i.e. municipal provincial) in the event of a marine oil spill) Impacts of a spill (See 1.4 Potential Environmental Impacts of a spill in Fraser Delta ecosystem and Burrard Inlet ecologically sensitive areas) 	<ul style="list-style-type: none"> Stakeholder agreed to meet in February 2015 Stakeholder requested to move meeting to April 2015 	<ul style="list-style-type: none"> TMEP recognized interests and concerns raised in Richmond which included environmental impacts, tanker safety, socio-economic impacts, and emergency response TMEP offered to meet in March/April 2015 regarding outstanding IR responses 	<ul style="list-style-type: none"> TMEP requests to schedule were not returned
Municipality of Bowen Island	<ul style="list-style-type: none"> TMEP sent letter to the new Mayor and council December 2014 offering to provide a project update. (See 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP sent letter to new Mayor in response to his participation in a joint declaration of non-confidence in the NEB process issued by the City of Vancouver (COV) on March 31, 2015. All other was made to provide a Project Update. (See 9.1 Opportunities for Input on Marine Issues/Concerns) 		<ul style="list-style-type: none"> No response to the letter was provided 	
City of North Vancouver (CNV)	<ul style="list-style-type: none"> TMEP offered briefing to re-elected Mayor and council. (See 1.0 - Environment; 3.A - Tanker Safety, 5.0 - Socio-Economic Benefits and Impacts, 8.0 - Emergency Response, 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP offered opportunity to meet in February 2015, regarding IR responses. (See 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP sent letter to re-elected Mayor in response to his participation in a joint declaration of non-confidence in the NEB process issued by the COV on March 31, 2015. An offer was made to provide a Project update. (See 9.1 Opportunities for Input on Marine Issues/Concerns) 		<ul style="list-style-type: none"> No response to the December 2014 letter was provided by CNV No response to February 2015 letter was provided by CNV Mayor declined offer to meet 	

TABLE A-1 Cont'd

Stakeholder/Group Name	Comments/Concerns Expressed and Addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed	TMEP Response	Commitments/Follow-up Actions
District of North Vancouver (DNV)	<ul style="list-style-type: none"> TMEP offered briefing to re-elected Mayor and council in December 2014 (See: 1.0 – Environment; 3.A – Tanker Safety; 5.0 – Socio-Economic Benefits and Impacts; 8.0 – Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) Expressed concern about NEB IR process and TERMOPOL process timing (See: 6.G TERMOPOL process; 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP offered opportunity to meet in February 2015 regarding IR responses (See: 9.1 Opportunities for Input on Marine Issues/Concerns) Expressed concern regarding emergency response and lack of understanding of risk assessment and emergency management processes (See: 1.B Increase in spill risk; 8.0 Emergency Response) Update on regulatory process (See: 6.A Timeline for NEB regulatory review process) 		<ul style="list-style-type: none"> No response to the December 2014 letter was received by TMEP. Pursuant to the letter issued to DNV on February 19, Trans Mountain is willing to meet with DNV to review answers provided to DNV IRs. Trans Mountain recognizes the limitations of the NEB process on the engagement of all types of comment to DNV. Trans Mountain would like an opportunity to review DNV questions and answers provided for key areas of concern. Both parties agreed to meet; however, meeting is date pending as of June 30, 2015 due to NEB regulatory process draw on staff resources. Trans Mountain will ensure DNV is invited to Environmental Protection Plan (EPP) workshop invitations. In response to meeting offered February 2015 to review IR responses, DNV representative indicated DNV would advise if they felt a meeting was required. No further response was received. TMEP offered to set up a separate meeting with the marine community so Metro Vancouver could ask questions and raise concerns about water lines at Second Narrows. No further interest indicated by Metro Vancouver. 	
District of West Vancouver (DWV)	<ul style="list-style-type: none"> TMEP offered briefing to re-elected Mayor and council in December 2014 (See: 1.0 – Environment; 3.A – Tanker Safety; 5.0 – Socio-Economic Benefits and Impacts; 8.0 – Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP offered opportunity to meet in February 2015 regarding IR responses (See: 9.1 Opportunities for Input on Marine Issues/Concerns) 			
Metro Vancouver (Regional District)	<ul style="list-style-type: none"> Possibility of PWV dredging to deepen Second Narrows 5 years from now, there would be burden on Metro Vancouver taxpayers because we have to move the water lines (See: 5.E – Possibility for tanker size to increase if dredging occurs in the future, and the ability of KMC to influence it) TMEP issued invitation to participate in Tri-Cities Emergency Management Workshop on May 13, 2015 (See: 8.0 Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) In May 2015, Trans Mountain provided locally elected officials and key staff with an update of upcoming engagement activities in each respective ring (9.1 Opportunities for Input on Marine Issues/Concerns) Seeking information on sign-up or September 18, 2014 telephone town hall to promote for public participation (See: 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP issued letter to re-elected Mayor in December 2014, offering opportunity to meet to discuss local issues and concerns (See: 1.0 – Environment; 3.A – Tanker Safety; 5.0 – Socio-Economic Benefits and Impacts; 8.0 – Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP issued IR follow-up letter and follow-up phone call in February 2015 to COV regarding IR responses and offering to meet to answer any outstanding questions not resolved through IR process (See: 9.1 Opportunities for Input on Marine Issues/Concerns) COV issued reply to TMEP IR follow-up letter stating opposition to the proposed Project and requesting Trans Mountain emergency response plans be posted online and made publicly available (un-redacted) (See: 1.0 – Environment; 5.B Public Availability of KMC Emergency Response Plans; 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP issued IR follow-up letter and follow-up phone call in February 2015 to COV regarding filing of IR responses and discussing the Project (See: 9.1 Opportunities for Input on Marine Issues/Concerns) Spill response timing and emergency management process (See: 8.0 Emergency Response times for marine oil spills; 8.H Notification protocol for marine oil spills; 8.I Specific to local governments) TMEP issued invitation to participate in Tri-Cities Emergency Management Workshop on May 13, 2015 to participate in the scenario discussion in regard to a hypothetical oil spill into the Fraser River (See: 8.0 Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) 		<ul style="list-style-type: none"> Team member provided details into how the Telephone Town Hall would be conducted on September 17, and informed that only rail lines that were publicly listed would be called. Trans Mountain will continue to attempt to engage with the COV on issues raised both during and following the completion of the NEB hearing process. Trans Mountain has recommended enhancement to the marine safety regime in TERMOPOL 3.15 Generic Risk Analysis and intended Methods of Reducing Risks (NEB Filing ID A3SS14 and in Technical Report BC-12 S12 Future Oil Spill Response Approach Plan (NEB Filing ID A3SS19)) 	
New Westminster				
City of Burnaby	<ul style="list-style-type: none"> Trans Mountain notified the City of Burnaby it had received Technical Update No. 2 Filing ID A3AA45D with the NEB. This filing included many marine-related topics: Facilities Update or Westridge Marine Terminal; Preliminary Marine Fishery Offset Plan; and Data on Recreational Boat Traffic in Burrard Inlet (See: 2.0 Impacts from terminal construction and operations on neighbours (e.g. lights, noise, odours, visual impacts); vessels using berths as anchors; number of tankers that can berth concurrently); 2.1 Impact of expanded rail and new berths of WMT). TMEP issued letter to re-elected Mayor in December 2014, offering opportunity to meet to discuss local issues and concerns (See: 1.0 – Environment; 3.A – Tanker Safety; 5.0 – Socio-Economic Benefits and Impacts; 8.0 – Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP issued IR follow-up letter and follow-up phone call in February 2015 to City of Burnaby regarding filing of IR responses and offering to meet to answer any outstanding questions not resolved through IR process (See: 9.1 Opportunities for Input on Marine Issues/Concerns) Offer for City of Burnaby (Fire Department) to participate in Westridge Terminal full scale exercise scheduled for October 2015 (See: 8.A – Desire to observe/participate in Emergency Response Exercises) In May 2015, TMEP provided City of Burnaby with notification of upcoming engagement opportunities (See: 1.1 Opportunities for Input on Marine Issues/Concerns; 5.1.2 Westridge Offsets/Benefits – incorporating stakeholder input and 2.C Impacts from terminal construction and operations on neighbours) City of Burnaby notification of Neighbourhood Information Session (See: 9.1 Opportunities for Input on Marine Issues/Concerns) Team Member indicated the Socio-Economic measures which can be monitored and measured: City of Burnaby invited to attend SSEMP meeting (See: 9.1 Opportunities for Input on Marine Issues/Concerns and 2.C Impacts from terminal construction and operations on neighbours) 		<ul style="list-style-type: none"> New Westminster did not choose to participate in the Tri-Cities Emergency Management Stakeholder Workshop (EWSW) stakeholder discussion. No meetings occurred in response to invitations to engage issued in December 2014 and February 2015. The planning of the Westridge Full Scale Exercise (WSE) was underway. There were no representatives from the City of Burnaby in attendance at the Neighbourhood Information Session June 3, 2015. Note: even though it is outside this reporting period, Trans Mountain issued a letter to the City of Burnaby in July 2015 to initiate a Preliminary Plan Approval (PPA) application for both Burnaby terminal and Westridge Marine Terminal in August or September 2015. A meeting did occur in August 2015. 	

TABLE A-1 Cont'd

Stakeholder/Group Name	Comments/Concerns Expressed and Addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed	TMEP Response	Commitments/Follow-up Actions
City of Port Moody	<ul style="list-style-type: none"> TMEP issued letter to re-elected Mayor in December 2014 offering opportunity to meet to discuss local issues and concerns (See: 1.0 - Environment; 3.A - Tanker Safety; 5.C - Socio-Economic Benefits and Impacts; 10 - Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) Port Moody indicated they were not getting questions answered through the IR process, depth of information provided in IR responses. TMEP issued IR Follow-up letter in February 2015 to City of Port Moody regarding filing of IR responses and offering to meet to answer any outstanding questions not resolved through IR process. (See: 6.1 Level of detail provided in IR responses; 9.1 Opportunities for Input on Marine Issues/Concerns) Trans Mountain Pipeline (TMP) history and emergency management program (See: 8.0 Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) Requested emergency management focused on a Fraser River Spill Scenario. Interest in a water-based spill scenario in Tri-Cities Emergency Management (EM) Workshops (See: 8.0 Emergency Response; 8.E Fraser River Spill Scenario; 9.1 Opportunities for Input on Marine Issues/Concerns) Input on Marine Issues/Concerns 	<ul style="list-style-type: none"> Interest in connecting with WCMRC. TMEP received request for info doc/funding 	<ul style="list-style-type: none"> Trans Mountain provided introduction to WCMRC personnel TMEP is open to learning more about Port Moody's life boat needs 	<ul style="list-style-type: none"> TMEP offered meeting with Senior Director of Marine Development to discuss ongoing concerns raised. Port Moody Chief Administrative Officer (CAO) agreed to meet with TMEP for a project update (See: 9.1 Opportunities for Input on Marine Issues/Concerns) Port Moody attended field Fraser River Spill Response Scenario Workshop with Tri-Cities (Port Moody, Coquitlam, Port Coquitlam) on May 13, 2015. TMEP sought additional information from Port Moody in relation to emergency response capacity. TMEP later circulated presentation from Tri-Cities EM Workshop to all participants (See Appendix P) Port Moody was offered participation in Westridge Emergency Exercise in Fall 2015 TMEP issued invitation July 6, 2015 to meet new Director of Emergency Management (See: 8.0 Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) Trans Mountain confirmed that emergency management workshop focuses on existing pipeline and that participation will not be recorded as support Coquitlam participated in the Fraser River Spill Response Scenario Workshop with Tri-Cities (See: 8.0 Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) Tri-Cities participated in the Fraser River Spill Response Scenario Workshop with Tri-Cities (See: 8.0 Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) Coquitlam participated in the Fraser River Spill Response Scenario Workshop with Tri-Cities (See: 8.0 Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) Meeting held February 2015 with the Mayor to provide an overview of the Project and to document his concerns.
City of Coquitlam	<ul style="list-style-type: none"> Requested clarity on whether the emergency management focuses on expansion project or existing pipeline and that participation is not recorded as project support (See: 8.0 Emergency Response; 9.1 Opportunities for Input on Marine Issues/Concerns) 			
City of Port Coquitlam	<ul style="list-style-type: none"> Mutual aid arrangement with Tri-Cities and how they could be implicated in a pipeline or marine emergency. (See: 8.0 Emergency Response) 			
City of White Rock	<ul style="list-style-type: none"> Destination or product by tanker (See: 7.B.2 Product destination) Concern about risks of oil by rail vs. tanker safety (See: 3.A - Safety of oil transport by marine tanker vs crude oil (rail cars) tank (Rail Traffic)) Tanker safety (See: 3.D.2 Inspections of tankers prior to loading; 1.B.6 Pollution of tankers; 1.B. Increase in risk with increase in tank (Rail Traffic)) Properties of bitumen in water (See: 4.A.2 Density and the possibility that bitumen will sink in the event of a marine spill) Product type (See: 7.B.3 Types of products moved by the pipeline and by tanker) Regulatory process and next steps in regulatory timeline (See: 6.A Timeline for Application to NEB and regulatory review process) 			<ul style="list-style-type: none"> TMEP sent letter to re-elected Mayor December 2014, offering opportunity to meet and discuss the Project (See: 9.1 Opportunities for Input on Marine Issues/Concerns) Concern about risks of oil by rail vs. tanker safety (See: 3.A - Safety of oil transport by marine tanker vs crude oil (rail cars) tank (Rail Traffic)) Tanker safety (See: 3.D.2 Inspections of tankers prior to loading; 1.B.6 Pollution of tankers; 1.B. Increase in risk with increase in tank (Rail Traffic)) Properties of bitumen in water (See: 4.A.2 Density and the possibility that bitumen will sink in the event of a marine spill) Product type (See: 7.B.3 Types of products moved by the pipeline and by tanker) Regulatory process and next steps in regulatory timeline (See: 6.A Timeline for Application to NEB and regulatory review process)
Village of Belcarra	<ul style="list-style-type: none"> TMEP provided notification of filing of Technical Update #2 in August 2014 this filing included many marine-related topics: Facilities Update for Westridge Marine Terminal Preliminary Marine Fisheries Offset Plan; Data on Recreational Boat traffic in Burndale Inlet (See: 1.D.1 Emissions from loading operations; 2.C impacts from terminal construction and operations on neighbours (i.e. lights, noise, odours, visual impacts, vessels using berths as anchors, number of tankers that can berth concurrently); 2.LJ footprint of expanded rail and new berths at WMT) TMEP sent letter to re-elected Mayor December 2014 offering opportunity to meet and discuss the Project (See: 9.1 Opportunities for Input on Marine Issues/Concerns) TMEP issued IR follow-up letter and follow-up phone call in February 2015 to City of Burnaby regarding filing of IR responses and offering to meet to answer any outstanding questions not resolved through IR process (See: 9.1 Opportunities for Input on Marine Issues/Concerns) Comments about TMEP and WCMRC response to 2007 spill (See: 8.D Emergency Response Plan (ERP)/Capabilities are not in place due to lack of funding for WMT and 8.C Emergency Response Capacity of WCMRC) Impacts of tankers on recreational boating (See: 3.A - Tanker Safety; 3.B.4 Impacts of increase tanker traffic on pleasure craft use of harbor; 3.B.5 Ability of Vancouver Harbour, Specifically Second Narrows, to safely accommodate more tankers; 3.B.9 Demarcation of shipping routes in Burndale Inlet) Emergency response improvements required (See: 8.B Adequacy of boom technology (existing technology ineffective in wave action); Commit to best available technology; 8.C Emergency Response Capacity of WCMRC; 8.B.6 Coordination with local resources (i.e., municipal provincial in the event of a marine oil spill); 8.G Emergency Response times for marine oil spills) Concerns about TMEP and WCMRC response to 2007 spill (See: 8.D Emergency Response Plan (ERP)/Capabilities are not in place due to lack of funding for WMT and 8.C Emergency Response Capacity of WCMRC) Comments about IR follow-up letter and follow-up phone call in February 2015 to City of Burnaby regarding filing of IR responses and offering to meet to answer any outstanding questions not resolved through IR process (See: 9.1 Opportunities for Input on Marine Issues/Concerns) 	<ul style="list-style-type: none"> Wants to see WCMRC have a bigger base in Burndale Inlet and for the response to have primary and secondary response plans so that flooding won't just happen around the oil spill but will also be deployed to protect sensitive areas Suggested TMEP circulate a summary of the roles from the WCMRC Offset Workshop so that attendees know their input was considered 	<ul style="list-style-type: none"> WCMRC has put forward a plan for enhancements to their own operations – it is outlined in Technical Report 8C-12 S-12-TER-APIOL 3.15 NEB Filing ID A3559 of the Application. These enhancements include significant investments in Geographic Response Planning Workshop notes were shared with Mayor. All suggestions and recommendations regarding potential benefits or offsets for impacts associated with Westridge Marine Terminal were considered by the Project Team. TMEP explained need to understand P/M permit requirements before marine offsets can be finalized 	<ul style="list-style-type: none"> Mayor met with Project team members in person and by phone in follow-up to letters issued December 2014 and February 2015 WCMRC Future Oil Spill Response Approach-Plan: Technical Report 8C-12 S-12-TER-APIOL 3.15 NEB Filing ID A3559 Notes for the Westridge Marine Fisheries Offset workshop were filed with the IER and can be found in response to City of Port Moody IR No. 22.2c (NEB Filing ID A4486G)

TABLE A-1 Cont'd

Stakeholder/Group Name	Comments/Concerns Expressed and Addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed	TMEP Response	Commitments/Follow-up Actions
Village of Belcarra (cont'd)	<ul style="list-style-type: none"> • Advised that the Project should consider communities along the Burrard Inlet for community benefits (e.g. energy/gas enhancement project) (See 5.1.2 Westridge Offsets/Benefits - including Burrard Inlet Canadian Coast Guard role in oil spill response (i.e., Marathassa) and their ability to be on scene quickly to manage oil spill response (See 8.C Emergency Response Capacity of WCMRC, 8.G Emergency Response times for marine oil spills, 8.H Notification protocol for marine oil spills [specific to local government(s)] 	<ul style="list-style-type: none"> • See above 	<ul style="list-style-type: none"> • See above 	<ul style="list-style-type: none"> • See above
Village of Anmore	<ul style="list-style-type: none"> • TMEP sent a letter to new Mayor and council in December 2014, offering to provide a Project update (See 9.I Opportunities for Input on Marine Issues/Concerns) 			<ul style="list-style-type: none"> • No response was received for letter issued December 2014
City of Surrey	<ul style="list-style-type: none"> • In May 2015, Trans Mountain provided locally selected officials and key staff with an update of upcoming engagement activities in each respective riding (9.I Opportunities for Input on Marine Issues/Concerns) 	<ul style="list-style-type: none"> • Surrey Deputy Fire Chief invited TMEP/KM to participate in a workshop the City is hosting Sept 15 2015 regarding communication during pipeline emergencies 	<ul style="list-style-type: none"> • Trans Mountain is considering the opportunity to attend this workshop 	<ul style="list-style-type: none"> • In December 2014, the City of Surrey Deputy Fire Chief assisted to postpone their EMSW session until spring 2015. When an attempt was made to reschedule Surrey declined to postpone; however, the Surrey Fire Chief joined the Tri Cities EMSW in May 2015 as an observer
OTHER CONSULTATION - BC				
Northgate (Westridge) Neighbours	<ul style="list-style-type: none"> • TMEP provided notification of filing of Technical Update #2 in August 2014 this filing included many marine-related topics: Facilities Update for Westridge Marine Terminal Preliminary Marine Fishery Impact Plan, and Data on Recreational Boat Traffic in Burrard Inlet (See 1.D Emissions from loading operations, C impacts from terminal construction and operations on neighbours [i.e., lights, noise, odours, visual impacts, vessels using berths as anchors, number of tankers that can berth concurrently]; 2.J Footprint of expanded initial and new berths of WMT] • TMEP invited three Westridge neighbour to participate in a comprehensive noise assessment around Westridge Terminal to be conducted by KMC Environment in August 2014 (See 5.A.1 Human health impacts related to noise, air quality [normal operations and accidents] at WMT) • Letter to Burnaby landowners (including Westridge neighbours) in August 2014 to advise of preliminary exploratory work including Environmental Field Studies and Geotechnical Assessments of the proposed routing corridor of the railway line between Burnaby Terminal and Westridge Marine Terminal • Mail drop in Westridge neighbourhood September 2014 to advise that although TMEP prefer the Burnaby Mountain pipeline corridor option, we are continuing to study the streets corridor (Burnaby Mountain Parkway to Cliff) for routing the proposed pipeline between Burnaby Terminal and Westridge Terminal. This will include survey work along this corridor that is beginning this week (See 9.I Opportunities for Input on Marine Issues/Concerns) • TMEP sent an email to key Westridge neighbour representatives in December 2014, seeking feedback on how best to share information with the neighbours, and notification of upcoming Burnaby telephone Town Hall with Ian Anderson on December 3, 2014 (See 9.I Opportunities for Input on Marine Issues/Concerns) • Email to key Westridge neighbour representatives in December 2014 to advise about the following activities related to the proposed TMEP Work completed on Burnaby Mountain, and the team is in process of tying up work site. Committee to assist site to previous condition • Mail drop to 2027 Westridge neighbours in January 2015 seeking input on how to continue engagement with neighbours and which topics are of most interest (See 9.I Opportunities for Input on Marine Issues/Concerns) • February 16, 2015 – TMEP completed mail drop to 120 Westridge neighbourhood homes to advise about upcoming onshore geotechnical drilling investigation • April 8, 2015 – TMEP rep advised neighbour representing Westridge neighbourhood that it is planning next engagement steps, will get back to you. • April 23, 2015 – TMEP rep advised neighbour representing Westridge neighbourhood that it continues to optimize the dock and terminal layout. Advised about an upcoming neighbourhood information session on June 3, 2015 	<ul style="list-style-type: none"> • One neighbour emailed to advise that he had declined to participate in noise study. He suggested other neighbours to contact. • Correspondence with Westridge Neighbour for this reporting period is available in in Appendix C 		
Pacific Wildlife Foundation (PWLF)	<ul style="list-style-type: none"> • Marine Bird Impacts (See 1.A.3 Effects on Marine Birds [resident and migratory]) 	<ul style="list-style-type: none"> • Ability of PWLF and BSC initiatives to support monitoring objectives 	<ul style="list-style-type: none"> • Trans Mountain conveyed stakeholder and regulator interest in addressing some of the gaps of knowledge in marine bird activity • Discussions with PWLF and BSC and other stakeholders will continue in 2015 in an effort to address Trans Mountain's interest in more marine bird monitoring 	<ul style="list-style-type: none"> • BSC and PWLF working on respect to TMEP request for proposal on marine bird monitoring
RCMP	<ul style="list-style-type: none"> • Requested to attend emergency management focused on a Fraser River Spill Scenario (See 8.E Fraser River Spill Scenario; 8.O Emergency Response) 		<ul style="list-style-type: none"> • Cogulatum RCMP participated in Cogulatum Emergency Management Workshop Day 2015. 	
Pacific Salmon Foundation (PSF)	<ul style="list-style-type: none"> • Impacts to salmon bearing waterways (See 1.A. Threat to the regenerated herring fishery and salmon populations) • PSF involvement in TMEP fisheries aspects (See 1.A. Threat to the regenerated herring fishery and salmon populations, 7.A Sustainability, 7.C Environmental benefits - will KMC ensure environmental investments to compensate for potential environmental harm from expanded operations) 	<ul style="list-style-type: none"> • PSF provided information about the Salish Sea Marine Survival Project • PSF has indicated capability in fisheries monitoring 	<ul style="list-style-type: none"> • TMEP is considering environmental benefits for fish and fish habitat • TMEP is interested to learn more about PSF monitoring capability for construction and/or post-construction monitoring of fish-bearing waterways 	<ul style="list-style-type: none"> • TMEP has committed to provide a presentation to PSF staff on the self-assessment for serious harm to fish and fish habitat (NEB filing ID A44652)
Clean Seas Centre for Sustainable Shipping	<ul style="list-style-type: none"> • Outreach to stakeholders on topic of Tanker Safety (See 3.A. Tanker Safety) • Interests expressed in how KMC/TMEP is minimizing environmental impacts resulting from tanker traffic, to inform their research into best practice (See 7.A. Sustainability) 	<ul style="list-style-type: none"> • Clean Seas is focused on prevention, preparedness, response and liability 	<ul style="list-style-type: none"> • Trans Mountain is supportive of independent research body capable of informing new best practices in marine shipping 	<ul style="list-style-type: none"> • TMEP provided information on community concerns regarding tankers learned through Project engagement

TABLE A-1 Cont'd

Stakeholder/Group Name	Comments/Concerns Expressed and Addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed	TMEP Response	Commitments/Follow-up Actions
Ocean Networks Canada (ONC) UBC Marine Mammal Research Unit	<ul style="list-style-type: none"> Received update on Seal-Oceans Program (See 1.B.4. Marine response plans for oil spills for sensitive shoreline; 8.B. Adequacy of boom technology [existing technology ineffective in wave action]. Commit to best available technology; 1.A.5 Underwater noise) acoustic environment 1.B.1 - Funding for research and preparations for future oil spills) 	<ul style="list-style-type: none"> Looking at coordinated hydrophone program across all Non-Government Organizations (NGOs), Government Organizations (GOs), and Coast Guard, similar to what United States (US) Coast Guard has started in the US 	<ul style="list-style-type: none"> Trans Mountain is pleased to see ONC involvement in the ECHO program to monitor and mitigate underwater noise effects of marine shipping on marine mammals. TMEP is supportive of the multi-stakeholder, collaborative approach to the ECHO program and has pledged financial support for the program. 	<ul style="list-style-type: none"> TMEP strives to connect with WCMRC to share new technologies and capabilities they have developed
University of British Columbia (UBC) Marine Mammal Research Unit	<ul style="list-style-type: none"> Marine Mammal monitoring during Westridge Marine Terminal construction (See 2.B Impacts from construction of terminal on marine life) 	<ul style="list-style-type: none"> Academic researchers from UBC and Simon Fraser University (SFU) and local Environmental groups invited TMEP to review work undertaken by the UBC Steller Sea Lion Research Centre and the Vancouver Aquarium. They struggle for operational funding and they have a vision to grow new research opportunities from the small operation that currently exists in Burrard Inlet. 	<ul style="list-style-type: none"> Trans Mountain recognizes its responsibilities of stewardship to the unique landscape in which it is an active occupant and is committed to contributing to a positive environmental legacy by protecting or enhancing the integrity, function and recreational opportunities of some major ecosystems and recreational areas directly affected by the construction and operation of TMEP. As described in its approach to Environmental Partnership, Trans Mountain will seek opportunities, alone or in partnership with others, to implement environmental net benefits to ensure secure or enhance (where currently degraded) elements of some of these aquatic ecosystems. The project is not in a position to commit support at this time, but all opportunities will continue to be evaluated. 	<ul style="list-style-type: none"> See response to NEB IR 3/3/08a attachment for more information about the TMEP Environmental Stewardship program (NEB Filing ID No. AAH1XZ)
Fish Safe BC	<ul style="list-style-type: none"> Discussion on: 1.F. Salmon Mandate, and establish opportunities to find synergies on marine outreach for commercial fisherman related to NEB and TMEPQ requirements around education and consultation on navigation safety (See 1.B.1 Tanker navigation in shipping lanes through the Gulf Islands and adequacy of existing shipping lanes to accommodate increase in tanker traffic) 	<ul style="list-style-type: none"> Request for a presentation to Fish Safe committee 	<ul style="list-style-type: none"> Trans Mountain has agreed to provide a presentation to the committee 	<ul style="list-style-type: none"> Presentation scheduled for September 17, 2015
Lotus Sports Club	<ul style="list-style-type: none"> In response to concerns raised in regulatory process and comments in local media expressing concerns, TMEP representatives (See 9. Opportunities for Input on Marine Issues/Concerns) emailed and phoned Lotus representative in June 2014 and June 2015 and offered to meet to discuss concerns 			<ul style="list-style-type: none"> No meetings have occurred in response to TMEP offers in June 2014 and June 2015
Burnaby Board of Trade	<ul style="list-style-type: none"> Emergency response and tanker safety. Recent spill in Burrard inlet (2007) (see 1.A-Potential Environmental Impacts of a spill in Fraser Delta ecosystem and Burrard Inlet ecologically sensitive areas; 3.A.2 Safety features such as double hull and compartmental spills) 			<ul style="list-style-type: none"> Note: Burnaby Board of Trade issues its own analysis of TMEP in January 2015. The analysis was filed as a letter of comment with the NEB in March 2015
North Shore No Pipeline Expansion (North Shore NOPE)	<ul style="list-style-type: none"> Tanker Anchorage Locations (See 3.C Anchorage) 	<ul style="list-style-type: none"> Email inquiry regarding air quality measurements immediately after the spill in July 2007 	<ul style="list-style-type: none"> The initial air monitoring response for the July 24, 2007 incident was executed by the Greater Vancouver Regional District (GVRD) now Metro Vancouver. The results for VOC and total Reduced Sulphur (TRS) concentrations were below the analytical detection limits, except for the benzene, toluene, ethyl benzene and xylyne (BTEX) components of the VOC sample. The first 24-hour continuous sampling was conducted from July 27, 2007 at 12:00 PM to July 28, 2007 at 12:00 PM. Analytical results observed no exceedances of available regulatory objectives. Further sampling was conducted on August 1st, 2007 to insure all levels remained below the available regulatory objectives. 	<ul style="list-style-type: none"> Trans Mountain responded to request for air quality information regarding the Westridge 2007 spill by email in April 2015 Hyperlinks provided to Volume 8 of the Application (NEB Filing ID AAUJAB)

MULTI-STAKEHOLDER CONSULTATION EVENTS FOR PMV FOR THE PERIOD OF AUGUST 1 2014 TO JUNE 30, 2015

TABLE A-2

Event/Date	Attendees	Comments/Concerns Expressed and addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed	TMCP Response	Commitments/Follow-up Actions
Westridge Marine Terminal – Aboriginal Fisheries Offset Workshop held on Aug 1, 2014	<ul style="list-style-type: none"> • Hul'q'umi'num First Nation • Lekwungen First Nation • Sto:lo Nation • Tsleil-Waututh First Nation • Sto:lo Collective Technical Working Group 	<ul style="list-style-type: none"> • First Nations consultation on TERM/POL (See 6.G TERM/POL Process) • Impacts to Herring and Salmon Populations (See 1.4.1 Threat to the regenerated herring fishery and salmon populations) • Environmental sustainability of marine habitat (See 7.A Sustainability) • Marine environmental benefits program (See 7.A.2 Environmental benefits will KMC ensure environmental investments is compensate for potential environmental harm from expanded operations) 	<ul style="list-style-type: none"> 1. How far out into the waterway will the Terminal extend? 2. What is the difference between habitat banking and habitat offsetting 3. To date, what has the involvement of First Nations been in the selection and execution of habitat offsetting plans? 4. What baseline are you going from for the productivity in the area? 5. Why not historical records? 6. Because this project is water based, the salmon route changes. The new Channel may be cut off further, and the new route may not find their streams – TMCP should look into this. This may result in a rope effect from a First Nations perspective, affecting other fisheries 7. I would encourage you to look at modifying the shoreline structures to maintain water flow through the inlet area for salmon 8. Are there any harvestable shellfish or pawns outside of the water lot? 9. Have we done any studies on the salmon and fish species in the area? 10. What about routes and the development of dead zones? 11. Vessels will increase the stress on the habitat 12. When a vessel comes into Washington State they put a lock on the discharge, and when it leaves the lock comes off 	<ul style="list-style-type: none"> 1. Approximately 250 m from the shoreline. The inlet is 1,150 m wide, with the terminal, and a dam at berth, extending 250 m into the water. 2. At present, no offsetting is planned, and there are PMV restrictions on vessel size (Antramax only). 3. Habitat banking is when a group creates habitat or enhances habitat, then monitors it for 5 years. After monitoring, if the habitat is effective, then a group can use that habitat as a credit for future projects. Habitat offsetting implies that you have not yet created habitat, but are proposing a project that will affect habitat. As a result, you are required to offset those lost habitats with new habitat. The authorization for habitat offsetting is typically filed with an Environmental Assessment. 4. This is highly dependent on the project. However, typically working groups are used to develop specific plans, and then the feedback received from those working group meetings are drafted in to the preliminary offsetting plan. 5. The closest stream are in Port Moody, Sand House Brook. TMCP will provide status files for all salmon bearing streams crossed by the Project to workshop participants. 6. N/A 7. TMCP will consider stakeholder feedback in terminal design aspects, however final design is not yet finalized to indicate whether this can be accommodated 8. Crabs and other fish are harvested within Burrard Inlet, however the burrard fishery is predominantly closed due to satiation. 9. We have looked at salmon habitat usage, spawning migration and juvenile outbound migration. We have obtained information on the general timing at which juvenile salmonids are outmigrating, and when adults are returning to spawn 10. Change in pattern at the levers – they have seen a deadzone develop now because of the levers. They assumed that the fish would just turn, and they don't see the vessels venting gas out to the tanker buses 11. The number of berths has been increased to decrease the pressure on vessel traffic and anchorages 12. This is included in the tanker standards document 	<ul style="list-style-type: none"> • Streams crossed by the Project can be found in the self-assessment of serious harm to fish and fish habitat report that was filed with the NEB on February 27, 2015 (NEB Filing ID A466C1)
Burnaby Telephone Town Hall held on September 16, 2014 and December 3, 2014	<ul style="list-style-type: none"> • General public in Burnaby, BC • 5,000 on September 16 • 5,000 on September 28 	<ul style="list-style-type: none"> 1. Concern and question about tanker traffic 2. Does KMC have a contingency fund set aside for a leak? What contains a spill? 3. Safe control of the oil finishes the coast. How acceptable are the clean-up costs? Who is responsible for the bailing process 	<ul style="list-style-type: none"> 1. Provided an explanation of current and proposed tanker traffic, along with comparators to understand volume 2. Trans Mountain has \$750,000,000 of liability insurance and substantial cash on hand with a commitment to \$1,000,000,000 of financial capacity where required by legislation 3. Port Authority, Chamber of Shipping responsible about bailing. We had ships and tonnage as occurred in ship movement through the port over years. Lots of coverage both national and international. The government is taking about lifting caps which would allow unlimited liability capture. We are also a principal shareholder of WCMRC 	<ul style="list-style-type: none"> • Streams crossed by the Project can be found in the self-assessment of serious harm to fish and fish habitat report that was filed with the NEB on February 27, 2015 (NEB Filing ID A466C1) 	
Vancouver Telephone Town Hall held on September 18, 2014	<ul style="list-style-type: none"> • General public in Vancouver, BC • 11,000 participants 	<ul style="list-style-type: none"> 1. Spills and liability - who pays? 2. Spill scenarios in Burrard Inlet – how does product react? 	<ul style="list-style-type: none"> 1. Provided explanation of marine liability and coverage 2. Shared information about fate and behaviour studies and recovery of dilute in water. Further description of marine safety regime and enhancements 	<ul style="list-style-type: none"> • Described safety regime, recent enhancements and ongoing process, role of WCMRC, etc. 	
Abbotsford – Chilliwack Telephone Town Hall on September 23, 2014	<ul style="list-style-type: none"> • General public in Abbotsford – Chilliwack • 1,000 participants 	<ul style="list-style-type: none"> 1. Contingency plan in case of spill? 	<ul style="list-style-type: none"> 1. Described safety regime, recent enhancements and ongoing process, role of WCMRC, etc. 	<ul style="list-style-type: none"> • Described safety regime, recent enhancements and ongoing process, role of WCMRC, etc. 	

TABLE A-2 Cont'd

Event/Date	Attendees	Comments/Concerns Expressed and addressed in Table 1.1: Common Issues/Responses	Additional Comments/Concerns Expressed	TMF Response	Commitments/Follow-up Actions
Twitter Town Hall held on October 14, 2014 – Topic: marine safety	<ul style="list-style-type: none"> • Participants were not defined beyond general public – however, participants were encouraged through promotional efforts to cite #AskTransMtn when asking questions as part of the Twitter Town Hall on marine safety. By the end of the night, the hashtag had been mentioned over 2,200 times and was trending nationally. • Hundreds of questions were submitted on topics ranging from the behaviour of diluted bitumen in water to liability for spill clean-up. 	<p>A recap of the entire Twitter Town Hall can be found on the TMF blog: http://www.TransMountain.com/corp/TwitterTownHall/marine-safety/</p> <ol style="list-style-type: none"> 1. Amount of oil that can be recovered from marine oil spill 2. What's the enviro record of tankers of the BC Coast? What's @TransMtn doing to keep it enviro friendly? 3. How many tourism and other jobs that depend on clean environment would a marine oil spill in near #Hycity destroy? 4. How many metres of hull clearance does an Aframax tanker have under the Second Narrows bridge? http://bitly.it2zBvEYf 5. What's your plan for spilled oil in the Strait of Juan de Fuca? 6. Does Kinder Morgan still believe that oil spills can have "positive" impacts on local communities? 7. How are you going to stop spills if accidents is attempting to minimize the probability and damage the best you can do? 8. How far does bitumen trap in Fraser River? Remove this blight on our coast! Entry: Enron, J. aka KIM 9. Would you be willing to dump a barrel of diluted bitumen into a wave tank in front of TV cameras? 10. How likely is another Exxon Valdez-like disaster with increased tanker traffic? 11. How far will Tankers be escorted by safety tug boats from the Vancouver Port? 12. What marine protections will be put in place to mitigate disasters to waterways, wildlife and people? 13. Why should we believe @Kinder_Morgan claims that a big oil spill would only occur every 250 years? 14. Makes & Bitum, what are your positions w/ @TransMtn? What makes your marine safety specialists? 15. Dilbit sinks & can not be cleaned up. What are your plans for a major spill besides plentiful apologies? 16. The @seafarersauth say no - How do you justify a possible spill from a foreign company, i'm their un-needed fuel? Kinder Morgan? 17. Have any KM CEOs ever kayaked in the Strait of Juan de Fuca? 18. Is it true that bitumen sinks, making cleanup of spills impossible? 19. Your tankers go along the same migratory paths of endangered species. Do you not understand that is a problem? 20. When was your spill cleanup technology developed? 21. Will you be liable for any of the spills out of the port of Vancouver, or is that responsibility of the shipping line? 22. What happens when a 10 metre high wave hits a ship on our rocky coastline? 23. Where are stores of spill cleanup equipment and personnel located and how long will it take to implement your plan? 24. What percentage of cleanup costs is #KinderMorgan responsible for in the event of a spill in the #SalishSea? 25. Isn't triple the capacity, triple the risk? 26. How will you measure the environmental effect of increased traffic in the Strait of Juan de Fuca? 27. Fund an Emergency Response Tug for Hero Start like the vessels that call on Washington ports in Neah Bay? 28. What will YOU do to ensure mariners are adequately trained and safety systems are "world class"? 29. Did DOEs that We agree to make Dilbit you will ADD materials like Naiphatic. This evaporates & then oil sinks. Correct? 30. Would your increased capacity cause "mission creep" and result in harbor dredging etc. 31. In your reports and research, which species/populations would be most negatively affected by an oil spill in Juan de Fuca? 	<p>A recap of the entire Twitter Town Hall can be found on the TMF blog: http://www.TransMountain.com/corp/TwitterTownHall/marine-safety/</p> <ol style="list-style-type: none"> 1. Many factors affect spill trajectory, including weather, location, spill size and oceanographic conditions. In the 2007 Westridge spill conventional clean-up methods recovered ~95% of dilbit from Burrard Inlet. There have been no tanker spills from vessels leaving Westridge in its 60 year history. 2. Spills are unlikely and specific effects cannot be forecast. A liability regime compensates affected parties. 3. Norman site has about 10 m/s water under the hull @ 2nd N. Sec 2, 1.4 of Vol 8A. http://www.TransMountain.com/corp/Vol8A 4. Normal site has about 10 m/s water under the hull @ 2nd N. Sec 2, 1.4 of Vol 8A. http://www.TransMountain.com/corp/Vol8A 5. Table 5.5.1 http://www.TransMountain.com/corp/Vol8A 6. Preventing spills is our first priority. Spills are bad for everyone and not part of our Project justification. 7. Prevention is our main focus. There's a well established marine safety regime and we've proposed enhancements. 8. We modelled diluted bitumen spill in Fraser River in application Vol 8C-2 59 http://www.TransMountain.com/corp/Vol8C-2 9. Our 10 day oil testing study was observed by gov't agencies. See public report here http://www.TransMountain.com/corp/Vol8C-2 10. Since Exxon Valdez, many safety improvements have been undertaken to prevent a recurrence. http://www.TransMountain.com/corp/Vol8A 11. We've proposed escort to edge of Canadian waters 22km from coast. Sec 5.3.2.1 (a) 8a http://www.TransMountain.com/corp/Vol8A 12. Strong incremental regime exists. Proposed enhancements in TMF Appn Sec 5.3. Vol 8A http://www.TransMountain.com/corp/Vol8A 13. Result based on a risk assessment prepared by an outside reputable marine risk consultant. http://www.TransMountain.com/corp/Vol8A 14. Captain Read more on line here http://www.TransMountain.com/corp/Vol8A 15. We've proposed enhancements in TMF to double capacity & halve response time. http://www.TransMountain.com/corp/Vol8A 16. No spill is acceptable. Spill prevention & mitigation measures in Sec 5.3.2 Vol 8A. http://www.TransMountain.com/corp/Vol8A 17. I can't speak to others, but do. Mentioned my hobby here http://www.TransMountain.com/corp/Vol8A 18. We move diluted bitumen @ density of 0.94 or < fate & behaviour studies available http://www.TransMountain.com/corp/Vol8A 19. All vessels bound for PMV transit same waterways. We support the DFO Action Plan http://www.TransMountain.com/corp/Vol8A 20. Spill response technologies are constantly improving. We've proposed large investment in latest technology 21. Spill liability is based on polluter pays principles. Update to regime provided in http://www.TransMountain.com/corp/Vol8A 22. Ships often encounter high waves at sea w/o any issue. 23. Details of enhanced spill response plans in Appn Vol 8C http://www.TransMountain.com/corp/Vol8C 24. KM resp for spills from our facilities. SORP provides 1.3B for ship spills 25. Industry funded compensation http://www.TransMountain.com/corp/Vol8A; Federal cap considering changes to remove cap on No. We've proposed enhancements to keep risk to similar level as today. 26. Vol 8C TERMPOL 3.5 http://www.TransMountain.com/corp/Vol8C 27. Marine environmental Socio-Economic Assessment in Vol BB http://www.TransMountain.com/corp/VolBB 28. Instead of standby rescue tug we've proposed a tug accompanying the tanker along the entire transits route. 29. Stringent tanker acceptance program ensures high quality ships & crew operating to global best practices at dock 30. Dilbit tested in Gulf of Mexico over 10 days did not sink. Link to study: http://www.TransMountain.com/corp/Vol8A 		

TABLE A-2 Cont'd

Event/Date	Attendees	Comments/Concerns Expressed and addressed in Table 1.1: Common Issues/Responses	Additional Comments/Concerns Expressed	TMEP Response	Commitments/Follow-up Actions
Twitter Town Hall held on October 14, 2014 – Topic: marine safety controls	• See above	See above	See above	30. Harbour dredging outside our jurisdiction. Dredging at Second Narrows not part of our application to NEB	• Outstanding items were provided at a subsequent meeting November 2014, also in a supplemental technical report titled Technical Report No. 2/NEB Filing D http://www.mcmbl.ca Update No. 4, Part 3, Marine Air Quality Supplemental Technical Report No. 2/NEB Filing D http://www.mcmbl.ca through http://www.mcmbl.ca
LFAOCC Meeting held on September 25, 2014	• Metro Vancouver (Chair)	Consistency of project with Regional Ground Level Ozone Strategy (RGLOS) (FVRD and others)	31. Marine environmental socio-economic assessment in Vol 8B	See above	
• EC	• PWV	Background values established for Burnaby regional study area (RSA) (MV)	1. How are vapours taken out of the ship's hold and how would a ship's hold have zero losses when tanks on land do not?	1. The ship's hold and tanks are fed directly to the VRU/MCU system. Air in the gas boiler exhaust is pumped into the hold with a positive pressure of 125-150% of atmospheric pressure until the blowers turn on. The blowers generate a partial vacuum pressure so that any leaks draw air from the outside in.	
• Fraser Valley Regional District	• BC Ministry of the Environment	• Northwest Clean Air Agency	2. Are there safety issues, specifically whether introduction of ambient air could bring mixtures into the explosive range?	2. Monitoring is required for explosive vapours and purging is performed with unit (TVAU) at Burnaby Terminal and a comparison to existing tanks there.	
			3. The extent of the VOC improvement on the tank vapour adsorption	3. Greg replied that the TVAU re-design will result in a small improvement for VOCs; all tanks have floating roofs with double seals.	
			4. Concern over the leak tightness of the ship's hold.	4. KMC will verify the leak tightness of the ship's hold and methods to test for other two at daily average emission rates.	
			5. MV/combined with assumption to use one vessel at the peak and	5. The Provide description how vapours are collected 100% of the time during tanker loading	
			6. The molar mass basis for NO _x conversion as well as justification for the assumption that 10% of NO _x emitted is in the form of NO ₂ for a VCU	6. KMC will verify and provide reference whether the molar basis is the accepted practice or splitting NO _x into NO and NO ₂ . Provide reference for VOCs; all tanks have floating roofs with double seals	
			7. Questions regarding the emission estimates for the VCU, where emission factors for propane or butane boiler were used	7. VOC emissions. How can cumulative effects be evaluated?	
			8. Does the Westridge Marine Terminal have unloading capability?	8. TMEP will provide updated cumulative case with emissions from BT application, would like information packaged together with R2 in Aug 2014, does no include emissions from vessels transiting, and the June 2014 Supplementary Marine Report does not include WMT emissions. How can cumulative effects be evaluated?	
			9. Request for plots at least for NO ₂ as well as emission estimates for total VOC	9. TMEP will provide an updated cumulative case with emissions from BT application, would like information packaged together with R2 in Aug 2014, does no include emissions from vessels transiting, and the June 2014 Supplementary Marine Report does not include WMT emissions. How can cumulative effects be evaluated?	
			10. Request for plots at least for NO ₂ as well as emission estimates for total VOC	10. TMEP will provide an updated cumulative case with emissions from BT application, would like information packaged together with R2 in Aug 2014, does no include emissions from vessels transiting, and the June 2014 Supplementary Marine Report does not include WMT emissions. How can cumulative effects be evaluated?	
			11. Outlined the results of the remodeling compared to the initial application, would like information packaged together with R2 in Aug 2014, does no include emissions from vessels transiting, and the June 2014 Supplementary Marine Report does not include WMT emissions. How can cumulative effects be evaluated?	11. TMEP will provide an updated cumulative case with emissions from BT application, would like information packaged together with R2 in Aug 2014, does no include emissions from vessels transiting, and the June 2014 Supplementary Marine Report does not include WMT emissions. How can cumulative effects be evaluated?	
			12. Environment Canada's position is that proper modeling of the marine background needs to be done with the Marine Emissions Inventory Tool (METT), and the resulting background needs to be added to the marine background plots	12. TMEP will consider use of METT pending further discussions on a modeling approach.	
			13. Comment that negotiations and IACG concentrations would exceed Ontario MOE ambient air quality criteria and odor detection thresholds respect only within the Westridge Terminal fence line on a daily basis.	13. TMEP will consider the risk to human health as a result of the West Coast Express commuter train passing through the fence line of the Westridge Marine Terminal	
			14. Process or colour complaints	14. KMC to provide odour response plan for WMT	
			15. Looking for confirmation modelling flagpole height (On or 1.5m)	15. TMEP will confirm flagpole height	
			16. RB12 and Woodfibre LNG project to be included in the cumulative effects case.	16. RB12 and Woodfibre LNG were excluded because they were not yet announced in Dec 2013.	
			17. It is possible for VCU (Vapour Combustion Unit) at WMT can run for 24 hours.	17. It is possible VCU could run for 24 hours during maintenance. TMEP will provide emission rates for a VCU running 24 hours during VRU maintenance and clarification on scenarios.	
			18. Would KMC commit to the Port Metro Vancouver (PMV) Continuous Improvement Programs (CIP) for port projects with 40% participation rate by 2007? If so, can KMC promote this to their members?	18. KMC has vessel acceptance criteria, will check against PMV CIP programs, remodelling but agree to discuss two scenarios – one with and one without the Project using 2009 data (July 2009) or perhaps an other time period.	
			19. FVRD formally requested multiple x4 meteorological events for Community Multi-Scale Air Quality (CMAQ) remodelling.	19. KMC did not agree to use multiple meteorological events for the CMAQ remodelling, but agreed to discuss two scenarios – one with and one without the Project using 2009 data (July 2009) or perhaps an other time period.	
			20. For the project to be consistent with regional air quality goals and in order to establish its social license it will be important for the project to demonstrate that the project have no detrimental effect on air quality in the Lower Fraser Valley, including ground level ozone issues. Will KMC and RWDI work with the LFAOCC on additional modeling?	20. TMEP will perform the analysis on ambient background from several WMT stations and include them with the final results.	
			21. FVRD is interested in exploring offsets for VOCs, consistent with the new Regional Ground-Level Ozone Strategy; WMT had no further direction to provide on how offsets would be selected or evaluated.	21. KMC will provide an explanation of why the conclusions of the HRA for pipeline spill scenario within Metro Vancouver would be analogous to a pipeline spill scenario within the FVRD	



TABLE A-2 Cont'd

Event/Date	Attendees	Comments/Concerns Expressed and Addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed and Addressed in Table 1.1 - Common Issues/Responses	TMP Response	Commitments/Follow-up Actions
LPA/QCC Meeting held on September 25, 2014 (cont'd)	• See above	• See above	22. Questions about the Air Quality Monitoring Station data that was used, why so few stations? Diesel PM2.5 should be treated differently than other components of PM2.5.	• See above	• See above
LPA/QCC Meeting held on November 13, 2014	• EC (Chair) • Metro Vancouver PMV/ Health Canada • Vancouver Coastal Health	• Engineering design on tankers and at VMT, so the regulators can have a better understanding of the technologies used (and their effect on air quality) (See 1.D. Emission Impacts from vessels in transit, 1.D. Emissions from loading operations, 1.D. Emissions of vessels at anchor, and 1.D.3 Emissions from terminal construction). Anchorage (see 3.C.2 Will there be greater or utilization of anchorage with an increase in tanker traffic?)	23. Request by FVRD that a pipeline spill scenario for the HIRVA be modeled for FVRD.	24. Request by FVRD that a copy of the slides were provided in the December 1, 2014 Project and Technical Update No. 4, Part 3, Marine Air Quality Supplemental Technical Report No. 2/NB FRing ID A457Z through A457Z2.	• Outstanding items such as a copy of the TMP slides from the meeting were provided in a supplemental technical report filed with the NEEB on December 1, 2014 - Project and Technical Update No. 4, Part 3, Marine Air Quality Supplemental Technical Report No. 2/NB FRing ID A457Z through A457Z2.
Emergency Preparedness and Business Continuity Conference held on November 18-20, 2015	• NorthWest Emergency Preparedness Society and Emergency Preparedness for Industry and Commerce Council (EPICC) • www.epicc.org	• Emergency response (see 3.10 Emergency Response) Risks associated with tanker traffic due to increased movement (See 3.3.1 Increase in risk with increase in tanker traffic, and 3.3.2 Increased risk with increased volumes of oil transiting the harbour)	• Expansion of Puget Sound line?	• Trans Mountain is not seeking to expand (bump) the pipeline south of the border into the United States. Some upgrades may occur at pump station facilities but the system will remain a single pipeline in the US.	• Meetings are ongoing, next scheduled meeting September 28, 2015.

TABLE A-2 Cont'd

Event/Date	Attendees	Comments/Concerns Expressed and addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed	TMEP Response	Commitments/Follow-up Actions
Green Marine West Coast Advisory Committee Meeting, September 9, 2014	Green Marine Victoria Harbour Authority	• Underwater noise from vessel traffic (See 1.5.1 Underwater noise/acoustic environment)	• Group discussion; Relationship between proposed Green Marine performance indicators and existing standards from terminal operators.	1. Yes, Tug emissions and underwater noise modelling is being done.	• Trans Mountain delivered a presentation on the marine transportation oil at the December 4, 2014 meeting.
December 4, 2014	PHM, SNC-Lavalin Vancouver Aquarium Port of Seattle Fraser Surrey Docks Prince Rupert Port Authority (WCAC Chair)	• Tanker impact on orca whales (See 1.5.2 Impact of increased tanker traffic on orca population)	• Air emissions from tankers (See 1.1 Emissions from loading operations in transit) (See 1.1.2 Emissions in vessels a la route)	Would this be duplicative? Tanker management and ventilation program by terminals such as Trans Mountain seem above baseline standards and the port of Green Marine is to establish indicators above requirement.	
May 27, 2015	SMT WWF - Canada Transport Canada COSBC Neptune Terminals EC Main Terminals Squamish Terminals	(See 1.5 Underwater noise/acoustic environment)	• Reviewed draft performance indicators for underwater noise	1. Are air emissions from tug boats considered in TMEP analysis?	
Monthly Maritime Community Meetings January 16, 2015 April 24, 2015	PMV SMT Marine Canadian Association of Petroleum Producers (CAP) WCRIC Seaspawn	• Tanker pilotage process (See 3.8.6 Pilotage of tankers) • Concern regarding adequacy of emergency response (See 3.8.1 Emergency response times for marine spills, 8.1H Notification protocol for marine oil spills [specific to local governments])	1. English Bay spill has undermined public confidence in spill response regime. Which aspects of the proposed enhancements are in play already? Discussion regarding lessons learned from Manathassa and what industry can do in future to improve response	1. Many are being actioned. We are undertaking tug study with Sam Snit Canada Inc. (SMT), Seaspan, Robin Allan and PPA. Assessing tug requirements for the future, liaising with tug companies on what requirements make sense. Requirements for tugs will become mandatory if acceptable criteria for Westridge. Also TEFM/POL endorsed helicopter process for dissemination of plots. Working with PPA on that aspect. 110 pilots underwent helicopter disembarcation training.	
Nautical Institute of BC (NIBC) Conference on May 7, 2015	NIBC membership	http://nibc.squarespace.com	• Concern about the wash from tugs at Cates Park boat launch when tugs were going to and from jobs (not necessarily TM-related vessels)	2. Provided an update on Project activities including Stakeholder and Aboriginal engagement, advertising and regulatory process.	• TMEP put Seaspan and SMT in contact to answer questions directly
Tri-Cities Emergency Management Stakeholder Workshop - spill scenario discussion involving the Fraser River	PMV, WCRIC, City of Coquitlam, City of Port Moody, City of Port Coquitlam, Fraser River Discovery Centre City of Surrey (observer only)	• What are the steps in TMEP response to a spill that could hit the Fraser River (See 8.E Fraser River Spill Response)	1. What is PMV role in response?	1. Need BC Ambulance Service engaged in the discussion as they have direct link to health authorities and care homes	• Trans Mountain will continue to engage with Tri Cities and other emergency management stakeholders in the enhancement of the new Emergency Management Program for the expansion. Local input will be important.
		• Early notification of first responders critical with moving water. (See 8.H Notification protocol for marine oil spills [specific to local gov'ts] and 8.G Emergency Response times for marine oil spills)	2. Need to use social media to relay messages	2. Need for consistent messaging between response agencies/responsible party	
		• Clarify required around early notification – who notifies and when. Notification protocol for marine oil spills (specific to local gov'ts). See 8.H Notification protocol for marine oil spills (specific to local gov'ts).	3. Need to have team how to work with/manage volunteers. Port Coquitlam and City of Coquitlam have set up a Volunteer Emergency System Team (VEST)	3. Trans Mountain agrees, social media is an important tool in the event of an emergency to communicate with the public.	
		• PMV role in traffic management on the river in the event of a spill. Notification protocols. (See 8.I PMV role in emergency response)	4. Identification of environmentally sensitive areas impacted by spill	4. KMC uses the Incident Command System for incident planning which is adaptable to different emergency scenarios and allows for quick identification of resources, and a method of procurement. The current planning methods also for the replacement of municipal services with private firms, as early as possible, with the approval of Unified Command. It's KMC's preference to enter into a Unified Command with the municipal, provincial and federal agencies to ensure a safe and thorough response to every event of a spill.	
		• How are wildlife addressed? (See 8.J Wildlife recovery/ emergency management)	5. In the unlikely event of a spill, air monitoring equipment is dispatched to the area of an incident immediately. Air monitoring begins in a downwind direction with priority being the closest un-evacuated area where people could be present. The data from the air monitoring equipment is given to the individuals responsible for air quality and human health impacts including the Safety Officer, local Authority and Unified Command. The data is used to identify if individuals could be at risk for adverse health impacts, and make decisions regarding evacuation and/or shelter in place.		
		• Engeniering going forward, what are next steps (See 9.1 Opportunities for Input on Marine issues/Concerns)			
		• Concern about crude oil not floating (i.e. difficult to clean up)			
		• See 8.B Ability to clean up oil spilled/diluted bitumen			
		• Effectiveness of boom in moving water (i.e. boom is effective in calm water) (See 8.D Adequacy of boom technology, best available technology)			
		• Share product identification with first responders in advance if by tankers)			

TABLE A-2 Cont'd

Event/Date	Attendees	Comments/Concerns Expressed and addressed in Table 1.1 - Common Issues/Responses	Additional Comments/Concerns Expressed	TMEP Response	Commitments/Follow-up Actions
Tri-Class Emergency Management Stakeholder Workshop - spill scenario discussion involving the Fraser River (cont'd)	<ul style="list-style-type: none"> • See above 	<ul style="list-style-type: none"> • Agreement to combine Emergency Operations Centres (EOCs), United Command Site (BC 1.6) coordination with local resources (i.e., municipal provincial) in the event of a marine oil spill 	See above	<ul style="list-style-type: none"> 6. Under ICS, the response would be guided, in part, by a safety plan developed to address the specific conditions of the incident. The plan would establish requirements for safe work practices, which in turn establish requirements for personal protective equipment (PPE) and safety training. Similarly, a security plan would be developed to address the unique conditions of the response. Both the safety and security plans would be approved by the unified or incident command. 	<ul style="list-style-type: none"> • See above
Fraser River Crossing EPP Workshop held on May 19, 2015					
Burnaby Neighbourhood Information Session held on June 3, 2015	<ul style="list-style-type: none"> • Four attendees from Burnaby/Coquitlam areas 	<ul style="list-style-type: none"> • Interest in emergency response and in particular response times (See 8.0 Emergency Response, 8.1 Emergency Response times for marine oil spills) 	<ul style="list-style-type: none"> • Interest in marine tanker safety (role of pilots, skipperism about BC Pilots role (see 3.B.6 Piloting of tankers)) 		



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January 5, 2015**

APPENDIX B

ISSUES, CONCERNS AND COMMON TRANS MOUNTAIN RESPONSES FOR THE MARINE CONSULTATION PROGRAM
TABLE B-1

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
1.0	Environment - Marine Impacts		
1.A	Potential environmental impacts of a spill in Fraser Delta ecosystem and Burrard Inlet ecologically sensitive areas	<p>The Trans Mountain Pipeline Ltd. (TMPL) has been operating safely for over 60 years. This includes Westridge Marine Terminal (Westridge) where tankers have been loading safely since the dock was commissioned in 1960. While Trans Mountain does not own or operate the vessels calling at the Westridge Marine terminal, it is responsible for ensuring the safety of the terminal operations in addition to Trans Mountain's own cleaning processes and terminal procedures, all vessels calling at Westridge must operate according to rules established by the International Maritime Organization (IMO), Transport Canada (TC), the Pacific Oil Authority (POA), and PMW.</p> <p>Trans Mountain recognizes the high consequence potential of the increased Project-related marine vessel traffic. Trans Mountain is committed to keeping its operations safe, while protecting its employees, facility users and visitors, the public and the environment. Trans Mountain strives to safeguard its facilities and to meet or exceed all applicable federal, provincial and local safety regulations.</p> <p>Western Canada Marine Response Corporation (WCIMRC) is the TC-certified spill responder for Canada's west coast. WCIMRC's mandate is to ensure there is a state of preparedness in place and to mitigate the impact should an oil spill occur. This includes the protection of wildlife, economic and environmental sensitivities, and the safety of both the responders and the public. View WCIMRC's website at http://wcimrc.com</p> <p>Trans Mountain is a member of WCIMRC and works closely with them and other members to ensure WCIMRC remains capable of responding to spills from vessels loading or unloading product or transporting within their area of jurisdiction.</p>	
1.A.1	Threat to the regenerated herring fishery and salmon populations	<p>In compliance with Canada's <i>Fisheries Act</i>, it is Trans Mountain's responsibility to ensure the proposed work or activity will not likely result in serious harm to fish or any permanent alteration to, or destruction of, fish habitat. Where harm cannot be avoided, Trans Mountain will work with the Department of Fisheries and Oceans Canada (DFO) to determine serious harm and identify appropriate conditions to proceed.</p> <p>Key issues for marine fish and fish habitat were identified through discussions with federal government agencies, including DFO, Environment Canada (EC) and PMW, through feedback received from public participants at open houses and Environmental and Socio-Economic (ESA) workshops held in the lower Mainland and southern Vancouver Island, and through the professional judgment of the assessment team based on extensive experience working on marine transportation projects in British Columbia (BC).</p> <p>For example, construction of Westridge Marine Terminal will result in the loss and/or alteration of intertidal and subtidal habitat, some of which could be used as herring spawning habitat. While herring spawn has not been observed in the vicinity of the Terminal, there is some indication local herring populations are rebuilding, as evidenced by the 2019 spawn observed in False Creek. The first spawn at this location in many decades. To ensure there is no net loss of productive capacity of marine fish habitats due to construction of the Westridge Marine Terminal, any unavoidable loss of fish habitat will be compensated for by the creation or enhancement of new fish habitats.</p> <p>Currently, the preferred marine habitat compensation option is the construction of artificial rocky reefs. These reefs would be colonized by a diversity of algae and invertebrates and would provide high-value habitat for a variety of commercially, ecologically and culturally important fish species, including juvenile salmon, herring and rockfish.</p> <p>Sections 4.3.6 and 4.4.4 of Volume 8a evaluates potential Project effects on fish and fish habitat.</p>	<p>Section 5.6.2 of Volume 8 (Filing ID A35QO), Environmental effects of a hypothetical oil spill for marine transportation</p> <p>Section 8.3.4 (Volume 7 (Filing ID A35A6)) discusses potential effects of a marine oil spill at Westridge Terminal on the environment.</p> <p>Section 5.7.4 (Volume 8 (Filing ID A35A9)) – Hypothetical Spill Scenario: Oil Spill from a Tanker at Arcticane Reef</p> <p>Section 4.5.2 (Volume 7 (Filing ID A35A5)) discusses WCIMRC as part of external spill response resources</p>
1.A.2	The threat to newly returned resident whale populations (Howe Sound, English Bay, Burrard Inlet)	<p>Refer to responses 3.A and 3.B for information regarding steps taken to prevent spills from tankers. Despite the low probability of a marine oil spill, if one were to occur there is potential for oiling of marine mammals such as whales. Actual effects would depend upon the size of the oil spill, the efficacy of measures intended to promptly contain and recover spilled oil, the ability of oil spill responders to capture and treat animals, and the intrinsic sensitivity of the animals to exposure.</p> <p>Trans Mountain is consulting with local environmental stewardship organizations to understand local efforts to conserve and protect marine mammals on BC's south coast.</p> <p>Sections 4.3.7 and 4.4.5 of Volume 8a evaluates potential Project effects on Marine Mammals.</p>	<p>Section 7.6.2 of Volume 5a Westridge Terminal (Filing ID A35TR0)</p> <p>Section 8.3.1.2 (Volume 7 Hypothetical Spill Scenario Ecological Risk Assessment: Westridge Marine Terminal (Filing ID A35A6))</p> <p>Sections 4.3.6 and 4.4.4 of Volume 8a, Marine Transportation (Filing ID A35A3)</p> <p>NEER IR No. 1.51 (Filing ID A3Y2K0)</p> <p>Preliminary Marine Fish Habitat Offsetting Plan (Filing ID A4AAE4)</p>
1.A.3	Effects on Marine Birds (resident and migratory)	<p>Marine birds were part of the effects assessment for the Project. Indicator species were reviewed in consultation with marine stakeholders in Vancouver and Victoria, BC in Spring 2013.</p> <p>As described in Trans Mountain's Application, Project effects (permanent or long-term) can most likely be technically or economically mitigated. Consequently, it is concluded the Project's contribution to cumulative effects on marine birds within the Marine regional study area (RSA) will be not significant.</p> <p>Where practical, the proposed pipeline route will remain within the existing TMPL right-of-way or parallel existing roads, which will minimize new disturbances to ecological communities. Every effort is made to minimize new disturbances to ecological communities, to minimize impact to wildlife, water courses and key biodiversity zones. A detailed Environmental Protection Plan (EPP) will be submitted to the NEER, which will document every linear metre of the construction right-of-way and mitigation strategies to help avoid or minimize environmental impacts from construction.</p> <p>Trans Mountain will work with EC and comply with the <i>Migratory Birds Convention Act/Migratory Birds Sanctuary Regulations</i> related to the Project components and impacts. Trans Mountain will conduct clearing and preconstruction activities outside the minimum migratory bird Reduced Activity Period (RAP) of May 1 to July 31 where practicable. In the event of schedule changes and/or clearing activities are planned during the migratory bird RAP, migratory bird nest sweep will be conducted. If a protective buffer is found, a protective buffer will be established around the nest. The size of the buffer will be influenced by the status of the bird. Typically a 10 m buffer is applied to a scrubby nest, and a 100 m buffer around waterfowl or raptor nests. If a bird species with a provincially or federally recommended setback distance is found, then that buffer will be applied around the nest, unless otherwise authorized by the appropriate regulatory authority.</p> <p>The marine transportation acoustic environmental assessment considers increased frequency of noise events like ship anchors being raised and lowered and vessel horns. The types of noise events are not expected to change from existing vessel operations; however, the frequency may increase.</p> <p>Section 4.4.6 of Volume 8a evaluates potential effects of the Project on marine birds.</p>	<p>Section 8.3.3.1.4 of Volume 7 - Ecological Risk of/Hypothetical Oil Spill at Westridge Marine Terminal (Filing ID A35AV6)</p> <p>Sections 4.3.7 and 4.4.5 of Volume 8a (Filing ID A35A3)</p>
1.A.4	Environmental conservation as mitigation for impacts	<p>Trans Mountain continues to be involved in initiatives to enhance the fish and wildlife habitat within the Company's operating areas. Trans Mountain continues to engage stakeholders to better understand local concerns and priorities for environmental protection and enhancement. Following the submission of its Application, Trans Mountain continued its work to refine the Project design to complete additional field studies and to identify potential investments in local benefits including opportunities for environmental enhancement.</p>	<p>City of Port Moody IR No. 1.3.17a (Filing ID A3XZB)</p>



TABLE B-1 Cont'd

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
1.C.1	Environment - Marine impacts (cont'd) Proportion of product that can be cleaned up following a spill	<p>Trans Mountain has proposed significant increase in spill response capacity and reduction in response times for marine spill response. Effectiveness of future spill response was evaluated using computer simulation. A credible worst case oil spill cleanup has been simulated by computer and the report was filed with the application [Refer to TR-BC-12-S10 and TR-BC-12-S12].</p> <p>The amount of product that can be recovered will depend on response capacity in place proximate to the spill location, as well as many other factors such as weather and product volume spilled. In some situations, it is not possible to remove or fully remediate the impacts of a spill. These situations may occur due to limited access to the area or in situations where trying to remediate the area will result in more harm (i.e. disturbance/damage) than good. In these situations a Risk Management Plan will be developed and a long term monitoring program will be implemented to ensure that contamination is not migrating/moving and is not a threat or risk to the public or environment. As with the remediation process, other agencies or affected stakeholders and Aboriginal groups will be involved in the assessment of risk and development of a Long Term Monitoring Program.</p>	Sections 5, 4, 4.1 (Volume 8A - Fate and Behaviour of an oil spill in a marine environment; [Filing ID A3S416]) / Section 5.5 of Volume 8 (Filing ID A3S416) Oil Spill Preparedness and Response Section 5, 5.1 (Volume 8 (Filing ID A3S419) - Hypothetical Spill Scenario: Oil Spill from a Tanker at Anchorage Technical Report TR-BC-12-S10 (Filing ID A3S50) Modelling the Fate and Behaviour of Marine Oil Spills Technical Report TR-BC-12-S12 (Filing ID A3S59) Future Oil Spill Response Approach Plan Sections 3, 2 and 5.0 (Volume 7 – Risk Assessments and Management of Pipelines and Facility Spills (Filing ID A3S495)) Sections 3, 3, 3.4 and 4.4.2 of Volume 8A – ESG, Marine Transportation (Filing ID A3S473) Marine Air Quality and GHG Marine Transportation Technical Report (Filing ID A61086) Marine Air Quality and GHG Marine Transportation Technical Report (Filing ID A4F548) Volume 5A, Sections 5.4, 6.0 and 5.4 (Filing IDs A3S15, A3S16 and A3S109) Volume 5C, Air Quality and GHG Technical Report (Filing ID A3S110) Volume 6B, Pipeline EPP, Sections 7.0 and Appendix O (Filing IDs A3S233 and A3S244) Volume 3A, Public Consultation (Filing ID A3S305)
1.D	Emission impacts from vessels in transit	<p>All vessels calling to PMW are required to comply with international and local regulations on the types of engines (i.e. both propulsion and generators) that they are fitted with. Those engines have to meet strict exhaust emission requirements set by IMO and carry manufacturers' certificates to show that. Regular surveys and checks are conducted by local authorities to verify this and to ensure that the engines are maintained to their continued adherence to those standards.</p> <p>There is an ongoing internationally mandated process underway to improve the type of fuel used by the ships. Vancouver is part of the North American Emissions Control Area, as are Seattle, San Francisco, and Los Angeles, and all ships entering or plying within 200 miles of the BC coast have to change over to cleaner burning fuel. Mandated further improvement in fuel standards take effect in 2015 and 2020, which period straddles the Project's estimated late 2018 coming into operation schedule.</p> <p>In addition, every ocean-going commercial vessel is currently required by the IMO to have in place a Shipboard Energy Efficiency Management Plan. From a more practical perspective, given the high cost of fuel, ship operators benefit greatly by taking extra care to ensure that the ship's engines operate efficiently, which plays a very positive overall role in reducing emissions as well. All of the above factors help prevent degradation of air quality in the region from shipping. Trans Mountain, as part of premarital checks, only accepts modern vessels that meet and follow all of the above international requirements to had at Westridge.</p> <p>** Note December 1, 2014, an update to the Marine Air Quality and greenhouse gas (GHG) Technical Report for Marine Transportation was filed, which indicated emissions will remain within Metro Vancouver, provincial and national objectives.</p>	Sections 3, 3.3, 3.4 and 4.4.2 of Volume 8A – ESG, Marine Transportation (Filing ID A3S473) Marine Air Quality and GHG Marine Transportation Technical Report (Filing ID A61086) Marine Air Quality and GHG Marine Transportation Technical Report (Filing ID A4F548) Volume 5A, Sections 5.4, 6.0 and 5.4 (Filing IDs A3S15, A3S16 and A3S109) Volume 5C, Air Quality and GHG Technical Report (Filing ID A3S110) Volume 6B, Pipeline EPP, Sections 7.0 and Appendix O (Filing IDs A3S233 and A3S244) Volume 3A, Public Consultation (Filing ID A3S305)
1.D.1	Emissions from berthing operations	<p>There will be no fugitive emissions associated with product loading activities at the Westridge Marine Terminal. During product loading, which includes a vapour combustion unit (VCU) and/or vapour recovery units (VRUs) under normal operations, 100% of any potential vapours will be collected by the Vapour Control System (VCS).</p> <p>More information on this topic was provided in Trans Mountain's Response to Lower Fraser Valley Air Quality Coordinating Committee - Informal Information Requests from September 25 and November 13, 2014 Meetings.</p> <p>Section 7.6.4 of Volume 5A (Filing ID A3S10) discusses potential air emissions for Westridge Marine Terminal.</p>	Section 3, 4, 6, 1.0 (Volume 4A – VRLI, Facilities Design, Westridge Marine Terminal (Filing ID A3S049)) Section 7.6.4 of Volume 5A (Filing ID A3S10) Marine Air Quality and GHG Marine Transportation Technical Report (Filing ID A4F548) Response to Lower Fraser Valley Air Quality Coordinating Committee - Informal Information Requests from September 25 and November 13, 2014 Meetings (Filing ID A4FAC49) PMW Harbour Air Emissions Standards http://transmountaincanada.com/ports/uses/fees.aspx
1.D.2	Emissions from vessels at anchor	<p>Ships at anchor within the Port are under the jurisdiction of PMW.</p> <p>Additional information on PMW harbour air emission standards can be found in the Fact Document at: http://transmountainvancouver.com/ports/uses/fees.aspx.</p> <p>** Note December 1, 2014, an update to the Marine Air Quality and GHG Technical Report for Marine Transportation was filed, which indicated emissions will remain within Metro Vancouver, provincial and national objectives.</p> <p>PMW encourages the reduction of emissions from vessels at berth or anchored within PMW's jurisdiction through the EcoAction program. This voluntary program provides discounted harbour rates for vessels complying with the program.</p>	Section 3, 4, 6, 1.0 (Volume 4A – VRLI, Facilities Design, Westridge Marine Terminal (Filing ID A3S049)) Section 7.6.4 of Volume 5A (Filing ID A3S10) Marine Air Quality and GHG Marine Transportation Technical Report (Filing ID A4F548) Response to Lower Fraser Valley Air Quality Coordinating Committee - Informal Information Requests from September 25 and November 13, 2014 Meetings (Filing ID A4FAC49) PMW Harbour Air Emissions Standards http://transmountaincanada.com/ports/uses/fees.aspx
1.D.3	Emissions from terminal construction	<p>Specific mitigation measures to manage noise and air quality impacts from construction include:</p> <ul style="list-style-type: none"> Trans Mountain will consult with and inform landowners and stakeholders so the potential to be affected by emissions from construction activities prior to commencement of these activities in the proximity. Restrict the duration vehicles and equipment are allowed to sit and idle to less than one hour unless air temperatures are less than 0°C. Use multi-passenger vehicles for the transportation of crews to and from the job sites, where feasible. Ensure equipment is well-maintained during construction to reduce air emissions. Control emissions to ambient air from construction at the facility sites or associated components so concentrations of pollutants do not exceed "maximum desirable levels" defined in the Canadian Environmental Protection Act and other appropriate regulatory authority ambient air quality objectives. <p>Refer to environmental resource specific mitigation tables for air quality provided in Appendix O of Volume 6C.</p> <p>For more information on the processes to be used for construction of the expanded Westridge Marine Terminal, Refer to the response to City Burnaby IR No. 11813a</p>	Volume 5A, ESG - Biophysical, Sections 5, 6, 7, 7.0 and 8.0 (Filing IDs A3S115, A3S106 and A3S109) Section 2, 2.0 of Volume 4B – Noise Control Plan, Project Design and Execution – Construction (Filing ID A3S116) Volume 5C, ESG - Biophysical Technical Reports TR-5C4: Marine Air Quality and GHG, Section 9.4.2, (Filing ID A3S173) Appendix O of Volume 6C (Filing ID A3S256) Volume 7, Risk Assessment and Management of Pipeline and Facility Spills, Section 7.0 (Filing ID A3S46) Volume 8A, Marine Transportation, Sections 4, 2, 4, 3, 4, 4, 5, 6 and 5, 7 (Filing IDs A3S4X6, A3S4Y3, A3S503 and A3S49) Volume 8B, Technical Reports, Marine Air Quality and GHG Emissions (Filing ID A3S4K1) Response to City Burnaby IR No. 11813a (Filing ID A3Y2E6) Construction of new dock complex

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
1.0	Environment - Marine Impacts (cont'd)		
1.E	Water quality impacts	<p>Storm water run-off will be collected from areas such as:</p> <ul style="list-style-type: none"> • dock loading platforms • tank containment areas • manifold areas • VRU and related equipment areas <p>Collected storm water will be directed through separators and released in accordance with permit requirements.</p> <p>Sections 6, 6.3 and 7, 11.1 of Volume 5A (Filing ID A3S1R0) discusses potential water quality impacts of Westridge Marine Terminal. Section 4.3.2 of Volume 8A discusses potential water quality impacts of Marine Vessel Transportation.</p> <p>Section 8.3.3.2.1 of Volume 7 (Filing ID A3S4V6) discusses the characterization of hypothetical oil spill Potential Effects on Marine Water and Sediment Quality at Westridge Marine Terminal.</p>	<p>Sections 6, 6.3 and 7, 11.1 of Volume 5A (Filing ID A3S1R0)</p> <p>Section 8.3.3.2.1 of Volume 7 (Filing ID A3S4V6)</p> <p>Section 4.3.2 of Volume 8A (Filing ID A3S4V3)</p>
1.E.1	Introduction of invasive species from ocean-going ship calling at Westridge Marine Terminal	<p>Balast water releases in Canadian waters are strictly regulated by TC under the Canada Shipping Act, 2001 in order to prevent the release of contaminated substances and/or invasive species.</p> <p>New IMO regulations regarding Balast Water Management that are expected to come into effect will require additional technological measures to be fitted on vessels. Visit www.iimo.org to learn more.</p> <p>The potential introduction of invasive species from Project-related tankers is discussed in the marine fish and fish habitat assessment for the Westridge Marine Terminal - Section 7.6 of Volume 5A.</p>	<p>Section 7.6 of Volume 5A (Filing ID A3S1R0)</p>
1.E.2	Bilge water management, oily water separation	<p>Vessel Pollution and Dangerous Chemicals Regulations (amended to the Canada Shipping Act, 2001) were put in place to prevent the recognized adverse effects of oil on water and sediment quality and on the health of marine birds and mammals. Bilge water must be treated before being discharged at sea or must be disposed of at an authorized facility. The release of contaminated bilge water is illegal in Canadian waters.</p>	<p>Section 4.3.13.3.1 of Volume 8A, Marine Transportation (Filing ID A3S4K6)</p>
1.E.3	Long term effects of oil spills on water quality (<i>i.e.</i> what were effects from Westridge 2007 spill?) Is the Long Term Monitoring Plan (LTM) report public? How often are assessments being done?	<p>Ongoing monitoring of marine plant and animal life in the affected area has shown very good recovery from the 2007 spill. Slantec conducted KUMC's long term monitoring program post-2007 Westridge spill. The results of the monitoring program are available at http://www.transmountain.com/westridge/2007_spill</p>	<p>Section 5.0 of Volume 8A - Marine Transportation (Filing ID A3S4V3)</p> <p>http://www.transmountain.com/westridge/2007_spill</p>
1.E.4	Shoreline erosion due to increase in tanker traffic wake	<p>Within Burrard Inlet, Project-related tankers and large vessel traffic at speeds of eight knots or less (typically around six knots), this is not expected to create wake that would have impacts above and beyond other commercial or recreational vessel traffic transiting Vancouver Harbour. Tables 4.3.6 and 4.3.6.5, Section 4.3.6.1 of Volume 8A describes maximum predicted wave heights of 0.03 m at a distance of 500 m and 0.02 m at a distance of 1,000 m.</p>	<p>Tables 4.3.6 and 4.3.6.5, Section 4.3.6.1 of Volume 8A (Filing ID A3S4K6)</p>
2.0	Marine Terminal		
2.A	Allermuir terminal locations (<i>i.e.</i> Roberts Bank, Cherry Point – ISRU, Shell, City of Burnaby, property east of existing Westridge Marine terminal)	<p>As a matter of due diligence in proposing the Project, Trans Mountain evaluated the potential of a variety of marine terminal locations, including an expansion of its existing Westridge Marine Terminal.</p> <p>The Westridge Marine terminal has operated safely for over 60 years and the proposed expansion of this facility is considered the best, most responsible option.</p>	<p>NEBIR No. 2.044a (Filing ID A324T9)</p>
2.B	Impacts from construction of terminal marine life	<p>Construction activities associated with the expansion of the Westridge Marine Terminal have the potential to directly and indirectly affect marine fish and fish habitat through:</p> <ul style="list-style-type: none"> • alteration or loss of marine fish habitat • change in productive capacity of marine fish habitat • injury or mortality of marine fish <p>EPs will identify potential mitigation and reclamation measures that may be implemented during detailed design, pre-construction, construction and post-construction activities at the Westridge Marine Terminal and contingency and management plans to address potential effects, events or conditions that may arise during construction. In addition, the Westridge Marine Terminal EPP outlines environmental inspection and construction inspection roles and responsibilities during and following construction.</p> <p>Section 7.6.9 of Volume 5A describes potential Project effects on fish and fish habitat.</p>	<p>Section 7.6.9 of Volume 5A (Filing ID A3S1R0)</p> <p>Volume 6 Westridge Marine Terminal EPP (Filing ID A3S2S9)</p>
2.C	Impacts from terminal construction and operations on neighbours (<i>i.e.</i> lights, noise, odours, visual impacts, vessels using berths as carports, number of tankers that can berth concurrently). Can shore power be offered to offset noise and emissions concerns?	<p>Trans Mountain will ensure equipment is well-maintained during construction to minimize all emissions and unnecessary noise. Additionally, Trans Mountain will restrict the duration that vehicles and equipment are allowed to sit and idle to less than one hour, unless air temperatures are less than 0°C.</p> <p>Trans Mountain will develop a Noise Management Plan and adhere to all federal (<i>i.e.</i> EC Motor Vehicle Safety Act, Oil and Gas Occupational Safety and Health Regulations, Health Canada), and provincial (<i>i.e.</i> Noise Control, BC Oil and Gas Commission, Worker's Compensation Act, Occupational Health and Safety Regulations [BC Reg 286/97 as amended; Section 7.2 [BC Reg 382/2004, s.1]] and municipal guidelines and regulations for noise management [Section 7.0]).</p> <p>Mitigations to reduce light and visual effects may include landscaping to limit visual effects to wildlife and the public (<i>i.e.</i> leave a vegetation buffer) and installing lighting control systems in the facility site that permit the reduction of the amount of lighting during periods of low activity.</p>	<p>Section 7.6.9 of Volume 5A (Filing ID A3S1R0)</p> <p>Section 3.4.4.6.1 of Volume 4A (Filing ID A3S0V9)</p> <p>BC Hydro IR 1.3.b (Filing ID A3X5V1)</p> <p>Marine Air Quality and GHG Marine Transportation Technical Report (Filing ID A4F5H8)</p> <p>Response to Lower Fraser Valley Air Quality Coordinating Committee - Informal Information Requests from September 25 and November 13, 2014 Meetings (Filing ID A4AFC9)</p>
		<p>As a measure to help reduce and mitigate SOx emissions from ships in port, a number of ports around the world, including PW, provide the ability for ships fitted with special high voltage electrical power connectors to connect to shore power during their time alongside berth. Trans Mountain has checked with International Association of Independent Tanker Owners (INTERTANKO), whose members control over 3,000 tankers, and was advised that there are virtually no tankers able to connect to shore power due to safety concerns (refer to the response to Syme N.R. No. 1.3b, Westridge Marine Terminal is being designed with the ability to retro-fit shore power facilities for tankers, should conditions change in future).</p> <p>There will be no fugitive emissions associated with product loading activities at the Westridge Marine Terminal because 100% of vapours will be collected by the VCS during crude oil loading, which includes a VCA and VRU under normal operations.</p> <p>More information on this topic was provided in Trans Mountain's Response to Lower Fraser Valley Air Quality Coordinating Committee - Informal Information Requests from September 25 and November 13, 2014 Meetings.</p>	<p>Response to Syme N.R. No. 1.3b (Filing ID A3X6U3) Marine and GHG Emissions Response to Syme N.R. No. 1.3b (Filing ID A3X6U3)</p>

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
2.0	Marine Terminal (cont'd)		
2.D	Consideration of sea level rise in terminal construction and operations	Sea level rise will be considered in the design and construction of the new Marine Terminal. Refer to Section 3.4.4.3.2 in Volume 4A for information about tide and water levels related to Westridge Marine Terminal.	Section 3.4.4.3.2 in Volume 4A [Filing ID A3S079]
2.E	Fire suppression systems at the terminal (i.e. capability to fight marine fires); are fire boats required?	Westridge Marine Terminal has a fire suppression system in place. Additional fire suppression upgrades are being considered as part of the Project. Refer to Section 3.4.4.8.2 of Volume 4A for details of Westridge fire protection system.	Section 3.4.4.8.2 of Volume 4A [Filing ID A3S079]
2.F	Ability to contribute to marine fire response for Vancouver Harbour	Trans Mountain understands the details of the program, including timing, funding and participation are not yet finalized. Through its existing relationship with PMV as a tenant within the Port, Trans Mountain is exploring the opportunity to support the initiative.	Province BC IR No. 1.178 [Filing ID A3S473]
2.G	Potential geotechnical issues with Westridge Marine Terminal location	The expanded facilities will be built in accordance with the latest building codes, which will account for any geotechnical issues identified through a geotechnical assessment of the foreshore and jetty sites that are currently ongoing. These will guide the engineers on specific engineering design and construction details required to be undertaken in constructing proposed Westridge facilities.	Appendix A of Volume 7 – Threat Assessment Report [Filing ID A3SAV7]
2.H	Move new dock away from neighbours (to east)	TMFP proposes to expand the existing Trans Mountain Pipeline System, including the existing terminal facilities. Parallelizing and expanding existing facilities reduces new disturbance, uses existing infrastructure and minimizes environmental effects. This is consistent with good project planning and best environmental practices. Twenty different layouts were considered for the Westridge dock complex. The process of selecting a location and orientation for the berths is influenced by a number of different criteria and involves optimizing a number of often competing interests.	Section 3.4.4.1.4 of Volume 4A – Westridge Marine Terminal – Proposed Expansion [Filing ID A3S079], City Boundary IR No. 1.101a [Filing ID A3Y2E6], Coronar KIR No. 1.2.2 [Filing ID A3X6A9], Technical Update 2 – Part 2 [Filing ID AA4AD9] Update Facilities, Also Attachments 2.0-1 (Filing ID AA4AD9), Attachment 2.0-3 [Filing ID AA4AE1] and Attachment 2.0-4 [Filing ID AA4AE2]
2.I	Allergens/dock layouts. What other options were considered?	In assessing the various criteria, the overriding priority is the terminal safety as it pertains to navigation vessel safety and spill avoidance, as well as safety and of operating personnel and neighbours. The dock layout option presented in the Application has been deemed the best suited for the location at Westridge and provides the necessary high degree of safety for the terminal, vessels, workers and other users of Burard Inlet while minimizing the impact on those residing near the marine terminal to the greatest practical extent. *Note: In response to input received during public consultations since May 2012, the dock footprint and location design has been modified to minimize the impact on the neighbouring residents of Westridge (Refer to Technical Update 2 – Part 2 Update Facilities).	Coronar KIR No. 1.2.2 [Filing ID A3X6A9], Section 3.4.4.1.4 of Volume 4A of the Application [Filing ID A3S020], Technical Update 2 – Part 2 [Filing ID AA4AD9] Update Facilities, Also Attachments 2.0-1 (Filing ID AA4AD9), Attachment 2.0-3 [Filing ID AA4AE1] and Attachment 2.0-4 [Filing ID AA4AE2]
2.J	Footprint of expanded fill and new berths of Westridge Marine Terminal. How much larger, dominant, visible?	A number of often competing interests, which include minimizing impact (e.g. view sheds, lights, noise, odour, traffic) on neighbouring residential areas. In assessing the various criteria, the overriding priority is the terminal safety as it pertains to navigation vessel safety and spill avoidance, as well as safety and of operating personnel. The dock layout option presented in the Application has been deemed the best suited for the location at Westridge and provides the necessary high degree of safety for the terminal, vessels, workers and other users of Burard Inlet while minimizing the impact on those residing near the marine terminal to the greatest practical extent. *Note: In response to input received during public consultations since May 2012, the dock footprint and location design has been modified to minimize the impact on the neighbouring residents of Westridge (Refer to Technical Update 2 – Part 2 Update Facilities).	Section 3.4.4.1.4 of Volume 4A of the Application [Filing ID A3X6A9], Technical Update 2 – Part 2 [Filing ID AA4AD9] Update Facilities, Also Attachments 2.0-1 (Filing ID AA4AD9), Attachment 2.0-3 [Filing ID AA4AE1] and Attachment 2.0-4 [Filing ID AA4AE2]

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
2.K	Compensation for property devaluation (impacted views, nuisance, safety)	<p>TMEP's compensation framework for situations where we do not directly affect adjacent lands, but where the property owner is concerned about potential property value effects is addressed in Trans Mountain's responses to Wembly Estates IR No. 1.</p> <p>Should adjacent landowners be of the opinion that the operations related to the TMPI have caused them directly related damages as defined in the NEB Act, Trans Mountain would look to the affected parties to provide the Company with information and documentation as to the nature and extent of the actual damages:</p> <ol style="list-style-type: none"> More specifically, if adjacent property owners believe they have been directly affected by the Project and feel forced to sell their property, Trans Mountain would expect the owner to undertake the following process: <ol style="list-style-type: none"> Sell the affected property to an independent third party through the open market; Retain an independent licensed and certified appraiser, being a member of the Appraisal Institute of Canada, to determine the market value of the property and ascertain whether the property sold for less than market value as a result of the operations of Trans Mountain; If the appraiser determines that an actual loss has occurred that is directly related to the operations of Trans Mountain, prepare and submit a claim for compensation to Trans Mountain inclosing a copy of the appraisal report to: <p>Manager, Land Trans Mountain Pipeline Kinder Morgan Canada 7815 Belmont Street Burnaby, BC V5A 1S9</p>	Eare TR No. 1.1 (Filing ID A34659) Wembly Estates IR No. 1 (Filing ID A3Y3W9)
3.J	Marine Tankers	<p>Using the information received, Trans Mountain would conduct an independent assessment, and if the Company determined that damages resulted from the Company's operations, it would provide any commensurate compensation due to the affected party.</p> <p>In determining whether compensation is applicable to specific landowner, Trans Mountain would be guided by legislative and legal requirements. In general Trans Mountain's obligation for compensation is to directly impacted landowners for damages directly related to Company operations, including construction.</p>	
3.A	Tanker Safety	<p>While Trans Mountain does not own or operate the vessels calling at the Westridge Marine Terminal, it is responsible for ensuring the safety of the terminal operations. In addition to Trans Mountain's own screening process and terminal procedures, all vessels calling at Westridge must operate according to rules established by the IMO, ITC, the PPA, and PMV.</p> <p>Although Trans Mountain is not responsible for vessel operations, it is an active member in the maritime community and works with BC maritime agencies to promote best practices and facilitate improvements to ensure the safety and efficiency of tanker traffic in the Salish Sea.</p>	Sections 1 and 2 of Volume BA [Filing IDs A3SAx3 and A3SAx4]
3.A.1	Tanker size and capacity	<p>On average up to 34 Aframax class vessels are expected to call at Westridge Marine Terminal. These will be similar in size to vessels currently calling at Westridge Marine Terminal. The expansion is not proposing larger vessels.</p> <p>Sections 10 and 20 of Volume BA discusses tanker safety related to TMEP.</p>	Section 2.1.3 of Volume BA [Filing ID A3SAx4] Existing Marine Traffic at Westridge Marine Terminal
3.A.2	Safety features such as double hull and compartmental storage of oil	<p>Tankers are the most scrutinized vessels in the shipping industry. The international tanker inspection regime includes both mandatory regulatory inspections as well as regular inspections by private customers like Trans Mountain who are all in their efforts to ensure the safety of marine transportation of oil cargoes. Tanker construction has evolved rapidly to meet the strictures of building standards which meet IMO, Flag State and Class Society requirements. Various modern build features include double hulling, back-up power generators, improved agility and brake response capacity, high quality corrosion control, collision avoidance radar, navigational instruments. Additionally, the entire cargo area of the typical Aframax tanker is subdivided into 12 to 14 smaller cargo tanks which are maintained in inert condition (i.e. oxygen content less than 5% volume), which removes any danger of fire or explosion in the tanks.</p>	Section 5.0 of Volume BA – Risk Assessment and Spill Management [Filing ID A3SAy3] TERMOI_3.9 Ship Specifications in Volume 8C (TR 8C-7) [Filing ID A3SAx2]
3.A.3	Improvement to tanker design, construction and operations	<p>Tankers are built with double hulls and segregated into 12 to 14 smaller cargo holds to reduce the possibility of cargo spills and to minimize any potential spill volume. If the tanker were to collide with another vessel or run aground, damaging the structure of the tanker, Section 14.3 of Volume BA describes the journey of a tanker and the safety considerations built into the tanker management regime.</p>	Section 14.3 of Volume BA [Filing ID A3SAx4] Journey of a Tanker
3.A.4	Records to show each tanker's safety history	<p>While Trans Mountain does not own or operate the vessels calling at the Westridge Marine Terminal, it is responsible for ensuring the safety of the terminal operations. In addition to Trans Mountain's own screening process and terminal procedures, all vessels calling at the Westridge Marine Terminal are pre-screened by the Trans Mountain Loading Master using industry databases and the Company's own records before being accepted or rejected for scheduling purposes. Section 14.3 of Volume BA describes the journey of a tanker and its safety considerations built into the tanker management regime.</p>	Sections 1 and 2 of Volume BA [Filing IDs A3SAx3 and A3SAx4]
3.A.5	KMC's involvement in tanker safety and spill prevention; Vessel Acceptance Criteria	<p>As an additional layer of oversight KMC, as the operator of the Trans Mountain Pipeline, has ship acceptance criteria that must be met by any vessel prior to their arrival at Westridge and prior to any commencement of loading operations. Vessels proposed to receive oil at the Westridge Marine Terminal are pre-screened by the Trans Mountain Loading Master using industry database and the Company's own records before being accepted or rejected for scheduling purposes. When a tanker arrives at the Westridge Marine Terminal, the Loading Master boards the tanker to conduct a physical inspection and to conduct a ship-to-shore safety meeting with the master and terminal operators. The loading Master stays on board throughout the loading process and has the authority to request the vessel to rectify any issues that might develop during the vessel's stay and to stop the loading process at any time should concerns arise. When a tanker loading is complete, the Loading Master stays on board until plots come in to move the vessel away from the dock.</p> <p>Section 14.3 of Volume BA describes the journey of a Tanker and the safety considerations built into the tanker management regime.</p>	Section 14.3 of Volume BA [Filing ID A3SAx4] Journey of a Tanker Section 3.2 of TERMOI_3.9 Technical report TR 8C-7 of Volume 8C [Filing ID A3SAx2]
3.A.6	Increase in tanker traffic (i.e. how many?)	<p>On average up to 34 Aframax class vessels are expected to call at Westridge Marine Terminal if the expansion proceeds. Section 2.1.3 of Volume BA discusses marine vessel types and the size of vessels calling at Westridge Marine terminal. Currently an average of one tanker call at Westridge Marine terminal each month.</p> <p>Currently vessels calling at Westridge Marine terminal account for approximately 2% of all marine traffic in Burrard Inlet. With the proposed expansion vessels for Trans Mountain are estimated to account for approximately 7% of the total traffic in Burrard Inlet.</p>	Section 2.1.3 of Volume BA [Filing ID A3SAx4] Existing Marine Traffic at Westridge Marine Terminal TERMOI_3.9 Ship Specifications in Volume 8C (TR 8C-7) [Filing ID A3SAx2]

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
3.0			
3.A.7	Safety of oil transport by marine tankers due to rail cars	Marine Transportation is a safer and cost efficient means of transporting oil around the world. Tanker design, construction, maintenance and operating standards have evolved over many years and improvement is reflected in the very low number of oil spills from tankers, which statistic is reflected significantly lower since introduction of double hull tankers and line peaking out to single hulls. Tankers are held to strict internationally quality standards mandated by the International Maritime Organization and Canadian Shipping Act and verified by Class Societies.	See Technical Report BC-2 TERRIMPOL 3.9 - Ship Specifications (NEB filing ID A3S412)
3.B	Tanker navigation	The established shipping lanes maintain separation between inbound and outbound traffic, which is particularly important in different areas of the Juan de Fuca Strait and Strait of Georgia, where different types of vessels use the shipping lanes to access the ports and terminals of the Puget Sound, various ferry terminals, Robert's Bank terminal, the mouth of the Fraser River, and the Burrard Inlet/Vancouver Harbour.	The International Tanker Owners Pollution Federation (ITOPF) www.itopf.com
3.B.1	Tanker navigation in shipping lanes through the Gulf Islands and adequacy of existing shipping lanes to accommodate increase in tanker traffic	Shipping lanes used by vessels calling at Westridge Marine Terminal are part of an internationally established shipping route and traffic separation scheme. Alternatives related to the tanker shipping lanes and Second Narrows, to safely accommodate more tankers, to move tankers into and out of the Westridge Marine Terminal are part of an internationally established shipping route and traffic separation scheme. Alternatives related to the tanker shipping lanes and	Section 14.3 of Volume 8A – Journey of a Tanker (Filing ID A3S4X4)
3.B.2	Ability of Vancouver Harbour, specifically Second Narrows, to safely accommodate more tankers	The impacts of increased vessel traffic through the movement restricted area (MRA) can be managed through sufficient scheduling as tanker transit times are specific to tidal schedules. This is shown from analysis of the tides and weather as put forward in response to PMV IR No. 1.2.1.	Section 2.2.2 of Volume 8A – Alternative considered related to marine transportation for the Project (Filing ID A3S4X4)
3.B.3	Tugboat escorts in Burrard Inlet and at Saturna Island	The practices and procedures relevant to the movement of tankers into and out of the Westridge Marine Terminal include the Second Narrows MRA, which are contained in the Port Harbour Operations Manual. Maneuvering areas and routes are defined in the Second Narrows MRA. The practices and procedures document regulates the movement of vessel traffic within the Second Narrows, a geographically constituted area within the Burrard Inlet through which vessels calling at the Westridge Marine Terminal must pass.	Section 14.2.4 of Volume 8A – Jurisdiction of PMV (Filing ID A3S4X3)
3.B.4	Impacts of increased tanker traffic on pleasure craft use of harbour	Regulations restrict the size and draft of tankers in relation to the available width of the channel, which is controlled by the tidal cycle. Aframax tankers are only permitted to transit during daylight regardless of whether they are empty or laden.	Section 3.2 of Appendix B to Technical Report TR-BC-10 of Volume 8C – TERRIMPOL 3.5 & 3.12 (Filing ID A3S479)
3.B.5	Volume and management of United States (US) bound tanker traffic in Puget Sound	The tanker will start its journey west to Berry Point with a minimum of three tethered escort tugs, two at the stern and one at the bow of the tanker. The tanker will enter the MRA at Berry Point and travel west through Second Narrows to enter the inner harbour of PMV and continue to travel west passing the First Narrows and enter English Bay. Once in English Bay, depending on the prevailing conditions, traffic and based upon the pilot requirements, the tanker will disconnect from the escort tugs and travel through the Strait of Georgia without tug escort. An escort tug will reconnect two nautical miles north of East Point on Saturna Island just before the tanker enters Boundary Pass. From East Point, the tanker will travel through Boundary Pass and Haro Strait and arrive at the Broads Passage. The tug will disconnect from the tanker and the two pilots will disembark from the tanker. The tug will continue unattached escort of the tanker to Race Rocks. The tanker will then travel through the Juan De Fuca Strait and exit into the Pacific Ocean passing Buoy "J". The tanker will then continue to its final destination.	Section 2.1 of Technical Report BC-2 TERRIMPOL 3.2 – Origin, Destination and Marine Traffic Volume Survey (Filing IDs ASSR1 and ASSR2)
3.B.6	Piloting of tankers	Trans Mountain will require all outbound faceted tankers traveling between Westridge Marine Terminal to Buoy "J" to be attended by at least one escort tug at all times. In certain high-risk transit areas, to be determined by pilots and regulatory authorities, the tug(s) would be tethered to the ship.	Section 10.0 of Technical Report TR-BC-12 S12 WCMRC Future Oil Spill Response Approach Plan (Filing ID ASSR1)
3.B.7	British Columbia Institute of Technology (BCIT) training facility for tanker pilots	At present, more than 250 deep draft vessels enter the port each month – about 3,000 per year. Of those 250 per month, only eight are presently destined for Westridge Marine Terminal, five are tankers. This traffic to Westridge currently represents less than 3% of the total traffic of PMV. With the proposed expansion of the TIPL and associated dock facilities, the Westridge Marine Terminal is forecast to serve 37 vessels per month, of which approximately 34 would be tankers. This increased total would then represent about 14% of today's marine tanker traffic in PMV.	Table 1.7.3 of Section 1.7.3 of Volume 3A (Filing ID A3S4R5)
		The marine EIS considers the potential effect of increased Project-related marine vessel traffic on recreational users. In Section 4.3.11 of Volume 8A, *Note: As part of Technical Update No. 3 – Part 7, a Review of Marine Recreational Vessel Activities in Burrard Inlet, was filed with the NEB.	Sections 3.11 and 5.0 of Volume 8A - Risk Assessment and Spill Management (Filing ID A3S4Y3)
		Currently PMV handles 250 vessels of all types, every month. At present, the Westridge Marine Terminal handles approximately eight vessels per month, five of which are tankers representing less than 3% of the total traffic in PMV.	Technical Update No. 3 – Part 7, a Review of Marine Recreational Vessel Activities in Burrard Inlet (Filing ID A4A44)
		Should the proposed Project be approved, the number of vessels, including tankers and barges, being loaded at the Westridge Marine Terminal could increase to approximately 37 per month in 2017, 34 of which could be tankers, or about 11% of today's total PMV tanker traffic. Within Juan de Fuca Strait, Trans Mountain predicts the Project-related increase in marine traffic will represent 6.6% of total marine traffic volume, compared to the current 1.1%.	Section 2.2 of Volume 8A (Filing ID A3S4X4) Project-related Changes to Marine Transportation and Traffic Volumes
		Ships are subject to compulsory pilotage if the vessel is over 350 gross tons for non-pleasure craft vessels, and over 500 gross tons for pleasure craft vessels. Compulsory pilotage does not apply to government vessels, ferries, or US government ships under 10,000 gross tons.	Section 5.0 of Volume 8A - Risk Assessment and Spill Management (Filing ID A3S4Y3)
		In BC coastal waters, pilots are provided by the British Columbia Coast Pilots Ltd. under license from the PPA. Two PPA-certified pilots come aboard to ensure the entire safety navigates out of Canadian waters. The PPA requires tankers to have two PPA-certified pilots on board, one to ensure safe conduct of the vessel and one to monitor the bridge crew and ship systems. The two PPA-certified pilots disembark at the Victoria pilot station near Fishtail Ledge.	Section 14.1.3 of Volume 8A – Piloting Act (Filing ID A3S4X3)
		In 2011, Trans Mountain contributed to the BCIT Marine Simulator upgrade.	Section 14.4 of Volume 8A (Filing ID A3S4X4)
		Trans Mountain continues to meet with academic institutions such as BCIT Marine.	City Burnaby IR No. 133.05a (Filing ID A3S4X4)
		Trans Mountain intends to contribute to community benefits in communities where it operates and has initiated discussions with local organizations such as BCIT (marine and land initiatives) to explore community benefit opportunities related to its priority areas of environment, safety, emergency preparedness and response, and community growth and well-being.	Section 14.2.1 of Volume 8A (Filing ID A3Y2E6)

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
3.0			
3.B.8	Do Metro Vancouver waterfies create draft restrictions at Second Narrows?	Draft restrictions and under keel clearance requirements are explained in section 2.1.1 of Volume 8A. The PMV/MVA rules for Second Narrows define the allowable beam (<i>i.e.</i> , width) and draft (<i>i.e.</i> , depth) of tankers in relation with the channel. Tankers have to maintain an under keel clearance of 10% over a channel width (2.85 times the vessel's beam) and are restricted to daylight transit. Since the centre of the Second Narrows channel is relatively deep in comparison to the vessel's draft it is typically the width of the channel that determines the allowable draft and therefore the extent to which a tanker can be loaded.	Sections 2, 1, of Volume 8A - EEA (Filing ID A35XW)
3.B.9	Demarcation of shipping routes in Burrard Inlet	The wrap wrap秉acing Metro Vancouver water lines are part of a number of factors limiting the width of the channel at Second Narrows. There is a long history of safe marine commercial activity within Burrard Inlet and similarly there is a long history of recreational vessel use in this area. All mariners are expected to adhere to established rules for ships and boats that ensure safety of all mariners. The safety regime in place today for both the existing tanker traffic, which includes traffic in the Westridge terminal has been developed and continually improved since the terminal entered service in 1953. The regime is based on regulatory requirements, local experience and international best practices. It is comprehensive, well established, and has proven to be effective. Recreational boating is very popular on the coast of British Columbia, especially the South Coast, and there are a large number of ice-free pleasure craft and pleasure craft operators. The statistics from 1999-2012 indicate there are 315,143 vessels and 418,357 operator cards. Within the port of Vancouver there are over 2,500 boats at moorage within English Bay and Burrard Inlet. However there is a seasonal pattern to the use of these vessels and on average recreation boats spend a considerable time at berth. On average about 500 incidents are reported annually to Vancouver MCTS and the majority of these incidents relate solely to recreational vessels.	A Review of Marine Recreational Vessel Activities in Burrard Inlet (NEB Filing ID AaaA44)
3.B.10	The TEP proposed enhancements to tanker safety regime	Trans Mountain has proposed additional measures that will further improve marine safety through accident prevention and reduce the consequences in the unlikely event one should occur. These recommendations can be found in Volume 8C as Technical Report TRC-12 TERMPOL 3.15 General Risk Analysis and Intended Methods of Reducing Risks (NEB Filing ID A35Z4) and are expected to raise the level of care and safety in the study area to a level above global accepted shipping standards. The TERMPOL Committee Report endorses the TEP's proposed enhancements, key amongst which are: <ul style="list-style-type: none">• Enhanced type of fender oil tankers requiring a tug to accompany the tanker throughout its entire passage to the open ocean will prevent accidents• Enhanced type of fender oil tankers requiring a tug to accompany the tanker throughout its entire passage to the open ocean will prevent accidents• Enhanced enhanced spill response program implemented by Western Canada Marine Response Corporation (WCRC) will reduce consequences. A significantly enhanced spill response program implemented by Western Canada Marine Response Corporation (WCRC) will reduce consequences. The enhanced program would more than double the area's response capacity and more than halve the response times with a number of new bases to be located along the local shipping lanes.	Technical Report TRC-12 TERMPOL 3.15 General Risk Analysis and Intended Methods of Reducing Risks (NEB Filing ID A35Z4) TERMPOL Review Process Report (NEB Filing ID A4E34)
3.C	Anchorage	PMM manages anchoring of vessels in the waters within its jurisdiction and maintains the safe operating procedures for shipusing these anchorages. Anchorage may be used by tankers calling at the Westridge Marine Terminal to wait in the event that scheduling does not permit direct berthing of a vessel at the Westridge Marine terminal. The Project does not seek to request any increases to the existing number of designated anchorage locations. Therefore Project traffic will have minimal impact on other non-Project vessels that wish to use the anchorages.	Section 14.4.2.4 of Volume 8A – PMV (Filing ID A35XX) Section 14.4.2.5 of Volume 8C – TERMPOL 3.7 TR 8C-C of Volume 8C (Filing ID A35A4) Analysis and Anchoring Elements, Second Narrows Movement Restriction Area Procedures, PMV Harbour Operations Manual (Filing ID A35A4)
3.C.1	Is an increase in anchorages required for more tanker traffic	With the expansion of Westridge Marine Terminal will result in three berths within the dock complex. Trans Mountain intends to maximize use of the three berths at Westridge and minimize use of the four existing anchorages east of Second Narrows. This means the anchorages will be available for use by all vessels, as is the current practice.	Section 4.3.11.6.2 of Volume 8A (Filing ID A35A13)
3.C.2	Will there be greater utilization of anchorages with an increase in tanker traffic	Yes, tankers will be at anchor from time to time; however the expansion of Westridge Marine Terminal will result in three berths within the dock complex. Trans Mountain intends to maximize use of the three berths at Westridge and minimize use of the four existing anchorages east of Second Narrows. This means the anchorages will be available for use by all vessels, as is the current practice.	Section 3.3.3 of TERMPOL 3.7 TR 8C-C of Volume 8C (Filing ID A35A4)
3.C.3	Vessels impacts if more tankers at an anchorage	Tankers bound for Westridge Marine Terminal are not the only vessels that call in the Port of Vancouver or anchor in Burrard Inlet near Westridge.	Section 2.2.1 of Volume 8A - Vessel Type and Marine Traffic Volume (Filing ID A35A4)
3.C.4	Noise levels of tankers at anchorage and during transit	Trans Mountain has been working with PMV and the COIBC to communicate guidelines for all guidelines that may use the anchorages near Westridge. This will also address any cases of excessive illumination of vessels at anchor. The effects of lights from ships can be mitigated to a large extent by such guidelines and shall make adherence a requirement for acceptance to call at the Westridge facility in the future. At the same time Trans Mountain will be planning the port turnaround of the tankers carefully to minimize the time tankers spend at anchor.	Section 2.2.1 of Volume 8A - Vessel Type and Marine Traffic Volume (Filing ID A35A4) Section 3.3.3 of TERMPOL 3.7 (TR 8C-C of Volume 8C) (Filing ID A35A4) Section 2.2.1 of Volume 8A - Vessel Type and Marine Traffic Volume (Filing ID A35A4)
3.D	Tanker Loading Operations	The vessel loading process at Westridge is a closed system, with oil loading, gas loading arms and displaced vapour being transmitted to onshore processing facilities via the vapour piping system. After loading operations are complete, the terminal personnel drain and disconnect the loading arms and cap off line in accordance with written terminal procedures. Vessels proposed by a pipeline shipper to receive oil at the Westridge Marine Terminal are pre-screened by Trans Mountain Loading Master using its safety database and the Company's own records before being accepted or rejected for scheduling purposes. When a tanker is at the Westridge Marine Terminal, the Loading Master boards the tanker to conduct a physical inspection and to conduct a ship-side safety meeting with the master and terminal operators. The loading master stays on board throughout the loading process and has the authority to request the vessel to rectify any issues that might develop during the vessel's stay and to stop the loading process at any time should concerns arise. When a tanker loading is complete, the Loading Master stays on board until pilots come to move the vessel away from the dock and stay on board of the required transit.	Section 4.1 of Volume 7 (Filing ID A35A15) Emergency Preparedness and Response Section 14.3 of Volume 8A (Filing ID A35A4) Journey of a Tanker Table 1.7.3 of Section 1.7.3 of Volume 3A (Filing ID A35S8) Village of Belcarra, NEB IR No. 18 (Filing ID A356W1)

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
3.O	Marine Tankers (cont'd)		
3.D.1	Process for loading tankers and potential for small spills	<p> Loading arms and vapour recovery lines are connected to the tanker. The Westridge Marine Terminal vapour destruction system is started and loading commences. Loading typically takes 24 to 36 hours depending on the size of the vessel. Operational best practices are followed in accordance with International standards.</p> <p>The Loading Master stays aboard the tanker throughout the loading process. The Trans Mountain Loading Master has the authority to request the vessel to rectify any issues that might develop during the vessel's stay and to stop the loading process at any time should concerns arise. The Loading Master also acts as the key ship-side contact for communication with the terminal.</p>	Section 14.3 of Volume 8A (Filing ID A3SA4X4)
3.D.2	Inspections of tankers prior to loading	<p>The Trans Mountain Loading Master boards the tanker to conduct a physical inspection and to conduct a ship-to-ship safety meeting with the master and terminal operators. The tanker is not expected to load unless it passes the inspection.</p>	Section 14.3 of Volume 8A (Filing ID A3SA4X4)
3.E	Dredging	<p>PMW has jurisdiction over dredging programs for Burrard Inlet and the Fraser River as part of the Port's mandate to ensure safe and unimpeded access to terminals for vessels. Regardless, no dredging is proposed by Trans Mountain for Second Narrows to accommodate increase in marine transportation for the Project. Near-shore dredging might be necessary to accommodate the expansion of Westridge Marine Terminal.</p>	Section 3.9 of Appendix B to Technical Report TR 8C-10 of Volume 8C – TEKMPOL 3.5 & 3.12, Route Analysis and Anchorage Elements, Dredging, PMW/Harbour Operations Manual (Filing ID A3SA4X9)
3.E.1	Is dredging proposed? (i.e. Second Narrows, at Westridge Marine Terminal berths)	<p>PMW has jurisdiction over dredging programs for Burrard Inlet, regardless; no dredging is proposed by Trans Mountain for Second Narrows to accommodate increase in marine transportation for the Project. Near-shore dredging might be necessary to accommodate the expansion of Westridge Marine Terminal.</p>	Sections 7, 8 and 8.11.3 of Volume 8A (Environmental and Cumulative Effects Assessments, Westridge Marine Terminal) (Filing IDs A3S1R0 and A3S1R2)
3.E.2	Impacts of dredging on tides and on West Vancouver shoreline near Ambleside	<p>The Project does not require or propose dredging of First or Second Narrows. Removal of existing material from the intertidal shores of Westridge in Burnaby will be carried out in order to develop infrastructure to accommodate the new dock complex and associated facilities. Maintenance and dredging contracts for First Narrows fall within the stringent regulations and requirements of PMW who undertake a dredging program to ensure that all vessels transite local waters safely.</p>	Section 7.6 and 8.11.3 of Volume 8A (Environmental and Cumulative Effects Assessments, Westridge Marine Terminal) (Filing IDs A3S1R0 and A3S1R2)
3.E.3	Possibility for tanker size to increase if dredging occurs in the future and the ability of KMIC to influence this. Ease of removing Second Narrows restrictions in future	<p>The maximum size of vessels (i.e. Aframax class) served at the terminal will not change as part of the proposed Project. If at any time in the future a larger vessel class is proposed, a new regulatory application and review process would be undertaken.</p>	Section 17.4 of Volume 3A, Public Consultation (Filing ID A3S0R5)
3.F	Other impacts of the proposed increase in tanker traffic	<p>Within the Burrard Inlet, Trans Mountain predicts the Project-related increase in marine tanker traffic volume, compared to the current 3%. Trans Mountain does not expect long term impacts beyond increasing the number of vessel transits.</p> <p>Trans Mountain's assessment has considered potential increase in PMW traffic, information that is available in Section 2 of Volume 8A - Marine Transportation.</p>	Section 2.0 of Volume 8A - Description of Marine Transportation Activities (Filing ID A3SA4X4)
3.F.1	Impact of wave action with increase in tanker movements on local shoreline in Burrard Inlet	<p>Some information is available in the Marine EIS found in Section 4.2 of Volume 8A - Effects Assessment, Marine Vessel Traffic Operations. There will be no detailed modeling because of negligible effect. Vessel transits can only travel at six knots in the harbour. In response to stakeholder interest on the north shore, Trans Mountain sent consultants out to watch when a vessel went by and Trans Mountain provided vessel transit details to local interest groups so they could observe vessel wake for themselves.</p>	Section 4.3.5.6.1 of Volume 8A - Disturbance to Intertidal Habitat due to Vessel Wake (Filing ID A3SA4Y3)
3.F.2	Impact of increased tanker traffic on orca populations	<p>Customers contract tankers to transport those products through existing marine shipping lanes to market. Those tankers intersect/transit shipping lanes inhabited by the Southern Resident Killer Whale (SRKW). While Trans Mountain does not own or operate the tankers that call at Westridge Marine Terminal, it is committed to encouraging and participating in collaborative solutions to aid in the recovery of the SRKW population.</p>	Sections 4.3.7 and 4.4.5 of Volume 8A (Filing ID A3SA4Y3)
3.F.3	Effects on traffic transiting the second narrows (vessel traffic and rail traffic)	<p>The marine mammal's assessment in the Application considers the effects of increased underwater noise on SRKW and modeling has been conducted. In addition, Trans Mountain supports the comprehensive industry/government advisory group that would develop effective mitigation measures to reduce potential effects of underwater noise on marine mammals in the region.</p>	Responses to NEB R No. 1.55, NEB IR No. 1.56 and NEB R No. 1.57 (Filing ID A3W9R8)
3.F.4	The impact of TIMEP on the expansion of other projects handled at PMW. E.g. Opportunities for Project to help improve the rail car transit capacity of the second narrows on CN Rail Bridge?	<p>The effect of increased tanker movements on other waterway users, particularly at the Second Narrows, has been assessed and is expected to be minimal. This is because movement restrictions at the Second Narrows affect oil tankers, especially Aframax vessels, more than non-tankers and vessels of lesser size. These other vessels have significantly more opportunities to transit the Second Narrows WPA during each tidal cycle either before or immediately after laden tankers have passed. Furthermore, non-tankers are allowed to transit the Second Narrows WPA at night and avoid those tides as well.</p> <p>The opportunity exists to further mitigate the effects of increased vessel traffic to Rail Bridge through efficient scheduling, as tanker transit times are specific to tidal schedules.</p> <p>TIMEP modeling data has been provided to PMW and CN Rail.</p> <p>Trans Mountain will continue to engage with CN, as well as PMW, and provide Project related information in order for CN and PMW to coordinate efforts towards efficient management of any effect from increase in marine traffic as a result of TIMEP.</p> <p>Potential effects to the CN Rail Bridge are discussed in Section 4.3.11.2 of Volume 8A. Mitigations for potential effects discussed Table 4.3.11.2 in Section 4.3.11.2 of Volume 8A.</p>	Section 4.3.11.2 of Volume 8A (Filing ID A3SA4Y3), Table 4.3.11.2 in Section 4.3.11.2 of Volume 8A (Filing ID A3SA4X3)

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
4.0	Diluted Bitumen		
4.A	Properties of diluted bitumen	<p>The general behaviour of diluted bitumen is similar to other heavy oils in terms of fate and weathering, and spill countermeasures.</p> <p>Trans Mountain has been exporting diluted bitumen from Vancouver for over 20 years without incident.</p> <p>Typically, once released into the marine environment it begins to "weather" depending on conditions and could reach density of fresh water. When released into water, lighter components of hydrocarbons will begin to evaporate, some will dissolve into the water column, and the remainder will float as long as the density of the remaining oil is less than the density of the water into which it was released.</p> <p>Trans Mountain tested this behaviour in brackish water under simulated conditions and oil did not sink for 10 days of the tests.</p>	
4.A.1	Corrosivity to pipeline and storage tanks	<p>The products proposed to be transported in the existing active, reactivated, and new pipeline segments are very similar to those currently being transported. These products do not contain any substances in the concentrations required to promote internal corrosion. Therefore, the Project is not considered to increase the risk of internal corrosion. Further, a recent National Research Council study has confirmed that there are no concerns in oil pipelines and tanks specific to the transport of diluted bitumen compared with the carriage of other crude oils.</p>	
4.A.2	Density and the possibility that bitumen will sink in the event of a marine spill	<p>Typically, once released into the marine environment oil begins to "weather" depending on conditions and could reach density of fresh water. When released into water, lighter components of hydrocarbons will begin to evaporate, some will dissolve into the water column, and the remainder will float as long as the density of the remaining oil is less than the density of the water into which it was released.</p> <p>Trans Mountain tested oil behaviour in brackish water under simulated conditions and oil did not sink for 10 days of the tests.</p>	
4.B	Ability to clean up spilled diluted bitumen	<p>Diluted bitumen exhibits properties and weathering behavior similar to other heavy crude oils. During the course of the testing done for the Project, the diluted bitumen floated on the water and could be retrieved effectively using conventional skimming equipment.</p>	
4.C	Human health impacts related to spilled bitumen and dilbit	<p>Trans Mountain does not move bitumen, which is a very dense product. Instead Trans Mountain moves diluted bitumen.</p> <p>Odours resulting from an oil spill can also contribute to discomfort, irritability and anxiety. The exact nature and severity of any health effects will depend on several factors such as a persons' proximity to a spill, the spill circumstances, the timeliness of emergency response and any one person's sensitivity to chemical exposures.</p> <p>Section 5.6.1.2 of Volume 8A describes possible human health effects from heavy oil spills in a marine environment.</p>	
5.0	Socio-Economic Benefits and Impacts		
5.A	Comparing the need for oil export with the risks to the environment and Vancouver's coastal way of life	<p>Vancouver's port is one of Canada's largest gateways to accessing the world economy. As the busiest port in Canada and the fourth largest tonnage port in North America, PMW facilitates trades with more than 160 world economies, with 95% of port activity focused on Canadian import/export markets. PMW handles a variety of products including petroleum, which has a long history of safe handling and transport through the port.</p> <p>TMEP is based on support from its customers — shippers who move products through the line to various markets. Thirteen participants in the Canadian producing and oil marketing business have signed binding 15- and 20-year contracts for additional capacity on the proposed expanded pipeline system to move their products, should the Project be approved.</p> <p>TMEP studies show that with additional mitigation measures in place, the risk of an oil spill will remain similar to the present. Trans Mountain recognizes that risk assessments are important to municipalities and stakeholders. Risk communications will be a component of the engagement programs Trans Mountain commissioned as part of the Technical Review Process. The results of the quantitative risk assessment are presented in Section 5.0, Volume 8a of the Application.</p>	
5.A.1	Human health impacts related to noise, air quality (normal operations and accidents) at Westridge Marine Terminal	<p>Overall the health assessment in the Application found that during construction of the Westridge Marine Terminal, the maximum predicted levels of exposure to the chemicals of potential concern (COPC) (acting either singly or in combination) remained below the levels of exposure that would be expected to cause health effects. In the majority of cases, the exposure levels were well below those associated with health effects. Therefore it is unlikely that people would experience health effects as a result of the expansion of the Westridge Marine Terminal.</p> <p>Overall the health assessment in the Application found that as a result of normal vessel operations, the maximum predicted levels of exposure to the COPC (acting either singly or in combination) remained below the levels of exposure that would be expected to cause health effects. Based on the weight of evidence, it is unlikely that people would experience health effects from exposure to the potential increase in marine vessel traffic under the cumulative effects assessment.</p> <p>In the case of accidents or malfunctions, potential socio-economic effects of credible worst case and smaller oil spills will vary depending on the exact location and nature of the incident. In the event of a marine spill, the tanker owner, CCG, WCCRC, and TCC will initiate spill response and notify municipal, provincial and federal authorities responsible for the protection of public health. Evaluation of affected areas will occur if health and safety of the public is threatened and this will present opportunities for short-term exposure to hydrocarbon vapours and potential for acute effects. Involvement of local, provincial and federal public health officials will also ensure that controls to limit long-term exposure and chronic effects potential will be implemented if warranted. Examples of such controls include closure of recreational or commercial fishing, beach closures, the issuance of drinking water or food consumption advisories, and forced evacuation. This will limit long-term exposure for all pathways, including inhalation, ingestion contaminated food, fish, plants, or animals; drinking from a contaminated source or incidental skin contact. A risk-based approach will be taken on the known health effects of the COPC studied for the health assessment; potential effects would likely be dominated by irritation of the eyes and/or breathing passages, possibly accompanied by nausea, headache, light-headedness, and/or dizziness. These effects could range from barely noticeable to quite noticeable, depending on the exposure circumstances and the sensitivity of the individual exposed. Odours might be apparent, dominated by a hydrocarbon-like smell, with some prospect for other distinct odours due to the presence of sulphur-containing chemicals in the vapour mix. The odours themselves could contribute to discomfort, irritability and anxiety. The exact nature and severity of any health effects are further explored in Section 5.6.1 of Volume 8A in the Application.</p>	
5.B	Benefits for non-pipeline communities or non-landowners	<p>Trans Mountain plans to maximize local, regional and Aboriginal employment opportunities by working with communities and industry associations in the vicinity of the Project. Communities who are not along the pipeline route may also benefit from socio-economic opportunities associated with pipeline design, construction and operations.</p> <p>Trans Mountain will provide more information about community investments and submit this to the NEB in Consultation Update No. 3 that will be filed in Q1 2015.</p>	

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
5.0			
5.B.1	Benefits for Aboriginal Peoples living along the coast (Shipping lanes)	TMEP is engaging with Aboriginal groups long the coast to seek their input through meaningful discussion, as to how they can see appropriate community benefits from TMEP.	Appendix D of Volume 8A - presentation to the Esquimalt First Nation (Filing ID A3SA422)
5.B.2	Procurement opportunities for local small business operators (Aboriginal and non-Aboriginal)	The construction and operation of the Project will create substantial economic benefits and opportunities locally and regionally. Numerous direct, indirect and induced employment and procurement opportunities will be created related to project construction. There will also be direct, indirect, and induced employment effects and procurement opportunities during operations.	Section 7.2.2 of Volume 5G – Employment and Economy (Filing ID A3S17)
5.C	Potential financial impact of a worst-case marine spill	<p>When construction of the Project is at its peak, the anticipated workforce will reach up to 4,500 workers. Trans Mountain plans to maximize local, regional and Aboriginal employment opportunities by working with communities, construction companies and industry associations along the pipeline corridor.</p> <p>Potential socio-economic effects of credible worst case and smaller spills will vary depending on the exact location and nature of the incident, and will be influenced by factors including:</p> <ul style="list-style-type: none"> • distance from human settlements • size and population density of nearby human settlements (e.g., rural versus urban areas) • particular patterns of resource use in the vicinity (i.e., commercial, recreational, traditional) • key economic activities and sectors in areas that may be affected by the spill, in particular the presence of resource-based economic activities (i.e., tourism, commercial fisheries, traditional uses by Aboriginal people) <p>Potential socio-economic effects of credible worst case and smaller spills will vary influenced by factors such as the spill volume, location, nature of the resources affected, the extent of traditional and non-traditional activities in the affected area, and the duration of clean-up and recovery</p> <p>Commercial fishing and aquaculture is an important economic activity in the Salish Sea region and available information on important fishery areas and efforts are provided in <i>Fishery Resources Survey (TERPSOL_3.3): Volume 8C</i>. A marine spill, particularly a large one that affects one or more important commercial fishing areas, would likely result in loss of commercial fishing income due to regulated or voluntary closures and possibly reduced demand due to concerns about fish quality.</p> <p>Aboriginal people have historically used or presently use the striping route to maintain a traditional lifestyle and continue to use marine resources throughout the Salish Sea region for a variety of purposes including fish, shellfish, mammal and bird harvesting, aquatic plant gathering, and spiritual/cultural pursuits as well as through the use of waters within the region to access subsistence resources, neighbouring communities and coastal settlements.</p> <p>A marine spill, particularly a large one that affects one or more important commercial fishing areas, would likely result in loss of commercial fishing income due to regulated or voluntary closures and possibly reduced demand due to concerns about fish quality. Following the Exxon Valdez Oil Spill, emergency listing closures were instituted for salmon, herring, crab, shrimp, rockfish and salemaef immediately following the spill. All fisheries were re-opened the next year.</p>	Section 12.5 of Technical Report 5D-2 – Socio-Economic: Technical Report of Volume 5D (Filing ID A3S25)
5.D	Liability regime in Canada in the event of a marine oil spill	<p>Ship-source spill: If oil were released from a vessel owned or operated by the Responsible Party, In addition to the ship owner's insurance, there are a variety of funding sources available to cover the costs of cleaning up such a spill under the <i>Marine Liability Act</i> (MLA) through the Ship Source Oil Pollution Fund.</p> <p>Although liability for such spills would not fall to the marine terminal owner, Trans Mountain has established programs to reduce the potential for ship-source spills. Vessels must pass a rigorous screening process set out by international and local governing bodies and Trans Mountain before being allowed to accept oil from the Westridge Marine Terminal. By ensuring that only the safest vessels dock at Westridge, Trans Mountain reduces the risk of a ship-source of spill.</p> <p>In Canada, liability and compensation for ship-source oil pollution are governed by the <i>Canada Shipping Act</i> and MLA. Both acts reflect Canada's commitment to international conventions administered by the IMO, such as those regarding the International Oil Pollution Compensation Funds (IOPCS).</p> <p>Conventions limit the liability of the Responsible Party (ship owner) and establish sources of funding for clean-up and compensation for damages. Up to \$1.32 billion is available for an individual spill.</p> <p>In May 2014, the Government of Canada announced it will enhance the liability and compensation regime by introducing legislative and regulatory amendments. These include:</p> <ul style="list-style-type: none"> • Allow the full balance of the <i>Ship Source Oil Pollution Fund</i> (SOPF), currently about \$400 million, to be available in the event of an oil spill. • In the event that all available sources of funds have been exhausted by spill-related claims, the Government of Canada will ensure compensation is provided to eligible claimants, and then recover those payments from the marine oil transport industry through a levy. • Align the SOPF with international funds by covering pure economic losses suffered by people who have had a loss of earnings but whose property has not been contaminated by an oil spill. <p>In May 2014 the Government of Canada enhanced the liability and compensation regime by introducing legislative and regulatory amendments which include:</p> <ul style="list-style-type: none"> • In the event that all available sources of funds have been exhausted by spill-related claims, the Government of Canada will ensure compensation is provided to eligible claimants, and then recover those payments from the marine oil transport industry through a levy 	Section 5.6.1.1 of Volume 8A – Commercial Fishing (Filing ID A3S503) Section 5.6.1.3.2 of Volume 8A – Aboriginal Culture and Subsistence Use (Filing ID A3S503). TERPSOL_3.3: Volume 8C, TR8C-3 (Filing ID A3S450). Sections 1.4.1.6 and 5.5.3 of Volume 8A - Marine Transportation (Filing IDs A3SA44 and A3SA43).
5.D.1	Adequacy of \$1.3 billion to cover the costs of a spill	<p>Conventions limit the liability of the Responsible Party (ship owner) and establish sources of funding for clean-up and compensation for damages. Up to \$1.32 billion is available for an individual spill.</p> <p>In May 2014, the Government of Canada announced it will enhance the liability and compensation regime by introducing legislative and regulatory amendments. These include:</p> <ul style="list-style-type: none"> • Allow the full balance of the <i>Ship Source Oil Pollution Fund</i> (SOPF), currently about \$400 million, to be available in the event of an oil spill. • In the event that all available sources of funds have been exhausted by spill-related claims, the Government of Canada will ensure compensation is provided to eligible claimants, and then recover those payments from the marine oil transport industry through a levy. • Align the SOPF with international funds by covering pure economic losses suffered by people who have had a loss of earnings but whose property has not been contaminated by an oil spill. <p>In May 2014 the Government of Canada enhanced the liability and compensation regime by introducing legislative and regulatory amendments which include:</p> <ul style="list-style-type: none"> • In the event that all available sources of funds have been exhausted by spill-related claims, the Government of Canada will ensure compensation is provided to eligible claimants, and then recover those payments from the marine oil transport industry through a levy 	Section 1.4.3 (Volume 8A, Filing ID A3SA43). Alan R IR No. 1.21 (Filing ID A3SA49). Alan R IR No. 1.21 (Filing ID A3S450).
5.D.2	Risk that taxpayers may have to cover some of the costs associated with a spill	<p>In the event of an oil spill in a marine environment, funding is available in a tiered system:</p> <ul style="list-style-type: none"> • The first level of funding for emergency response, clean-up and compensation is provided by the responsible party's protection and indemnity insurance. Ship owners and operators obtain insurance coverage against third-party liability through a protection and indemnity (P&I) club which would be a member of the International Group of P&I Clubs (<i>Transport Canada</i> 2013). The responsible party's liability is limited based on vessel tonnage to a maximum of about \$3.76 million. • If the responsible party's insurance is not adequate to cover costs and compensation, funds are available through the IOPC (\$17.250 million) and the Supplementary Fund Protocol (\$833.34 million). Lastly, Canada maintains its own source of funding called the SOPF, which has up to \$61.29 million of funding available. <p>In May 2014 the Government of Canada enhanced the liability and compensation regime by introducing legislative and regulatory amendments, which will strengthen the liability coverage for the regime.</p>	Alan R IR No. 1.21 (Filing ID A3SA49) TC background released May 13, 2014: http://news.gc.ca/web/article.do?lang=eng&dID=1374580&ctryID=2014&fileType=s&title=ar&date=15-07-2012&path=/&minPath=1&currPage=1&tgtPage=1&rtID=2012&currPath=0&minPath=0&dID=1374580&ctryV3ID=2012&currPathV3=0&minPathV3=0 Section 14.4.6 of Volume 8A – MLA (Filing ID A3SA41).
5.D.3	Ability to recover costs from responsible parties	<ul style="list-style-type: none"> • The first level of funding for emergency response, clean-up and compensation is provided by the responsible party's protection and indemnity insurance. Ship owners and operators obtain insurance coverage against third-party liability through a protection and indemnity (P&I) club which would be a member of the International Group of P&I Clubs (<i>Transport Canada</i> 2013). The responsible party's liability is limited based on vessel tonnage to a maximum of about \$3.76 million. • If the responsible party's insurance is not adequate to cover costs and compensation, funds are available through the IOPC (\$17.250 million) and the Supplementary Fund Protocol (\$833.34 million). Lastly, Canada maintains its own source of funding called the SOPF, which has up to \$61.29 million of funding available. <p>In May 2014 the Government of Canada enhanced the liability and compensation regime by introducing legislative and regulatory amendments, which will strengthen the liability coverage for the regime.</p>	Section 14.4.6 of Volume 8A – Canadian Oil Spill Preparedness and Response (Filing ID A3SA41).
5.D.4	Responsibility for terminating source spill	<p>Trans Mountain is committed to keeping pipelines safe, and to protecting employees, the public and environment. Trans Mountain has developed a suite of programs focused on preventing pipeline failure, as well as minimizing their impact if they do happen. Trans Mountain has detailed ERPs for all the facilities, and in the event of an emergency, Trans Mountain will immediately mobilize all of the necessary resources to minimize its impact on the public and environment.</p>	Volume 7 - Risk Assessment and management of Pipeline and Facility Spills (Filing IDs A3SAV5 to A3SA42)

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
5.O	Socio-Economic Benefits and Impacts (cont'd)	If an oil spill occurs in the marine environment, multiple organizations quickly take coordinated action to mitigate public and environmental effects. WCMC has mutual aid agreements with emergency response organizations in the State of Washington.	Volume 8A - Marine Transportation, Section 5.0 (Filing ID A3S4Y3)
5.F	Cross-border responsibilities in the event of a marine oil spill	Trans Mountain continues to meet with academic institutions such as trade schools and high schools regarding skills development and equipment funding.	Volume 8A, Section 14.2.11 (Filing ID A3S4X4)
5.F.1	KMC collaboration with trade schools and apprenticeship training	Trans Mountain intends to contribute to community benefits in communities where it operates and has initiated discussions with local organizations such as trade schools to explore community benefit opportunities related to its priority areas of environment, safety, emergency preparedness and resilience, and community growth and well-being.	Sections 5.7 and 7.2.7 of Volume 5B (Filing ID A3S4Y and A3S1ST).
5.F.2	Employment and training for local workforces	Trans Mountain plans to maximize local, regional and Aboriginal employment opportunities by working with communities and industry associations in the vicinity of the Project.	Volume 8A, Section 3.2.1.3 (Filing ID A3S4X4)
5.G	Increasing the number of jobs available in BC	Trans Mountain plans to maximize local, regional and Aboriginal employment opportunities by working with communities and industry associations in the vicinity of the Project.	Table 1.7.4 of Section 1.7.4 of Volume 3A (Filing ID A3S0R5).
5.H	Investment in local clean technology companies including local clean (renewable) energy companies	As a long-time industry and community member, Trans Mountain is committed to working with residents, regulatory authorities and other stakeholders on environmental initiatives.	City of Port Moody IR No.1.3.17 (Filing ID A3X5Z8).
6.O	Investment in local initiatives such as herring and bird population restoration projects	KMC, as the operator of TMPL, are the Kinder Morgan Foundation have funded many local environmental education initiatives since 2006, benefiting schools, local stream keepers and other stewardship groups. Trans Mountain restoration project near Westridge Marine Terminal in 2007, which involved the creation of an artificial reef where boulders and rip-rap were placed. This project was managed by the Pacific Wildlife Foundation.	Table 1.7.4 of Section 1.7.4 of Volume 3A (Filing ID A3X5Z8).
6.A	Regulation Process	Consultation on TMEP was initiated two years prior to filing the Application with the NEB on December 16, 2013.	http://www.transmountain.com/translateralprocess
6.B	NEB requirements for the Application	In early April 2014, the NEB determined the Application is complete and issued a Hearing Order which lays out the key steps and schedule for the process to consider the Project. On July 15, 2014 the Board is released revised hearing events and steps table in Procedural Directive No. 4, which updates and replaces the table found in Procedural Directive No. 2.	http://www.transmountain.com/translateralprocess (Filing ID A3S4X4)
6.B.1	Is shipping aspect within NEB review scope?	The Filing Manual has been developed by the NEB to provide direction regarding the information the Board would typically expect to see addressed in a filing.	http://www.transmountain.com/translateralprocess (Filing ID A3S4X4)
6.B.2	What will be a marine risk assessment, if so who will do the assessment?	Marine risk assessments, both qualitative and quantitative for normal operations as well as for accidents and malfunctions were completed for the Application. In addition, TMEP selected to undergo a TERMPOL review of navigational safety related to the proposed Project. All information is available in Volumes 8A and 8C.	http://www.transmountain.com/translateralprocess (Filing ID A3S4X4)
6.C	Release of the entire ESA Assessment and other Application data for stakeholder review	The entire ESA is provided in Volumes 5A, 5B, 5C and 5D (Filing IDs A3S1L2 to A3S2L9)	http://www.transmountain.com/translateralprocess (Filing ID A3S4X4)
6.C.1	Does HIRRA consider accidents or only normal operations?	Normal operations as well as accidents and malfunctions are considered in the HIRRA for Westridge Terminal as well as Marine Transportation.	http://www.transmountain.com/translateralprocess (Filing ID A3S4X4)

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
6.0	Regulatory Process (cont'd)		
6.C.1 (cont'd)	See above	See above	HTRA Westridge Marine Terminal Part 1 (Filing ID A3Y1G1) and Part 2 (Filing ID A3Y1G1)
6.D	Site of study area (<i>i.e.</i> expand beyond Burrard Inlet)	<p>The Application includes a discussion of methodology and how study areas and indicators were chosen. Stakeholder input was considered in the selection of a RSA beyond Burrard Inlet to ensure the regional effects of the increase Project-related marine vessel traffic could be considered.</p> <p>The local study area was expanded to include the inbound and outbound marine shipping lanes the area between the shipping lanes and a two km buffer extending from the outermost edge of each shipping lane.</p> <p>The RSA comprised of a large portion of the Salish Sea, including the inland marine waters of the southern Strait of Georgia and Juan de Fuca Strait and their connecting channels, passes and straits. The RSA generally centred on the marine shipping lanes which extend from the Westridge Marine Terminal through Burrard Inlet, south through the southern part of the Strait of Georgia, the Gulf Islands and Haro Strait westward past Victoria and through Juan de Fuca Strait out to the 12 nautical mile limit of Canada's territorial sea.</p>	Detailed descriptions of the element-specific RSAs are provided in Section 4.2 and associated rationales are provided in Section 4.3.2 (Volume 8A).
6.E	Consideration of upstream and downstream effects on NEB's review of the oil sands, or the downstream use of the oil transported by the pipeline.		The NEB has issued a list of 12 issues it will consider in reviewing Trans Mountain's Application. The Board does not intend to consider the ESA effects associated with upstream activities, the development of
6.F	Impacts of changes to legislation (Fisheries Act, NEP vs DFO oversight, etc.)		Trans Mountain does not foresee changing its approach to the ESA in light of recent legislative changes.
6.G	TERMPOL process	<p>The Termopol Review Process (TRP) is a voluntary process whereby Trans Mountain conducts a prescribed set of studies, described in Tempol/Review Process 2017 (TP7-45E), and submits these to a Tempol Review Committee chaired by Transport Canada and includes representatives of other federal agencies. The purpose of the review in this case is to assess the safety and risks associated with tankers movements to, from and around Westridge Marine Terminal resulting from the Project. The review includes consideration of:</p> <ul style="list-style-type: none"> • Ship design and operation • Navigational and physical characteristics of the approaches to the terminal • Terminal design and infrastructure • Risk and accident analysis along the transit route and at the terminal, and the related mitigating measures • Contingency plans • Pollution prevention program 	<p>The TERMPOL studies can be found in Volume 8C of the Facilities Application</p> <p>The TERMPOL Review Committee report submitted to the National Energy Board on December 11, 2014 can be found on the NEB website https://docs.neb-one.gc.ca/-/-/enquiry/diffrect/2010949052/548311956726/2392872449025245187/2384380/C353-4.3 - TMEP TERMPOL Report December 11, 2014 - A4FBZQ.pdf?objId=2554077&vernum=-2.</p>
6.H	PHM permit review of Westridge Terminal Expansion	<p>The Westridge Marine Terminal is located within Port Metro Vancouver (PMV). Under the Canadian Marine Act, PHM sets rules and regulations within its jurisdiction focused on maintaining the safe and efficient movement of marine traffic and cargo. PMV's marine operational responsibilities include oversight on upgrade projects and permitting, as such PMV will conduct an environmental review of the proposed expansion of Westridge Marine Terminal following the NEB process.</p>	See evidence filed by Port Metro Vancouver with the NEB as part of the TMEP hearing on May 26, 2015 (NEB Filing ID A4FSQ)
6.I	Level of detail provided in IR responses	<p>The NEB process has identified a very specific scope of issues they will evaluate for the facilities application; however, Trans Mountain made every effort to directly and thoroughly answer questions of intervenors and the NEB. Questions were asked that were outside the NEB's list of issues. Trans Mountain acknowledged that in its responses but also attempted to provide the additional information Trans Mountain has committed to engage with stakeholders in parallel with the NEB review process to provide stakeholders with opportunities to discuss issues of concern with Trans Mountain if they were not satisfied with the level of information provided through the NEB hearing.</p>	
7.0	Corporate Policy		
7.A	Sustainability	<p>Across all its operations, Kinder Morgan strives to provide for the safety of the public, its employees and contractors, protect the environment, comply with applicable laws, rules, regulations, and permit requirements, and operate and expand efficiently and effectively to serve our shareholders and customers.</p> <p>Trans Mountain has been safely loading tankers and barges since 1956 from the Westridge Marine Terminal in Burnaby, BC. Trans Mountain is responsible for, and has internal standards and procedures relating to marine safety at the Westridge Marine Terminal, including rigorous inspections and monitoring for each vessel. In addition, Trans Mountain works closely with PMV, TC, the Canadian Coast Guard, and other agencies to ensure the safety and efficiency of this traffic. Trans Mountain has consistently worked to bring parties to the table to advance opportunities to improve the safety and efficiency of tanker traffic.</p> <p>While Trans Mountain does not own or operate the vessels calling at the Westridge Marine Terminal, it is responsible for ensuring the safety of the terminal operations. In addition to Trans Mountain's own screening process and terminal procedures, all vessels calling at Westridge must operate in accordance to rules established by the IMO, ITC, the IOPA, and PMV. Although Trans Mountain is not responsible for vessel operations, it is an active member in the maritime community and works with BC maritime agencies to promote best practices and facilitate improvements to ensure the safety and efficiency of tanker traffic in the Salish Sea.</p>	Section 12.1 of Volume 2 – About the Applicant (Filing ID A3SQ08) Section 11.6 of Volume 8A – Marine Transportation (Filing ID A3SAX3)

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
7.0	Corporate Policy (cont'd)		
7.A.1	Since on upstream issues, GHG emissions and climate change	Trans Mountain is assessing the carbon impact of constructing and operating the proposed expansion and its related facilities. The GHG impacts are outlined in the EIS submitted with the Application. A carbon management plan will be developed to mitigate/reduce emissions as much as possible. For upstream or downstream impacts outside of Trans Mountain's jurisdiction or control, Trans Mountain is acting as a catalyst to influence the industry to help address issues upstream and downstream from the pipeline.	Section 34,4,6 of Volume 4A (Westridge Marine Terminal) [Filing ID A3S019] Sections 4,2, 4,3 and 4,4 of Volume 8A, [Filing ID A3S4X3 and A3S4V3].
7.A.2	Environmental benefits – will KMC ensure environmental investments to compensate for potential environmental harm from expanded operations	Engagement with stakeholders to better understand local concerns and priorities for environmental protection and enhancement is ongoing. Trans Mountain will provide more information about environmental Sections 4,2, 4,3 and 4,4 of Volume 8A describe GHG and Air Quality Assessments and potential investments for marine components of TMEP.	
7.A.3	KMC should set expectations of vessel behavior (i.e. noise, lights)	KMC sent a letter to PHV Operations to request support in educating vessel operators about common community complaints about local shipping activity.	
7.B	Export	Trans Mountain commissioned third party expert opinion from IHS Global Canada Limited (IHS) to examine the oil market supply and demand. Although outside the reporting period for this Update, on September 25, 2015 Trans Mountain replaced the direct evidence prepared by IHS with an expert report prepared by Mure Stanoi (Filing ID A3Z774). Total Western Canadian crude production is forecasted to grow at 3% annually from 2013 to 2037, resulting in 3.3 million barrels per day (mbbl) of incremental production over the same period. Oil sands crude production is expected to grow by about 3.23 million bbl/d between 2013 and 2037, from 1.95 million bbl/d to 5.17 million bbl/d. Despite a lack of demand growth in US refining markets, Canadian crude exports to the US are expected to approximately double from 2013 to 2035, representing growth of more than 2.5 million bbl/d. Canadian crude exports will account for a growing share of US crude consumption, and will lead to a dramatic drop in US imports from other countries. This will occur despite an increase in US crude production. This suggests that there is a need for additional transportation capacity to provide access to both North American and international markets.	Table 7.6,4-2 of Section 7.6,4,4 of Volume 5B Human Occupancy and Resource Use [Filing ID A3S19] Section 33,1 of Volume 2 – Supply and Demand [Filing ID A3S0R0]
7.B.1	Export of undefined product (minimize environmental spill risk, create more jobs in Canada)	Our industry has been safely transporting crude in pipelines for over 30 years and conventional crude for over 60 years. Transporting diluted oil is safe as transporting other types of crude oil. This is because there is virtually no difference between the two products.	Table 1.7,6 Section 1.7,7 of Volume 3A [Filing ID A3S0RS];
7.B.2	Product destination	Trans Mountain transports crude oil, semi-refined and refined products, for use in local markets and for export – on behalf of its customers. In the same way a highway does not own the cars travelling on it, Trans Mountain does not own the product transports. Any product moved in the pipeline must meet Trans Mountain's tariff requirements. These are the specifications that must be followed in order for the product to be moved in the Trans Mountain Pipeline.	Section 3,3 of Volume 2 [Filing ID A3S0R0].
7.B.3	Support of Chinese growth and use of petroleum	The toll on the expanded TMPL will enable western Canadian oil producers to deliver crude oil to tidewater at a very attractive rate, both for long-term shippers and spot shippers. The evidence provided by IHS demonstrates that the Project will provide access to markets that yield attractive networks, and Trans Mountain is confident that the expanded TMPL system will attract considerable spot volumes during its operating life.	Section III of Appendix A to Volume 2 [Filing ID A3S0R1].
7.B.4	Type of products moved by the pipeline and by tank	Demand for most types of crude is forecast to increase in China and India, as refining industries in these countries expand and evolve to meet domestic product requirements. An increasing need for imported crude of all types suggests that interest in Canadian oil sands crudes should continue. China is generally expected to move towards more complex refining configurations as capacity is added with the addition of cracking, coking and hydro processing capacity.	Table 5,1,7 of Appendix D to Volume 4A – Representative Properties of Crude Oils [Filing ID A3S025] NEIR No. 1,93a [Filing ID A3M9f9] Province SC IR No. 1,1,26a – Attachments 1 and 2 [Filing IDs A3Y3A4, A3Y3A5 and A3Y3A6].
8.0	Emergency Response		
8.A	Desire to observe/participate in Emergency Response exercise	The objective of response exercises is to practice the knowledge and skills received in training, identify areas of future training priority, identify areas to improve current emergency procedures or equipment, engage with local response communities, and to share/exercise learnings to ensure a smooth response in the event of an incident.	Sections 4,6,2 and 4,7,1 of Volume 7 – Exercises and Continuing Education Program [Filing ID A3S4V5]
8.B	Adequacy of boom technology (existing technology, Commit to best available technology)	The function of oil containment boom is to contain, concentrate and reduce the spreading of spilled oil. Containment boom is an engineered product constructed according to guidance published by many international organizations. As there is a robust market for the product, the manufacturers of containment boom are constantly refining and testing their products to maintain the best available technology." TC in consultation with the CCG, EC, and other stakeholders codified containment boom and other response resources according to the environment in which they will operate (Transport Canada 1995). These TC equipment designation of shoreline, sheltered and unsheltered water capability will define boom and other resource selection and its appropriate placement at the various locations between the Westridge Marine Terminal and Buoy J at the Pacific Ocean.	Belcarra IR No. 1,3 [Filing ID A3X6W1]

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
8.O	Emergency Response capability of WCMRC	<p>Trans Mountain is a founding member of WCMRC, the TC-certified marine spill response organization with a mandate to respond to spills in navigable waters on the BC coastline. WCMRC's mandate is to ensure there is a state of preparedness in place and to mitigate the impact, when an oil spill occurs.</p> <p>WCMRC is certified to Tier 4, which is the highest certification level available to a Canadian spill response organization and has more than the capacity required to respond to an oil spill up to 10,000 tonnes. Trans Mountain has been working collaboratively with WCMRC to enhance its emergency preparedness and response capacity.</p> <p>WCMRC's current mandate includes response to a spill in the marine environment at the Westridge Marine Terminal. The Westridge Marine Terminal also serves as a base for a WCMRC response vessel, which ensures rapid response in the event of a spill. For the Westridge delivery line releases in 2007, WCMRC was instrumental in the response and high recovery rate of oil achieved.</p> <p>WCMRC maintains its certification under the Canada Shipping Act, 2001 by undertaking a number of equipment deployment exercises, tabletop exercises, and oil spill response training courses, and scenarios, within the certification period (WCMRC 2013a). The current capacity of WCMRC to respond to an oil spill is further detailed in Section 5.5.1 of Volume 8A. TMEP has proposed that WCMRC expands its capacity and resources in accordance with Table 5.5.3 of Section 5.5.2 in Volume 8A.</p>	Section 4.8, 13 of Volume 7 – Industry Initiatives [Filing ID A3SAV5]
8.D	ER Capabilities are not in place/adequate for Westridge Marine terminal	<p>ERPs are available for the TMP, including pump stations, terminals (Edmonton, Kamloops, Sumas, and Burnaby) and the Westridge Marine Terminal. These plans detail precriptive procedures, activities, ERPs are utilized in coordination with the Control Point and Field Guide manuals which provide complementary information specific to the spill location including predetermined control points and response tactics.</p> <p>The current ERP for TMP provides a generic response to a spill for any location along the pipeline, whereas the ERPs for Terminals/Kankakee and for Westridge Marine Terminal are location-specific. All plans have a common structure and format and address key elements. These include:</p> <ul style="list-style-type: none"> • responder health and safety • internal and external notifications • spill site assessments • spill containment and recovery • protection of sensitive areas • multiple hazards <p>Each of the plans also includes detailed information on the ICS, includes the Environmental Health and Safety Policy, regulatory background, and documents the approach to training and exercises.</p> <p>KMC has a rigorous training and response exercise program that ranges from detailed equipment deployment drills to full ICS management and organization training and deployment. Training is provided to operations and head office staff, and at locations along the pipeline.</p> <p>The goal is to ensure that employees receive the training necessary to protect themselves, the public, the local community and the environment during a spill or emergency.</p> <p>At a minimum, all employees who could be involved in emergency response will receive ICS level 100 training, which provides a general overview of the ICS structure, procedures, processes, and standard forms. The Incident Management Team (IMT) members receive increased detail and complexity of ICS training depending on their role following the widely recognized training format of ICS-200 (ICS-200 and ICS-400 level). The level of training is commensurate with the anticipated roles and responsibilities of personnel, with efforts to cross-train key personnel for ICS Leadership roles such as incident commander, deploy incident commander, and the sectors other roles.</p>	Sections 4.4 and 4.6 of Volume 7 – Training [Filing ID A3SAV5]
8.F	Public Availability of KMC Emergency Response Plans (non-redacted)	<p>Kinder Morgan Canada (KMC) acknowledges the interest of intervenors to seek more information about the existing EERP documents, and reference materials related to the Trans Mountain Pipeline System, which is why KMC has a redacted copy of the existing Emergency Response Plan (Filing ID A3SAV5) in Ruling No. 50 (Filing ID A4G519) the NEB determined that it was satisfied that sufficient information has been provided from the existing EERP documents to meet the Board's requirements at this stage in the process."</p> <p>It is KMC's intent to continue to share unredacted versions of the EERP documents with agencies tasked with ensuring public safety. KMC-EERP is shared, tested, and regularly exercised with federal, provincial and local agencies. The EERP meets regulatory requirements and KMC works with emergency planners and emergency responders to maintain relationships and to ensure their awareness of KMC's system, as well as mutual awareness of joint exercises and programs.</p> <p>The Application, Volume 7, Section 4.8 outlines the process to enhance Kinder Morgan Canada's (KMC) existing emergency management programs (EERP) as they relate to the Trans Mountain Pipeline system to address the need of the Project (Filing ID A3SAV5). The final programs will be developed in a manner consistent with the National Energy Board's (NEB or Board) draft conditions of approval related to the consultation plan for the Project. KMC will file with the NEB a consultation plan related to KMC's EERP review, that will include consultation scope, objectives, preliminary list of regulatory authorities, communities, Aboriginal groups with whom KMC will engage, and a preliminary list of consultation locations and timing, as well as any other information that the NEB requires. This consultation plan will describe the methods that will be used to track commitments made during consultation and to incorporate them into the EERP, including its Emergency Response Plans. As part of this program KMC will periodically file reports with the NEB on progress of its EERP review including summaries of interested parties consulted and how their comments were considered.</p> <p>KMC will file with the NEB the revised Emergency Response Plan for the pipeline as part of the approval conditions for the Project. The plan will demonstrate KMC's ability to prepare to respond to, recover from, and mitigate the potential effects of any type of release to the Trans Mountain Pipeline system. Filing of the Emergency Response Plan will include, for the NEB's consideration, a final report on the consultation process as well as confirmation that an independent third party has reviewed and assessed the Emergency Response Plan and that KMC has considered and incorporated the comments generated by the independent review and assessment into the plan.</p>	<p>Redacted copies of KMC existing Emergency Response Plans [Filing ID A3SAV5]</p> <p>NEB Ruling No. 50 [Filing ID A4G519]</p> <p>Section 4.8 of Volume 7 [Filing ID A3SAV5]</p> <p>Updated draft conditions of approval issued August 12, 2015; [Filing ID A3S1G2]</p>
8.G	Emergency Response times for marine oil spills	See Table 5.5.3 of section 5.5.2 of Volume 8A. (NEB Filing ID A3SAV6)	

TABLE B-1 Cont'd

Code	Interest/Issue/Concern	Trans Mountain Response	Reference
8.H	Emergency Response (cont'd)		
8.I	Notification protocol for marine oil spills specific to local go/no-go's	<p>Immediate notification is a key element of any emergency response action. The health and safety of employees and the public is paramount and, as a result, immediate notification is essential.</p> <p>The first step in many incidents is to confirm that an emergency condition exists. Reports may come from a number of sources including automated detection systems, on-site KMC or other Personnel, and members of the public and/or Emergency Services (Police, Ambulance, Fire).</p> <p>If a notification is made to a local office or pump station, the Kinder Morgan representative receiving the call will generally implement the following actions:</p> <ul style="list-style-type: none"> • Notify the Control Centre and regional office/Qualified individual • Dispatch field personnel to the site to confirm damage and conduct preliminary assessment • Notify their immediate supervisor and provide assessment results. <p>Appropriate actions taken by the Control Centre personnel may include, but are not limited to:</p> <ul style="list-style-type: none"> • Shut down affected line segment if there is an indication of a leak • Isolate line segment • Depressurize line • Start internal and external notifications • Mobilize additional personnel as required. 	
8.J	PHN role in emergency response	<p>For emergency incidents affecting the Fraser River or Burrard Inlet, KMC personnel would contact Canada Coast Guard and Marine Communications and Traffic Services (MCTS) at 604-775-8920 and Port Metro Vancouver at All marine spills must be reported within one hour to MCTS for转出 to other Federal Government agencies.</p> <p>The Transportation Safety Board (TSB) 87039-780 and Emergency Management British Columbia 800-363-3456 would also be among the initial external calls made. The local 911 call centre will be notified of any incident to inform the call centre operators of the problem or potential problem so they do not allocate additional unneeded resources to the event.</p> <p>Once notified, Emergency Management BC typically undertakes municipal notification; however, there are many instances where Trans Mountain may have already been in contact with municipalities, such as when first responders are already on scene (e.g. through public notification of the incident).</p> <p>Local government representatives will be invited to participate in the response as part of Incident Command System (ICS). Depending on the incident and requirements, this will more likely be into the command post, or other areas of the ICS response team. This is standard ICS operating practice and Trans Mountain responders are trained in ICS. Trans Mountain won't open Emergency Operations Centres (EOCs) such as what first responders are used to. The incident command post is initially at the scene then it will be relocated to a more appropriate facility offsite. As provided for in ICS, it is KMC's preference to enter into a Unified Command with the municipal, provincial and federal agencies to ensure a safe and thorough response to any emergency. This allows the communities to put forth their objectives and priorities along with other members of Unified Command.</p> <p>Notification protocols are among the topics Trans Mountain plans to engage on as part of the enhancement of the current Emergency Management Program (EMP) to accommodate the proposed expansion. Engagement for the EMP enhancement is ongoing with local first responders (fire, police and ambulance), health authorities, emergency managers and other provincial and federal agencies as appropriate in each pipeline community.</p> <p>Answer provided by PHN at Tri Cities Emergency Management Workshop at Fraser River Discovery Centre on May 13, 2015:</p> <ul style="list-style-type: none"> • Port Metro Vancouver's role is to facilitate the safe and efficient movement of trade • We are not first responders in an emergency; however, we do work with others in emergency situations and our 24/7 Operations Centre acts as a coordination hub for relaying information. • We maintain procedures, and have equipment and personnel in place to address a variety of emergencies both on land and on water. • If there was an incident on the Fraser River [or Burrard Inlet] we would dispatch one of our operations desks to be in the vicinity to assist if needed. Port Metro Vancouver would participate in the ICS structure. • More information at www.portmetrovancouver.com 	<p>Port Metro Vancouver Website: http://www.portmetrovancouver.com/aboutus/securitestrategic/emergencemanagement/ Accessed August 14, 2015</p>
8.K	Wildlife recovery / emergency management	<p>In emergency response, a wildlife branch of the operations section forms within the Incident Command System. Generally, the best response strategy is to prevent wildlife from being impacted by the product via an effective monitoring, reconnaissance and hazing program. Wildlife impacts are unavoidable, proactive search and relocation to quickly retrieve contaminated animals is imperative. The sooner an animal is brought in to care for treatment, the better it is, and the faster it will progress through the wildlife care centre and return to the wild.</p> <p>For incidents involving the Fraser River or Burrard Inlet, our spill response contractors such as WCIRC have hazing equipment that can be deployed.</p> <p>Trans Mountain will engage with appropriate agencies and animal rescue/rehabilitation organizations on the wildlife management protocols in the efforts to enhance the current EMP to accommodate the proposed expansion.</p>	<p>Section 13.0 – Wildlife Care at Westridge Terminal Emergency Response Plan (NEB Filing ID A4D3E1) Accessed August 14, 2015</p>
9.A	Engagement	<p>Trans Mountain is committed to undertaking open and thorough engagement with Aboriginal groups and stakeholders along the pipeline route and marine corridor. Extensive dialogue with landowners, Aboriginal groups, government, communities and stakeholders will ensure these views are included in our plans and legacies for the proposed Expansion Project and Facilities Application.</p> <p>As part of the stakeholder engagement program, Trans Mountain has implemented, and continues to conduct an open, extensive and thorough public consultation process commonly known as Stakeholder engagement. Stakeholder engagement includes all aspects of the proposed pipeline corridor between Strathcona County, AB and Burnaby, BC. The stakeholder engagement program was designed to take into account the unique and varying needs of the communities along the Project corridor, and to be responsive and adaptive to the feedback received throughout the various stages of the engagement program. In addition, the feedback received has been incorporated into the program and has influenced the design of subsequent phases of stakeholder engagement.</p>	<p>Section 13.0 of Volume 3.A (Filing ID A33082) Design of Stakeholder Engagement Program</p>



TRANSMOUNTAIN

Marine Consultation Summary No. 1
January 5, 2015

APPENDIX C



January 2, 2015

Dear Neighbour,

For more than two and a half years, we have been talking with and listening to people in our pipeline communities to hear their questions and concerns and address their feedback. We want to continue the conversation.

This letter provides you with some information about next steps and how you can continue to provide us your feedback. Most recently, we hosted a Telephone Town Hall on December 3, 2014 – and we thank those who participated. The feedback we receive makes our Project better. A recap of the town hall can be found on our blog at www.blog.transmountain.com - it is titled Recap: December 3rd Telephone Town Hall.

Ongoing Community Engagement

As set out by the NEB, the next step in the regulatory review process is a round of Information Requests, Motions and Comments. This information exchange will occur in Q1 2015.

In late spring of 2015, we will be back in the community to continue our ongoing dialogue, including sharing information about detailed engineering and seeking input as we continue to develop our plans in anticipation of construction, should the Project be approved.

As we prepare to revisit communities, we have heard from some about the format and topics they are interested in. We would like to hear from you. Please fill out the brief survey (enclosed) to tell us how you would like to continue the conversation. Please respond in this postage paid envelope by Friday January 23, 2015.

December 1, 2014 NEB Filing

On December 1, 2014, we filed an update with the National Energy Board (NEB). This filing includes the *Westridge Delivery Pipelines Routing Update*, which addresses proposed routing for the delivery pipelines between our Burnaby Storage Terminal and Westridge Marine Terminal under Burnaby Mountain.

We looked at routing options between the two terminals – the proposed revised pipeline corridor through Burnaby Mountain by either a Horizontal Directional Drill (HDD) or a tunnel and the proposed revised alternative corridor through Burnaby streets. Given the strong public interest in this Project in the City of Burnaby, we are requesting the NEB examine both the proposed revised pipeline corridor using a tunnel option via Burnaby Mountain as well as the proposed revised alternative corridor through Burnaby streets in its public interest determination. It was determined from geotechnical information that the horizontal directional drill (HDD) construction method is not technically acceptable. However, from information gathered, we are able to confirm the feasibility of a tunnel under Burnaby Mountain. A tunnel option is preferred to avoid residential areas and urban infrastructure, to reduce environmental effects during construction and operation, and to minimize risk during operation.



If the Project is approved with the proposed tunnel option, we would consider relocating the existing Westridge Delivery Pipeline to the tunnel under Burnaby Mountain. Our proposal to relocate the existing pipeline is not part of the Application currently before the NEB and would be part of a separate regulatory application.

We look forward to receiving your response to the survey. In the meantime if you have any questions please do not hesitate to contact us at info@transmountain.com, 1.866.514.6700 or visit our website at www.transmountain.com.

Yours truly,

A handwritten signature in black ink that reads "Lizette Parsons Bell".

Lizette Parsons Bell
Project Lead, Stakeholder Engagement & Communications
Trans Mountain Expansion Project
Kinder Morgan Canada



Tell Us How You Want to Continue the Conversation

For more than two and a half years, we have been talking with people in our pipeline communities to hear and address their questions, concerns and feedback. We are looking for your feedback about how you want to continue the conversation. We invite you to participate in a brief survey. You can go online to www.transmountain.com/burnaby-survey or respond below and return to us in the pre-paid enclosed envelope.

1. Which of these would be of most interest to you (check all that apply)?

- Telephone Town Hall
- Online feedback forum
- Panel discussion (in person and live broadcast)
- Roundtable discussions
- Community Open House
- Speaker Series with Q&A
- Radio Call-in Shows
- TV Talk Shows
- Webinar with Q&A
- Workshops
- One-on-One Meetings
- Other – Please specify: _____

2. What topics are of most interest to you (check all that apply)?

- Climate Change
- Construction
- Consultation
- Economic Benefits
- Environmental Remediation



- Health Considerations
- Jobs and Employment
- Marine Traffic
- NEB Process
- Nuisance Issues
- Parks and Protected Areas
- Property Values
- Routing
- Safety and Emergency Preparedness
- Water Quality/Quantity
- Other – Please specify: _____

3. Please tell us which area you live in so we can customize opportunities to each area.

Burnaby Mountain Westridge neighbourhood Other

4. Would you like to receive mail by post or email with updates and information? You can withdraw your consent at any time.

By entering my personal information, I consent to receive mail by post or via email from the survey author's organization based on the information collected.

Mail Email

First Name _____

Last Name _____

Street Address _____

Postal Code _____

Email Address _____

Thank you for your feedback. We appreciate your time and input.

If you have any questions, we can be reached at info@transmountain.com or 1-866-514-6700. You can also follow us on Twitter @TransMtn.

Snider, Stephanie

From: Hobenshield, Lexa
Sent: Thursday, April 23, 2015 5:25 PM
To:
Subject: Neighbourhood Information Session: June 3

Thanks for your patience. We have just today firmed up the date & time of our next neighbourhood information sessions. It will be the evening of June 3rd. There will be more information coming soon about the specifics.

In terms of progress on our plans, we continue work to optimize the design of the dock and terminal layout. On June 3rd, our project team will be on hand and would be pleased to provide you with an update and answer any questions you have.

I look forward to seeing you then. If you have specific questions or wish to discuss further, I welcome hearing from you.

Sincerely,

Lexa Hobenshield

*Manager, External Relations Kinder Morgan Canada
Stakeholder Engagement & Communications Trans Mountain Expansion Project*
P: 604.809.9869 | E: lexa_hobenshield@kindermorgan.com
Twitter: @TransMtn | @LexaHobenshield

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From:
Sent: Thursday, April 23, 2015 5:12 PM
To: Hobenshield, Lexa
Subject: ???

Lexa - can you plse tell me what is going on? I sent you an e-mail in Jan. - no response. Then another one Apr. 7th - only received an auto response and nothing since. I'd appreciate knowing what is going on with the dock and if you are not available to tell me, can you put me on to someone who is.

Snider, Stephanie

From: Hobenshield, Lexa
Sent: Wednesday, April 08, 2015 7:33 AM
To:
Subject: RE: Hi

Thanks for the note. When I had reached out in January, I was hoping to seek your input on engaging with the Westridge neighbours. (You may recall we issued a survey asking how you would like to receive information.) At that time, I had a brief window between regulatory steps, so apologies for not following up. We have been planning our next steps in the engagement program, so I should have a better idea what this looks like in the next week. I will circle back with you shortly.

I hope you are enjoying the lovely spring like weather.

Cheers! Lexa.

From:
Sent: Tuesday, April 07, 2015 1:36 PM
To: Hobenshield, Lexa
Subject: Hi

Lexa - Wondering what's happening at your end. Last time I heard from you, you were wanting to get together for a coffee - that was in January. I sent you a message re setting up a date but haven't heard in over 3 months. Would really like to know what is going on with the dock situation etc. Please bring me up to date. have moved to Kelowna to be with family but wouldn't have sold if it hadn't been for the pipeline issue. Talk soon I hope,

From: Hobenshield, Lexa <Lexa_Hobenshield@kindermorgan.com>
Sent: Wednesday, December 03, 2014 11:42 AM
To:
Subject: Seeking your advice please

I was hoping that you might have some time to meet me for coffee on Friday afternoon if convenient for you. I know that the recent work on Burnaby Mountain received significant media coverage and you and your neighbours may have questions and concerns about it. I am interested in your thoughts about how we can best share information with you and seek the neighbourhood's input to our plans in the coming months.

I also hope that you are planning to participate in this evening's telephone townhall to ask Ian Anderson questions. (If you haven't done so already, you can register for the townhall at www.transmountain.com – at the bottom of the page).

I look forward to hearing from you.

Sincerely,
Lexa Hobenshield
Manager, External Relations Kinder Morgan Canada
Stakeholder Engagement & Communications Trans Mountain Expansion Project
P: 604.809.9869 | **E:** lexa_hobenshield@kindermorgan.com
Twitter: @TransMtn | @LexaHobenshield

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Trans Mountain Crews & Equipment Gone from Burnaby Mountain

Burnaby (November 29, 2014: 2:00 pm) This morning, Trans Mountain finished removing the final pieces of supplies and equipment from the second of two worksites on Burnaby Mountain. This includes the removal of all equipment on Burnaby Mountain.

Earlier in the week, crews successfully completed the geotechnical investigations at one test hole on Burnaby Mountain to the goal depth of 183 metres, as well as geo-physical testing in and around Barnet Marine Park. The depth reached at the second test hole was 70 metres.

Trans Mountain is confident we have obtained a sufficient level of information from the geotechnical and geophysical work completed over the past week, together with the engineering, geophysical and geotechnical work, and other data already compiled to complete our analysis. The work will be reflected in the December 1, 2014 filing to the National Energy Board (NEB); however ultimately it will be up to the NEB to determine.

Trans Mountain is in the process of cleaning up the worksites on Burnaby Mountain to the best of our ability under the current weather conditions. We have also been assessing the damages to the Burnaby Mountain Conservation area as a result of the protests and are willing and prepared to work with the City of Burnaby to return the area to prior condition. Trans Mountain is committed to minimizing any impacts and restoring, or compensating for, any disturbance on our worksites to Burnaby Mountain. With the current weather conditions it may require revisiting the site at a later date.

We recognize the impacts the work has had to neighbours and the community and we want to acknowledge all those who were involved in completing the work safely. Trans Mountain would also like to acknowledge the role of the RCMP in their enforcement of the injunction and court order and thank them for their professionalism in dealing with our crews and all those on the Mountain.

Ultimately, if the Project is approved, there will be no surface disturbance on Burnaby Mountain because the tunnel, at its deepest point, will be approximately 160 metres below surface. The tunnel option through Burnaby Mountain is a result of consultation with the community, its request to see the existing pipeline rerouted, and our objective to minimize disruptions to landowners, neighbours and road users.



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September 25, 2014

Dear Neighbour,

You are receiving this letter as an important neighbour of the Westridge Marine Terminal in Burnaby. In December 2013, Trans Mountain filed a Facilities Application with the National Energy Board (NEB), seeking approval for the Trans Mountain Expansion Project. Subject to approval, the project will twin the existing Trans Mountain Pipeline, which has been in operation since 1953. Trans Mountain has been communicating and engaging with communities along the route for more than two years in order to further refine our routing and planning. Trans Mountain has operated in Burnaby for 60 years. Maintaining a positive, constructive and open relationship with our neighbours is a key priority both during our proposed expansion and into the future.

After engaging with residents of the Westridge community, we have heard loud and clear many of our neighbours in the area would prefer to see our new proposed pipeline routed through Burnaby Mountain. This would avoid the residential neighbourhood, along with city streets. We share this preference and, as you are likely aware, we have been attempting to perform the necessary environmental and geotechnical research to assess whether this option is technically viable. We are committed to ensuring the work is done with the least impact possible and to fully restore any areas we disturb. We would also like to explore deactivating the existing pipeline through the Westridge neighbourhood and rerouting it through Burnaby Mountain, should our studies and testing tell us it is feasible. The ability to route through Burnaby Mountain would avoid several private homeowners and minimize community disruptions.

We are also very conscious that if we are unable to conduct these necessary studies soon, we may have to pursue our alternate route through city streets in the Westridge neighbourhood. You may notice some crews in your neighbourhood doing survey work over the next week. As we have not yet been able to fully explore the Burnaby Mountain route, we need to continue our planning and work for the neighbourhood route as well. I cannot emphasize strongly enough this is not our preferred option, and we would much prefer to work together with residents in order to minimize impacts.

Working constructively with the City and with local residents has always been a key priority for Trans Mountain. We have had close to 150 early interactions with the City of Burnaby, but have yet to receive constructive feedback that would enable us to refine our routing based on the City's preferences. Unfortunately, we have been unable to communicate openly with the City of

Burnaby in recent months. Instead, we are in a position where we are communicating indirectly through city solicitors, the city's external legal counsel, and through numerous motions through various regulatory bodies, along with the BC Supreme Court.

Our hope is we will be able to continue with our studies, pending a ruling from the National Energy Board, that reinforces our rights to undertake these studies- and keep working to minimize impacts for the residents of Burnaby.

As always, we welcome any further questions or your thoughts and feedback as how to best optimize our route, minimize disruption and maximize safe operations. Please do not hesitate to be in touch at info@transmountain.com or 1.866.514.6700.

Regards,



Lizette Parsons Bell
Lead, Stakeholder Engagement and Communications;
Trans Mountain Expansion Project



Trans Mountain Expansion Project

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August 27, 2014

Dear Neighbour,

As you are likely aware, Trans Mountain is proposing to twin its existing Trans Mountain Pipeline that has been providing safe and efficient transportation of petroleum products to the west coast for more than 60 years. For the Burnaby Storage Terminal to the Westridge Marine Terminal portion of the pipeline, based on feedback received from community residents, a trenchless route through Burnaby Mountain would be the least impactful to the surrounding community. Choosing a route through Burnaby Mountain would move this section of the pipeline away from residential areas, and avoid four private properties that the alternate route would cross near the Westridge Marine Terminal. To confirm the pipeline location, further on-the-ground field work is required on City of Burnaby owned lands. We want to tell the people of Burnaby if our preferred route is viable and therefore need to undertake this preliminary exploratory work.

Over the past two years we have been undertaking field work and are currently in the field with continued studies along our proposed route. This work would be an extension of this ongoing assessment. The work in Burnaby would begin immediately and occur over the next several weeks, with the exception of Archaeology, which will continue into December. The studies will consist of two types of investigations:

1. Environmental Field Studies

We are committed to minimizing our impact. The work includes several categories of studies. Most involve observation but a few include minor surface disruption (e.g. with a hand auger or shovel). Any disruption will be restored immediately following the disturbance. Where possible, access will be on foot and on existing road or pathways to minimize environmental disturbance. This work will be used to assess feasibility of routing and potential mitigative strategies. A brief description of the surveys is below.

General Field Study - non-intrusive field visits along the study corridor to gain a broad understanding of the study areas in the vicinity of the study corridor. This includes visualizing the information

pertaining to the existing field conditions, assessment of the accessibility of the area, pattern and distribution of watercourses, and vegetation and its composition.

Watercourse Assessment – will gather data to support modelling channel characteristics, water level and flow regime, and fish habitat information. Data will be gathered regarding a number of aspects including, gradients, channel and bank widths, bank heights and slope, fish spawning locations, pools versus riffles, substrate types, flow volumes, overhanging vegetation, channel alignment, presence and locations of oxbows and overflow channels, and high water marks. If deemed necessary by the study crew, some scientific information may also be obtained regarding fish species presence/absence.

Wildlife Survey - identify potential wildlife presence and site-specific wildlife habitat issues associated with the construction and operation of the Project. These may include breeding bird, amphibian, raptor and waterbird surveys, as well as a general review of habitat suitability and wildlife habitat features. Data collected (by walking along the study area will include: all wildlife detected (heard/seen/sign); any habitat feature (e.g., stick nest); information on habitat; photographic documentation; and GPS coordinates.

Terrestrial Ecosystem Mapping Survey – a shovel will be used to dig a small hole (a shovel blade wide and 30 cm deep) to look at the soils. The hole will be filled back in and vegetation replaced within an hour of digging the hole to minimize disturbance. The crew will collect difficult to identify plants following best practice guidelines for rare plant surveys, to only collect a single plant when there are more than 50 of them. These surveys will collect information on dominant vegetation, wildlife habitat and soil properties.

Vegetation Survey - conduct and identify potential vegetation issues or rare plants, rare ecological communities and invasive species encountered by the Project. Rare plant surveys will focus on segments of the study area, which traverse native vegetation with high rare plant potential as well as representative habitats. Plant biologists will walk the study area recording every plant species observed (including mosses and lichens where possible) and will frequently stop to confirm uncertain species. When rare species are discovered, the biologists will: determine the area and abundance of the population; record detailed site information; take photographs; record GPS coordinates; and make a sketch. During the rare plant surveys, weeds and additional species commonly considered invasive or weedy (whether they are agronomics, native species or introduced species) and their density and distribution will be recorded for all locations where they occur within the study area.

Nonvascular surveys (e.g. fungi, lichens) may be recommended for select areas of high sensitivity, where the potential for nonvascular species at risk exists or sensitive sites of high rare non-vascular plant potential are identified. Non-vascular plant surveys will be conducted in areas identified as having a high potential to contain rare or unique species. In these areas intensive site-based collecting would be undertaken. Voucher specimens or portions of specimens will need to be taken in order to identify nonvascular plant species.

Soil survey - map the soils and provide baseline soils and landscape information for each soil map unit delineation within the study area to inform construction and operation of the Project. The soil survey will be conducted using a hand held hand auger. Soil investigations within the study area will involve digging soil pits to a maximum depth of 1.2 m with a hand auger with a diameter of 0.05 m to map soil resources. Approximately two to three holes will be dug every kilometer. All holes will be filled in after the soils are described in detail and no soil samples will be taken offsite as part of the will field surveys.

Archaeological Survey - identification and assessment of new and previously recorded archaeological and paleontological resources within the study area. The number of sites to visit will be based on archaeological site potential. All areas of moderate to high archaeological potential within the study area will be assessed during ground reconnaissance fieldwork. Ground reconnaissance may include shovel testing, up to 1 m in depth. The visual inspection will be augmented by subsurface testing in areas of moderate to high archaeological potential. All identified sites will be mapped, photographed, recorded, and the sites' relationship to the proposed developments impact zone will be determined.

Traditional Knowledge Studies - The collection of Traditional Ecological Knowledge (TEK) with potentially affected Aboriginal communities is typically facilitated through their participation in the biophysical field studies for the Project as described above. The field studies for the Project will be discussed with Aboriginal communities that indicate an interest in participating in these studies. These studies include watercourse assessments, wildlife surveys, vegetation, rare plant and rare ecological community surveys.

2. Geotechnical assessment:

As part of its feasibility investigations, Trans Mountain's contractor plans to drill six 6-inch geotechnical boreholes in the Burnaby Mountain area. While four of these boreholes are on private property, two are planned within the Burnaby Mountain Conservation Area. In addition, the contractor

will also complete geophysical surveys using both seismic refraction and electro-resistivity tomography.

A 10m by 20m cleared area is required to complete safe drilling operations. Vegetation disturbance will be minimized. This work will include a heli-staging area and additional support vehicles. A 20m by 8m staging area is planned west of Centennial Way. On completion of drilling, Trans Mountain will restore the site to as close to their original condition as practical.

To minimize the period of drilling within the Burnaby Mountain Conservation Area, drilling is planned for 24 hours per day in two 12 hour shifts during the investigation. Previous tests indicate that noise levels generated by this work are not anticipated to exceed Burnaby City bylaw limits. During this work we will ensure public safety.

Geophysical surveys are also proposed. These are non-intrusive survey using electro-resistivity tomography and seismic refraction. These may include an intermittent sharp banging sound and laying temporary cables along the ground surface. This work will try to avoid brushing, although minimal vegetation removal may be required where dense vegetation is encountered.

This investigation will form part of a wider geological study with SFU, to better understand the subsurface geology of Burnaby Mountain area. This wider study is sponsored by Trans Mountain and will use the results of the drilling program. The results will be available for public use.

Should you have any questions or if you would like to meet to discuss this work; we would welcome your inquiry to info@transmountain.com or 1.866.514.6700.

Sincerely,



Carey Johannesson
Lead, Land Team



Trans Mountain Expansion Project

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22 August 2014

As representatives of the Westridge neighbourhood

Dear for the Westridge neighbourhood,

RE: Proposed Trans Mountain Expansion Project – Technical Update #2 Filing to National Energy Board

As part of our commitment to continuing to work with the community on the proposed Trans Mountain Expansion Project, attached is information outlining sections of our August 22, 2014 Technical Update #2 Filing to the National Energy Board as they relate to Burnaby.

This Update provides additional information about the Project, with a focus on routing, risk assessment, and engineering design. Routing details on the Westridge Delivery Line will be filed in late 2014 and are not included in this update. We will continue to keep you informed.

Additional Information

The entire August 22, 2014 filing can be viewed on the National Energy Board's website at www.neb-one.gc.ca and will be available on the Trans Mountain website shortly.

Additional information about the proposed Trans Mountain Expansion Project is available on our website (www.transmountain.com).



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If you have any questions or would like to set a meeting to discuss this filing, please contact me at 604-809-9869 or lexa_hobenshield@kindermorgan.com. Should you require clarification on any aspect of this filing or wish to meet to discuss this filing, we would be pleased to do so at your convenience.

Sincerely,

Lexa Hobenshield
Kinder Morgan Canada, External Relations manager
Stakeholder Engagement & Communications, Trans Mountain Expansion Project



Trans Mountain Expansion Project

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BACKGROUNDER: AUGUST 22, 2014
Trans Mountain Expansion Project Technical Update #2
Sections of Interest in Burnaby

Part 2.1 Facilities Update – Burnaby Mountain Terminal

In this filing Trans Mountain provides an update on the conceptual design development for the proposed expansion of Burnaby Terminal. Minor changes include removal of proposed Tank 79 and existing Tank 73, and increasing in the capacity of proposed Tank 74 and 76.

These changes reduce the potential geographic impact in the unlikely event of a fire emergency at the Terminal, moving the area of potential impact further away from the residential neighbourhood to the south and east of the Burnaby Terminal property.

Engineering development activities will continue until early 2015. Prior to detailed engineering design commencing in Spring 2015, further refinements to the Burnaby Terminal conceptual design are expected.

Part 2.2 Facilities Update – Westridge Marine Terminal

In this filing Trans Mountain provides an update on the conceptual design development for the proposed expansion of Westridge Marine Terminal (WMT).

Layout

Trans Mountain has been working to optimize the conceptual layout of WMT to reduce the overall footprint.

A reduction of the footprint of the expansion at WMT has been achieved by shifting Berth 1 loading platform (and the vessel at Berth 1) approximately 50 m to the east, shifting Berth 2 loading platform (and the vessel at Berth 2) approximately 30 m to the east, shifting the central core of the dock complex slightly to the east and canting the main access trestle to be perpendicular to the Berth 1/2 access trestle, and eliminating both the two planned synthetic crude tanks and the relief tank, and reorganizing the remaining infrastructure on the foreshore to be more efficient.

These changes will reduce the visual impact of the proposed WMT expansion to residents of the Westridge neighbourhood and reduces the new foreshore infill area by 45%, subject to completion of geotechnical work.



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Trans Mountain, working with two of the leading international vendors of vapor recovery technology, has made progress on further definition of the scope of the two proposed vapor recovery units. This work means that there is no need for proposed synthetic crude tanks which were to have been used for absorption of the regenerated VOC vapor stream. The proposed vapor recovery systems are anticipated to provide very high capture and recovery efficiencies. The revised design concept and emissions projections have been used in the updated air quality modelling.

Pipeline Surge

Although Trans Mountain has not yet completed the Burnaby-Westridge delivery pipelines transient hydraulic study ("surge study"), initial analysis indicates that the proposed surge relief tank is no longer required.

Engineering development activities will continue until early 2015. Prior to detailed engineering design commencing in Spring 2015, further refinements to the WMT conceptual design are expected.

Part 3.0 Terrestrial and Terminals Air Quality Update

This filing includes an updated air quality assessment based on updated design changes at Burnaby and Westridge Marine Terminals.

As the detailed engineering for the Project evolves, the assumptions used in the technical air quality assessment have been refined. This technical update reflects the improvement to a number of assumptions and provides the summary of the updated modelling parameters, assumptions and dispersion model results.

With this new information, Trans Mountain is able to meet all the applicable Metro Vancouver ambient air quality objectives and odour detection thresholds. Additional modelling is planned in late 2014 to further inform engineering design and support vapor recovery equipment vendor selection.

Part 4.0 Preliminary Marine Fish Habitat Offset Plan

The Preliminary Marine Habitat Offsetting Plan includes information on preferred offsetting methods, and additional offsets identified during consultation with interest groups. The plan is based on preliminary engineering and Westridge layout and will continue to be developed as detailed design progresses.

The final offsetting strategy will be determined through discussions with DFO, participating Aboriginal communities and other interested parties. Trans Mountain is committed to working with all interested parties to identify the most appropriate means of offsetting impact to marine fish and fish habitat. The offsetting measures presented in the submitted report are intended to form the basis for initiating discussions with various participating groups.

4/6



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Follow-up meetings will be held with specific stakeholders and a second round of Offsetting Workshops will be held in 2015, prior to the submission of the final marine fish habitat offsetting plan. All additional offsetting measures identified during future consultation will be discussed with DFO, Port Metro Vancouver and Transport Canada.

It is anticipated that these discussions may lead to the identification of additional options, or to the refinement of the measures presented in the report. Additional offsets will be examined for feasibility and may be included in future plans.

Part 8.0 Data on Recreational Boat Traffic in Burrard Inlet

The proposed Trans Mountain Expansion Project (TMEP), with commensurate future increase in the number of tanker calls into Burrard Inlet to load at an expanded Westridge marine terminal, has raised concerns among recreational boaters about the safety of these small vessels.

A review of marine recreational activities in Burrard Inlet shows that while over 5,250 boats may be at moorage within English Bay and Burrard Inlet, there is a seasonal pattern to the use of these vessels. On average, recreational boats spend considerable time at berth. When travelling on the water, these vessels are observed by Radar and Automatic Identification System (AIS), if fitted, by Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS) and other vessels in the area.

Several recommendations proposed by Trans Mountain are under review by the Termpol Review Committee that will, if accepted, further enhance the safety of all mariners in the central harbour. This includes demarcation of a shipping route between the Second Narrows and Port Moody, giving a wide berth to the expanded Westridge marine terminal. The dock complex itself will have navigation marks and lights, and the oil spill booms around the vessels will be marked in a similar fashion. This will ensure that all marine users are able to identify the area during day or night and keep clear. In addition, Trans Mountain has requested Transport Canada to expand outreach activities at marinas in order to improve the level of information amongst boaters in order to benefit all users of these waterways.

It is concluded that current and already proposed future additional safeguards are sufficient to comprehensively mitigate potential effects of TMEP on marine recreational vessels.

Part 9.0 Westridge Spill and Clean-up: Effect on Local Property Values

In response to concerns about reduced property values as a result of the proposed Trans Mountain expansion project, Trans Mountain engaged Dr. Tsur Somerville to conduct a review of the effect on local property values from the Westridge Spill and Clean-up.

Dr. Somerville, using data from Landcor, provided an analysis of the impacts from the Westridge spill on property values in the Westridge community, compared to other adjacent communities.

5/6



2844 Bainbridge Avenue, PO Box 84028, Bainbridge, Burnaby, BC, V5A 4T9 CANADA



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Study methodology used hedonic (regression) analysis to distinguish the property value impact from the pipeline and spill from other possible influences including time and housing type. His analysis found that while there may have been short-term value reductions, there were no permanent negative effects on either property prices or assessed values.

In addition to this filing, a follow-up seminar for area relators is being organized to help inform this group of stakeholders who frequently have questions about this topic.

A follow-up study is being completed addressing potential property value impacts from proximity to the existing Trans Mountain pipeline. These results will be available later in 2014.



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Hello,

As part of our commitment to keep you informed on the proposed Trans Mountain Expansion Project, I am pleased to provide you with an update about a recent filing with the National Energy Board. On August 1, 2014 Trans Mountain filed Technical Update No. 1 and Consultation Update No.2, which contain the following sections:

Part 1: Routing Update expands on the corridor revisions under consideration since filing the Application in December 2013, and as identified in NEB IR's No. 1.12, 1.40, and 1.84. Corridor revisions include 3 in Alberta, 3 in BC Interior (Hargreaves to Hope) and 10 in BC Lower Mainland (Hope to Burnaby).

Part 2: Risk Assessment is in response to various intervenor information requests and the NEB IR No. 1.81a, where Trans Mountain committed to provide the results of the risk assessment for Line 2 and the new Westridge delivery pipelines. It is also in response to NEB IR No. 1.81b, where Trans Mountain committed to provide a risk ranking for the various wall thicknesses for the new pipeline segments. The Report also addresses mitigation strategies that are being developed to either eliminate risk completely or significantly reduces it.

Part 3: Human Occupancy and Resource Use (HORU) provides an update on land uses for revised corridor (Burnaby to Westridge delivery segment only) in response to the NEB's June 3rd information request to Trans Mountain.

Part 4: High-Sensitivity Wetland Areas provides an overview of High-Sensitivity Wetland Areas for the Lower Mainland in response to Environment Canada IR 1.041. Wetlands of Special Concern, as per Environment Canada request, will be included in Technical Update No. 2, which will be filed by August 22, 2014.

Part 5: Consultation Update No. 2 provides an update to Public Consultation, Aboriginal Engagement and Landowner Relation activities for the period of January 1 to April 30, 2014. Our next consultation update is planned for Q1 2015.

We will continue to provide you with information as the Project progresses. If you have any questions, please contact me directly by email at lexa_hobenshield@kindermorgan.com or phone at 604. 809.9869.

Regards,

**Lexa Hobenshield**

Manager, External Relations Kinder Morgan Canada

Stakeholder Engagement & Communications Trans Mountain Expansion Project

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Trans Mountain Expansion Project Office

Kinder Morgan Canada Inc.

2844 Bainbridge Avenue, PO Box 84028 Bainbridge, Burnaby, BC V5A 4T9

Toll Free: 1-886-514-6700 | **E:** info@transmountain.com | **W:** transmountain.com | **t:** [@TransMtn](#)

THIS IS EXHIBIT "16"
Referred to in the Affidavit of
Michael Davies
Sworn before me this 26th
day of October A.D. 2017



SHANNON DAVIDSON
Barrister & Solicitor
Osler, Hoskin & Harcourt LLP
Suite 1700, Guinness Tower
1055 West Hasting Street
Vancouver, BC V6E 2E9
Telephone: 604.692.2754



PORT of
vancouver

VANCOUVER FRASER PORT AUTHORITY
PROJECT AND ENVIRONMENTAL REVIEW
PROJECT PERMIT

PER No.:	15-322
Tenant:	Kinder Morgan Canada
Project:	Westridge Marine Terminal Upgrade and Expansion Project
Project Location:	7065 Bayview Drive, Burnaby
VFPA SID No.:	BBY 092
Land Use Designation:	Port Terminal and Port Water
Applicant(s):	Kinder Morgan Canada
Applicant Address:	Suite 2700, 300- 5 Avenue S.W., Calgary, Alberta T2P 5J2
Category of Review:	Designated Project
Date of Approval:	August 28, 2017
Date of Expiry:	August 31, 2021

PROJECT DESCRIPTION

For the purposes of this project permit (the Permit), the project is understood to include the following works on Vancouver Fraser Port Authority (VFPA) property:

General Description

- Construction of a new three-berth marine Terminal including new pile-supported berth structures extending approximately 250m into Burrard Inlet, new circular sheet pile retaining wall and land infill
- The construction of associated office and control building, utilities, fire suppression systems and mechanical systems
- Construction of new in-water habitat and riparian planting areas
- Sections of new transfer and delivery pipelines and related equipment
- Decommissioning and demolition of certain facilities at the Terminal

Site Preparation

- Modifications and relocation of existing utilities
- Modifications to existing mechanical systems at the Terminal
- Removal of existing Pier 59
- Surface soils and vegetation clearing along the foreshore extension area
- Installation of an in-water circular sheet pile retaining wall
- Densification of existing soils, placement of new imported fill, and compaction of fill behind the retaining wall to create new land in Burrard Inlet
- Rip-rap removal in the foreshore area for construction of a new dock complex and extension into the water
- Removal of abandoned culverts within the foreshore extension area

Marine Berth Expansion and New Operations Facilities

- Demolition and decommissioning of the existing Terminal berth and associated facilities
- Installation of approximately 152 in-water piles to support new berth structures (piles range in size from approximately 1.4 m to 2.0 m in diameter)
- Construction of a new three-berth dock complex encompassing approximately 275,000 m² of water lot area
- New mooring dolphins, pipeline loading and delivery infrastructure, fender systems, vehicular access and utility connections as part of the new dock complex

- Construction of new in-water rock habitat areas (approximately 9,000 m²) and riparian plantings (approximately 2,350 m²)
- Sections of three new 762 mm diameter crude oil delivery pipelines including construction of pipe segments under the existing CP rail tracks
- Construction of a new crude oil receiving and transfer facility consisting of:
 - A two-story operations building to house offices, a control room for the facilities, first aid facilities and washrooms
 - New ancillary buildings including storage, equipment buildings and electrical kiosks
 - Construction of containment areas for spill protection beneath equipment
 - New Marine Vapor Control System for handling ship vapors during loading operations
 - Foundation construction including foundations for vapor recovery mechanical equipment, electrical buildings and transformers, metering area equipment and piping
 - Installation of structural steel and concrete, mechanical equipment, piping and fire-protection systems
 - A backup generator capable of running core functions and firefighting systems
- A new utility dock including a new float and steel gangway for support vessels of approximately 500 m²
- A new concrete railway derailment protection barrier north of the property line to protect the facility from existing train tracks (320 m long by 2.2 m high)
- Emergency response booms and areas for deployment of emergency response equipment
- Installation of pre-fabricated dock trestles and platforms
- Modification and relocation of portions of the existing 6.0 m wide access driveway north of the existing CP rail tracks (main access from Bayview Drive)
- New parking spaces for employees/contractors, visitors and maintenance personnel
- Perimeter security fencing with new vehicle access gates

Lighting and Utilities

- New lighting at the Terminal on buildings, new area lights on dock structures and new marine navigation lighting
- Upgrades to the Terminal fire protection system and new perimeter fire hydrants
- New electrical transformers
- New dock delivery lines and metering equipment
- Air emissions management equipment and control system
- A new fire-water and foam pumping system
- New electrical equipment and control system
- A storm-water management system including new oil water separators
- Storm-water detention on berths to collect water that is pumped to an oil water separator system on foreshore
- Extension of one existing stormwater outfall, relocation of one existing stormwater outfall and installation of one new stormwater outfall
- Installation of new underground wastewater and sanitary holding tanks
- New utilities including storm-water, sanitary tank connections, water, communications and electricity
- Installation of new electrical systems such as cable trays and cabling

Onshore and Marine Construction Temporary Facilities

- Barges with office, lunchroom and washroom facilities
- Storage barges with equipment and material storage areas
- Marine equipment including barge mounted derricks for pile driving and supporting barges

- Installation of a safety boom around marine work areas during construction extending approximately 350m into Burrard Inlet and anchored at each end by a new pile
- Office trailers
- Washroom trailers
- Equipment storage trailers
- Water treatment plants

PROJECT AND ENVIRONMENTAL CONDITIONS

VFPA has undertaken and completed a review of the Project in accordance with the *Canada Marine Act* and Section 5 of the Port Authorities Operations Regulations.

If at any time the Applicant fails to comply with any of the project and environmental conditions set out in the Permit below, or if VFPA determines that the Applicant has provided any incomplete, incorrect or misleading information in relation to the Project, VFPA may, in its sole and absolute discretion, cancel its authorization for the Project or change the project and environmental conditions to which such authorization is subject.

Pursuant to Section 29 of the Port Authorities Operations Regulations, VFPA may also cancel its authorization for the Project, or change the project and environmental conditions to which such authorization is subject, if new information is made available to VFPA at any time in relation to the potential adverse environmental and other effects of the Project.

The following are the project and environmental conditions that must be followed by the Applicant to mitigate potential or foreseeable adverse environmental and other effects.

No.	GENERAL CONDITIONS
1.	This Permit is conditional on a valid tenure agreement with respect to the subject premises being in place. No construction or any other physical activities may commence in the absence of a valid tenure agreement.
2.	This Permit is granted subject to the fulfillment of all other requirements of VFPA relating to the Project. Furthermore, prior to commencing construction or any other physical activities the Applicant shall ensure that it has complied with all other necessary legal requirements and that all necessary regulatory approvals have been obtained.
3.	This Permit in no way endorses or warrants the design, engineering, or construction of the Project and no person may rely upon this Permit for any purpose other than the fact that VFPA has permitted the construction of the Project, in accordance with the terms and conditions of this Permit.
4.	In consideration of the granting of this Permit by VFPA the Applicant agrees to indemnify and save harmless VFPA against any and all actions, claims, loss, damages or other expenses in any way arising or following from or caused by the granting of this Permit or the construction or operation of the Project as contemplated by this Permit.
5.	On December 1, 2016 the overall Trans Mountain Expansion Project received a Certificate of Public Convenience and Necessity pursuant to Section 52 of the National Energy Board Act. The Applicant shall adhere to Certificate of Public Convenience and Necessity OC-64 to Trans Mountain Pipeline ULC subject to the relevant terms and conditions set out in Appendix 3 of

	the National Energy Board (NEB) Report of May 19, 2016 entitled Trans Mountain Expansion Project OH-001-2014 and subsequent amending orders.	
6.	The Applicant shall provide VFPA with updated mitigation plans for review and approval, such as the Westridge Marine Terminal Environmental Protection Plan, if these plans are modified or new procedures are created to address site conditions not previously addressed in the plans submitted as part of the Application.	
7.	The Applicant is responsible for locating all existing site services and utilities, including any located underground, and to employ best practices and meet applicable code requirements with respect to protection of existing site services and clearance between existing and proposed site services. The Applicant is responsible for repair or replacement of any damage to existing site services and utilities, to the satisfaction of VFPA, that result from construction and operation of the Project.	
8.	The Applicant shall undertake and deliver the Project to total completion in a professional, timely and diligent manner in accordance with the Application submitted by the Applicant and the applicable standards and specifications set out in the sections above entitled Project Description and Information Sources, including the attached plans and drawings numbered PER No. 15-322-A1 to A49 . The Applicant shall not carry out any other physical activities unless expressly authorized by VFPA.	
9.	The Applicant shall cooperate fully with VFPA in respect of any review by VFPA of the Applicant's compliance with these conditions including, without limitation, providing any information or documentation required by VFPA.	
10.	The Applicant shall make a copy of this Permit available to all employees, agents, contractors, licensees and invitees prior to commencing any physical activities. The Applicant shall be solely responsible for ensuring that all such employees, agents, contractors, licensees and invitees comply with these conditions.	
11.	The Applicant shall make available upon request by any regulatory authority (such as a Fishery Officer) a copy of this Permit.	
12.	Unless otherwise noted, the Applicant shall submit all documents required for VFPA approval to email: per@portvancouver.com; fax: 1-866-284-4271 and referencing PER No.15-322 .	
	CONDITIONS - PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	SUBMISSION TIMING (business days)
13.	The Applicant must install and maintain a Marine Construction Safety Boom around the perimeter of the work area. The Marine Construction Safety Boom must be secured to the sea bed in a manner which does not create a hazard to navigation, and be lit from dusk to dawn and during periods of restricted visibility by flashing yellow lights (2 NM range) installed at distances no greater than 50 metres apart.	Before commencing construction of any in-water works
14.	The Applicant shall submit signed and sealed drawings for each phase of the proposed works prior to start of construction of each phase. Drawings shall be approved for construction by a professional engineer licensed to practice in the Province of British Columbia.	Before commencing construction or any physical activities for each phase of construction

15.	The Applicant shall submit final design drawings for rail crossing modifications signed and sealed by a professional engineer licensed to practice in the Province of British Columbia, for VFPA review and approval.	Before commencing construction or any physical activities for each phase of construction
16.	The Applicant shall submit a dimensioned site plan and master fire department access plan signed and sealed by a Fire Protection Engineer licensed to practice in the Province of British Columbia for VFPA review and approval. The Fire Department Access Plan is required to reference the applicable vehicle access requirements from the 2015 NBC and applicable requirements from the Burnaby Fire Department. Any conditions of the access route on Bayview Drive or within the VFPA boundary that do not comply with the acceptable solutions of the NBC are required to be addressed by the Applicant on an alternative solution basis pursuant to NBC Division A, Article 1.2.1.1.	Before commencing construction of any permanent facilities
17.	The Applicant shall submit a signed and sealed Approach to Building and Fire Code Compliance Report prepared by the Applicant's Building Code Consultant for VFPA review and approval. The Building and Fire Code Compliance Report is required to address the 2015 NBC and 2015 NFC requirements noted in the correspondence from VPFA during the review of the Project Permit application, including compliance with NFPA 11 for foam/water system capacities. The report is required to provide a consolidated summary of the firefighting strategy, required fire protection equipment and foam/water supplies and delivery systems for various fire scenarios including the credible worst case. This report should have input from the Director of Emergency Management from Kinder Morgan Canada. If possible, this report should also include input from the local fire service. If the local fire service is unable to participate in the consultation process, the Applicant's Building Code Consultant should consider consultation with an additional consultant(s) having experience with municipal firefighting command and control, and firefighting in an industrial setting similar to the Project.	Before commencing construction of any permanent facilities
18.	The Applicant shall submit a Construction Fire Safety Plan for VFPA review and approval.	Before commencing construction or any physical activities
19.	For construction activities in and around the City of Burnaby's underground sewer facilities generally shown on Lease Plan 2017-127 and licensed under Vancouver Fraser VFPA's Wastewater System License to the City of Burnaby under License No. BBY093-0008F-002, dated May 1, 2011, the Applicant shall contact the City of Burnaby Planning and Building Department (Ph: 604.294.7944) to advise the City of the activities and work in order to ensure there are no adverse impacts to the sewer system.	Before commencing construction or any physical activities
20.	For construction activities in and around the Greater Vancouver Sewerage and Drainage District's wastewater outfall system as generally shown on License Plan No. 2004-111 dated October 12, 2004 and Lease Plan No. 2017-123 dated July 31, 2017, and licensed	Before commencing construction or any physical activities

	<p>under Vancouver Fraser VFPA's outfall license under License No. BBY092-00753F-001 (formerly L-0753 (01)) dated October 1, 2004, the Applicant shall contact Metro Vancouver's Liquid Waste Services Department (Ph: 604.432.6200) to advise Metro Vancouver of the activities and work in order to ensure there are no adverse impacts to the outfall system.</p>	
21.	<p>The Applicant shall submit a final Construction Communications Plan in accordance with VFPA's Public Consultation Guidelines, to the satisfaction of VFPA. The Plan shall outline how the Applicant will continue to engage and communicate with the public and stakeholders from the date of permit issuance to the completion of construction. The Plan shall include engagement and communication activities on the following:</p> <ul style="list-style-type: none"> • About the project and current status; • Proposed mitigations; • Status of satisfying permit conditions; • Communication and engagement activities during major phases of construction; • Addressing inquiries during construction; • Any other topic that may be deemed by VFPA to be of relevance; and • A draft construction notification for review. <p>The Plan shall be updated as necessary and upon request by VFPA to ensure the public and stakeholders are provided with relevant information as it becomes available.</p>	15 days before commencing construction or any physical activities
22.	<p>The Applicant shall distribute a final construction notice to residents and businesses within approximately two kilometres from Westridge Marine Terminal describing the works and activities, hours of operation, and contact information, in accordance with an approved Construction Communications Plan. This includes residents and businesses within the District of North Vancouver and City of Burnaby as shown on VFPA North Vancouver and Burnaby Location maps which can be found in Section 5 of the 15-322 PER Report located here: https://www.portvancouver.com/development-and-permits/status-of-applications/kinder-morgan-westridge-marine-terminal-upgrade-and-expansion-project/. The notice shall be approved by VFPA prior to distribution. Applicant to use same notification area maps created by the VFPA for the comment period during application review. The Applicant shall copy VFPA when construction notices are distributed.</p>	10 days before commencing construction or any physical activities
23.	<p>The Applicant shall submit a marine construction and staging plan, including the following for VFPA review and approval:</p> <ul style="list-style-type: none"> • Staging and construction areas; • Dates and hours of operation; • Description of activities taking place; • Equipment and vessels (dimensions must be included); • Method of preferred communication with marine users; • Proposals to accommodate Aboriginal traditional marine resource use activities potentially affected by construction activities; and • Special requests and/or additional information. 	15 days before commencing construction or any physical activities

24.	The Applicant shall submit an Archeological Chance Find Procedure which includes the source of any fill material to be used in conjunction with the project for VFPA review and approval.	30 days before commencing construction or any physical activities
25.	For structures and proposed interior changes that are reviewable under the National Building Code and National Fire Code, the Applicant shall apply for a VFPA Building Permit. Each Building Permit package is required to be complete with VFPA letters of assurance and signed and sealed drawings by a BC Certified Engineer as noted in the Building Permit list provided for the Westridge Marine Terminal Expansion Project.	40 days before commencing construction or any physical activities for each phase of construction
26.	The Applicant shall submit an updated signed and sealed Approach to Building and Fire Code Compliance Report(s), for the applicable Building Permit phase, prepared by the Applicant's Building Code Consultant for VFPA review and approval.	Prior to issuance of a VFPA Building Permit
27.	Prior to the commencement of any vessel-related activities, the Applicant shall contact the appropriate Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS) centre regarding the issuance of a Notice to Shipping (NOTSHIP) to advise the marine community of potential hazards associated with the Project.	As per Coast Guard requirements
28.	If the Applicant intends to discharge hydrostatic testing water to Burrard Inlet or another water body located within VFPA jurisdiction, a Hydrostatic Testing Plan shall be submitted for VFPA review and approval.	15 days before commencing intake or discharge of hydrostatic testing water
29.	The Applicant shall submit an updated <i>Noise Management Plan for Construction at Pump Stations and Terminals</i> , PER Submission TR.07 for VFPA review and approval. The updated plan shall address the following: <ul style="list-style-type: none"> • Section 3.1 Operating Hours shall include a requirement for the Applicant to obtain VFPA written authorization for any construction works outside of Westridge construction hours as described in the <i>Noise Management Plan for Construction at Pump Stations and Terminals</i>. • Section 7.1 Planned Monitoring shall include a requirement to submit to VFPA: implemented plan details (locations, equipment specifications, site photos, expected time periods, etc.), and weekly summary reports; a requirement to grant access by VFPA staff to historical and real-time levels from continuous monitors. 	5 days before commencing construction or any physical activities
30.	The Applicant shall submit an updated <i>Air Emission Management Plan for Westridge Marine Terminal and Fugitive Emissions Management Plan for Westridge Marine Terminal</i> , PER Submission TR.08 for VFPA review and approval. The updated plan shall address the following:	5 days before commencing construction or any physical activities

	<ul style="list-style-type: none"> Section 4.8.2 Construction Combustion Emissions shall include compliance with Non-Road Diesel Emissions Fee, VFPA Fee Schedule Section 3.9 (http://www.portvancouver.com/about-us/port-fees/). 	
31.	<p>The Applicant shall submit an updated <i>Westridge Marine Terminal Environmental Protection Plan</i>, PER Submission TR.014 for VFPA review and approval. The updated plan shall address the following:</p> <ul style="list-style-type: none"> Section 1.0 Introduction shall include an additional subsection on <i>Links to Other Trans Mountain Environmental Plans</i>, detailing all related management plans, i.e. Noise Management Plan, Air Emissions Plan, and Fugitive Emissions Plan. 	5 days before commencing construction or any physical activities
32.	<p>The Applicant shall submit an updated Stormwater Pollution Prevention Plan for VFPA review and approval. The updated Stormwater Pollution Prevention Plan shall:</p> <ul style="list-style-type: none"> Address comments included in the July 14, 2017 technical memorandum prepared by Kerr Wood Leidal. Confirm that stormwater collection sump pumps on the loading wharves are connected to emergency power supplies. <p>Containment and appropriate treatment shall be provided for:</p> <ul style="list-style-type: none"> Utility wash down water that may potentially contact hydrocarbons. All parts of the hydrocarbon conveyance systems, including pipe rack pipe joints, valves and inspection/maintenance ports, where leaks or spills may occur. 	30 days prior to construction of the new stormwater system
33.	Any proposed alterations to the Marine Construction and Safety Boom footprint, anchoring system or design must be submitted to and approved by VFPA.	20 days prior to implementing alterations
CONDITIONS - DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES		
34.	The Applicant shall notify VFPA upon commencement of construction or any physical activities of the Project at the beginning of each construction phase.	
35.	The Applicant shall discuss with the Indigenous Advisory and Monitoring Committee (IMAC), or relevant Sub-Committee, potential opportunities for their input or involvement in monitoring efforts during construction. As directed by VFPA, monitoring reports submitted to VFPA by the Applicant under this permit shall be shared with IMAC, potentially affected Aboriginal groups, and/or other persons or entities as specified by VFPA, from time to time.	
36.	All general construction and physical activities related to the Project shall be conducted Monday to Saturday between the hours of 7:00am to 8:00pm except for non-motorized hand labor activities which do not increase the background noise levels within the surrounding community. Pile driving, other activities that are impulsive in nature, and activities containing strong low frequency, shall only occur within regular hours (Monday to Saturday between the hours of 7:00am to 8:00pm). These hours shall not be modified without prior approval from VFPA.	
37.	The Applicant shall ensure that noise levels within the surrounding community as identified in <i>Noise Management Plan for Construction at Pump Stations and Terminals</i> , PER Submission	

	<p>TR.07, table C-3 remain below the following thresholds, where nighttime hours are from 10pm to 7am:</p> <ul style="list-style-type: none"> • WMT_1; Daytime limit – 61 dBA; Nighttime limit – 51 dBA (Location: Northcliffe Crescent and North Clide Avenue, Burnaby) • WMT_2; Daytime limit – 61 dBA; Nighttime limit – 51 dBA (Location: Bayview Drive and Malibu Drive, Burnaby) • WMT_3; Daytime limit – 66 dBA; Nighttime limit – 56 dBA (Location: Bayview Drive and Barnet Road, Burnaby)
38.	The Applicant shall remove all abandoned utilities from the site, both underground and aboveground. At locations of connections to municipal network (i.e. at property lines), the abandoned utilities shall be capped.
39.	The Applicant shall establish and define a marine restricted area within the marine construction safety boom around the existing Greater Vancouver Sewage and Drainage district sewage system as generally shown on License Plan No. 2004-111 dated October 12, 2004 and Lease Plan No. 2017-123 dated July 31, 2017. The Applicant shall not permit any anchoring or operation of marine vessels or equipment within this restricted area.
40.	The Applicant may place temporary construction trailers on site while this permit remains in effect, provided that the Applicant first obtains a VFPA Building Permit for any trailers reviewable under the 2015 National Building Code of Canada.
41.	The disturbance to the intertidal foreshore shall be kept to the minimum required to complete the Project. Land-based equipment and machinery should not travel along the intertidal foreshore beyond the footprint of the foreshore extension area. Shoreline modification, temporary or otherwise, to facilitate land/sea equipment or materials transfer or for any other reason is not permitted without prior review and approval by VFPA.
42.	The Applicant shall not permit barges or other vessels used during the project to ground on the foreshore or seabed or otherwise disturb the foreshore or seabed (including disturbance as a result of vessel propeller wash), excepting only such disturbance as is reasonably required resulting from the use of barge spuds.
43.	The Applicant shall remove any piles completely by extracting the entire length of pile from the seabed. If physical conditions result in the breakage of piles, the Applicant shall remove the remaining pile stubs with the least amount of disturbance of the seabed as possible.
44.	Floating portions of the marine construction safety boom shall not be permitted to ground on the seabed or intertidal foreshore with the exception of only such disturbance as is reasonably required as described in the technical memo, dated July 31, 2017, titled "Information provided to Vancouver Fraser VFPA regarding the proposed marine construction safety boom at Westridge Marine Terminal". Pontoons at the west end shall be positioned parallel to shore to further limit the potential effects of sweeping.
45.	The Applicant shall provide VFPA with weekly construction monitoring reports containing the same information listed for the monthly construction monitoring reports required by the Fisheries and Oceans Canada (DFO) Paragraph 35(2)(b) <i>Fisheries Act Authorization</i> (DFO Authorization). VFPA shall be copied on the monthly reports to DFO, if these are different from the corresponding weekly VFPA report.
46.	VFPA shall be copied on the offsetting measures monitoring reports required by the DFO Authorization. VFPA shall be consulted during the development of any contingency plans and any measures in those plans that fall within VFPA jurisdiction.

47.	<p>During any vessel-related activities, the Applicant must:</p> <ol style="list-style-type: none"> 1. Position vessels and equipment associated with the Project in such a manner so as not to obstruct line of sight to navigational aids or markers. 2. As per the International Regulations for Preventing Collisions at Sea, exhibit the appropriate lights and day shapes at all times. 3. Monitor the VHF channel used for MCTS communications in the respective area at all times and participate as necessary. 4. Be familiar with vessel movements in areas affected by the Project. The Applicant must plan and execute the Project in a manner that will not impede navigation or interfere with vessel operations. 5. If applicable, during night hours, any rigs or associated equipment must be moored outside the navigation channel, approaches to adjacent terminal facilities and/or anchorage areas, and lit in accordance with all applicable regulations. 6. All temporary piles, false works, silt curtains, construction material or debris, etc. are to be appropriately marked and sufficiently illuminated in periods of darkness and reduced visibility. 	
CONDITIONS – PRIOR TO OPERATION		
48.	The Applicant shall submit a Project Energy Study Report in accordance with VFPA's guidelines, or provide a copy of the New Plant Design Engineering Study, at the time of the Study submission to BC Hydro.	
49.	The Applicant must submit a berthing simulation study for VFPA review and approval.	
50.	The Applicant shall submit an updated Operational Emergency and Fire Safety Plan for VFPA review and approval.	
CONDITIONS - UPON COMPLETION		SUBMISSION TIMING (Business Days)
51.	Upon completion of the deep-sea berth(s) construction, the Applicant must undertake a hydrographic survey that meets the requirements of a "Special Order" survey with "Type C1" coverage as defined by the Canadian Hydrographic Service (CHS) "Standards for Hydrographic Surveys", to the satisfaction of VFPA.	Upon completion
52.	The Applicant must contact the Database Information Office of the CHS at (250) 363-6360 or chsdatacentre@dfo-mpo.gc.ca to arrange for the relevant CHS charts to be updated.	Upon completion
53.	The Applicant shall notify VFPA upon completion of the Project.	Within 10 days of completion
54.	The Applicant shall provide record drawings, in both AutoCAD and Adobe (PDF) format to VFPA signed and sealed by a Certified Engineer licensed to practice in the Province of British Columbia.	Within 40 days of completion
55.	With respect to terminal lighting, lighting type and luminaire orientation and tilt shall be adjusted as needed to mitigate any adverse effects on fish, wildlife and neighbouring residents that become evident after commencement of operations.	Within 40 days of completion

56.	The Applicant shall provide to VFPA reports and all follow up correspondence related to NEB condition 141 <i>Post-construction noise surveys</i> as applicable to the Westridge Marine Terminal. Any required mitigations as a result of NEB condition 141 and applicable to the Westridge Marine Terminal shall be to VFPA's satisfaction prior to implementation.	Within 3 months after commencing operations
57.	VFPA shall be provided reports and follow up correspondence related to NEB condition 151 <i>Post-construction environmental monitoring reports</i> as applicable to the Westridge Marine Terminal. Any required mitigations as a result of NEB condition 151 and applicable to the Westridge Marine Terminal shall be to VFPA's satisfaction prior to implementation.	On or before 31 January following the first, third, and fifth season after completing final clean up

VFPA reserves the right to rescind, revise or add to these conditions at any time that new information warranting such action is made available to VFPA.

LENGTH OF PERMIT VALIDITY

The construction of the Project must commence by August 31, 2018 (the Commencement Date) and be complete no later than August 31, 2021 (the Expiry Date).

AMENDMENTS

- Details of any material proposed changes to the Project, including days and hours when construction and any physical activities will be conducted, must be submitted to VFPA for consideration of an amendment to this Permit. Changes to the Project that affect the assumptions underpinning VFPA's review of the Application may result in a requirement to revisit such review.
- For an extension to the Commencement Date, the Applicant must apply to VFPA in writing no later than 30 days prior to that date.
- For an extension to the Expiry Date, the Applicant must apply in writing to VFPA no later than 30 days prior to that date.

Failure to apply for an extension as required may, at the sole discretion of VFPA, result in termination of this Permit.

PROJECT AND ENVIRONMENTAL REVIEW DECISION

Project Permit PER No. 15-322 is approved by:

Original Copy Signed

August 28, 2017

**PETER XOTTA
VICE PRESIDENT, PLANNING & OPERATIONS**

DATE OF APPROVAL

CONTACT INFORMATION

Vancouver Fraser Port Authority
100 The Pointe, 999 Canada Place,
Vancouver BC V6C 3T4 Canada

Project & Environmental Review
Tel.: 604-665-9047
Fax: 1-866-284-4271
Email: PER@portvancouver.com
Website: www.portvancouver.com

THIS IS EXHIBIT "17"
Referred to in the Affidavit of
Michael Davies
Sworn before me this 26th
day of October A.D. 2017



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Barrister & Solicitor
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	Stantec	Trans Mountain Expansion Project	Contractor Revision Date:	2017-03-01
		Section 11 Application – Burnaby Terminal	Contractor Revision No.:	
			Page	1 of 60



Trans Mountain Expansion Project

Section 11 Application – Burnaby Terminal

KMC Document # 01-13283-TB-BB02-STE-RPT-0001 R1



Rev No.	Prepared by/ Date	Reviewed by/ Date	Approved by/ Date	TMEP Acceptance/ Date	Pages Revised	Issued Type
1	S. Webster 2017-01-31	S. Nelson 2017-03-01	L. McDonough 2017-03-01			Issued for Information



Stantec Consulting Ltd.
500-4730 Kingsway, Burnaby BC V5H 0C6

March 1, 2017

File: 123512431

Attention: BC OGC—Section 11 Permitting Approvals

Victoria Office
300-398 Harbour Road
Victoria, BC V9A 0B7

KMC Doc No.: 01-13283-TB-BB02-STE-RPT-0001 R1

Dear Sir or Madam,

**Reference: Trans Mountain Expansion Project Burnaby Terminal
Changes In and About a Stream Activity Application # 100101805**

Trans Mountain Pipeline ULC (Trans Mountain), operated by Kinder Morgan Canada, submitted a Facilities Application to the National Energy Board (NEB) in December 2013 for the proposed Trans Mountain Expansion Project ("the Project" or "TMEP"). On November 29, 2016, the Government of Canada concluded the Project was in the public interest of Canada. A Certificate of Public Convenience and Necessity (CPCN) and other authorizations allowing the Project to proceed were issued and became effective on December 1, 2016, subject to 157 conditions (the NEB Conditions). On January 11, 2017, the British Columbia (BC) Environment Minister and Natural Gas Development Minister issued an Environmental Assessment Certificate to Trans Mountain for the British Columbia portion of the Project, subject to another set of 37 conditions (the BC EAO Conditions).

Trans Mountain plans to expand the storage capacity at its Burnaby Terminal as part of the Project. The planned works at the Burnaby Terminal include changes in and about four streams, requiring a permit under section 11 of the Water Sustainability Act through the BC Oil and Gas Commission (OGC). This letter, its attachments, and the information provided through the BC OGC's online Application Management System (application #100101805) were prepared on behalf of Trans Mountain to apply for the required section 11 permit.

WORKS PLAN

PROPOSED WORKS

The Burnaby Terminal involves construction of 14 new storage tanks, expansion of the road and pipe networks to access the tanks, diversion of 2 above-ground streams, 2 culverted streams, and 4 non-classified drainages (NCDs), as well as associated alterations to the on-site stormwater management system (see attachments Figure 1, Burnaby Terminal Creek Culvert Drawings Package). Construction is scheduled to begin on September 1, 2017, and end on March 31, 2018.



March 1, 2017

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**Reference: Trans Mountain Expansion Project Burnaby Terminal
Changes In and About a Stream Activity Application # 100101805**

The Burnaby Terminal is located at 7815 Shellmount Street in the city of Burnaby, British Columbia, on the southwest slope of Burnaby Mountain. There are currently 13 storage tanks on the property. Fourteen new tanks will be constructed and 1 existing tank removed, for a new total of 26 tanks (Figure 1). Six of the new tanks will be located north of the existing tanks, in the Eagle Creek watershed (the "northern tanks"). Two of the new tanks will be located amongst the existing tanks, in the Eagle Creek watershed (the "central tanks"). The final six new tanks (and the demolished tank) will be located east of the existing tanks, in the Silver Creek watershed (the "eastern tanks").

The road and pipe networks will be expanded to provide access to each new tank. Two new road and pipe segments, with spurs to each individual tank, will provide access to the six northern tanks. Two new spurs will provide access from the existing road network to the two new central tanks. Three new road and pipe segments, with spurs to each individual tank, will provide access to the six eastern tanks.

Two unnamed tributaries to Eagle Creek (BC-785j and BC-785k, both S6 class) and one NCD (BC-785i) flow south from the northern property boundary to an existing drainage ditch along the north edge of an existing road. From this surface drainage ditch, the flows are collectively conveyed south through the middle of the property via a culvert. The two tributaries will be diverted and the NCD will be infilled because they would interact directly with four of the proposed northern tanks (Figure 1). One NCD (BC-785h), which flows south (primarily through culverts) from near the west side of the central tanks to the existing retention pond, will be infilled.

- BC-785k (S6) will be diverted into a new, 900 mm diameter culvert for 320 m of its length, starting at a point 75 m south of the property boundary. Flows will be permanently diverted along the east property boundary downslope between the central and eastern tanks, then southwest to a new outlet at approximately the same location as the existing culvert. The new path ties into the same unnamed tributary to Eagle Creek as the existing path.
- BC-785j (S6) will be diverted into a new 525 mm diameter culvert for 250 m of its length, starting at a point 10 m east of the property boundary. The flow will be permanently diverted within a new section of culvert (~300 m) and will join with flow from (BC-785k).
- BC-785i (NCD) will be diverted into new roadside ditches and be managed as part of the site storm water system.
- BC-785h (NCD) will be infilled and the water diverted into new roadside ditches to be managed as part of the site storm water system.

Two unnamed tributaries to Silver Creek (BC-785l and BC-785m, both S6 class) currently travel across the property through individual existing culverts. Two NCDs (BC-785b and BC-785c) drain the eastern portion of the property. The new eastern tanks and infrastructure will affect both culverts and both NCDs.



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**Reference: Trans Mountain Expansion Project Burnaby Terminal
Changes In and About a Stream Activity Application # 100101805**

- BC-785l (S6): 330 m of existing culvert will be replaced with 400 m of new 750 mm culvert, diverted to the west.
- BC-785m (S6): 360 m of existing culvert will be replaced with approximately the same length of new 900 mm culvert.
- BC-785b (NCD) will be infilled and the water diverted into new roadside ditches to be managed as part of the site storm water system.
- BC-785c (NCD) will be infilled and the water diverted into new roadside ditches to be managed as part of the site storm water system.

AQUATIC HABITAT INFORMATION

Two watercourses and two NCDs in the Eagle Creek watershed will be affected by the Project.

- BC-785k is the eastern tributary to Eagle Creek. It is 2.7 m wide and not fish bearing (riparian class S6). It is a seasonal watercourse with a 11.36 ha catchment area. It flows through a riparian reserve strip within the Burnaby Terminal property then enters a culvert, gathers water from BC-785j and BC-785i, then discharges into an open channel flowing west along the south boundary of the terminal. It eventually joins Eagle Creek, approximately 1.4 km downstream.
- BC-785j is the western tributary to Eagle Creek. It is 1.5 m wide and not fish bearing (riparian class S6). It is a small seasonal watercourse flowing within a riparian reserve strip within the Burnaby Terminal property. Its catchment area is 5.59 ha. It flows into a roadside ditch, which continues on to collect flows from BC-785i before joining BC-785k in an existing 900 mm culvert. This water flows into Eagle Creek approximately 1.4 km downstream of the Burnaby Terminal.
- BC-785i is an NCD. It is a seasonal drainage located within a reserve strip on the Burnaby Terminal property. Its channel was not defined; short sections of scour and overland flow were observed. It drains a 15-20% slope into the same roadside ditch as BC-785j. This watercourse does not have fish habitat potential.
- BC-785h is an NCD. It is a seasonal drainage flowing primarily through culverts on the western side of the property. It flows overland through part of a forested area near the western property boundary, immediately north of the existing retention pond. It drains into the retention pond.

Two watercourses and two NCDs in the Silver Creek watershed will be affected by the Project.

- BC-785m is the western tributary to Silver Creek. It is 1.0 m wide upstream of the Burnaby Terminal and 1.8 m wide downstream of the terminal, and not fish bearing (riparian class S6). The channel enters the terminal facility through the fence at the northern edge on the eastern side of the facility. Approximately 12 m into the terminal facility it enters a 1,000 mm diameter concrete culvert, in which it crosses the entire terminal facility, emerging at the southern boundary of the Burnaby Terminal. It eventually joins Silver Creek, approximately 1.5 km downstream.



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**Reference: Trans Mountain Expansion Project Burnaby Terminal
Changes In and About a Stream Activity Application # 100101805**

- BC-785I is the eastern tributary to Silver Creek. It is 0.6 m wide upstream of the Burnaby Terminal and 1.3 m wide downstream of the terminal, and not fish bearing (riparian class S6). The channel enters the Burnaby Terminal through the fence at the northern edge on the eastern side of the facility. Approximately 15 m into the facility it enters a 600 mm diameter concrete culvert, in which it crosses the entire terminal facility, emerging at the southern boundary of the Burnaby Terminal. It eventually joins Silver Creek, approximately 1.5 km downstream.
- BC-785b is the southern NCD on the eastern side of the Burnaby Terminal. It is a vegetated swale that collects surface runoff. No evidence of scour or alluvial processes were observed. It does not connect to fish habitat or provide fish habitat potential.
- BC-785c is the northern NCD on the eastern side of the Burnaby Terminal. It is a vegetated swale that collects surface runoff. No evidence of scour or alluvial processes were observed. It does not connect to fish habitat or provide fish habitat potential.

Photographs of these watercourses are provided in the watercourse atlas appendix of the attached Environmental Management Plan (EMP).

The nearest fish bearing habitat in the Eagle Creek watershed is downstream of an impassable vertical section of culvert under Shellmount Street. The nearest fish-bearing reach of Silver Creek is approximately 1.5 km downstream of the two unnamed tributaries.

Ditches and other constructed drainage structures exist on the Burnaby Terminal property but are not described here because they do not provide fish habitat, and are not naturally formed drainages.

AVOIDANCE AND MITIGATION ACTIVITIES

Diversion of the watercourse channels on the property is required because of engineering requirements for the tank capacity, location and spatial layout. Options to retain the existing portions of open channel were investigated, but could not accommodate the tank expansion required. As a result, the avoidance and mitigation strategies focus on maintaining instream flow and protecting downstream habitat from potential water quality impacts. Water quality impacts to downstream habitats will be avoided during construction by implementing interim erosion and sediment control measures, and during operations through the design of long term structures such as culverts and rock armouring. The following summary is based on mitigation details provided in the attached EMP, and those developed for an erosion and sediment control plan developed for the construction of all components of the Burnaby Terminal expansion.

The construction approach for each of the four diversion culverts will begin with installation of the outlet structures, in isolation from flowing water, at the downstream end of the new culverts. The culverts will be constructed from downslope to upslope, then the inlet structure will be installed (also in isolation from flowing water. The watercourse water will be temporarily diverted, using a



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**Reference: Trans Mountain Expansion Project Burnaby Terminal
Changes In and About a Stream Activity Application # 100101805**

dam and pump system equipped with hoses and/or piping, and the channel will be tied-in to the new inlet and outlet structures. Then the watercourse water will be returned to the channel to flow through the new culvert, and the dewatering system will be removed.

The attached EMP provides a list of environmental mitigation measures to be implemented during construction. The measures most relevant to aquatic habitats are listed here.

1. Review with the Contractor the mitigation to be implemented to avoid or reduce effects on resource-specific environmental features or cultural features on or in proximity to the Burnaby Terminal. Conduct this review in advance of construction at known locations where any of the above features are known to be present to ensure that the Contractor has a full understanding of the procedures to be implemented.
49. Implement appropriate precautions to prevent deleterious substances (e.g., gasoline, sediment, oil, wet concrete) from entering drainages or channels. Cleaning, fuelling and servicing of equipment will be conducted in an area where spills or wash water will not contaminate surface water or groundwater resources. An appropriate emergency spill kit will be available at all times.
50. Prevent construction materials and debris from entering channels or drainages.
51. Install and maintain appropriate erosion and sediment control measures to prevent sediments from being transported into drainages or channels.... Ensure that approvals are in place prior to works where the work site encounters a watercourse.
52. Maintain sediment fences in place, where warranted, until a vegetation cover is established or the surrounding area is stabilized. Allow waterbodies to recover naturally, if disturbed (i.e., do not seed these areas).
58. Reduce the potential for soil erosion by water during construction activities by avoiding ponding of water or the unintentional channelization of surface water flow.
59. Provide surface drainage of adequate capacity across the construction footprint.
60. Install drainage features to ensure that runoff originating off-site will not be allowed to enter the construction area.
61. Inspect all water conveyance installations (e.g., ditches and culverts) and ensure that they are functioning appropriately. Take appropriate action prior to and during spring break-up to clear culverts blocked by ice or debris.
63. Install erosion and sediment control structures and materials as approved by [a Qualified Environmental Professional] (e.g., subsoil berm or sediment fencing) and implement, as warranted, erosion control measures outlined in the Soil Erosion and Sediment Control Contingency Plan... to ensure that sediments in surface water draining from the Burnaby Terminal do not adversely affect the surrounding terrain or channels or drainages.
64. Maintain or, when the area is stabilized, remove drainage and erosion control devices, and materials at all sites that are no longer in use (e.g., soil disposal sites, stock pile sites).



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**Reference: Trans Mountain Expansion Project Burnaby Terminal
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71. Ensure that during construction no fuel, lubricating fluids, hydraulic fluids, methanol, antifreeze, herbicides, biocides or other chemicals are dumped on the ground or into watercourses. In the event of a spill, implement the Spill Contingency Plan (see Appendix B).
72. Conduct refueling a minimum of 100 m from any channel or drainage, unless otherwise approved by an Environmental Inspector. Employ the following measures to limit the risk of fuel spills in water if refueling within 100 m of a channel or drainage: all containers, hoses, nozzles are free of leaks; all fuel nozzles are equipped with shut-offs; Operators are stationed at both ends of the hose during fueling unless the ends are visible and readily accessible by one Operator; and fuel remaining in the hose is returned to the storage facility.
73. Do not wash equipment or machinery in channels, drainages or artificial ponds. Control wastewater from construction activities, such as equipment washing or cement mixing, to avoid discharge directly into any body of water.

An erosion and sediment control plan for all components of the Burnaby Terminal project was developed, following the mitigations listed above, with a specific section on stream diversions. The ESC plan specifies that during diversion and tie-in, a stand-by pump and dewatering system will be in place at the outlet area to collect the stream flows if turbid water is identified. If turbid, the stream flow will be redirected to the intermediate storm water retention area to be constructed immediately to the north of the existing retention pond (see Figure 1). The ESC plan lists the following mitigation measures to be applied during stream diversion works.

- An Environmental Inspector and Resource Specialist will be onsite throughout active diversion work to ensure BMPs are being followed, monitor water quality and advise onsite construction staff.
- Set up water treatment system adjacent to newly constructed intermediate water retention area prior to modifying existing drainage infrastructure.
- Trees within the creek areas will be felled so as to land outside of the wetted perimeter of the creek. Preferably grubbing would occur after the creek diversion to the new channel, however if trees are being cleared first, while the existing creek is still active then grubbing within the 5-10 m buffer zone at the inlet and outlet areas will not occur until just prior to start of instream work.
- Placement of the excavators and heavy equipment will stay out of the stream bed and work from the upper benches so they are not working in the flowing water.
- During dewatering operations backup pumps, hoses and generators will be on site and available to switch out if mechanical issues occur. Dedicated resources will be on site full time to monitor the dewatering systems when in use.
- During the critical tie-in periods the contractor will monitor weather forecasts and plan the work during low flow and lower risk weather windows.
- Reclamation of the new inlet and outlet areas should occur immediately after completion of the creek diversions to minimize the risk of soil erosion including hydroseeding the disturbed areas. Temporary erosion control measures should be installed prior to hydroseeding activities.



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**Reference: Trans Mountain Expansion Project Burnaby Terminal
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CONSTRUCTION MONITORING

Downstream water quality in each of the three resulting watercourses (single outlet channel for the combined outflow of the two unnamed tributaries to Eagle Creek combined upslope, and each of the two separate unnamed tributaries to Silver Creek) will be monitored during instream work. Key periods of instream work include the diversion of flow and permanent tie-in of flow into the new channel system. A qualified environmental professional will be on-site at all times when the contractor is working instream.

CLOSURE

We trust that the information summarized in and attached to this letter, and supplied through the Application Management System, meets your present requirements for reviewing the Changes In and About a Stream Activity Application for stream diversions at the Burnaby Terminal. If you have any questions or comments please do not hesitate to contact Lindsay McDonough (lindsay.mcdonough@stantec.com), Sandra Nelson (sandra.nelson@stantec.com) or Ellen Frisch (Ellen_Frisch@transmountain.com).

Regards,

STANTEC CONSULTING LTD.

A blue ink signature of the name "Lindsay McDonough".

Lindsay McDonough, M.A.
Project Manager
Phone: (403) 992-9115
Lindsay.McDonough@stantec.com

A blue ink signature of the name "Sandra Nelson".

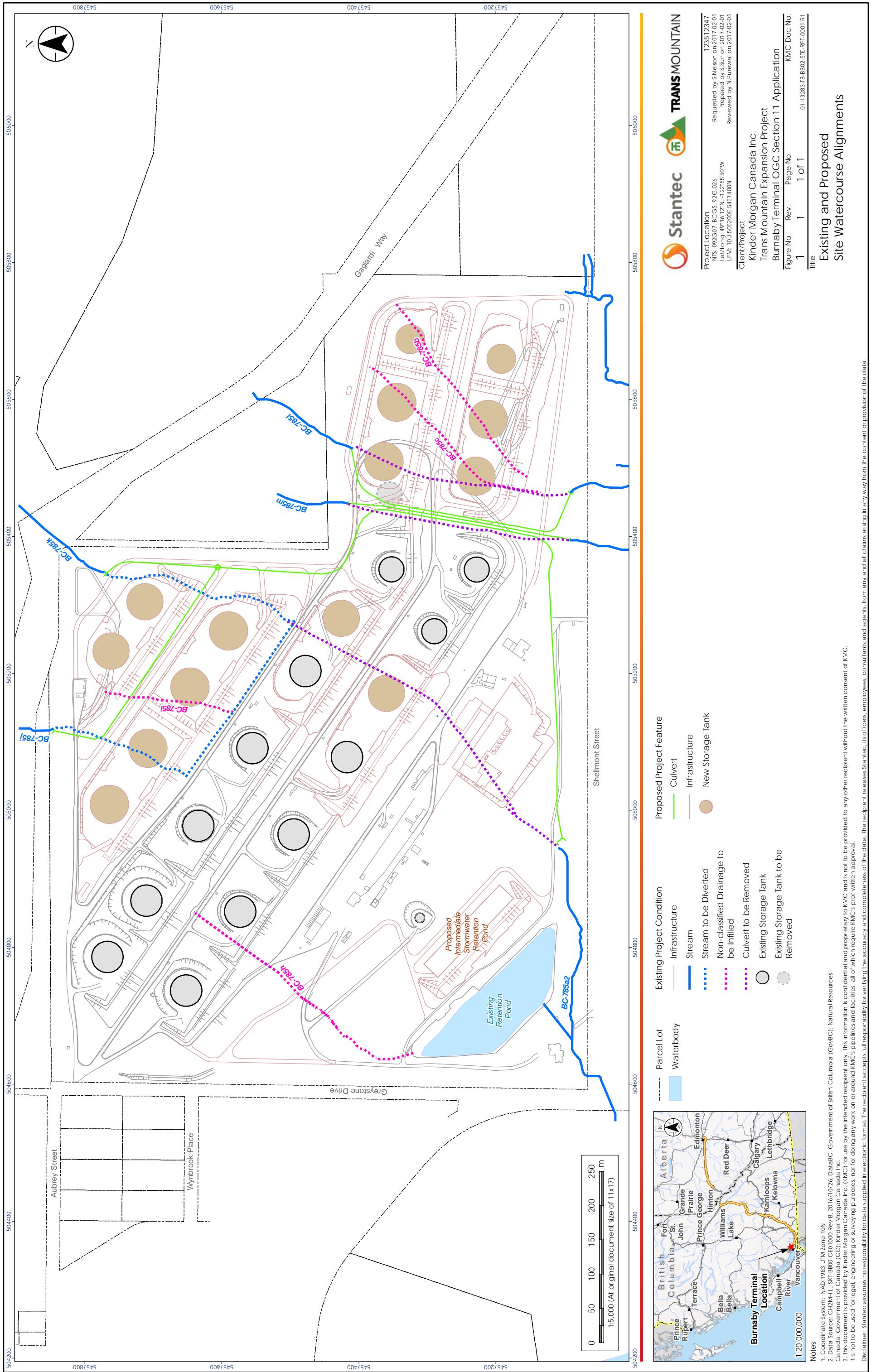
Sandra Nelson, M.Sc. R.P.Bio
Aquatic Ecologist
Phone: (778) 331-0217
Sandra.Nelson@stantec.com

Attachments: 1) Figure 1: Existing and Proposed Site Watercourse Alignments
2) Burnaby Terminal Creek Culvert Drawings Package
3) Environmental Management Plan for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project: Burnaby Terminal BC OGC Section 11 Permit Application.

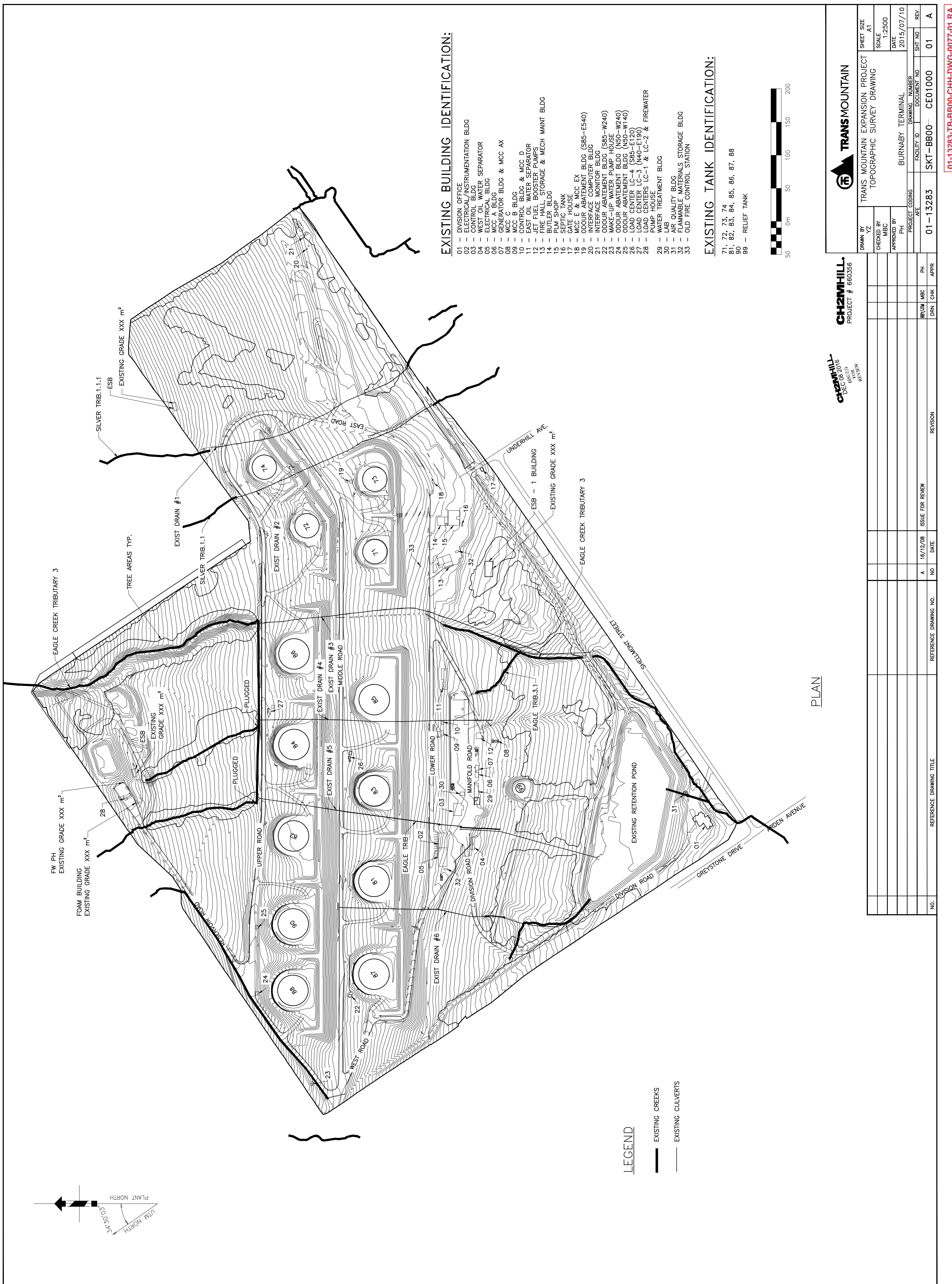
cc. Ellen Frisch, Manager, Permitting, Trans Mountain Expansion Project
Julie Walker, Trans Mountain Expansion Project
Gary Davidson, Trans Mountain Expansion Project
Calum Bonnington, Geomarine Environmental Consultants Ltd.

ATTACHMENT 1

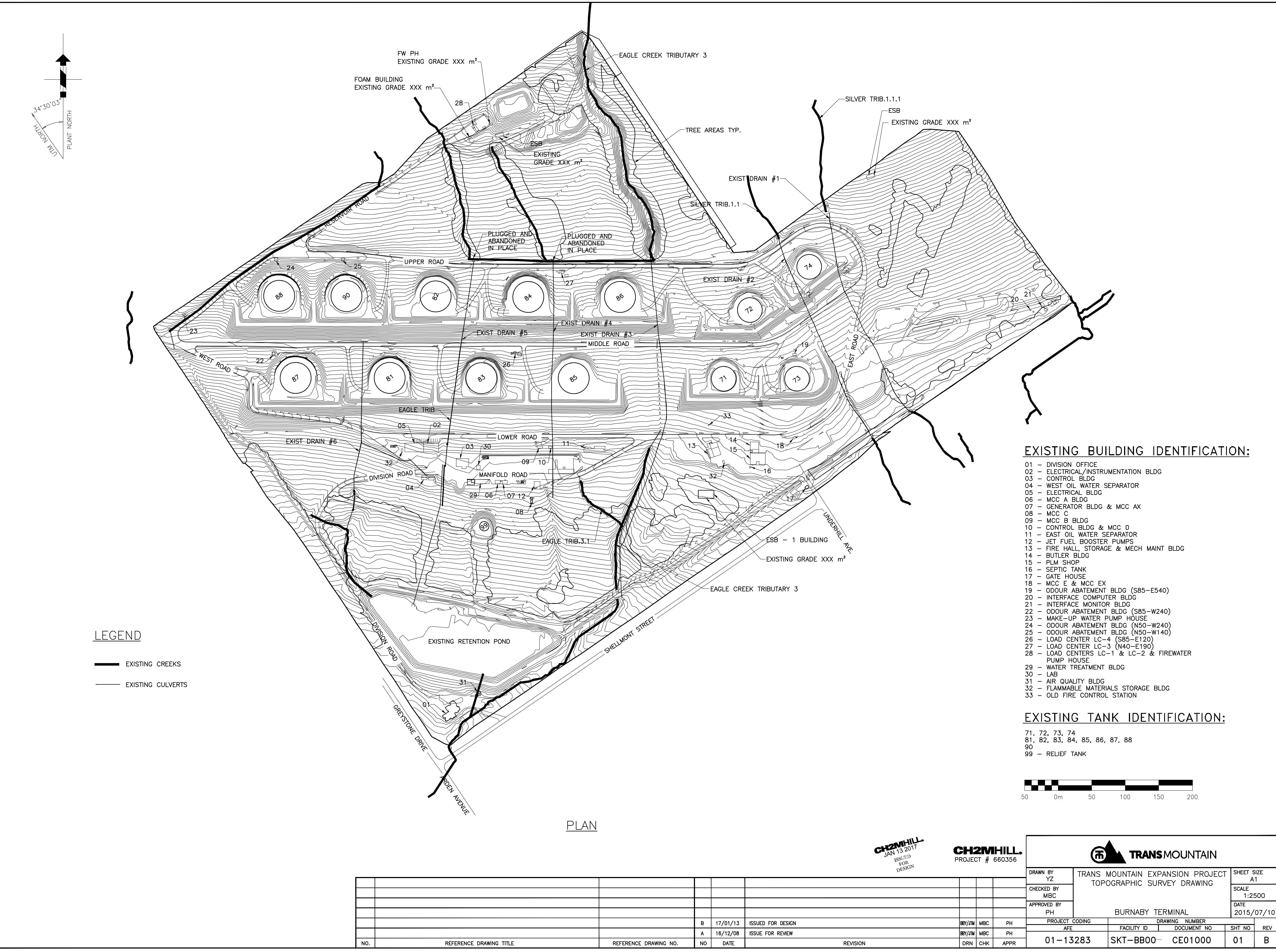
**FIGURE 1: EXISTING AND PROPOSED SITE
WATERCOURSE ALIGNMENTS**

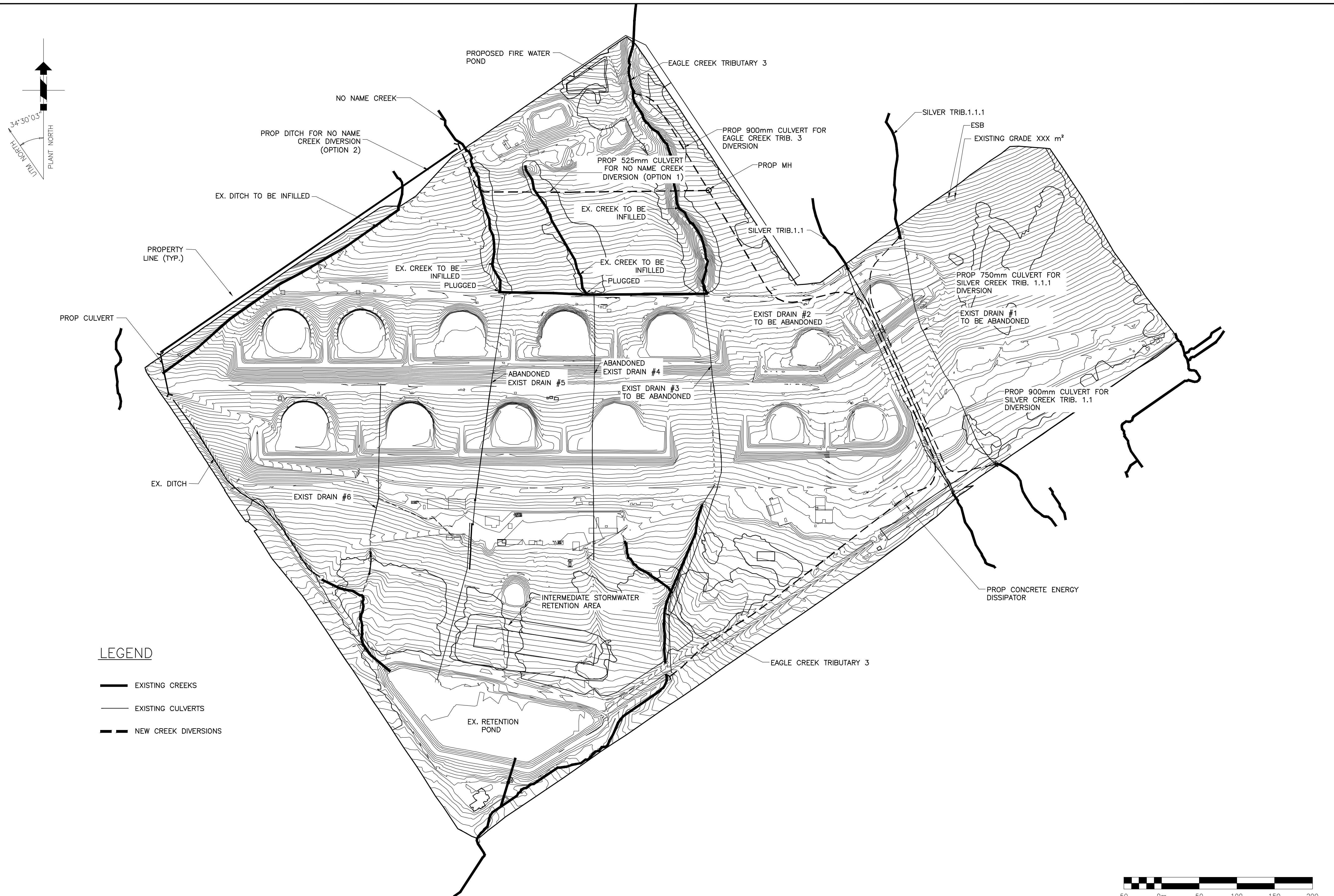


ATTACHMENT 2
BURNABY TERMINAL CREEK CULVERT
DRAWINGS PACKAGE



001-13283-TB-BB00-CHH-DWG-0077-01 RA



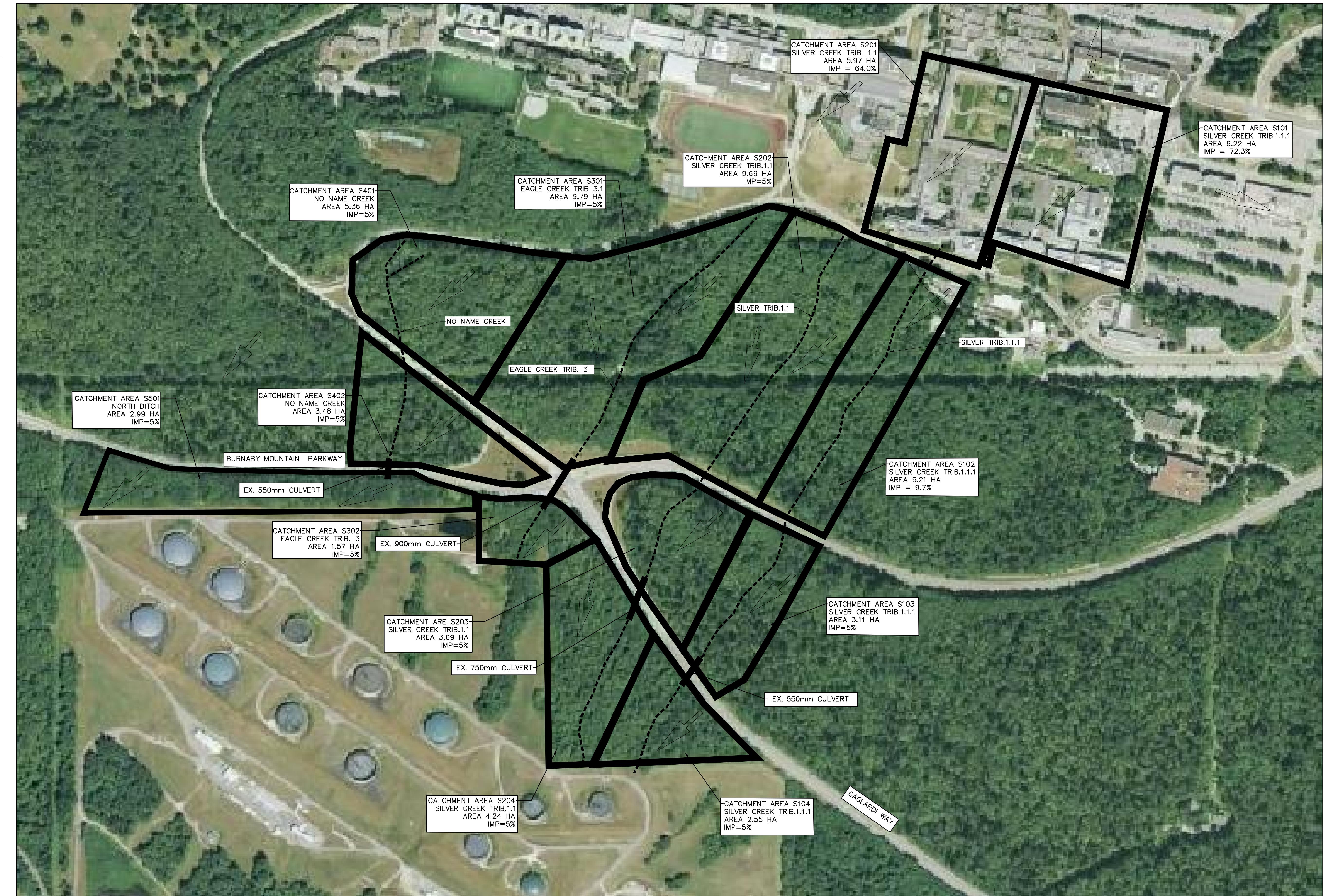


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DEC 8 2016
ISSUED
FOR
REVIEW

CH2MHILL
PROJECT # 660356

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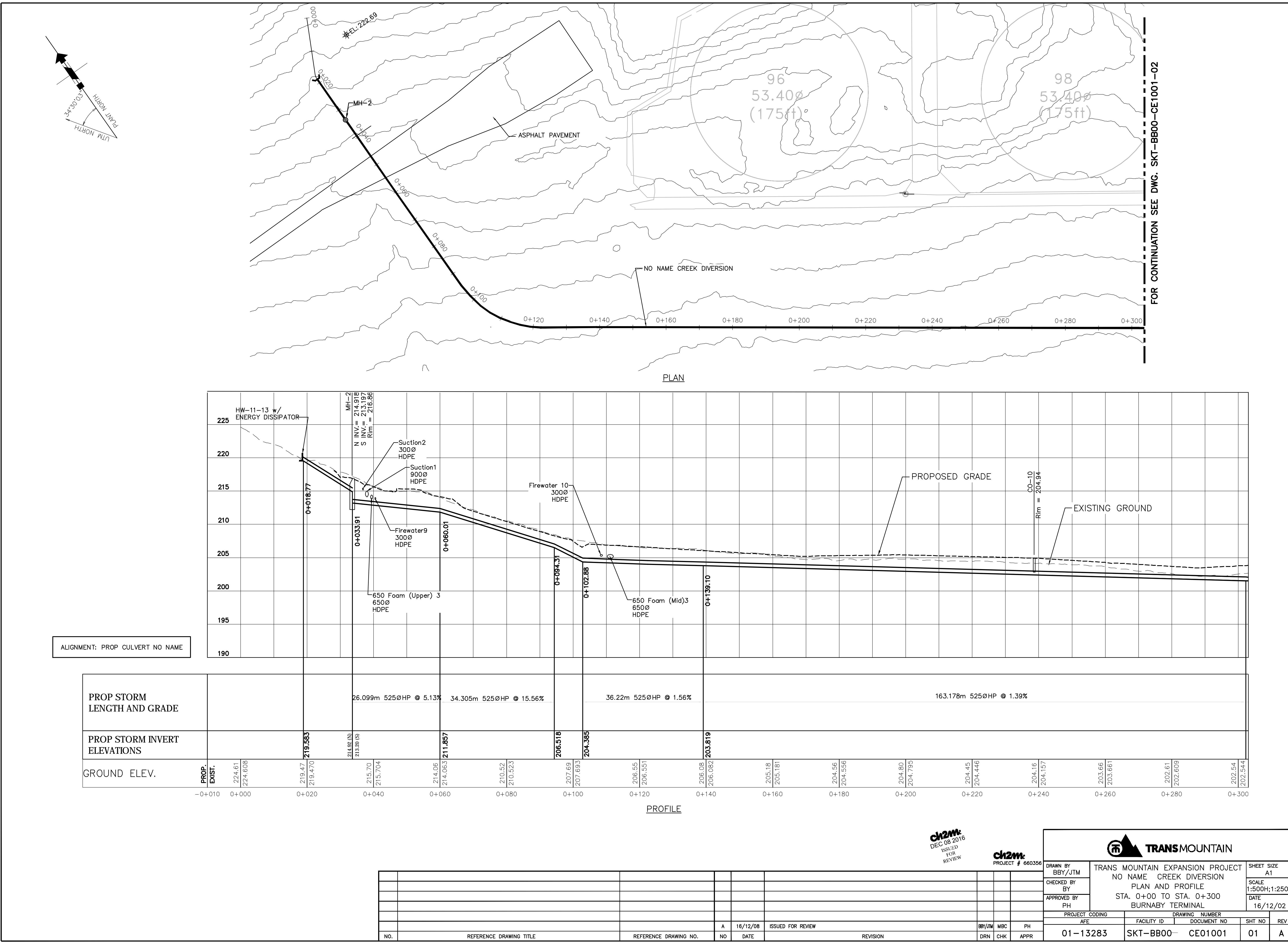


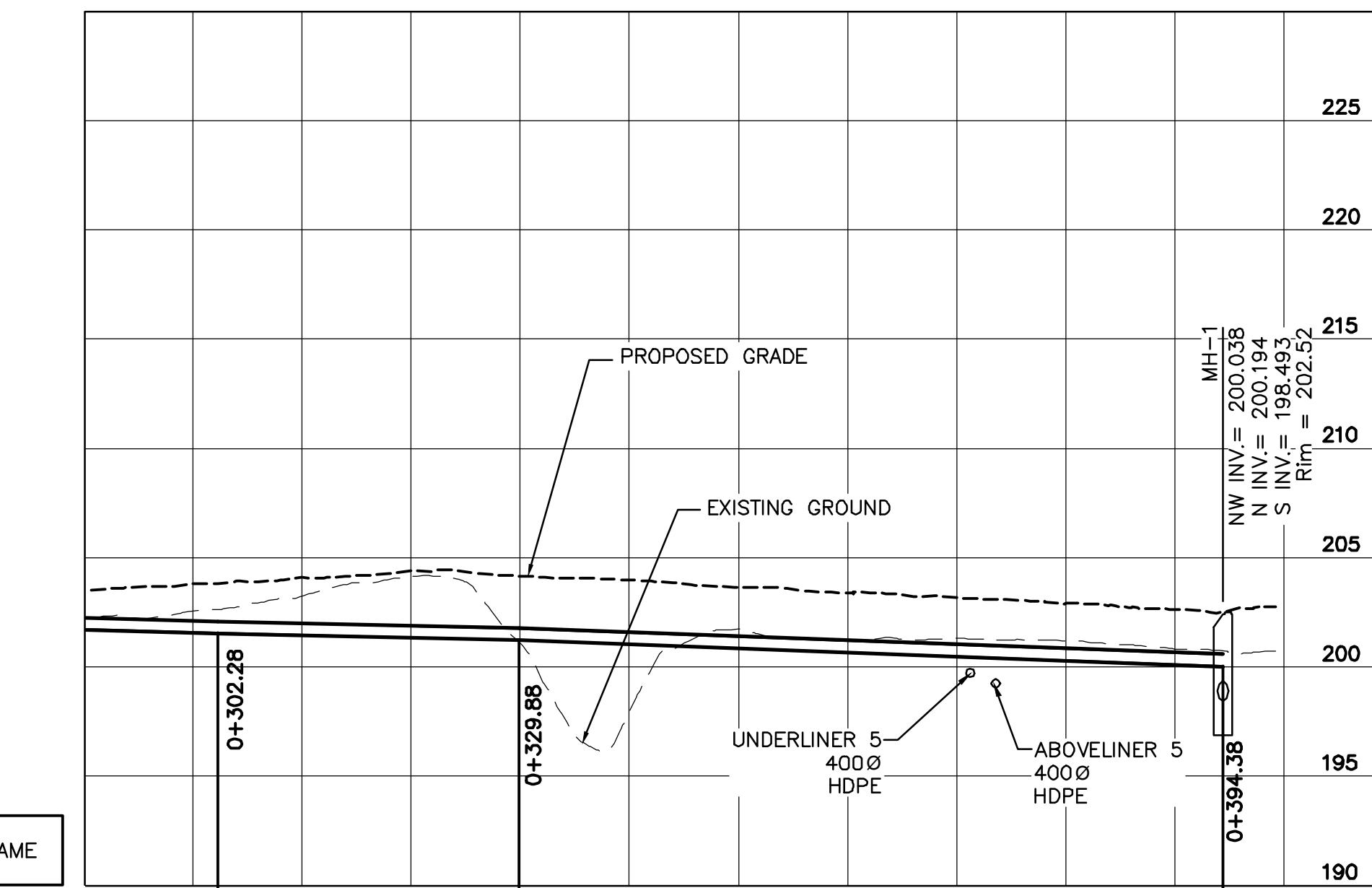
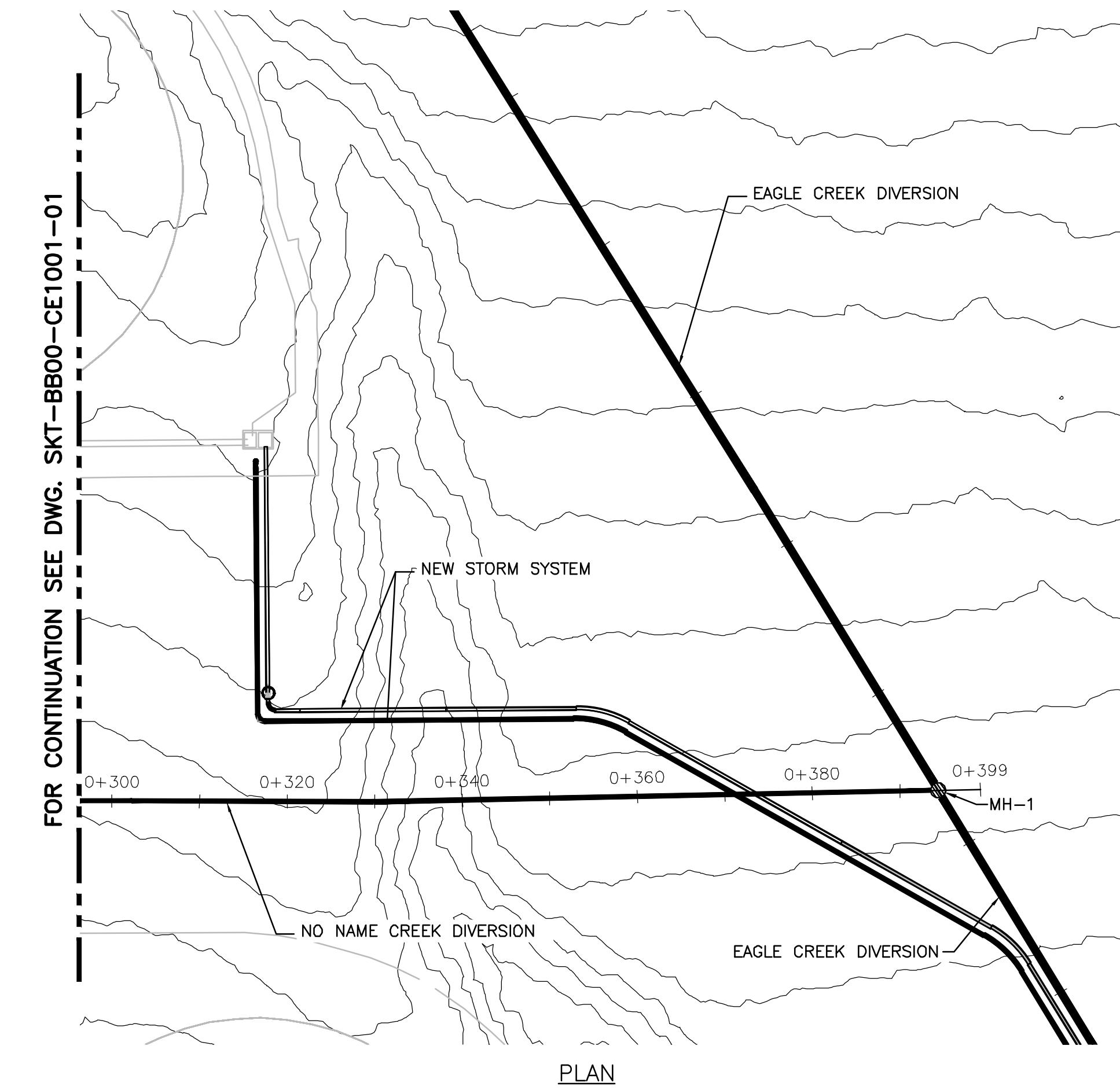
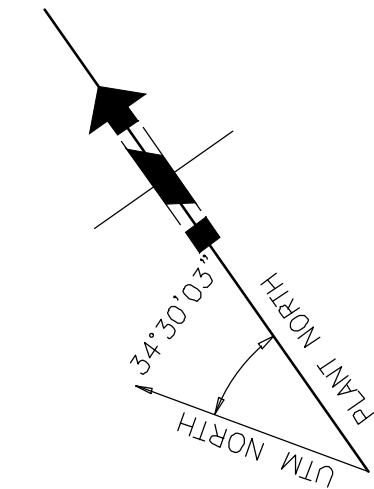
CH2MHILL
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CH2MHILL
PROJECT # 660356

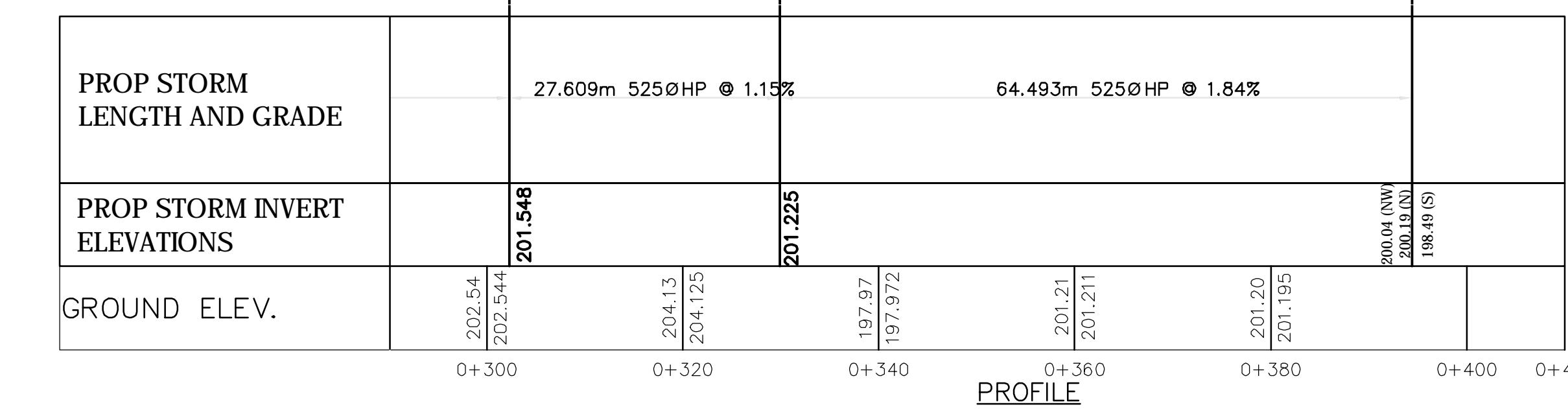
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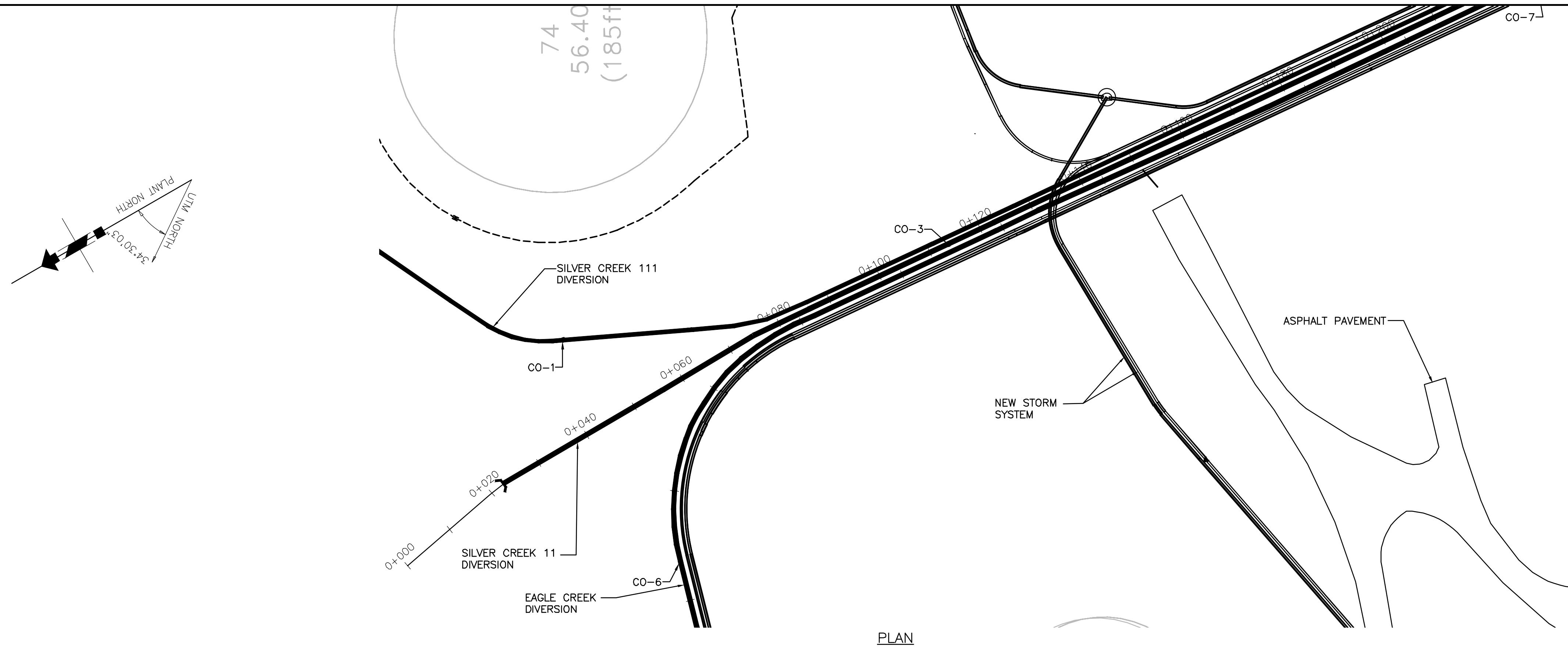
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DEC 08 2016
ISSUED FOR REVIEW

ch2m
PROJECT # 660356
DRAWN BY JTM
CHECKED BY
APPROVED BY PH

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PLAN AND PROFILE		DATE 16\12\02
STA. 0+300 TO 0+410		
BURNABY TERMINAL		
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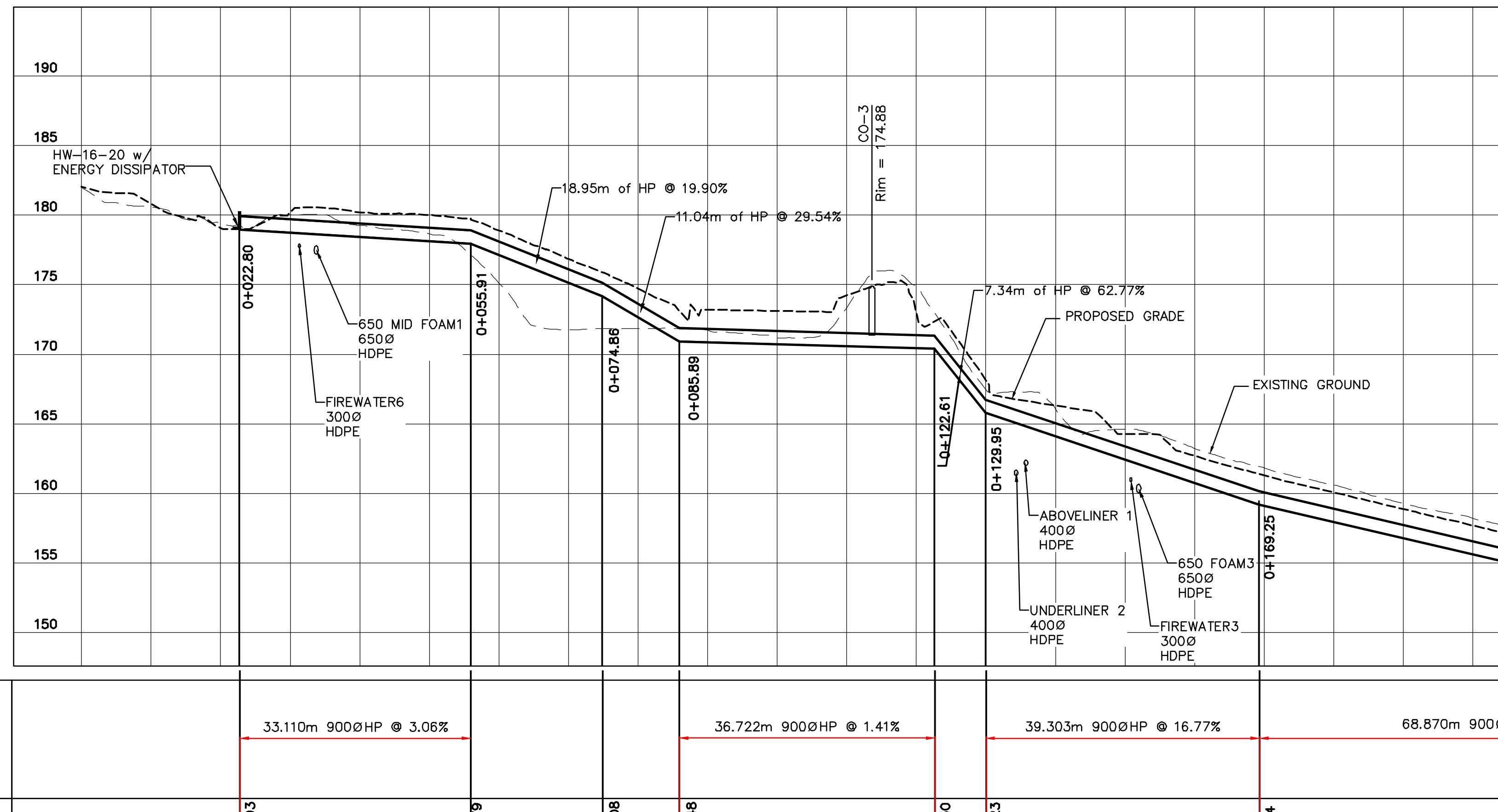


FOR CONTINUATION SEE DWG. SKT-BB00-CE1002-02

NOTES:

1. ALL LOCATIONS OF CREEK TIE-INS SHOWN ON DRAWINGS ARE BASED ON LIDAR DATA, AND NEED TO BE CONFIRMED PRIOR TO CONSTRUCTION
2. ALL PROPOSED CULVERTS TO BE SaniTite HP SEWER PIPE UNLESS NOTED OTHERWISE
3. PIPE ANCHOR BLOCKS NEED TO BE INSTALLED AT THE PIPE WHERE THE PIPE SLOPE IS GREATER THAN 15%, CONFORM TO MMCD STANDARD DRAWING G8
4. CONTRACTOR TO CONFIRM LOCATION OF ALL EXISTING UTILITIES & NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
5. CHECK ALL PLANS, REPORT ANY CONFLICTS TO ENGINEER PRIOR TO CONSTRUCTION.

PLAN



ALIGNMENT: PROP CULVERT S11

PROP STORM LENGTH AND GRADE	33.110m 9000HP @ 3.06%	36.722m 9000HP @ 1.41%	39.303m 9000HP @ 16.77%	68.870m 9000
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PROP STORM INVERT ELEVATIONS	177.99	174.208	170.948	165.823	59.234
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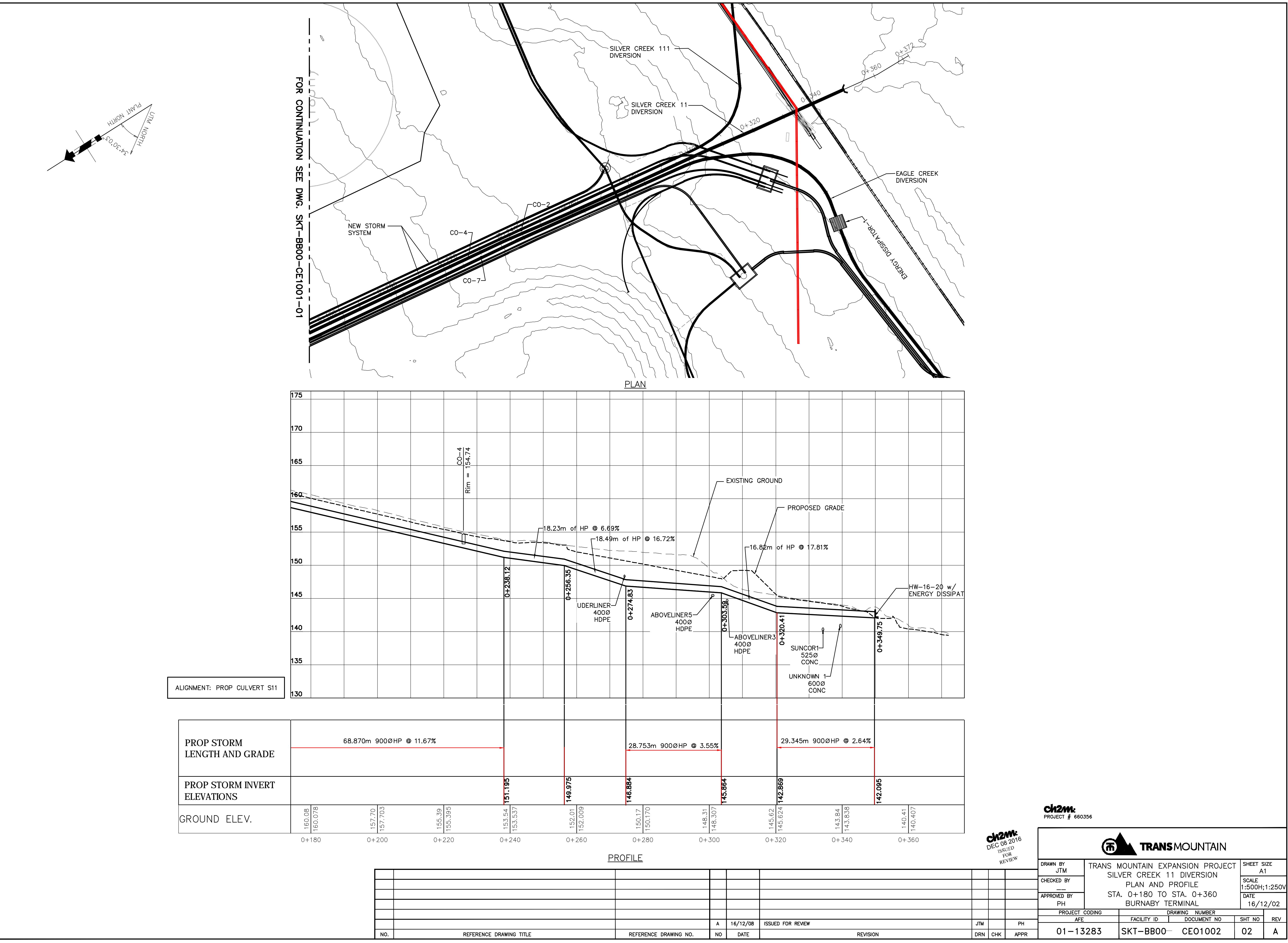
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	178.993											

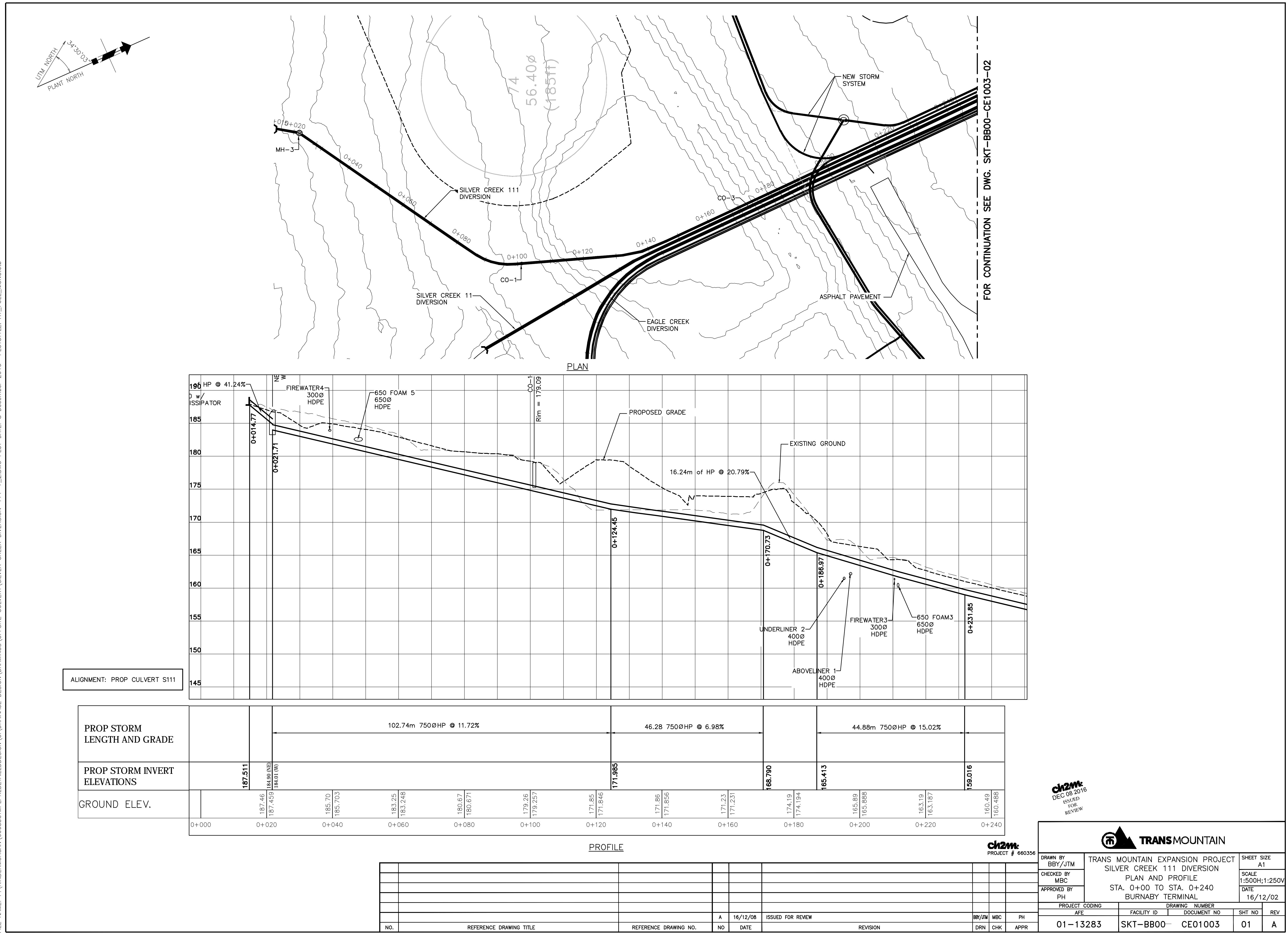
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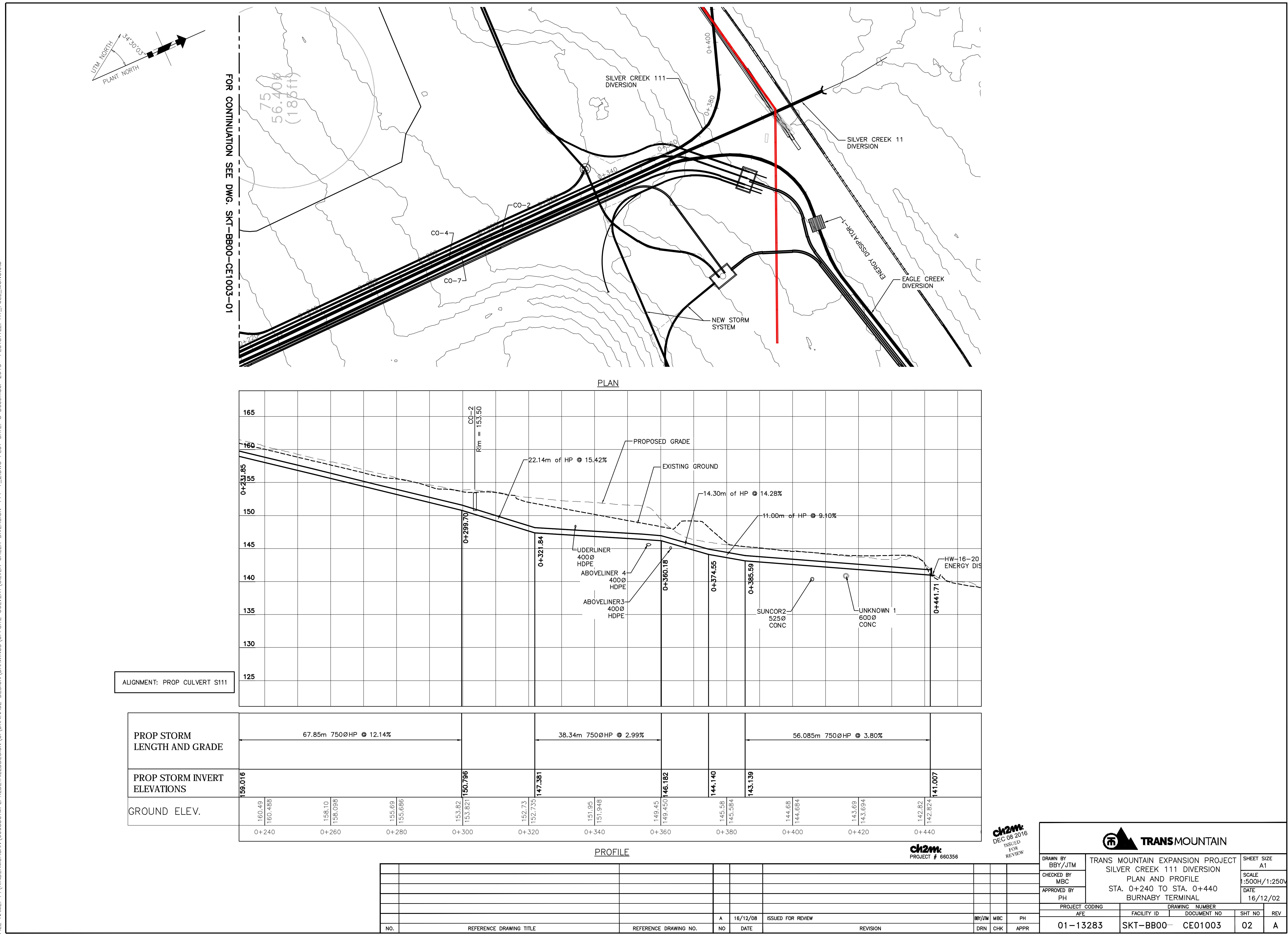
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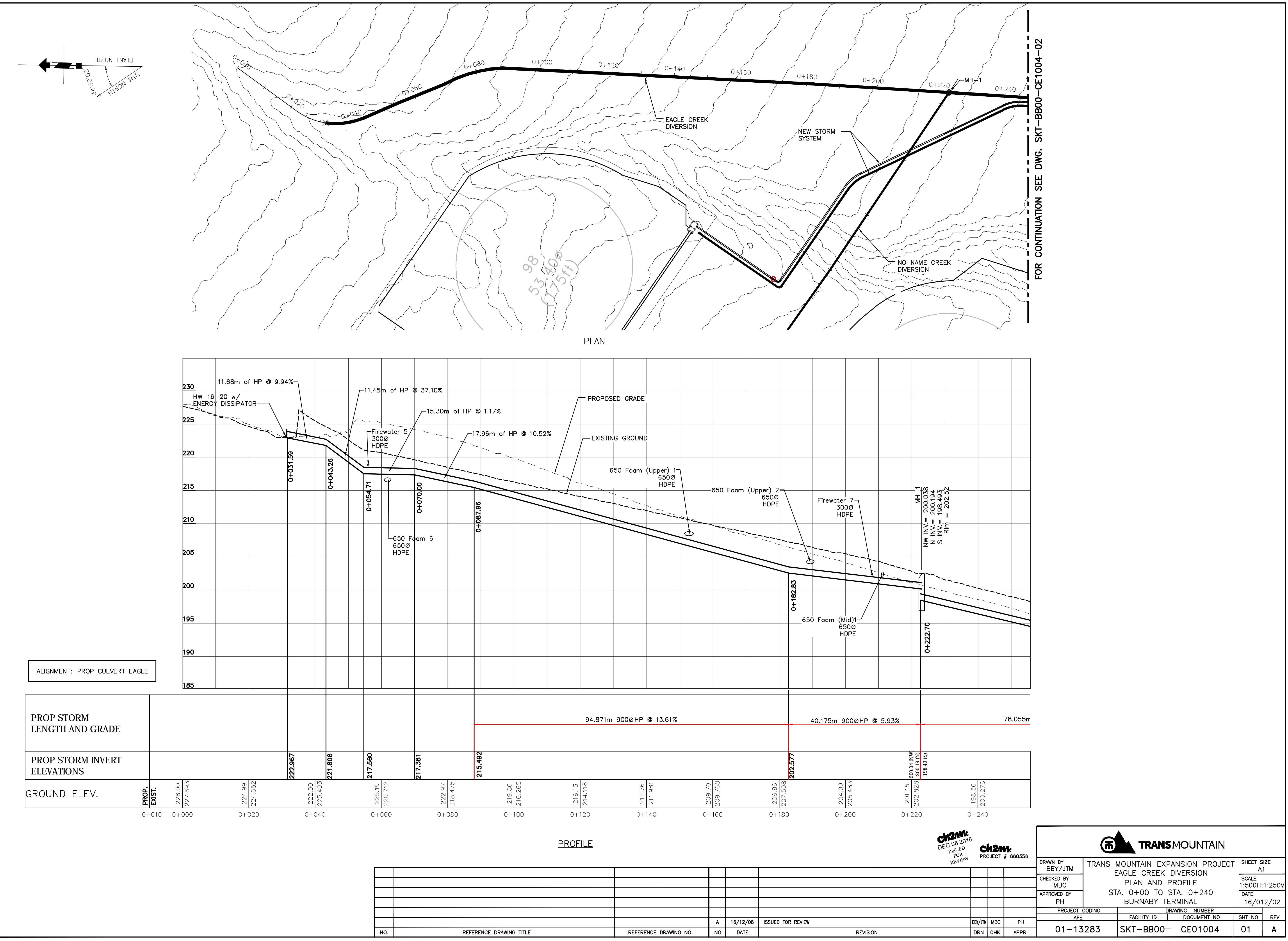
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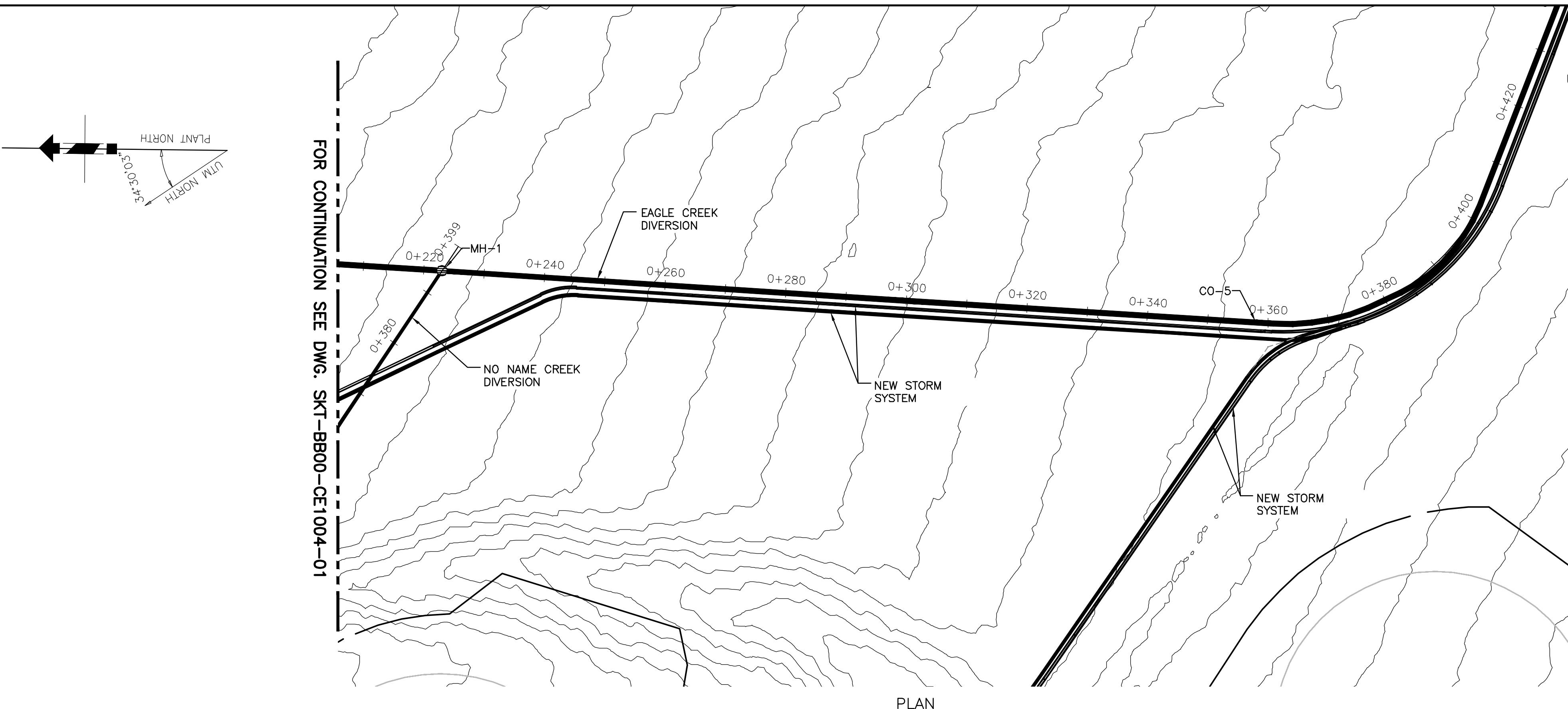
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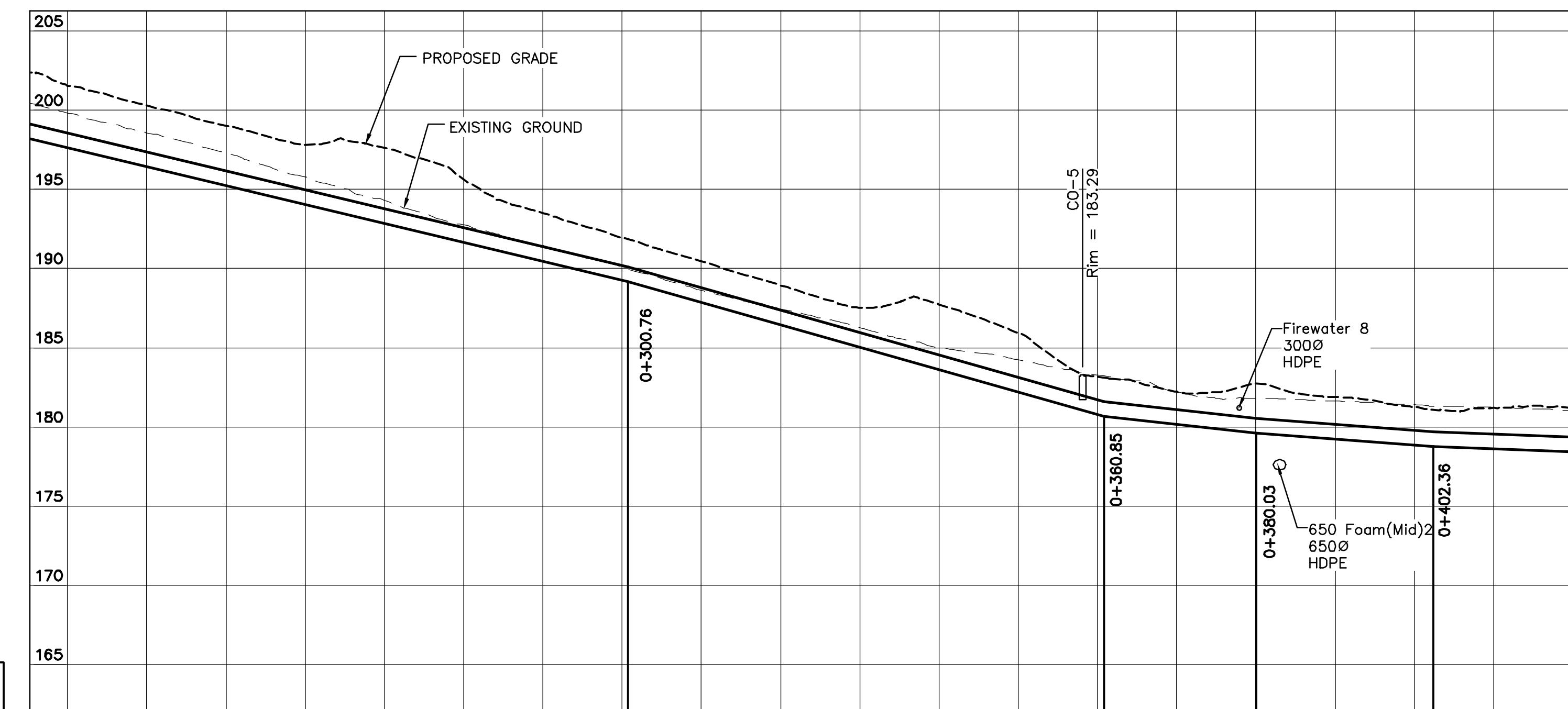








ALIGNMENT: PROP CULVERT EAGLE



PROP STORM LENGTH AND GRADE	78.055m 900φ HP @ 11.94%	60.098m 900φ HP @ 14.15%		54.767m
PROP STORM INVERT ELEVATIONS	198.56 200.276	195.77 197.803	192.76 195.639	190.08 191.941
GROUND ELEV.	198.44 188.941	187.739 188.941	185.01 183.157	181.81 182.728

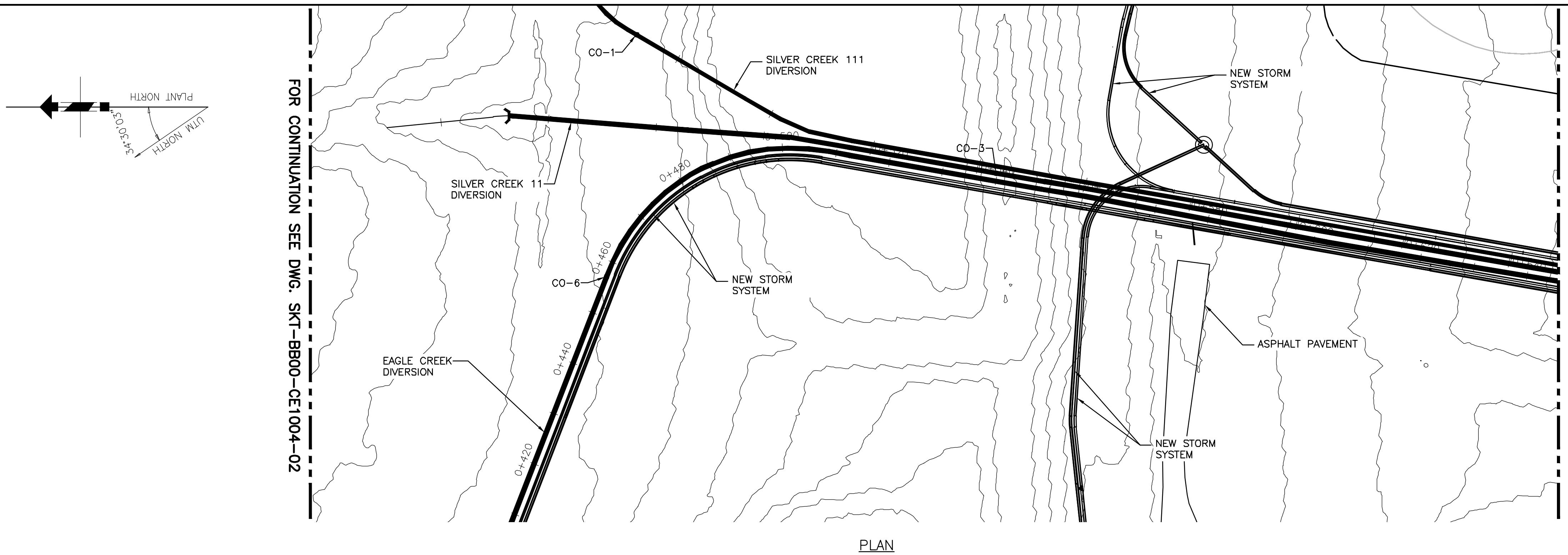
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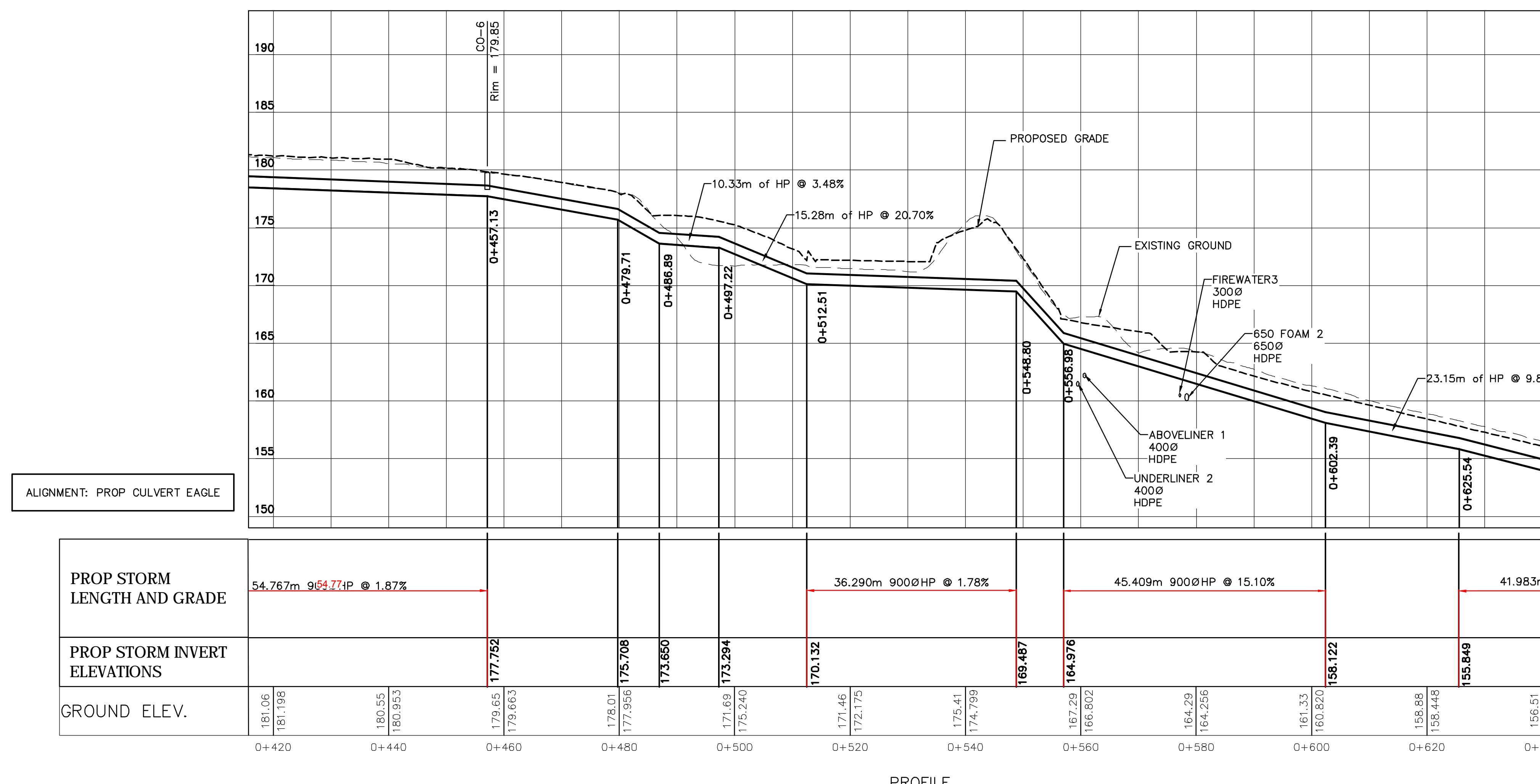
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DEC 08 2016
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FOR
REVIEW

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PROJECT # 660356

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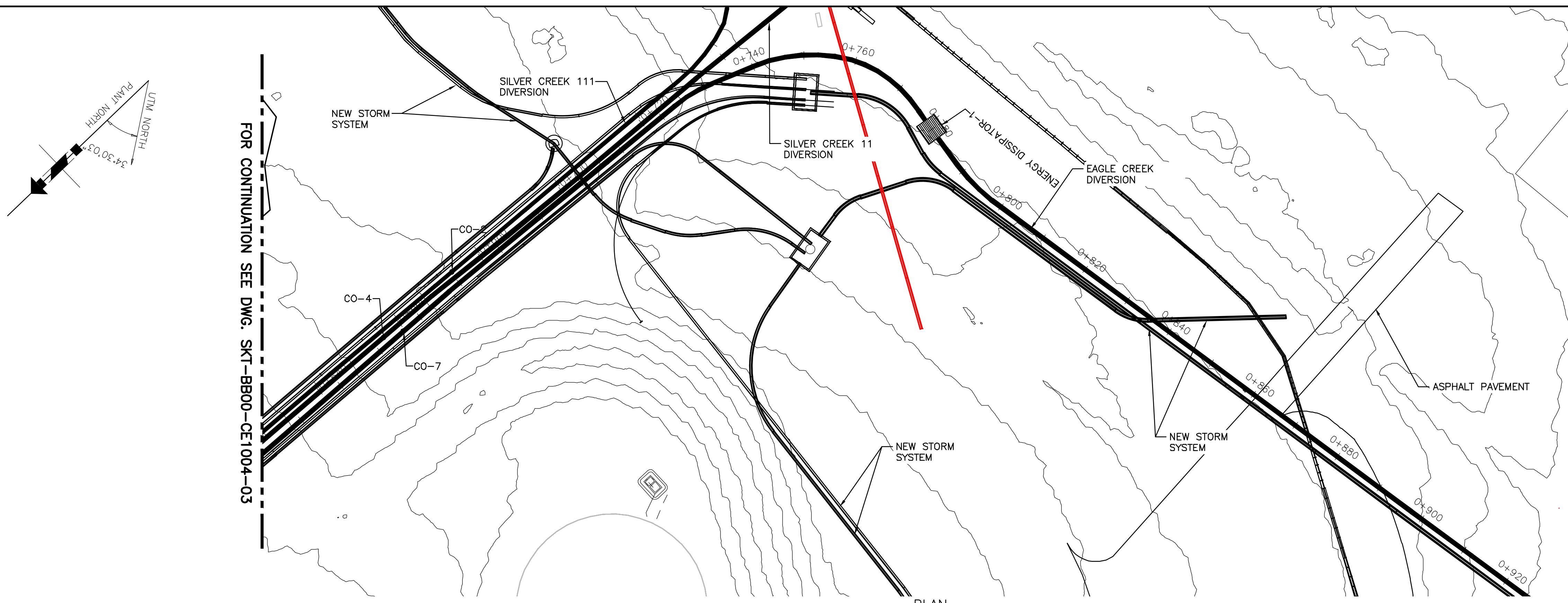


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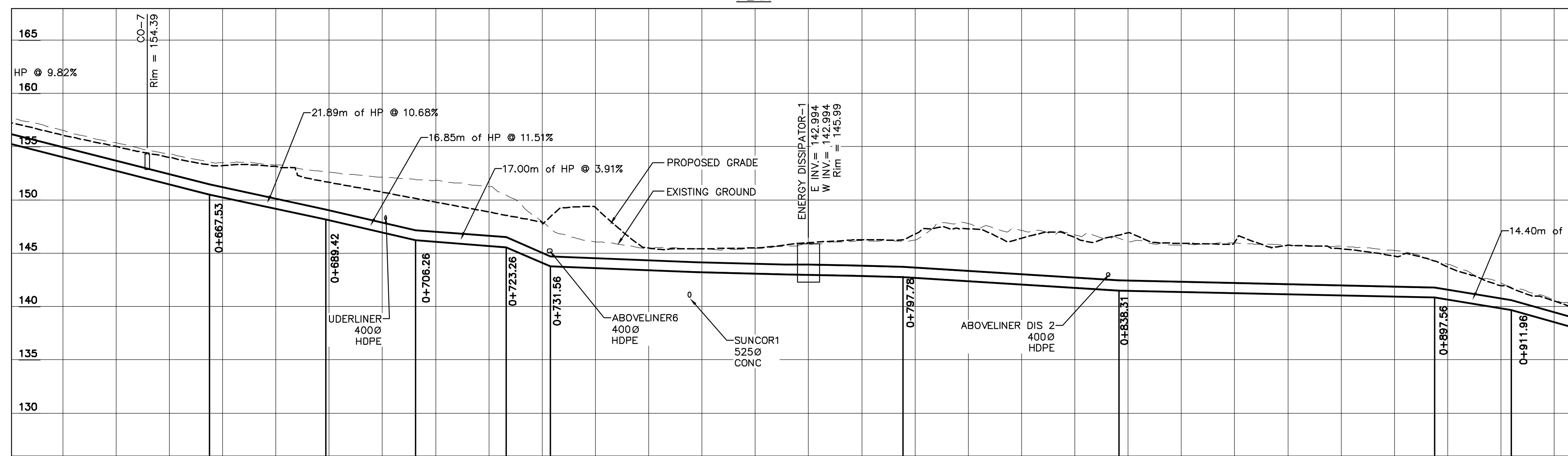
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PROJECT # 660356

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		PLAN AND PROFILE				SCALE	
PROJECT CODING	A FE	FACILITY ID	DOCUMENT NO	SHT NO	REV	1:500; 1:250V	DATE
NO.	REFERENCE DRAWING TITLE	REFERENCE DRAWING NO.	NO	DATE	REVISION	BBY/JTM MBC PH	16/12/02
01-13283	SKT-BB00 CE01004	03	A			DRN CHK APPR	



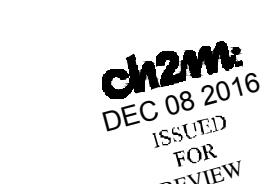
A vertical dashed line with thick black segments, representing a boundary or path.



ALIGNMENT: PROP CULVERT EAGL

PROP STORM LENGTH AND GRADE		41.983m 900ØHP @ 12.70%												
PROP STORM INVERT ELEVATIONS														
GROUND ELEV.		156.51 156.079	154.30 153.999	150.517 150.517	148.179 148.179	146.240 146.240	145.576 145.576	143.794 143.794	142.787 142.787	141.512 141.512	140.871 140.871	139.680 139.680		

PROFI

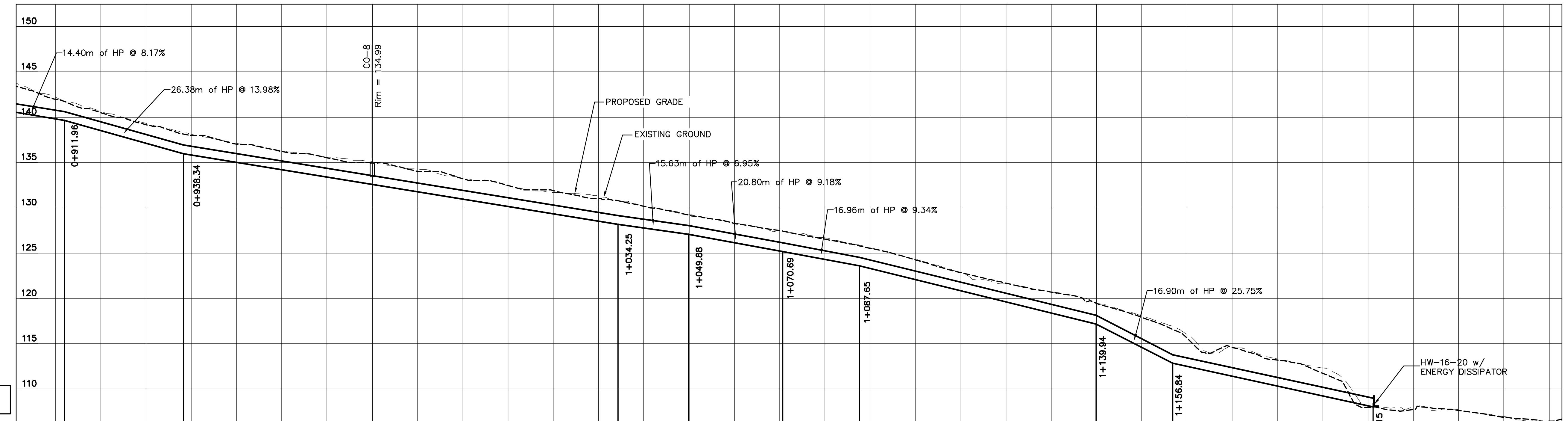


ANS MOUNTAIN

		 TRANS MOUNTAIN			
0356	DRAWN BY BBY/JTM	TRANS MOUNTAIN EXPANSION PROJECT EAGLE CREEK DIVERSION PLAN AND PROFILE STA. 0+640 TO STA. 0+920 BURNABY TERMINAL	SHEET SIZE A1		
	CHECKED BY MBC		SCALE 1:500H;1:250V		
	APPROVED BY PH		DATE 16/12/02		
PROJECT CODING		DRAWING NUMBER			
AFE		FACILITY ID	DOCUMENT NO	SHT NO	REV
R	01-13283	SKT-BB00	CE01004		



PLAN



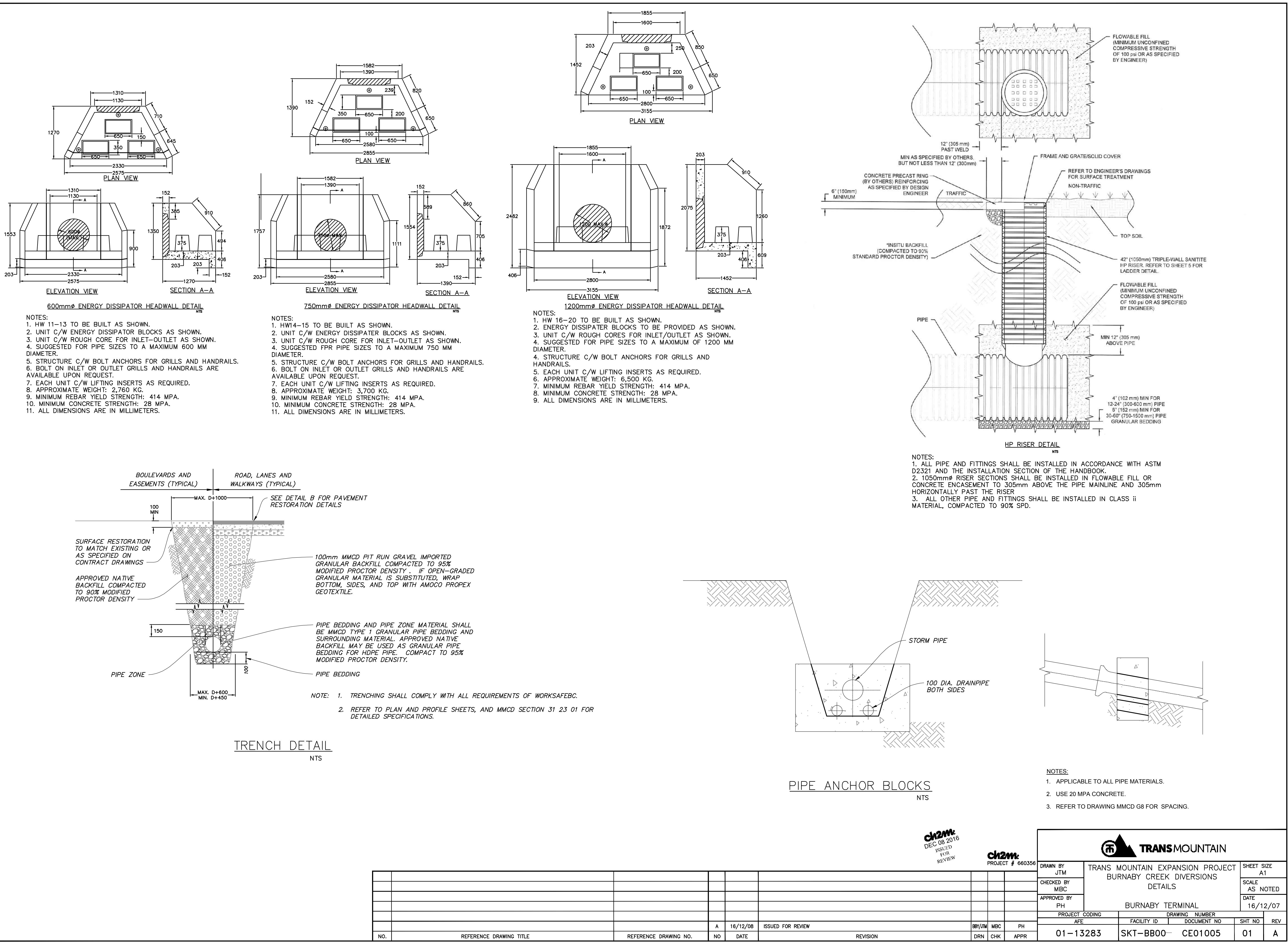
ALIGNMENT: PROP CULVERT EAGLE

PROP STORM LENGTH AND GRADE	95.908m 9000HP @ 8.12%																		52.290m 9000HP @ 12.26%							
PROP STORM INVERT ELEVATIONS	139.680	138.003	135.992	134.990	133.222	131.68	130.164	128.206	127.119	125.210	123.625	122.69	121.694	120.694	119.478	117.213	115.612	113.33	111.196	108.10	107.999	106.73	105.650	104.49	103.365	
GROUND ELEV.	140.64	140.511	138.11	136.219	136.31	135.08	134.99	133.22	131.68	130.164	128.34	126.538	124.33	122.694	121.694	119.478	117.213	115.612	113.33	111.196	108.10	107.999	106.73	105.650	104.49	103.365

PROFILE

CH2M
DEC 08 2016
ISSUED FOR REVIEW
PROJECT # 660356

DRAWN BY BBY/JTM	TRANS MOUNTAIN EXPANSION PROJECT			SHEET SIZE A1
CHECKED BY MBC	EAGLE CREEK DIVISION			SCALE 1:500H;1:250V
APPROVED BY PH	PLAN AND PROFILE			DATE
PROJECT CODING AFC		DRAWING NUMBER FACILITY ID DOCUMENT NO	SHT NO	REV
01-13283		SKT-BB00 CE01004	05	A



ATTACHMENT 3

ENVIRONMENTAL MANAGEMENT PLAN

FOR THE TRANS MOUNTAIN PIPELINE ULC

TRANS MOUNTAIN EXPANSION PROJECT:

BURNABY TERMINAL BC OGC SECTION

11 PERMIT APPLICATION

 <p>01-13283-TB-BB00-GEO-RPT-0001 R0</p>	Trans Mountain Expansion Project	Contractor Revision Date:	2017-2-10
	Environmental Management Plan Burnaby Terminal	Contractor Revision No.:	0
		Page	1 of 32



Environmental Management Plan For The Trans Mountain Pipeline ULC Trans Mountain Expansion Project

Burnaby Terminal

**In Support of:
BC OGC Section 11 Permit Application**

KMC Document # 01-13283-TB-BB00-GEO-RPT-0001 R0



Rev No.	Prepared by/ Date	Reviewed by/ Date	Approved by/ Date	TMEP Acceptance/ Date	Pages Revised	Issued Type
1	Calum Bonnington 2017-2-10					Issued for Use



ENVIRONMENTAL MANAGEMENT PLAN FOR THE

TRANS MOUNTAIN PIPELINE ULC TRANS MOUNTAIN EXPANSION PROJECT

BURNABY TERMINAL

BC OGC Section 11 Permit Application

February 2017

01-13283-TB-BB00-GEO-RPT-0001 R0

Prepared for:



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1.0 INTRODUCTION

Trans Mountain Pipeline ULC, a general Partner with Trans Mountain Pipeline L.P., operated by Kinder Morgan Canada Inc. (KMC), and owned by Kinder Morgan Energy Partners L.P. applied to the National Energy Board (NEB) in December 2013 for regulatory approval to construct the proposed Trans Mountain Pipeline Expansion Pipeline (TMEP) between Edmonton, Alberta, and Burnaby, British Columbia.

On May 19, 2016, Trans Mountain received the NEB's Conditions for the Project, including NEB Condition 78, which requires an update to the Facilities Environmental Protection Plan (EPP). The Facilities EPP covers environmental procedures applicable to all Project phases and activities at the facilities (terminals, pump stations, temporary facilities and associated infrastructure). This includes all works proposed within the Burnaby Terminal that will be required to accommodate the additional capacity provided by the new TMEP Project, including the construction of 14 new tanks within the existing Burnaby Terminal.

The Facilities EPP covers a wide range of facilities on the Project, as such the following Burnaby Terminal Environmental Management Plan (EMP) has been developed to specifically address environmental mitigation for the construction planned at Burnaby Terminal and to support necessary permitting. The information in this EMP will be incorporated into the updated Facilities EPP and submitted to the NEB prior to construction.

1.1 Purpose of Environmental Management Plan

The purpose of the Burnaby Terminal Environmental Management Plan (EMP) (the Plan) is to provide information in support of the Section 11 Application being made under the *BC Water Sustainability Act*, for Changes in and About a Stream. These changes include construction activities at the Burnaby Terminal property to control local surface and groundwater hydrology to accommodate the addition of 14 new storage tanks within the existing terminal facility. Detailed information on each watercourse and drainage affected is provided in the appendices to this EMP.

2.0 DESCRIPTION OF WORK AND ENVIRONMENTAL SETTING

2.1 Project Location and Description

The Burnaby Terminal is located on the southwest slope of Burnaby Mountain, at 7815 Shellmount Street, in the City of Burnaby, BC. Currently, there are 13 storage tanks on the property (see Figure 1, Existing and Proposed Site Watercourse Alignment). All of the works proposed for the tank expansion will occur within the existing Burnaby Terminal boundary. Note that the drainage patterns across the terminal facility are divided into two watersheds, with channels and drainages within the western two-thirds of the facility contained within the Eagle Creek watershed, and flows across the eastern third of the facility contained within the Silver Creek watershed (see Figure 1, Existing and Proposed Watercourse Alignment). All works proposed will maintain flows within each respective catchment.

The proposed construction works at Burnaby Terminal include construction of 14 new storage tanks, and removal of a single existing tank, creating a total of 26 tanks at the facility. Of the 14 new tanks being added to the terminal facility, 8 are to be situated within the upper Eagle Creek watershed. The final six new tanks (including the tank to be removed) will be located east of the existing tanks, within the upper Silver Creek watershed. In addition to the construction of new tanks, the road and pipeline networks will be expanded to provide access to each new tank. Two new road and pipe segments, with spurs to each individual tank, will provide access to the northern tanks. Three new road and pipe segments, with spurs to each individual tank, will provide access to the eastern tanks.

2.1.1 *Eagle Creek Watershed*

Eagle Creek is a tributary to Burnaby Lake and begins as many tiny streams that drain the west and southwest sides of Burnaby Mountain. The lands on the mountain are protected as part of the Burnaby Mountain Conservation Area. Below the protected area, tributaries of Eagle Creek emerge from the forest to flow through land that has been developed for industrial and residential purposes (including Burnaby Terminal). In locations the creek is culverted, channelized and constrained, and at other locations it is allowed to flow almost freely.

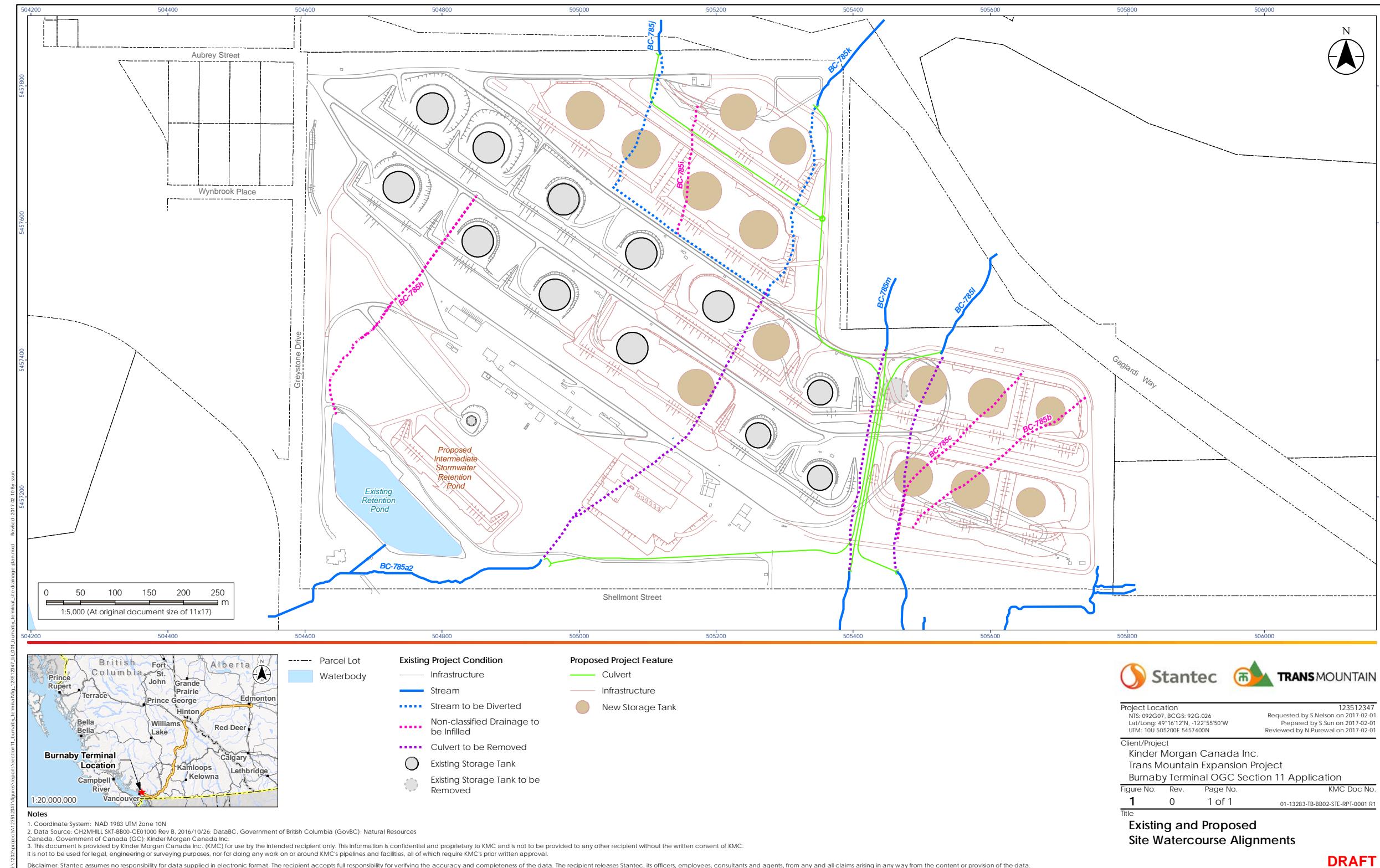
The various tributaries to Eagle Creek are gathered together upstream and downstream from Squint Lake, on lands that are currently the site of the Burnaby Mountain Golf Course. The collected waters of Eagle Creek are culverted under Broadway, and descend from the culvert into a deep ravine that runs uninterrupted to the Lougheed Highway. Aside from a service road at the bottom, and some concrete stormwater management infrastructure, the ravine is generally undeveloped.

Below Lougheed Highway, Eagle Creek runs through Charles Rummel Park, and then once again enters a residential zone, where it is mostly channelized, and occasionally culverted. Below Winston Street, the creek enters Warner Loat Park, where it flows in a bed that parallels Piper Avenue all the way into Burnaby Lake Regional Park. Once in the park, the waters of the creek do not have far to go until they are directed into Burnaby Lake.

The Eagle Creek watershed is in the coastal western hemlock biogeoclimatic zone of British Columbia. The protected lands of Burnaby Mountain, as well as the lands of Burnaby Lake Regional Park, are forested with a second growth forest that primarily consists of bigleaf maple, red alder, western hemlock, western redcedar, and Douglas-fir, with an underbrush of salmonberry, Indian plum, red elderberry, and other shrubs and herbs. Mammals found here include the Douglas squirrel, black-tailed deer, coyote, and raccoon. Many birds and amphibians also inhabit the watershed. In areas that have been converted by residential development, exotic and invasive species predominate, including English ivy and Himalayan blackberry.

Pacific salmon are a native part of Eagle Creek's ecosystem. Today, the fish are encouraged and protected by the actions of the Eagle Creek Streamkeepers. The limit of upstream fish passage is reported to be the downstream side of the culvert under Broadway, where 6 adult coho were observed in 2016 (Eagle Creek Streamkeepers, Pers. Comm.). Resident populations of coastal cutthroat trout inhabit Squint Lake and are able to move between the lake and Eagle Creek's tributaries. Movement upstream by fishes within the unnamed tributary to Eagle Creek that exits the Burnaby Terminal is limited to the reach within the golf course and downstream of the barrier that exists at Shellmount Street.

Figure 1. Burnaby Terminal Project: Existing and Proposed Site Watercourse Alignments



Eagle Creek Watershed: Watercourses and Drainages within Burnaby Terminal

Two unnamed channels (tributaries to Eagle Creek), classified as S6, nonfish-bearing, and one Non-Classified Drainage (NCD) (BC-785i) flow south from the northern property boundary to an existing drainage ditch along the north edge of an existing road. From this surface drainage ditch, the flows are collectively conveyed south through the middle of the property via a culvert, which enters a section of channel that runs west, parallel to Shellmount Street before joining with flows from the outlet of the stormwater detention pond in the southwest corner of the terminal facility. These are described below and in more detail in Appendix A. And additional NCD (BC-785h) collects overland flow and general runoff from between the tanks on the western side of the terminal, carrying flow downslope through a series of roadside ditches and culverts, before discharging into an existing stormwater retention pond.

BC-785h; Unnamed Drainage

This NCD originates between the tanks situated on the western side of the terminal facility. Flows are conveyed through a series of roadside ditches, feeding into a section of culvert and open channel that carries the combined flow downslope. Additional stormwater collected along the inside western boundary of the terminal, are also combined with NCD BC-785h, ultimately discharging into the stormwater pond situated in the southwest corner of the terminal facility.

BC-785i; Unnamed Drainage

This short, 140 m length of NCD is situated between the two sections of unnamed channel (tributaries to Eagle Creek, BC-785j and BC-785k). This drainage was intermittently defined through vegetation, with short sections of scour down the 15-20% slope, and flow eventually entering the same roadside ditch carrying flow from BC-785j towards BC-785k. This NCD has no fish habitat potential.

BC-785k; Unnamed Tributary to Eagle Creek [1]

This unnamed channel is classified as an S6, nonfish-bearing watercourse and is subject to seasonal flows. The current channel consists of a 320 m section of channel above ground, before entering a culvert and flowing subsurface through the centre of the terminal for more than 500 m before discharging into an open channel section flowing west along the south boundary of the terminal. Note, the flow entering the existing culvert system is the combined flow of the second unnamed tributary to Eagle Creek (BC-785j) and any discharge collected by the NCD situated between the two channels (BC-785i).

BC-785j; Unnamed Tributary to Eagle Creek [2]

This unnamed channel is classified as a small nonfish-bearing seasonal watercourse (S6) with a riparian reserve strip along its 250 m length before flow enters a roadside ditch connecting to the existing culvert inlet at BC-785k. This small channel was considered to have little to no fish habitat potential, with documented barriers downstream shared by BC-785k.

2.1.2 *Silver Creek Watershed*

Silver Creek also begins as several small streams flowing down Burnaby Mountain and through the eastern portion of the Burnaby Terminal property. Silver Creek is ultimately a tributary to the Brunette River, approximately 2 km downstream from the terminal facility.

Silver Creek Watershed: Watercourses and Drainages within Burnaby Terminal

Two unnamed tributaries to Silver Creek traverse through the Burnaby Terminal; these headwater streams are also classified as S6, non-fish bearing and are extensively culverted, both through the terminal facility and through their urban reaches downstream from the terminal. Two NCD's also flow through the eastern portion of the property, originating within the terminal facility. Additional surface stormwater runoff is also collected onsite within roadside ditches. These are described below and in more

detail in the Watercourse Crossing Summary Table (Appendix A) and accompanying Atlas pages (Appendix B).

BC-785l; Unnamed Tributary to Silver Creek [1]

This unnamed channel is classified as an S6, nonfish-bearing watercourse that enters the terminal facility through the fence at the northern edge on the eastern side of the facility. Approximately 15 m into the terminal facility, flow enters a 600 mm diameter concrete culvert and remains within this culvert across the entire terminal facility, emerging at the southern boundary of the terminal facility. Below the site, the reach was previously documented to be nonfish-bearing, and the culvert through the terminal is an existing barrier to fishes.

BC-785m; Unnamed Tributary to Silver Creek [2]

Following a similar path to BC-785l, this unnamed channel is also classified as an S6, nonfish-bearing watercourse. The channel enters the terminal facility through the fence at the northern edge on the eastern side of the facility. Approximately 12 m into the terminal facility, flow enters a 1,000 mm diameter concrete culvert and remains within this culvert across the entire terminal facility, emerging at the southern boundary of the terminal facility. Below the site, the reach was previously documented to be nonfish-bearing, and the culvert through the terminal is an existing barrier to fishes.

BC-785b; Unnamed Drainage

This NCD was documented as a vegetated swale, collecting surface runoff. There was no evidence of scour or fluvial processes. There is no connectivity to fish habitat, or fish habitat potential.

BC-785c; Unnamed Drainage

This NCD was also documented as a vegetated swale, collecting surface runoff. There was no evidence of scour or fluvial processes. There is no connectivity to fish habitat, or fish habitat potential.

2.2 Wildlife and Species at Risk

There are no fish or wildlife species listed under Schedule 1 of the Species at Risk Act present within the Burnaby Terminal facility.

Previous field studies associated with the TMEP Project identified a single red-tailed hawk nest, in the southwest corner of the terminal facility. In addition, amphibians were also documented within the larger detention pond, also situated in the southwest corner of the facility. Note, all works associated with the channel diversions and tank expansion proposed does not involve the existing detention pond in the southwest corner of the facility.

As a precaution, appropriate mitigation measures, particularly those associated with migratory or nesting birds are addressed in Section 4.0.

2.3 Fisheries Timing Windows

All four unnamed channels and all four non-classified drainages have been classified as nonfish-bearing S6's and NCD's, respectively. As such they have no provincially designated or prescribed instream work window. Downstream fish-bearing reaches in each of the receiving waterbodies are considered to be outside the immediate zone-of-influence (ZOI) of the respective watercourses in both watersheds. An "open" least risk work window is therefore proposed (see Appendix A: Watercourse Crossing Summary Table).

3.0 INSTREAM WORKS PROPOSED

3.1 Schedule and Duration of Works

All works associated with the channel diversions proposed to accommodate the tank expansion are scheduled to occur in between September 2017 and March 2018.

3.2 Eagle Creek Watershed Within Burnaby Terminal

The two unnamed channels and one NCD (BC-785i) would interact directly with four of the proposed northern tanks and need to be diverted, with the current above ground sections of channel infilled. The easternmost unnamed tributary to Eagle Creek (BC-785k) will be diverted into a culvert from a point 75 m south of the property boundary, while the westernmost unnamed tributary to Eagle Creek (BC-785j) will be diverted into a culvert from a point 10 m east of the property boundary. The NCD currently situated between the two sections of above ground channels (BC-785i) will be captured by two new and one amended surface drainage ditches. The two new culverts and flows from the surface drainage ditches will join together into a new culvert near the central part of the property. The new culvert will convey the flows east, downslope between the central and eastern tank areas, then southwest to a new outlet at approximately the same location as the existing culvert (see Figure 1: Existing and Proposed Site Watercourse Alignment). The new channel alignment ties into the same unnamed tributary to Eagle Creek that exits the terminal facility in the southwest corner, below the existing stormwater retention pond.

The additional NCD (BC-785h) and its associated culvert network through the existing tanks on the western edge of the terminal facility will also be realigned. At present, flows generally run directly downslope through a combination of roadside ditches and buried culverts. These combined flows referred to as BC-785h will be diverted west, into the stormwater discharge running downslope inside the western boundary of the terminal facility. Minor realignment of the culverts carrying this combined flow will also occur further downslope, approximately 100 m before discharging into the existing retention pond. A summary of the works proposed is provided in Table 1, below.

3.3 Silver Creek Watershed Within Burnaby Terminal

The two unnamed tributaries to Silver Creek currently travel across the property through individual existing culverts. The new eastern tanks and infrastructure will affect both culverts. The two existing culverts will be replaced with new culverts that will begin and end in the same locations but travel along different paths, further to the west. The surface portions of these two creeks will not be altered.

Two additional NCDs in the Silver Creek drainage will also be infilled to accommodate the eastern tanks and infrastructure. Overland flow previously collected by these NCDs will instead be captured by new roadside ditches associated with the new access roads to be formed between the new tanks.

All watercourses and drainages affected by the works proposed are summarised in Table 1, with all fish and fish habitat investigations summarised in the Watercourse Crossing Summary Table (Appendix A) and accompanying Atlas pages (Appendix B).

3.4 Permits and Approvals

3.4.1 Federal

No federal permits (*i.e.*, Authorization under the *Fisheries Act*) are required for the works proposed. All works will occur in nonfish-bearing reaches of the respective watercourses and drainages. A Self Assessment of the Potential for Serious Harm to Fish and Fish Habitat was completed for the Project in 2015 (CH2M 2015) and included an evaluation of all fish-bearing watercourses, and reaches of nonfish-bearing watercourses with fish-bearing reaches within the defined zone-of-influence.

Nonfish-bearing watercourses or watercourses with nonfish-bearing reaches where works are proposed, were typically screened out through the Self Assessment process, particularly where the works proposed are outside the zone-of-influence of downstream fish-bearing reaches (CH2M 2014).

TABLE 1
WATERCOURSES & DRAINAGES WITHIN THE BURNABY TERMINAL

Site Name	Site ID	UTM	Stream Class	Proposed Works	Construction Methodology
Unnamed Drainage	BC-785h	10, 504762 E, 5457546 N	NCD	Diversion and realignment in new sections of culvert.	Flow isolation. Install new culvert section and divert flow.
Unnamed Drainage	BC-785i	10, 505141 E, 5457579 N	NCD	Diversion and infill of ~200 m of intermittently defined drainage.	Flow isolation. Install culvert and divert to Unnamed Channel (BC-785k).
Unnamed Channel (Unnamed Tributary to Eagle Creek [2])	BC-785j	10, 505041 E, 5457658 N	S6	Diversion and infill of ~250 m of S6 channel. Channel section to be permanently diverted within a new section of culvert (~300 m) and join with flow from (BC-785k). Combined flow to be carried south along east property boundary through ~350 m of new culvert to be installed to accommodate diversion of BC-785k.	Flow isolation. Construction of new channel prior to flow diversion.
Unnamed Channel (Unnamed Tributary to Eagle Creek [1])	BC-785k	10, 505288 E, 5457518 N	S6	Diversion and infill of ~320 m of S6 channel. Channel section to be permanently diverted along east property boundary through ~350 m of new culvert. Existing culvert system carrying combined flow of BC-785i, j and k to be replaced by new culvert further west to carry combined flow south into existing channel along south fence line of terminal facility.	Flow isolation. Construction of new channel prior to flow diversion.
Unnamed Channel (Unnamed Tributary to Silver Creek [1])	BC-785l	10, 505464 E, 5457095 N	S6	Removal of ~330m of existing culvert and replacement with ~400 m of new culvert, diverted to the west to accommodate new tank placement.	Flow isolation. Construction of new channel prior to flow diversion.
Unnamed Channel (Unnamed Tributary to Silver Creek [2])	BC-785m	10, 505394 E, 5457090 N	S6	Removal of ~360m of existing culvert and replacement with approximately the same length of new culvert.	Flow isolation. Construction of new channel prior to flow diversion.

<i>Site Name</i>	<i>Site ID</i>	<i>UTM</i>	<i>Stream Class</i>	<i>Proposed Works</i>	<i>Construction Methodology</i>
Unnamed Drainage	BC-785b	10, 505735 E, 5457341 N	NCD	Overland flow and surface runoff to be collected by new roadside ditch drainage network. Existing NCD to filled to accommodate new tank placement.	Diversion
Unnamed Drainage	BC-785c	10, 505586 E, 5457316 N	NCD	Overland flow and surface runoff to be collected by new roadside ditch drainage network. Existing NCD to filled to accommodate new tank placement.	Diversion

3.4.2 Provincial

Authorization under the *BC Water Sustainability Act*, specifically, approval under Section 11 for Changes in and About a Stream is required for any modifications to the bed and banks of defined watercourses, particularly the permanent realignment of channel sections.

3.5 Summary of Potential Effects to Fish and Fish Habitat

Given all instream flow needs will be maintained within downstream reaches, no adverse effects are anticipated to fishes or their habitat in downstream reaches of the unnamed tributary to Eagle Creek, or unnamed tributaries to Silver Creek. The nearest fish-bearing reach of Silver Creek is approximately 1.5 km downstream from the Burnaby Terminal, well beyond the zone-of-influence of the two unnamed tributaries.

The combined flow in the unnamed tributary to Eagle Creek leaving the Burnaby Terminal facility, joins with the main stem of Eagle Creek approximately 400 m downstream from where it exists the terminal facility, and approximately 700 m downstream from the extent of the channel diversions proposed. The mainstem of Eagle Creek runs through Squint Lake, and has documented populations of resident coastal cutthroat trout.

While the 400 m section of channel flowing through the golf course between Eagle Creek and the terminal facility is considered fish-bearing, multiple barriers to fishes were documented, including a vertical section of culvert under Shellmount Street. In addition, this section of channel is subject to seasonal flows, and periods of extremely low Dissolved Oxygen have been recorded. Effects resulting from the loss of sections of open channel within the Burnaby Terminal are expected to be negligible, and unlikely to have a measureable effect on resident fish populations in the mainstem of Eagle Creek.

4.0 MITIGATION MEASURES

The following general mitigation measures provided below, have been taken from Section 5.0 of the EPP for the Trans Mountain Pipeline ULC Burnaby Terminal Facility Piping Relocation Project (Trans Mountain, 2017) and in turn were derived from Section 6.0 of the revised draft Facilities Environmental Protection Plan (EPP) prepared for the TMEP Project (Trans Mountain, 2016). References to appendices below, are to appendices contained within the Piping Relocation Project EPP.

Activity/Concern	Mitigation Measures
<i>Review Mitigation Measures for Environmental Features</i>	1. Review with the Contractor the mitigation to be implemented to avoid or reduce effects on resource-specific environmental features or cultural features on or in proximity to the Burnaby Terminal. Conduct this review in advance of construction at known locations where any of the above features are known to be present to ensure that the Contractor has a full understanding of the procedures to be implemented.
<i>Species at Risk/Sensitive Species</i>	2. Refer to information on species at risk presented in the Resource-Specific Mitigation Table provided in Appendix D and the Environmental Facility Drawings provided in Appendix E. Ensure that all mitigation measures and timing restrictions concerning species at risk are communicated to the Contractor by an Environmental Inspector. 3. Suspend activity if previously unidentified sensitive species/species at risk are encountered on the work site during construction. Implement the following plans as appropriate: <ul style="list-style-type: none">• Rare Ecological Communities or Rare Plant Species of Concern Discovery Contingency Plan (see Appendix B); and• Wildlife Species of Concern Encounter and Discovery Contingency Plan (see Appendix B). 4. Report observations of sensitive species or species at risk immediately to an Environmental Inspector.
<i>Wildlife</i>	5. Initiate construction and decommissioning activities outside of the migratory bird nesting period (March 19 to August 17), where feasible, to reduce the risk of encountering migratory birds nesting at Burnaby Terminal. 6. Where required, clear areas of vegetation outside of the migratory bird nesting period to reduce the risk of migratory birds nesting on the construction site where work is scheduled to occur during the migratory bird nesting period. 7. In the event that construction activities are scheduled to commence within the migratory bird nesting period, consult with a Wildlife Resource Specialist to determine the need to conduct a non-intrusive area search for evidence of nesting (e.g., presence of territorial males, alarm calls, distraction displays, adults carrying nesting material/food). Searches for evidence of nesting should occur within 7 days prior to the proposed activity. In the event there are extended periods of inactivity between construction activities during the migratory bird nesting period (<i>i.e.</i> , a period greater than 7 days), consult with an Environmental Inspector regarding the potential need for follow-up searches for evidence of nesting.

Activity/Concern	Mitigation Measures
<i>Wildlife (cont'd)</i>	<ol style="list-style-type: none">8. In the event an active nest is found, it will be subject to site-specific mitigation measures (e.g., clearly marked species-specific buffer around the nest or non-intrusive monitoring). The appropriate mitigation measures will be selected by an Environmental Inspector, in consultation with a Wildlife Resource Specialist (see also the Wildlife Species of Concern Encounter and Discovery Contingency Plan provided in Appendix B).9. Discuss wildlife issues that are identified during construction, as necessary, with an Environmental Inspector, Wildlife Resource Specialist and the Appropriate Government Authority representatives, as directed in the Wildlife Species of Concern Encounter and Discovery Contingency Plan (see Appendix B).10. Conduct construction in a well-organized and efficient manner to limit the duration of sensory disturbance to wildlife.11. Implement the Wildlife Species of Concern Encounter and Discovery Contingency Plan (see Appendix B) in the event of an encounter with wildlife during construction, either at the site or on the commute to or from the construction site.12. Do not harass or feed wildlife.13. Report any incidents or collisions with wildlife to an Environmental Inspector, who will consult with the Appropriate Government Authority and the local police detachment, if applicable.14. Store food in vehicles or equipment or the construction office. Do not store food in beds of pick-up trucks or areas readily accessible to wildlife.15. Prohibit all Project personnel from having pets at the Burnaby Terminal.
<i>Heritage Resources</i>	<ol style="list-style-type: none">16. Follow applicable recommendations identified in the Archaeological Impact Assessment (AIA).17. Suspend work in proximity (<i>i.e.</i>, within 30 m or other distance as specified in the applicable regulatory permit) to archaeological, palaeontological or historical sites (e.g., arrowheads, modified bone, pottery fragments and fossils) if discovered during construction. No work at that particular location shall continue until permission is granted by the Appropriate Government Authority. Follow the contingency measures identified in the Heritage Resources Discovery Contingency Plan (see Appendix B).18. Prohibit the collection of historical, archaeological or palaeontological resources by Project personnel.19. Avoid disturbance of geodetic or legal survey monuments, to the extent feasible. If a geodetic monument is disturbed during construction of the pipeline, the Construction Manager or designate will immediately report such disturbance to a Trans Mountain representative who will report such disturbance to the Appropriate Government Authority. The Contractor will re-establish the monument, where feasible, in accordance with the instructions of the Dominion Geodesist.

Activity/Concern	Mitigation Measures
Noise Emissions	<ol style="list-style-type: none">20. Adhere to applicable federal (i.e., Environment and Climate Change Canada, <i>Motor Vehicle Safety Act</i> and <i>Oil and Gas Occupational Safety and Health Regulations</i>) and provincial (i.e., Directive 038: Noise Control, BC <i>Noise Control Best Practices Guideline</i> [BC OGC 2009], Section 7.2 of the <i>Occupational Health and Safety Regulations</i>) and municipal guidelines and legislation regarding noise management, where feasible.21. Noise abatement equipment and construction scheduling will be considered at noise-sensitive locations (e.g., neighbouring residents) and during noise-sensitive periods.22. Enforce vehicle speed limits. Use of engine retarder braking in urban areas is prohibited.23. Maintain equipment in good working condition and in accordance with manufacturer guidelines. Maintain noise suppression equipment (e.g., mufflers and silencers) on applicable construction machinery and vehicles.24. Maintain noise suppression equipment (e.g., mufflers and silencers) and use noise suppression techniques where and when feasible, to limit the transmission of noise beyond the construction site.25. Ensure the tools that are utilized are proportionate to the activity being conducted to limit excessive noise resulting from construction. Ensure stationary equipment, such as compressors and generators, will be located away from noise receptors, to the extent feasible.
Waste and Hazardous Material Storage	<ol style="list-style-type: none">26. Personnel will be made aware of their responsibilities for proper handling, identification, documentation and storage of hazardous materials and wastes.27. Personnel handling hazardous materials and wastes will possess valid Workplace Hazardous Materials Information System (WHMIS) training (Health Canada 2015).28. An appropriate number of portable toilets or wash facilities will be made available to ensure that construction crews have ready access to washroom facilities. Service and clean facilities regularly and ensure that they are adequately secure.29. Store bulk hazardous materials in accordance with applicable regulatory requirements.30. Store fuel, oil or hazardous materials required to be stored on-site within secondary containment that is to be located greater than 100 m from a drainage or channel.31. Store bulk tanks containing hazardous materials (e.g., fuel for construction equipment) in a bermed area lined with an impervious polyethylene liner. Secondary storage for fuel storage tanks is required for volumes exceeding 1,000 L. Design and size secondary containment for hydrocarbons in accordance with applicable provincial and federal requirements. Remove any water that accumulates within the containment structure, if directed by an Environmental Inspector. If there is a visible sheen or odour, the water in the containment structure should be characterized for disposal at an approved facility.32. Maintain documentation on all hazardous materials or wastes being stored at the facility sites.

Activity/Concern	Mitigation Measures
<i>Waste and Hazardous Material Storage (cont'd)</i>	33. Visually inspect fuel tanks on a regular basis as well as when the tank is refilled. Maintain inspection records for each tank. Take remedial action as soon as a leak is detected.
<i>Waste Disposal</i>	34. Collect construction debris and other waste materials on a regular basis, and dispose of it at an approved facility and in accordance with the Spill Contingency Plan (see Appendix B). Recycle wastes to the extent feasible. 35. Store garbage in wildlife-proof containers when potential wildlife/human conflicts may occur. 36. Ensure the construction site is left in a tidy and organized condition at the end of each day.
<i>Scheduling</i>	37. Review and abide by all applicable timing restrictions (e.g., migratory bird nesting period [March 19 to August 17]), where feasible. 38. In the event that a permit or approval is likely to expire prior to the completion of the applicable construction activities, take steps well in advance of the expiration date to obtain renewal or extension of the permit and/or approval. 39. Schedule construction activities in accordance with applicable approval conditions and municipal bylaws where feasible.
<i>Roads and Access</i>	40. Confine construction activities to the existing Burnaby Terminal boundaries. Restrict construction traffic to existing roads.
<i>Construction Traffic</i>	41. Establish speed limits, approved by Trans Mountain, and in compliance with provincial regulation, on access roads and in the Burnaby Terminal. Post signs stating the applicable speed limits for construction traffic to reduce dust. 42. Transport construction personnel to and from the Burnaby Terminal by multi-passenger vehicle, to the extent practical, to limit the potential for vehicle/wildlife interactions. 43. Implement wheel washing for equipment leaving the Burnaby Terminal and entering public roads, where warranted. Shovel and sweep clean, as quickly as practical, any mud, soils debris or foreign material tracked onto roads from vehicles leaving the construction site.
<i>Weeds</i>	44. Ensure that equipment arrives at Burnaby Terminal clean and free of soil or vegetative debris. Inspect and identify equipment deemed to be in appropriate condition with a suitable marker, such as a sticker. Any equipment arriving in a dirty condition will not be allowed on-site until it has been cleaned. 45. Clean equipment (i.e., shovel and sweep, pressurized water or compressed air) involved in topsoil/root zone material handling at weed-infested sites prior to leaving the location unless full topsoil/root zone material salvage has been conducted. Clean equipment involved in topsoil handling in weed-infested areas prior to leaving the location. 46. Monitor topsoil/root zone material piles during the course of construction and conduct corrective measures (e.g., spraying) to address weed growth as necessary.

Activity/Concern	Mitigation Measures
<i>Use of Herbicides</i>	<p>47. Restrict the application of herbicides to licensed applicators.</p> <p>48. Prohibit the use of herbicides within 30 m of a waterbody unless otherwise approved by an Environmental Inspector.</p>
<i>Drainages/Channels</i>	<p>49. Implement appropriate precautions to prevent deleterious substances (e.g., gasoline, sediment, oil, wet concrete) from entering drainages or channels. Cleaning, fuelling and servicing of equipment will be conducted in an area where spills or wash water will not contaminate surface water or groundwater resources. An appropriate emergency spill kit will be available at all times.</p> <p>50. Prevent construction materials and debris from entering channels or drainages.</p> <p>51. Install and maintain appropriate erosion and sediment control measures to prevent sediments from being transported into drainages or channels (see Details 1 and 2 provided in Appendix C). Ensure that approvals are in place prior to works where the work site encounters a watercourse.</p> <p>52. Maintain sediment fences in place, where warranted, until a vegetation cover is established or the surrounding area is stabilized. Allow waterbodies to recover naturally, if disturbed (<i>i.e.</i>, do not seed these areas).</p>
<i>Air Quality/ Odour/Greenhouse Gas Emissions</i>	<p>53. Restrict the duration that vehicles and equipment are allowed to sit and idle to the extent practical.</p> <p>54. Burning is prohibited in the Lower Fraser Valley and Greater Vancouver areas.</p>
<i>Aesthetics</i>	<p>55. Landscape the Burnaby Terminal to limit visual effects (e.g., leave a vegetation buffer between Burnaby Terminal and public roads) to the extent possible.</p> <p>56. Direct lighting for construction activities downward and, where feasible, position it to avoid or reduce annoyance of nearby residents.</p> <p>57. Install lighting control systems in the Burnaby Terminal that permit the reduction of the amount of lighting during periods of low activity.</p>
<i>Drainage</i>	<p>58. Reduce the potential for soil erosion by water during construction activities by avoiding ponding of water or the unintentional channelization of surface water flow.</p> <p>59. Provide surface drainage of adequate capacity across the construction footprint.</p> <p>60. Install drainage features to ensure that runoff originating off-site will not be allowed to enter the construction area.</p> <p>61. Inspect all water conveyance installations (e.g., ditches and culverts) and ensure that they are functioning appropriately. Take appropriate action prior to and during spring break-up to clear culverts blocked by ice or debris.</p>
<i>Wet Soil Conditions</i>	<p>62. Adhere to the measures outlined in the Wet Soils Contingency Plan (see Appendix B) if wet soil conditions are encountered prior to the removal of topsoil/root zone material from the construction area.</p>

Activity/Concern	Mitigation Measures
<i>Erosion and Sedimentation</i>	<p>63. Install erosion and sediment control structures and materials as approved by an Environmental Inspector (e.g., subsoil berm or sediment fencing) and implement, as warranted, erosion control measures outlined in the Soil Erosion and Sediment Control Contingency Plan (see Appendix B) to ensure that sediments in surface water draining from the Burnaby Terminal do not adversely affect the surrounding terrain or channels or drainages.</p> <p>64. Maintain or, when the area is stabilized, remove drainage and erosion control devices, and materials at all sites that are no longer in use (e.g. soil disposal sites, stock pile sites).</p>
<i>Contaminated Soils</i>	<p>65. Implement the Contamination Discovery Contingency Plan (see Appendix B) in the event that contaminated soils are discovered during construction.</p> <p>66. Report spills immediately to an Environmental Inspector who will notify the Senior Compliance Advisor for reporting to the Appropriate Government Authorities in accordance with the Spill Contingency Plan (see Appendix B).</p> <p>67. Maintain all appropriate spill equipment at all work sites. Assess the risk of spills to determine the appropriate type and quantity of spill response equipment and materials to be stored on-site and a suitable location for storage (see the Emergency Response Plan). Ensure that Operators and on-site Construction Foremen are trained to contain spills or leakage from equipment.</p>
<i>Spill Prevention</i>	<p>68. Store all hazardous substances and fuels in proper containment systems, to prevent release to the environment. Handle all hazardous materials in accordance with applicable WHMIS protocols.</p> <p>69. Post specific instructions at the field construction offices and in construction environmental training handbooks regarding applicable contacts and appropriate response actions to be taken in the event of a spill, including the measures provided in the Spill Contingency Plan (see Appendix B) and contacts for spill reporting (see Appendix A).</p> <p>70. Ensure that during construction no fuel, lubricating fluids, hydraulic fluids, methanol, antifreeze, herbicides, biocides or other chemicals are dumped on the ground or into watercourses. In the event of a spill, implement the Spill Contingency Plan (see Appendix B).</p> <p>71. Ensure that bulk fuel trucks, service vehicles and pick-up trucks equipped with box-mounted fuel tanks carry spill prevention, containment and clean-up materials that are suitable for the volume of fuels or oils carried. Carry spill response supplies on bulk fuel and service vehicles that is suitable for use on land and water (<i>i.e.</i>, sorbent pads, sorbent boom and rope).</p>

Activity/Concern	Mitigation Measures
<i>Spill Prevention (cont'd)</i>	<p>72. Conduct refuelling a minimum of 100 m from any channel or drainage, unless otherwise approved by an Environmental Inspector. Employ the following measures to limit the risk of fuel spills in water if refuelling within 100 m of a channel or drainage:</p> <ul style="list-style-type: none">• all containers, hoses, nozzles are free of leaks;• all fuel nozzles are equipped with shut-offs;• Operators are stationed at both ends of the hose during fuelling unless the ends are visible and readily accessible by one Operator; and• fuel remaining in the hose is returned to the storage facility. <p>73. Do not wash equipment or machinery in channels, drainages or artificial ponds. Control wastewater from construction activities, such as equipment washing or cement mixing, to avoid discharge directly into any body of water.</p>

4.1.1 Water Quality Monitoring

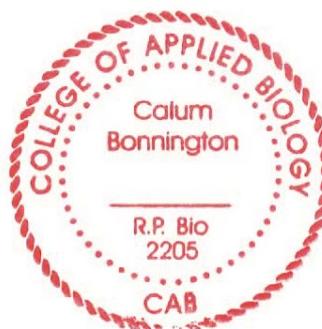
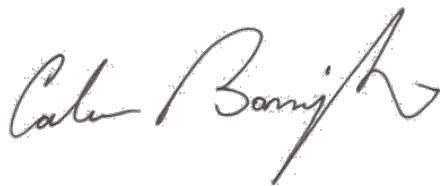
Environmental monitoring, and water quality monitoring in particular, is acknowledged as key component in the environmental process and site-specific mitigation proposed. Downstream water quality in each of the three resulting watercourses (single outlet channel for the combined outflow of the two unnamed tributaries to Eagle Creek combined upslope, and each of the two separate unnamed tributaries to Silver Creek) will be monitored during periods of instream work. Key periods of instream work include the diversion of flow and permanent tie-in of flow into the new channel system.

Environmental monitoring proposed during expansion works within Burnaby Terminal is outlined in Section 9.0 of the Trans Mountain Expansion Project, Burnaby Terminal Erosion and Sediment Control Plan (EDI 2017). Water quantity and turbidity levels will be collected upstream of the Burnaby Terminal for each of the two unnamed tributaries to Eagle Creek, and the two unnamed tributaries to Silver Creek. These readings will be compared to those collected at the output locations leaving the facility to confirm no-net-loss of instream flow quantities and that any elevations in turbidity above background are within the Canadian Council of Ministers of the Environment (CCME) guidelines being used for turbidity (CCME 2007), as referenced in Section 3.1.4 of the EDI Sediment Control Plan (EDI 2017).

5.0 SUMMARY

This EMP is intended to be a dynamic document that will be updated as necessary to reflect new and/or additional information pertaining to the Project, and to incorporate specific permit conditions as permits and approvals are acquired. Effective communication between Trans Mountain, and other Project Stakeholders, Contractors and Environmental Representatives will ensure that the BMP's and mitigation measures outlined in this document are implemented and/or modified as required to avoid and mitigate potentially negative impacts to the environment.

Sincerely,



Calum Bonnington, M.Sc., P.Biol., R.P.Bio.
Fisheries Lead
GeoMarine Environmental Consultants Ltd.

6.0 REFERENCES

Canadian Council of Ministers of the Environment (CCME). 2007. Canadian Environmental Quality Guidelines.

CH2M HILL Energy Canada, Ltd. 2014. The Process For: Self-Assessment of Potential for Serious Harm to Fish and Fish Habitat Resulting from the Trans Mountain Pipeline ULC Trans Mountain Expansion Project". Submitted to the NEB, December 2014, Filing ID A4F5C7. 14pp + Appendices.

CH2M HILL Energy Canada. 2015. Self-Assessment of the Potential for Serious Harm to Fish and Fish Habitat Resulting From the Trans Mountain Pipeline ULC, Trans Mountain Expansion Project. Prepared by TERA Environmental (a CH2M company), in association with GeoMarine Environmental and Triton Environmental. Submitted to the NEB in February 2015. 23 pp + Appendices.

Environmental Dynamics Inc. (EDI). 2017. Trans Mountain Expansion Project, Burnaby Terminal Erosion and Sediment Control Plan. Prepared for Kinder Morgan Canada Inc. 98 pp.

Triton Environmental Consultants. 2013. Fisheries [British Columbia] Technical Report for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project. Contained in Volume 5C of the initial Application submitted to the NEB [Filing ID: A3S2C1].

Triton Environmental Consultants. 2014. Supplemental Fisheries (British Columbia) Technical Report for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project. Prepared for Trans Mountain, Calgary, AB.

Trans Mountain Pipeline ULC (Trans Mountain). 2016. Environmental Protection Plan (Draft) for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project. Contained in Environmental Plans, Volume 3. Prepared to satisfy NEB Condition 78. Available for comment, November 2016.

Trans Mountain Pipeline ULC. 2017. Environmental Protection Plan for the Trans Mountain Pipeline ULC Burnaby Terminal Facility Pipeline Relocation Project. Prepared for Trans Mountain in support of an NEB Section 58 Application.

APPENDIX A
WATERCOURSE CROSSING SUMMARY TABLE

Watercourse Crossing ID	PXID	KP (TMPL)	Watercourse Name	Flow Regime	Provincial Class	UTM Coordinates (NAD 83)			Fish Spp. Captured or Observed (Previously Documented)	Sensitivity Rating	Provincial or Designated Instream Work Window	Least Risk Biological Window Proposed ¹ (LRBW)	Rationale to Support LRBW Proposed if different from Provincial Instream Work Window	Planned Instream Construction Timing	Construction Crossing Method		Vehicle Crossing Method	Navigability Status	Site-Specific Comments	Can all of DFO's Measures to Avoid Harm be implemented for the Primary Construction Method?	
						Zone	Easting	Northing							Project Proposed Primary	Project Proposed Contingency					
Eagle Creek Watershed	BC-785h	W11430.2	Terminal	Unnamed Drainage	Seasonal	NCD	10	504762	5457546	None (None)	Low	None	Open	NA	Fall/Winter	Flow Isolation STRD (PERM)	NA	Existing or Ramp and Culvert	Non-Navigable	Concrete ditch which drains SE along an existing KMC access road; conveys seasonal runoff from adjacent hillside; discharges directly into an outfall structure downstream from access road, eventually flowing into stormwater retention pond; no fish habitat potential.	Yes
	BC-785i	W11457.1	Terminal	Unnamed Drainage	Seasonal	NCD	10	505141	5457579	None (None)	Low	None	Open	NA	Fall/Winter	Flow Isolation STRD (PERM)	NA	Existing or Ramp and Culvert	Non-Navigable	Short sections of scour and overland flow; no continuous defined channel; drains SE along an existing KMC access road and converges with BC-785k (NFB) approx. 140 m downslope (flows subsurface through terminal); no fish habitat potential.	Yes
	BC-785j	W11458.1	Terminal	Unnamed Channel	Seasonal	S6	10	505041	5457648	None (None)	Low	None	Open	NA	Fall/Winter	Flow Isolation STRD (PERM)	NA	Existing or Ramp and Culvert	Non-Navigable	Discharges into ditch line along an existing KMC access road (also conveys flow from BC-785i); flows SE and converges with BC-785k (NFB) approx. 270 m downstream (drains subsurface through terminal); no fish habitat potential.	Yes
	BC-785k	W11464.0	Terminal	Unnamed Channel	Seasonal	S6	10	505288	5457518	None (None)	Low	None	Open	NA	Fall/Winter	Flow Isolation STRD (PERM)	NA	Existing or Ramp and Culvert	Non-Navigable	Seasonal watercourse that discharges into large culvert drain along an existing KMC access road; flows subsurface through Burnaby Terminal; culvert also conveys combined flow from BC-785i and BC-785j; discharges into section of open channel at terminal south fence line, flowing west before discharging under Shellmount Street; multiple barriers to fish passage downstream (e.g., 1000 mm stormwater outfall at Shellmount Street); no fish were captured or observed.	Yes
Silver Creek Watershed	BC-785l	TBD	Terminal	Unnamed Channel	Seasonal	S6	10	505464	5457095	None (None)	Low	None	Open	NA	Fall/Winter	Flow Isolation STRD (PERM)	NA	Existing or Ramp and Culvert	Non-Navigable	Seasonal watercourse that flows subsurface through Burnaby Terminal (entry point is 600 mm culvert at 10U 505534 5457418); stream daylight along the south perimeter of terminal at 10U 505464 5457095, and flows through a second 600 mm culvert underneath Trans Mountain Trail; upper reaches of Silver Creek (~1 km downstream) are largely culverted, and considered to be nonfish-bearing.	Yes
	BC-785m	TBD	Terminal	Unnamed Channel	Seasonal	S6	10	505394	5457090	None (None)	Low	None	Open	NA	Fall/Winter	Flow Isolation STRD (PERM)	NA	Existing or Ramp and Culvert	Non-Navigable	Seasonal watercourse that flows subsurface through Burnaby Terminal (entry point is 1000 mm culvert at 10U 505445 5457409); stream daylight along the south perimeter of terminal at 10U 505394 5457090, and flows through a second 1000 mm culvert underneath Trans Mountain Trail; upper reaches of Silver Creek (~1 km downstream) are largely culverted, and considered to be nonfish-bearing.	Yes
	BC-785b	W1822.3	Terminal	Unnamed Drainage	Seasonal	NCD	10	505735	5457341	None (None)	Low	None	Open	NA	Fall/Winter	Flow Isolation STRD (PERM)	NA	Ford	Non-Navigable	Vegetated swale with potential for seasonal overland flow; no continuous defined channel; dry in July 2014; no fish habitat potential.	Yes
	BC-785c	W1823.3	Terminal	Unnamed Drainage	Seasonal	NCD	10	505586	5457316	None (None)	Low	None	Open	NA	Fall/Winter	Flow Isolation STRD (PERM)	NA	Ford	Non-Navigable	Vegetated swale with potential for seasonal overland flow; no continuous defined channel; dry in July 2014; no fish habitat potential.	Yes

¹ As defined for Trans Mountain Expansion Project (Triton, 2013, Fisheries [British Columbia] Technical Report for the Trans Mountain Pipeline ULC Trans Mountain Expansion Project. Contained in Volume 5C of the initial Application submitted to the NEB [Filing ID: A3S2C1])

Notes:

Provincial Class	Channel Width (m)	Fish-Bearing v NonFish-Bearing
S 6	≤3	Non Fish Bearing
NCD	-	-

APPENDIX B
WATERCOURSE CROSSING ATLAS



View upslope at unnamed drainage (11-01-16)



View downslope at unnamed drainage (11-01-16)



View of NE approach at unnamed drainage (11-01-16)



View of SW approach at unnamed drainage (11-01-16)

Fish Habitat Potential

Species	Spawning	Rearing	Wintering	Migration
All	N	N	N	N

Sampling Effort

Method	Time	Distance	Date
(none)	-	-	-

Classification: NCD

Least Risk Window Proposed: Open

Navigability: (none)

Mean Channel Width: (none)

Proximity to other watercourses: Eagle Creek (FB), 1.0 km downslope

Comment: Concrete-lined ditch which drains SE along the NE side of an existing KMC access road inside Burnaby Terminal; conveys seasonal runoff from adjacent hillside; flow from ditch drains south underneath road through a 400 mm culvert which discharges directly into an outfall structure; no fish habitat potential.

Trans Mountain Expansion Project		Unnamed Drainage			
 TRITON <small>Environmental Consultants</small>		TMEP Site ID: BC-785h		KP 1178.89	
 TRANS MOUNTAIN		UTM Zone: 10 504767 E 5457552 N NAD 83			



View upslope at unnamed drainage (11-01-16)



View downslope at unnamed drainage (11-01-16)



View upslope showing overland flow 15 m east of drainage (11-01-16)



View downslope showing overland flow 15 m east of drainage (11-01-16)

Fish Habitat Potential

Species	Spawning	Rearing	Wintering	Migration
All	N	N	N	N

Sampling Effort

Method	Time	Distance	Date
(none)	-	-	-

Classification: NCD

Least Risk Window Proposed: Open

Navigability: (none)

Mean Channel Width: (none)

Proximity to other watercourses: Eagle Creek (FB), 1.4 km downslope

Comment: Seasonal drainage located within riparian reserve strip inside Burnaby Terminal; drains down a 15-20% slope into road ditch line; short sections of scour and overland flow but no continuous defined channel; ditch line drains SE and converges with BC-785k channel approximately 140 m downslope (flows subsurface through terminal); an additional swale with overland flow was observed along edge of riparian reserve strip 15 m east of BC-785i; no fish habitat potential.

Trans Mountain Expansion Project		Unnamed Drainage			
 TRITON <small>Environmental Consultants</small>		TMEP Site ID: BC-785i		KP 1178.89	
 TRANS MOUNTAIN		UTM Zone: 10 505158 E 5457581 N NAD 83			



View upstream at unnamed channel (12-02-16)



View downstream at unnamed channel (12-02-16)



View of left bank at unnamed channel (12-02-16)



View of right bank at unnamed channel (12-02-16)

Fish Habitat Potential

Species	Spawning	Rearing	Wintering	Migration
All	L	L	L	L

Sampling Effort

Method	Time	Distance	Date
EF	220 s	200 m	11-01-16

Classification: S6

Least Risk Window Proposed: Open

Navigability: Non-Navigable; Class 1

Mean Channel Width: 1.50 m

Proximity to other watercourses: Tributary to Eagle Creek (FB), 1.4 km DS

Comment: Small seasonal watercourse that flows within riparian reserve strip inside Burnaby Terminal; channel discharges into ditch line (conveys flow from BC-785i and BC-785j) and flows SE converging with BC-785k watercourse approximately 270 m downslope (flows subsurface through terminal); no fish habitat potential.

Trans Mountain Expansion Project		Unnamed Channel			
TRITON Environmental Consultants	TRANSmountain	TMEP Site ID:	BC-785j	KP	1178.89
		UTM Zone:	11	505054	E 5457646 N NAD 83



View upstream through unnamed watercourse (11-02-16)



View downstream through unnamed watercourse (11-02-16)



View of left bank at unnamed watercourse (11-02-16)



View of right bank at unnamed watercourse (11-02-16)

Fish Habitat Potential

Species	Spawning	Rearing	Wintering	Migration
All	L	L	L	L

Sampling Effort

Method	Time	Distance	Date
EF	487 s	100 m	11-02-16

Classification: S6

Least Risk Window Proposed: Open

Navigability: Non-Navigable; Class 2

Mean Channel Width: 2.67 m

Proximity to other watercourses: Tributary to Eagle Creek (FB), 1.4 km DS

Comment: Seasonal watercourse that discharges into a culvert drain immediately downstream from the assessment location (located along an existing KMC access road) and flows subsurface through Burnaby Terminal; culvert also conveys flow from BC-785i and BC-785j; multiple barriers to fish passage downstream (e.g., 1000 mm stormwater outfall at Shellmont Street) and no fish were captured or observed.

Trans Mountain Expansion Project		Unnamed Channel			
TRITON Environmental Consultants	TRANSmountain	TMEP Site ID: BC-785k		KP	1178.89
		UTM Zone:	10	505288	E 5457518 N NAD 83



View upstream through unnamed channel at north edge of Burnaby terminal (18-01-17)



View downstream through unnamed channel at north edge of Burnaby terminal (18-01-17)



View upstream through culvert outlet at south edge of Burnaby terminal (18-01-17)



View downstream from culvert outlet at south edge of Burnaby terminal (21-07-14)

Fish Habitat Potential

Species	Spawning	Rearing	Wintering	Migration
All	L	L	L	L

Sampling Effort

Method	Time	Distance	Date
- (gradient)	-	-	-

Classification: S6

Least Risk Window Proposed: Open

Navigability: Non-Navigable; Class 1

Mean Channel Width: 0.6 m

Proximity to other watercourses: Tributary to Silver Creek (NFB), 1.4 km DS

Comment: Seasonal watercourse that flows subsurface through Burnaby Terminal (entry point is a 600 mm culvert at 10U 505534 5457418); stream daylights along the south perimeter of terminal at 10U 505464 5457095, and flows through a second 600 mm culvert underneath Trans Mountain Trail; upper reaches of Silver Creek (up to >1 km downstream) are largely culverted, and considered to be nonfish-bearing.

Trans Mountain Expansion Project		Unnamed Channel			
TRITON Environmental Consultants	TRANS MOUNTAIN	TMEP Site ID: BC-785I			KP 1179.92
UTM Zone: 10 505464 E 5457095 N NAD 83					



View upstream through unnamed channel at north edge of Burnaby terminal (18-01-17)



View downstream through unnamed channel at north edge of Burnaby terminal (18-01-17)



View upstream through culvert outlet at south edge of Burnaby terminal (18-01-17)



View downstream from culvert outlet at south edge of Burnaby terminal (18-01-17)

Fish Habitat Potential

Species	Spawning	Rearing	Wintering	Migration
All	L	L	L	L

Sampling Effort

Method	Time	Distance	Date
- (gradient)	-	-	-

Classification: S6

Least Risk Window Proposed: Open

Navigability: Non-Navigable; Class 1

Mean Channel Width: 1.0 m

Proximity to other watercourses: Tributary to Silver Creek (NFB), 1.4 km DS

Comment: Seasonal watercourse that flows subsurface through Burnaby Terminal (entry point is 1000 mm culvert at 10U 505445 5457409); stream daylights along the south perimeter of terminal at 10U 505394 5457090, and flows through a second 1000 mm culvert underneath Trans Mountain Trail; upper reaches of Silver Creek (~1 km downstream) are largely culverted, and considered to be nonfish-bearing.

Trans Mountain Expansion Project		Unnamed Channel			
TRITON Environmental Consultants	TRANS MOUNTAIN	TMEP Site ID: BC-785m			KP 1179.92
UTM Zone: 10 505394 E 5457090 N NAD 83					



View upslope at proposed Burnaby terminal location
(21-07-14)



View downslope at proposed Burnaby terminal location
(21-07-14)



View of E approach at proposed Burnaby terminal location
(21-07-14)



View of W approach at proposed Burnaby terminal location
(21-07-14)

Fish Habitat Potential

Species	Spawning	Rearing	Wintering	Migration
All	N	N	N	N

Sampling Effort

Method	Time	Distance	Date
(none)	-	-	-

Classification: NCD

Least Risk Window Proposed: Open

Navigability: (none)

Mean Channel Width: (none)

Proximity to other watercourses: Brunette River (FB), >2.5 km downslope

Comment: Vegetated swale/runoff drainage located in the southeast corner of the Burnaby Terminal (KMC); no evidence of scour or prominent fluvial processes; dry at the time of survey; no potential for fish or connectivity to fish habitat.

Trans Mountain Expansion Project		Unnamed Drainage			
TRITON Environmental Consultants	TRANSmountain	TMEP Site ID: BC-785b			KP 1178.89
		UTM Zone:	10	505735	E 5457341 N NAD 83



View upslope at proposed Burnaby terminal location (21-07-14)



View downslope at proposed Burnaby terminal location (21-07-14)



View of E approach at proposed Burnaby terminal location (21-07-14)



View of W approach at proposed Burnaby terminal location (21-07-14)

Fish Habitat Potential

Species	Spawning	Rearing	Wintering	Migration
All	N	N	N	N

Sampling Effort

Method	Time	Distance	Date
(none)	-	-	-

Classification: NCD

Least Risk Window Proposed: Open

Navigability: (none)

Mean Channel Width: (none)

Proximity to other watercourses: Brunette River (FB), >2.5 km downslope

Comment: Vegetated swale/runoff drainage located in the southeast corner of the Burnaby Terminal (KMC); no evidence of scour or prominent fluvial processes; dry at the time of survey; no potential for fish or connectivity to fish habitat.

Trans Mountain Expansion Project		Unnamed Drainage			
TRITON Environmental Consultants	TRANSmountain	TMEP Site ID:	BC-785c	KP	1178.89
		UTM Zone:	10 505586 E 5457316 N	NAD 83	

THIS IS EXHIBIT "18"
Referred to in the Affidavit of
Michael Davies
Sworn before me this 26th
day of October A.D. 2017



A COMMISSIONER FOR OATHS
IN AND FOR BRITISH COLUMBIA

SHANNON DAVIDSON
Barrister & Solicitor
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Suite 1700, Guinness Tower
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Telephone: 604.692.2754



October 16, 2017

Trans Mountain Pipeline ULC
2700, 300 - 5th Avenue SW
Calgary, AB T2P 5J2

Attention: Trans Mountain Pipeline ULC

RE: Determination of Application Area Number 100101805

Approval Holder: Trans Mountain Pipeline ULC

Date of Issuance: October 16, 2017

Effective Date: October 16, 2017

Application Submitted Date: April 13, 2017

Application Determination Number: 100101805

Approved Disturbance Footprint: 0 ha

ACTIVITIES APPROVED

Changes In and About a Stream: 0003844

GENERAL AUTHORIZATIONS and CONDITIONS

AUTHORIZATIONS

Water Sustainability Act

1. The Commission, pursuant to section 11 of the *Water Sustainability Act*, approves the changes in and about a stream, as detailed in the Activities Approved table above, within the activity area for construction and maintenance activities, unless otherwise restricted by this approval.
 - a) Instream works must be carried out in accordance with the methods and any mitigations, as specified in the application.
2. The approvals granted under this permit are limited to the area identified in the spatial data submitted to the Commission in the permit application as identified and dated above; herein referred to as the 'activity area'.

CONDITIONS

Notification

3. A notice of construction start must be submitted, as per the relevant Commission process at the time of submission, at least 48 hours prior to the commencement of activities under this permit.
4. Within 60 days of the completion of construction activities under this permit, the Approval Holder must submit to the Commission a post-construction plan as a shapefile and PDF plan accurately identifying the location of the total area actually disturbed under this permit. The shapefile and plan must be submitted via eSubmission.
5. At least 5 (five) working days prior to the commencement of any changes in or about a stream, the Approval Holder must provide a notice of works to any First Nation(s) who may have Aboriginal Interests identified, as per the BC First Nations Consultative Areas Database, within the area in which the works are to occur.

Clearing

6. The Approval Holder is permitted to fell any trees, under applicable regulations, located on Crown land within 1.5 tree lengths of the activity area that are considered to be a worker safety hazard and must be felled in order to eliminate the hazard. Trees or portions of these trees that can be accessed from the activity area without causing damage to standing timber may be harvested.

Water Course Crossings and Works

7. Except with leave of the Commission, and subject to relevant access permissions, the Approval Holder must conduct water quality monitoring during in-stream works and the results of that monitoring must be submitted to the Commission upon the Commission's request.
8. At any time, the Commission may suspend instream works approved under this permit. Suspensions on instream works will remain in place until such time as the Commission notifies Approval Holders that works may resume. Reasons for suspension of works may include, but are not limited to, drought conditions and increased environmental or public safety risks.
9. Except with leave of the Commission, the Approval Holder must ensure that:
 - a) any culverts used are designed and fabricated in compliance with the applicable:
 - (i) Canadian Standards Association CSA G401, Corrugated Steel Pipe Products; or
 - (ii) Canadian Standards Association Standard CSA B1800, Section B182.2, Plastic Non-pressure Pipe Compendium, or
 - b) Any pipe installed in lieu of a culvert is of at least equivalent standard and strength as any culvert as specified above.
10. Except with leave of the Commission, the Approval Holder must ensure that culverts are designed to pass the highest peak flow of the stream that can reasonably be expected within the return periods set out in column 2 the table below for the period the Approval Holder anticipates the structure will remain on site, as set out in column 1 in the table below:

Column 1 Anticipated period crossing structure will remain on site	Column 2 Peak flow period
Bridge or culvert, 3 years or less	10 years
Bridge other than a bridge within a community watershed, more than 3 years but less than 15	50 years
Bridge within a community watershed, more than 3 years	100 years
Bridge, 15 years or more	100 years
Culvert, more than 3 years	100 years

ADVISORY GUIDANCE

1. Construction plans are for the Approval Holder's internal reference only and were not reviewed as decision tools for this approval, nor does they form an integral part of this approval.

All pages included in this approval and any attached documents form an integral part of this approval.

Approval Holder: Trans Mountain Pipeline ULC
Application Determination number: 100101805

Application Submission Date: April 13, 2017
Date Issued: October 16, 2017



Tarilee Rauscher
Authorized Signatory
Commission Delegated Decision Maker

Copied to:

Land Agent – Stantec Consulting Ltd.
First Nations – Cowichan Tribes, Halalt First Nation, Hwlitsum First Nation, Kwikwetlem First Nation, Lake Cowichan First Nation, Lyackson First Nation, Musqueam Indian Band, Penelakut Tribe, People Of The River Referrals Office, Seabird Island First Nation, Squamish Nation, Stz'uminus First Nation, Tsleil-Waututh Nation

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Burnaby Mayor Derek Corrigan tells Kinder Morgan pipeline opponents he's ready to "get arrested to stop this"

by [Travis Lupick](#) on May 22nd, 2015 at 10:37 AM



The mayor of Burnaby has said he is prepared to get arrested and see his career in politics come to an end if that's what it takes to stop a proposed expansion of the Kinder Morgan Trans Mountain pipeline.

Speaking at a May 20 community meeting, **Derek Corrigan** told a full house he would do whatever it takes to prevent the project from going ahead.

"We're going to ride this thing through to the very end, because if we're not going to win it here, we're going to win it in the courts, and we're going to continue to fight," he said as reported by the *Burnaby Now*'s Jennifer Moreau. "If we go to court, we're going to go to court with clean hands and ensure we've done everything humanly possible before I stand with you and probably 10,000 other people and get arrested to stop this."

"That's a hard thing to promise for a lawyer and a mayor," Corrigan continued. "It will probably be the end of my career. But if I end my career on that note, it will be something that I'm very proud of, that I stood my ground."

Corrigan was also critical of the National Energy Board (NEB), the federal body conducting a review of the project. (One day earlier, an expert intervener for the NEB withdrew from the Trans Mountain review process with a [critique](#) that described it as "a parochial board steeped in Calgary petro culture, run by corporate interests".)

The proposed expansion of the Trans Mountain pipeline would triple the current amount of diluted bitumen transported from the Alberta tar sands to the Lower Mainland, increasing the number of oil tankers moving through Metro Vancouver's Burrard Inlet from 60 to 400 ships per year.

The City of Vancouver and its mayor, Gregor Robertson, have also staked out [positions against the project](#), as has the board of Metro Vancouver.

The route Kinder Morgan has planned for a new section of pipeline would tunnel through Burnaby Mountain. That prospect has turned the hilltop, which serves as the home of Simon Fraser University's main campus, into a rallying point for opponents of the project.

In November 2014, a large demonstration gathered on Burnaby Mountain in an attempt to block Kinder Morgan from conducting survey work there. At the time, Corrigan [told CBC News](#) the city was attempting to stop the pipeline's construction in the courts.

"I don't want people to be arrested. I think that that is a last resort, and we're still in the middle of a process that is going to take, probably, years to settle out," Corrigan said on November 25. "We have taken every action we had within the legal remedies available to us in order to stop the project from proceeding....I still have faith in the courts."

Burnaby RCMP eventually [arrested dozens](#) of protesters, including [Tamo Campos](#), the grandson of renowned environmentalist David Suzuki.

Follow Travis Lupick on [Twitter](#), [Facebook](#), and [Instagram](#).

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[Expert intervener quits NEB review of Kinder Morgan Trans Mountain project "steeped in Calgary petro culture"](#)

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Burnaby RCMP looking for missing teen girl

HOLD THE MOMENT

Lee, it's DJ

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NEWS INSIDERS

Burnaby mayor hoping for support to slow down Trans Mountain

LOCAL ([HTTP://WWW.NEWS1130.COM/CATEGORY/LOCAL/](http://WWW.NEWS1130.COM/CATEGORY/LOCAL/))

by MARCELLA BERNARDO ([HTTP://WWW.NEWS1130.COM/AUTHOR/MARCELLA-BERNARDO](http://WWW.NEWS1130.COM/AUTHOR/MARCELLA-BERNARDO))

Posted Jun 29, 2017 3:09 pm PDT Last Updated Jun 29, 2017 at 9:45 pm PDT



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SUMMARY <https://www.rogersmedia.com/privacy-policy/#question17> or change your

cookie preferences. Rogers Media supports the Digital Advertising Alliance Burnaby Mayor Derek Corrigan is closely watching what happens in Victoria

Corrigan is hoping an NDP government with Green support would at least slow down the Trans Mountain pipeline project



BURNABY (NEWS 1130) – It may not kill plans to expand the Trans Mountain oil pipeline, but Burnaby's mayor is counting on a new NDP-Green government in Victoria to at least help slow down the multi-billion dollar project.

"Yes, I am. I'm very excited about the possibility," says Derek Corrigan.



Corrigan is one of the loudest opponents to the planned expansion of the Trans Mountain oil pipeline from Alberta through his city to Burrard Inlet.

He's confident a new government would help him fight it.

"At the very least, I think it's going to make the project a lot more frustrating for Kinder Morgan to put forward because if they have a government that is requiring far more in the way of consultation and far more in the way of cooperation, that project will become less viable."

The multi-billion dollar project, which would triple the pipeline's capacity, is supported by the Liberals, but opposed by the Greens and New Democrats.
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("The opportunity is there for us to do a lot more to be able to deal with the Kinder Morgan project going through our community. If we have the support of the provincial government, then I think there's a lot more tools in our tool chest. By continuing to use our service, you agree to our use of cookies."
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Kinder Morgan reveals pipeline construction timeline
(<http://www.news1130.com/2017/06/09/kinder-morgan-reveals-pipeline-construction-timeline/>)

Coalition urges banks to shun financing for Kinder Morgan's Trans Mountain
(<http://www.news1130.com/2017/06/12/coalition-urges-banks-to-shun-financing-for-kinder-morgans-trans-mountain/>)

KINDER MORGAN

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Growing speculation about RCMP investigation in the Okanagan

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(Lasia Kretzel, NEWS 1130 Photo)



SUMMARY

Five women have vanished in the area in recent years



Police warn against speculating which direction the investigation is going



SALMON ARM (NEWS 1130) – Mounties are bringing in forensics specialists to help search a farm near Salmon Arm where human remains have been found.

The search is ongoing as five women have gone missing in the same area of the north Okanagan in just the past couple years — the latest disappearing last month. At this point, there is nothing that links any of the women to the remains, however, many people are jumping to that conclusion.

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Imagine a member of your family is missing and you're looking for answers, a false or assumed connection could be very hurtful. NEWS 1130 (<https://twitter.com/NEWS1130>) has spoken to area leaders and there is a lot of frustration about how people outside the region are making connections that aren't there.

RCMP Corporal Dan Moskaluk is also warning against speculation.

He gave local media an update at the scene earlier today. Besides confirming human remains were found, he hasn't said who they might belong to or if they belong to more than one person.

BC's new Public Safety Minister Mike Farnworth says he's been briefed on the situation, but he had nothing more to share.

"There's a police investigation underway. I can't comment on the nature of the case at this particular time [but] what I can tell you is my senior ministry officials are in contact with the RCMP. They're saying they also have the resources that they need and the investigation is ongoing."

The farm police are searching is about 10 hectares with several buildings on the property. Investigators will likely need a generous amount of time to go through everything.

Earlier this month, Mounties did issue a warning to the public, specifically to sex workers, about a man they arrested after it's believed he threatened a woman with a gun. She was able to get away. The 36-year-old man was eventually released without charges.

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Traffic e-ticketing, online payments legislation introduced in BC

LOCAL (HTTP://WWW.NEWS1130.COM/CATEGORY/LOCAL/)

by LASIA KRETZEL (HTTP://WWW.NEWS1130.COM/AUTHOR/LASIA-KRETZEL)

Posted Oct 25, 2017 5:48 pm PDT



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(File Photo)



SUMMARY

New bill introduced to lower number of mistakes made during handwritten tickets



Thousands of tickets are tossed every year



VICTORIA (NEWS 1130) – BC drivers may soon be able to pay for their traffic tickets (<http://www.news1130.com/2017/09/21/distracted-driver-vancouver/>) online thanks to electronic ticketing, or e-ticket, legislation introduced in Victoria today.

Minister of Public Safety and Solicitor General Mike Farnworth introduced the bill to amend the Offence Act which is aimed at curbing mistakes caused by handwritten tickets and increase efficiency of both payment and record keeping. It's basically bringing British Columbia, when it comes to traffic enforcement and the issue of ticketing, into the 21st century," Farnworth said.

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Traffic violators will still receive paper tickets, but they will be able to go online to pay the fine, in addition to by phone, mail, or in person, while the information will be automatically sent to all the relevant government agencies including police and ICBC.

Currently, the information written by officers roadside is entered manually as much as four times by police, ICBC, court staff, and others, increasing the risk of errors with each step. This can lead to tickets being challenged and overturned. In addition, the slow, manual entry of data can delay the ability to identify dangerous drivers and trends.

Around 15,000, or three per cent, of all tickets are cancelled annually due to errors, equivalent to \$1.8 million, according to Farnworth.

"I think [e-tickets are] a more efficient way for us, it allows us to make fewer mistakes on roadside, it allows the interaction between the officer and the violator to potentially go smoother and it will also allow payment to be right online so it's very convenient," said Neil Dubord, Delta Police Chief and chair of the BC Association of Chiefs of Police Traffic Safety Committee.

If approved, the program will be piloted in Vancouver, Delta, Prince George, North District and the Greater Victoria area in the spring of 2018 before being rolled out across the province.

RELATED STORIES

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Sears liquidation puts pressure on feds to protect workers' pensions

NATIONAL ([HTTP://WWW.NEWS1130.COM/CATEGORY/NATIONAL/](http://WWW.NEWS1130.COM/CATEGORY/NATIONAL/))

by THE CANADIAN PRESS

Posted Oct 25, 2017 3:28 pm PDT Last Updated Oct 25, 2017 at 3:48 pm PDT



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Sears at Metropolis at Metrotown (October, 2017) (John Ackermann, NEWS 1130 Photo)



SUMMARY

Sears received approval to liquidate a couple of weeks ago



Many long-time employees have wondered about their pensions



OTTAWA, ON. (NEWS 1130) – Innovation Minister Navdeep Bains says the federal government will consider legislation to protect employees' pensions when a company goes bankrupt.

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While ~~there's no plan for the government to introduce legislation at the moment, he says it will carefully examine two different private member's bills on the subject, put forward a New Democrat MP and a Bloc Quebecois MP.~~ Rogers Media uses cookies for personalization, to customize its online advertisements, and for other purposes. Learn more

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"This is a legitimate issue and a legitimate challenge," Bains said Wednesday, adding that the government is "very mindful" of the fact that bankruptcy "could happen at any time with any company."

"That's why we support secure pensions, that we want to make sure that companies maintain and fulfil their pension obligations and so we'll work with the employees and companies to address this issue."

Bains added that the government is "willing to work with anyone that wants to put forward proposals."

The government has come under increasing pressure to do something to protect the pensions of employees since struggling retailer Sears Canada won court approval to liquidate its assets and close all its remaining stores. The company has been operating under court protection from creditors since June.

The NDP wrote Prime Minister Justin Trudeau on Wednesday, asking him to launch a special parliamentary investigation into the liquidation of Sears.

"While in opposition, the Liberals vowed to change bankruptcy laws to protect workers," NDP pensions critic Scott Duvall told the House of Commons.

"But since then the Liberal government has done nothing to help workers except apparently monitor the situation, leaving workers at companies like Sears, US Steel, Stelco, Algoma steel, Wabush Mines, and Cliff Mines reeling."

Outside the Commons, Duvall said he's met with workers who've lost their benefits, severance and termination pay and their pensions when a company goes belly-up.

"This is criminal and it's got to stop," he said. "It's theft, that's basically what it is, it's real theft."

Duvall said he believes it's already too late to help Sears employees but the government needs to act quickly to prevent the same thing happening over and over again (<https://www.rogersmedia.com/privacy-policy/#question17>) or change your

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In the Commons, Trudeau said that "our hearts go out to workers affected" by the Sears liquidation and he insisted the government has been making every effort to "help them through this tough time." However, he suggested their pensions are safe.

"I understand the current Sears Canada pension fund assets are held in trust and must be used solely for the benefit of pensioners," Trudeau said.

Bains said Service Canada has held 82 sessions with Sears employees across the country to advise them on the various government programs that exist to help them and their families.

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People are mourning the end of Sears but is there really anything to mourn?
(<http://www.news1130.com/2017/10/20/people-mourning-end-sears-really-anything-mourn/>)

Sears Canada granted permission to liquidate, putting 12,000 people out of a job (<http://www.news1130.com/2017/10/13/sears-canada-court-liquidate/>)

How will Canadian malls cope with the loss of Sears?
(<http://www.news1130.com/2017/10/11/will-canadian-malls-cope-loss-sears/>)

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johnny_canuck001



I don't think it is too late to help Sears employees and those of other companies. The federal government was able to change bankruptcy laws to protect themselves in the event to a student loan borrower going bankrupt. Why can't they amend the Bankruptcy and Insolvency Act to make employee pay a higher priority debt than other creditors', thereby protecting working Canadians.

This protection would come at the expense of other creditors to be sure, but other creditors have an opportunity to evaluate a company's finances and credit history prior to doing business with them. Employees don't have that opportunity. Most simply take a job when they are offered it.

October 25, 2017 at 8:05 pm

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Boeing ad campaign targeting Canadians prompts social media backlash

NATIONAL ([HTTP://WWW.NEWS1130.COM/CATEGORY/NATIONAL/](http://WWW.NEWS1130.COM/CATEGORY/NATIONAL/))

by MARCELLA BERNARDO ([HTTP://WWW.NEWS1130.COM/AUTHOR/MARCELLA-BERNARDO](http://WWW.NEWS1130.COM/AUTHOR/MARCELLA-BERNARDO))

Posted Oct 25, 2017 4:49 pm PDT Last Updated Oct 25, 2017 at 4:56 pm PDT



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(iStock image)



SUMMARY

The US has hit Bombardier with a nearly 300 per cent tariff



Some people on social media are not convinced by new ads



VANCOUVER (NEWS 1130) – You may have heard or seen the ads, but a new campaign by an American aircraft giant seems to be backfiring in Canada. The so-called charm offensive by Boeing has prompted mostly negative comments on social media.

Many people have taken to Twitter or Facebook to complain about commercials like this one which points out at least 2,000 jobs in this country depend on Boeing.

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SFU Marketing Professor Lindsay Meredith says the Chicago-based company is at risk of losing a lucrative contract that would see 18 Super Hornets support Canada's aging fleet of CF-18 fighter jets.

"It's produced a massively expensive jet fighter and it's having trouble selling it. Canada was going to be one of the main customers for that product and guess what? The federal government fell out of love with them big time."

In April, executives from Boeing accused the federal government of unfairly subsidizing the Montreal-based Bombardier and the US government has slapped a roughly 300 per cent tariff on contracts awarded for the CSeries aircraft.

Meredith explains he's not surprised Boeing's now appealing directly to Canadians for support.

"Basically now the issue is, sure, let's kiss and make up when the Canadians are saying, 'Hey, you're the guys who started this nonsense in the first place. Boeing has made a hell of a mess of things... and now they're trying to hope for at least 'let's try this, to hold on to the jet fighter stuff because, if we lose Canada, we're going to start losing Europe too and we're going to have a real mess as a corporation.'"

He adds savvy Canadians are not falling for the media blitz by Boeing which includes a reminder their business is worth \$4 billion a year.

"When you hit a brick wall with a particular market segment, if you can, you try to go around that. 'Did Canadians see through it? Oh hell yes!' That's the problem with those strategies. Those can backfire yet again because people say, 'Hey look, I know you're stripes. I know what you are and now you're trying to convince me you're that sheep. You're really not a wolf anymore, huh?' A little too late."

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Ken Dopson

Boeing has shown extremely poor judgement in complaining about Bombardier which seemed to have led to the 300% tariff levied by the US government . I have absolutely no sympathy for them after the Airbus takeover / merger for the CSeries aircraft .

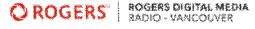
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Burnaby Mayor to rally the public to fight Kinder Morgan expansion

Burnaby Mayor Derek Corrigan said he plans to organize a mass citizens campaign to send a strong message to Prime Minister Justin Trudeau to stop the proposed expansion of the Trans Mountain pipeline.



KELLY SINOSKI

Published on: May 20, 2016 | Last Updated: May 21, 2016 4:41 PM PDT



Burnaby Mayor Derek Corrigan plans to organize a mass citizens campaign to stop the proposed expansion of the Trans Mountain pipeline.
ARLEN REDEKOP / PNG

Burnaby Mayor Derek Corrigan said he plans to organize a mass citizens campaign to send a strong message to Prime Minister Justin Trudeau to stop the proposed expansion of the Trans Mountain pipeline.

The move comes after the National Energy Board signed off on the \$6.8-billion Kinder Morgan proposal to twin the 1,150-kilometre pipeline from Edmonton to Burnaby and triple its capacity, provided 157 conditions are met.

The NEB said the project was in the national interest, but Prime Minister Justin Trudeau's Liberal government will have to make a hard decision on the project.

"We're going to continue to fight, it's not over," Corrigan said. "There are obvious additional things we can do."

The city will continue its legal action against the Kinder Morgan project, while encouraging residents to speak up, especially those who voted for Trudeau and his Liberal MPs, who promised to fix the “flawed” environmental review process, Corrigan said.

He said this project marked the first time the NEB had not allowed cross-examination on a proposal during its hearings.

Other groups against the pipeline are also going to do everything they can to show the PM that the pipeline project is not receiving community consent, he said, which he hopes will convince Trudeau to hold true to his pledge that "the government gives permits but the community gives permission."

Many other municipalities, including Vancouver and those on the North Shore, and the Metro Vancouver regional district, oppose the project.

"It's never really over in a political environment when people haven't been able to speak. This will affect candidates across the province, many of them new MPs. Trudeau might have second thoughts," Corrigan said. "Ultimately that's what politicians react to. If there are enough people outraged by this decision, the government is going to feel it."

Sven Biggs, pipeline campaigner for the group called Stand, said the issue will come down to the prime minister, saying that if follows through on his promises to First Nations and local communities, “this pipeline will never be built.”

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1

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Kris Hadikin · Self Employed at Self-Employed

You know, I'd rather the oil stay in the ground, but blocking the pipeline does nothing. It just sends it by rail. So which risk is worse? An oil slick, caused by what would presumably be caused by interference by the City of Burnaby, or an Oil tank car Kaboom right beside highway 7? These are all losing situations.

I'll care about the pipeline when you care about the lack of affordable housing.

[Like](#) · [Reply](#) · May 24, 2016 1:59am



Doug Fromson

"Wrong-way Corrigan" must shoot himself in the foot every morning before requesting money for pet projects from taxpayers.

[Like](#) · [Reply](#) · May 22, 2016 1:23pm



Gary Chalmers

Man it's like the 1970's in here.

If even a backwards thinking, human rights abusing, 100% oil dependent oligarch like Saudi Arabia can now see the necessity of moving beyond an oil based economy, what does it say about a supposedly progressive country like Canada allowing the Houston based energy concern Enron Redux to twin a pipeline; one over which Enron, er I mean Kinder Morgan, would spend the immediate aftermath of a leak or spill trying to limit their liability.

You know while we're at it, since the coal industry is dying maybe everyone should install a fireplace and start burning coal to heat their homes. Let's give the old coal industry the shot in the arm it deserves.

[Like](#) · [Reply](#) · May 21, 2016 3:54pm



Tom Scott · Simon Fraser University

Right...the Saudis are only dependent on 92.5 pct of govt revenues and exports on petroleum. The rest comes from exporting terror.

[Like](#) · [Reply](#) · 5 · May 21, 2016 5:30pm



Dave Smyth

Reason for Corrigan's opposition <http://www.tsb.gc.ca/.../pipeline/2007/p07h0040/p07h0040.asp>. The only spill on the pipeline was due to Sewer work done by Burnaby. They failed to locate the pipeline as required by both Transmountain and same NEB. So it was Corrigan's burnaby that was at fault!! Hence given Burnaby's inconsistent policies my guess this maybe more personal than driven by a concern for environment.

[Like](#) · [Reply](#) · 7 · May 21, 2016 9:14am



Clarence F Hooge · Chilliwack, British Columbia

More grandstanding by insignificant city politicians that fail to see the bigger picture of economic value decisions for all of Canada

[Like](#) · [Reply](#) · 5 · May 21, 2016 7:18am



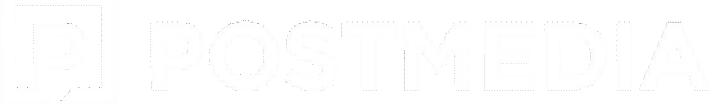
Tom Scott · Simon Fraser University

It is grandstanding. Should we continue to ship oil by rail, pay a high price to have Canadian oil refined by our single customer the US, and import oil from human rights abusers like Saudi Arabia? There are thousands of miles of pipelines in NA and double hulled tankers safely transporting oil all over the world.

[Like](#) · [Reply](#) · 5 · May 21, 2016 10:33am

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Mayor Derek Corrigan addresses federal-government-appointed Trans Mountain Expansion Project Ministerial Panel – Emphasizes Burnaby's Opposition to Kinder Morgan Pipeline Proposal

August 18, 2016

On Tuesday, August 9, Mayor Derek Corrigan addressed the [Trans Mountain Expansion Project Ministerial Panel](#).

"The City of Burnaby remains steadfastly opposed to this proposal that would see Houston-based Kinder Morgan build a new pipeline through the heart of our City, to ship raw bitumen offshore via the environmentally significant Burrard Inlet and the Salish Sea," says Mayor Derek Corrigan. "This would put our region's economy, environment and quality of life at significant risk."

Following are video excerpts from the Mayor's presentation (provided to the City of Burnaby by Kai Nagata, communications director, Dogwood Initiative):

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YouTube Video – Protesting the Kinder Morgan Pipeline Expansion: Derek Corrigan

<https://www.youtube.com/watch?v=9uXR0i7ALK0>

Next speaker we know is against the pipeline, we know is doing everything within his power to stop it: Burnaby Mayor, Derek Corrigan.

Derek Corrigan: What a crowd. This is absolutely thrilling to see so many people out here to support the City of Burnaby, the City of Vancouver and the other cities who have stood against Kinder Morgan. I want to particularly thank councillor Dan Johnson who is with me and all the people from Burnaby that are here. Thank you very much for being here with us. You know, I shouldn't be here today because right now my son and my daughter-in-law are up in Burnaby Hospital and my daughter-in-law is in labour with our twin grandsons who are on the way. My first grandchildren. So, I shouldn't be here, except those grandchildren are why I must be here. I'm sure they will be proud of their grandfather for having stood here with you to say that we will oppose Kinder Morgan and we will ensure that the Kinder Morgan Pipeline never goes through our community. Burnaby has committed to fight Kinder Morgan. We fought Kinder Morgan in our community. We fought Kinder Morgan at the National Energy Board. We fought Kinder Morgan in the Supreme Court of British Columbia. We fought Kinder Morgan in the British Columbia Court of Appeal. We fought Kinder Morgan in the Federal Court. And we will continue to fight Kinder Morgan until the bitter end. Now, there has been people who have doubted us and doubted our conviction but I can tell you that the people of Burnaby are strong. We are prepared to stand by each other to ensure this commitment is fulfilled. I said very early on that I go through every legal mechanism available to us to prevent Kinder Morgan from imposing its pipeline on British Columbia. But I also promised that if, as a last resort, the last resort if Trudeau pushes this pipeline through and this pipeline begins going through Burnaby Mountain through our conservation area, through our park, I'll be standing in front of the bulldozers. And I want to know how many you will standing there with me. Together, we will stop Kinder Morgan. We will stop Kinder Morgan not only for our families but for our future generations. Let's stop Kinder Morgan so that my grandchildren who are going to be born today are going to have the kind of future that we are promising them. Stand with me. Stop Kinder Morgan. Stop Kinder Morgan. Stop Kinder Morgan. Stop Kinder Morgan. Thank you very much everyone for having me with you.

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Local governments "deeply disappointed" by NEB ruling on Kinder Morgan expansion

By [Elizabeth McSheffrey](#) in [News, Politics](#) | May 19th 2016

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Vancouver Mayor Gregor Robertson (left) and Burnaby Mayor Derek Corrigan will lobby for rejection of the Trans Mountain expansion at the federal level after its NEB approval on Thurs. May 19, 2016. Photos by Canadian Press and Mychaylo Prystupa.

As the Texas-based oil giant Kinder Morgan celebrates victory in the National Energy Board's recommendation for approval of its [Trans Mountain expansion project](#), governments in Metro Vancouver are vowing not to accept defeat.

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Municipal leaders across Vancouver, Burnaby, Victoria and more will rally together over the coming months to lobby the federal government to reject the project at the end of the year. If approved, they say the expansion would run straight through six or seven communities in Vancouver's Lower Mainland, disrupting operations and generating extra infrastructure and utility costs, while putting more than 200,000 people at risk from a catastrophic failure in pipeline operations.

"I am deeply disappointed, but not surprised with the National Energy Board's decision to approve the Kinder Morgan pipeline expansion," Vancouver Mayor Gregor Robertson said in a public statement. "This proposal is a bad deal for Vancouver and our entire region. The 600 per cent increase in oil tanker traffic in our local waters dramatically increases the risk of an oil spill, which would have devastating impacts on our environment and our thriving economy."

The City of Vancouver stated in a previous announcement that the city's brand as a "green, clean and sustainable" city was worth \$31 billion, and that an oil spill could damage the brand value by up to \$3 billion.

The risks far outweigh the benefits, he explained, which in this case, include increased access to diverse markets for Canadian oil, thousands of construction jobs, billions of dollars in provincial and federal tax revenue and royalties, and — as the NEB argues — improved capacity for local Indigenous groups, communities, and businesses.

The Trans Mountain expansion is a proposal to triple the capacity of an existing pipeline that runs from Alberta's tar sands to the waters of Burnaby, B.C. to 890,000 barrels of diluted bitumen per day. The operation, once completed, would involve 987 kilometres of brand new pipeline, 12 new pump stations, and 20 new tanks.



Vancouver Mayor Gregor Robertson responds to the National Energy Board's ruling on the Trans Mountain expansion, Thurs. May 19, 2016. Video by the Mayor's Office.

Only communities can grant permission

The City of Burnaby, too, led by Mayor Derek Corrigan, has done everything in its power to stop the expansion from ploughing through its neighbourhoods and will continue to do right up until a federal cabinet ruling. In 2014, the municipality saw more than 100 citizens [arrested](#) during a protest against the project on Burnaby Mountain, and the following year Corrigan [asked the federal government](#) to cancel NEB hearings for the pipeline, citing extraordinary matters of conflict of interest.

Last November however, Burnaby [lost a court battle](#) against Trans Mountain to put the project to rest for good, but the mayor said he hasn't lost faith that Trudeau and his cabinet will see reason. In an interview with *National Observer*, he vowed to use all the resources available to him to hold the Liberal leader to account for promises made that while governments grant permits, "[only communities can grant permission.](#)"

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At the provincial level, B.C. Environment Minister Mary Polak offered a mixed review of the NEB's recommendation for approval, issued Thursday along with 157 stringent technical, environmental, and financial conditions.

Her government has set its own conditions for approving large energy projects, including completion of the environmental review process, well-placed marine and land-based spill response, First Nations participation and benefit from operations, and a fair share of economic benefits for the province.

B.C. not in a position for a heavy oil pipeline

"A significant amount of work has already gone toward establishing and meeting the five conditions," Polak said in a statement, "but we are not yet in a position to consider support for any heavy-oil pipeline in B.C."

Her ministry will follow up with Kinder Morgan over the summer to ensure that all the conditions are being met, particularly those dealing with adequate First Nations consultation and whether any additional accommodations may be required by Indigenous communities along the pipeline route.

Despite her apprehension however, a report by Desmog Canada, a local investigative advocacy publication, found that the B.C. government is already prepping for the Trans Mountain expansion's construction. Last week, it passed legislation that changes the boundaries of Finn Creek Provincial Park in response to a request from [Kinder Morgan that it redraw the borders of four provincial parks](#) to make way for the new pipeline.

It later clarified with DeSmog Canada saying, "this proposed boundary adjustment would not be brought into force unless and until the project is approved by the National Energy Board, the Province is satisfied its five conditions have been met, and the Province has issued an environmental assessment certificate. Until such time, this boundary adjustment does not permit any form of construction of the proposed pipeline."





A snapshot shows construction workers breaking ground on a pipeline in Canada. Photo by Trans Mountain.

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7.1 Administration:

This Bylaw shall be administered by the Chief Building Inspector and the Chief Licence Inspector or any other official of the City who may be appointed by the Council.
(B/L No. 11032-99-12-13)

7.2 Permits and Licences:

The Chief Building Inspector shall not issue any permit, nor shall the Chief Licence Inspector issue any licence for a building, structure or use which violates any of the provisions of this Bylaw.

7.3 Preliminary Plan Approval and Development Permits:

- (1) Any person wishing to undertake a development shall apply for and receive preliminary plan approval from the Director of Planning before the issuance of a building permit or a business license, except in the case of the following:
(B/L No. 12713-09-11-16)
 - (a) The construction of one-family and two-family residential dwellings and accessory buildings
 - (b) The maintenance of any building, structure or use.
 - (c) The completion of a building which was lawfully under construction or for which a permit has been lawfully issued at the effective date of this Bylaw.
 - (d) The improvement or alteration of any building within the property lines of the lot, provided that such improvement or alteration shall not materially affect the external appearance, increase the density of occupancy nor change the use of such building.
 - (e) The construction, alteration, maintenance, or repair of a highway, street, lane or bridge.
 - (f) The erection or placement of a temporary building permitted under section 6.7(1)(a) or 6.7(1)(e). (B/L No. 12664-09-09-14)
 - (g) Home occupations, except for the operation of a child care facility in a single family dwelling. (B/L No. 13063-12-05-14)

- (2) Every application for development shall be accompanied by the following:
- (a) The street address and legal description of the lot.
 - (b) The name of the applicant and/or of the owner of the lot.
 - (b.1) The full amount of the preliminary plan approval fee prescribed and set out in Appendix "A" of Burnaby Building Bylaw.
(B/L No. 9337-90-06-18)
 - (c) A statement of the purpose of the proposed development and the estimated commencement date.
 - (d) A preliminary plan showing the dimensions of the lot or lots; location, plans, profiles, elevations and height of all buildings and structures including signs, setbacks, parking areas, access, open spaces and landscaping, screen fences, surrounding land uses and such further or additional land use information as the Director of Planning may require.
 - (e) In the case of industrial uses, a description of the proposed operation in sufficient detail to determine whether the operation is a use permitted within the applicable zoning district.
 - (f) In the case of apartment or townhouse development proposals, the submission of either, at the choice of the applicant, a true-to-scale perspective or model, together with a detailed plan of landscaping and usable open space. (B/L No. 11032-99-12-13)
 - (g) Repealed. (B/L No. 11888-05-04-11)
- (3) When such application for development conforms to the provisions of this Bylaw and does not contravene any approved land use or road plan, preliminary plan approval shall be given by the Director of Planning.
- (4) The approval of plans or drawings shall not in any way relieve the applicant from full responsibility for the carrying out of the development in accordance with the provisions of this Bylaw.
- (5) The granting of preliminary plan approval shall not absolve the applicant from compliance with all relevant municipal Bylaws.

7.4 Utilities Required before Commencement:

- (1) Notwithstanding any right contained in this Bylaw, the Chief Building Inspector may prohibit a person who proposes to erect a building from commencing the erection of such building until firm arrangements have been made to supply such building with electric power and public water, sewerage, street and other facilities.
- (2) No building shall be constructed, erected or occupied on any lot not serviced by a municipal sanitary sewer until a permit for the installation thereon of a septic tank has been obtained from the Medical Health Officer and such permit shall not be issued unless the topography, usable area for sewage control, soil formation and conditions, surface and subsurface drainage of the lot will permit the satisfactory operation of the septic tank.

7.5 Inspection:

The Chief Building Inspector, the Chief Licence Inspector, or any other official of the City who may be appointed by Council, is hereby authorized to enter, at all reasonable times, upon any property or premises to ascertain whether the provisions of this Bylaw are being obeyed. (B/L No. 11032-99-12-13)

7.6 Enforcement:

- (1) Every person who violates any provision of this Bylaw or who causes, suffers or permits any contravention of its regulations shall be deemed to be guilty of an infraction thereof and shall be liable to the penalties herein imposed.
- (2) Where any building or part thereof or any use of building or land contravenes this Bylaw, the Chief Building Inspector, or any other official of the City who may be appointed by Council, shall give to the owner or agent or the responsible persons written notice specifying the violation, ordering the cessation thereof, and requiring such remedial measures to be taken or work to be done in the time and in the manner the notice shall specify. In the event of failure to comply the Chief Building Inspector, or any other official of the City who may be appointed by Council, may cause such remedial measures to be taken or work to be done and the cost thereof shall be recoverable by the City by summary process at law in any court of competent jurisdiction. In the event of default of payment of such assessed costs a charge shall be placed against the property and such costs, when certified by the Treasurer, shall be entered in the Collector's Roll and collected in the same manner as the taxes shown thereof. (B/L No. 11032-99-12-13)

7.7 Penalties:

Every person who violates any of the provisions of this Bylaw shall be guilty of an offence and shall be liable on summary conviction to the penalties provided in the Offence Act. (B/L No. 7896-82-04-05)

7.8 Bylaw Amendments:

- (1) An application for rezoning shall be treated as an application to amend this Bylaw.
- (2) Any person applying to have this Bylaw amended shall apply in writing to the City Clerk describing the proposed change and furnishing reasons in support of the application. In addition, if such application is for an amendment to the Official Zoning Map, it shall include the legal description and location of the property sought to be rezoned, name and address of the owner of the property, and if the applicant is not the owner, a statement as to the applicant's interest in the property to be rezoned. (B/L No. 11032-99-12-13)
- (3) repealed. (B/L No. 10576-97-07-21)
- (4) Each application for amendment to this Bylaw shall be referred to the Director of Planning for recommendation and report to Council.
- (5) No application for an amendment to this Bylaw shall be again considered by Council where the requested change has been denied within the six (6) month period immediately preceding the filing of such application.
- (6) Notice of the Public Hearing on any proposed amendment to the Zoning Bylaw having the effect of rezoning an area of the City from one zone to another shall be mailed or otherwise delivered to the owners and occupiers of all real property. (B/L No. 11032-99-12-13)
 - (a) within the area that is subject to the rezoning, and
 - (b) within a distance of 30 m (98.4 ft.) from the area that is subject to the rezoning. (B/L No. 11032-99-12-13)

7.9 Fees:

The fees set out below are imposed pursuant to section 931 of the Local Government Act with respect to rezonings: (B/L No. 11204-01-02-12)

Rezoning Application Fees:	
(a) CD Rezonings with FAR less than 3.6 and Standard Rezonings	
First 1,700 m ² (18,299 sq.ft.) of site area or part thereof	\$2,320.00 <i>Plus Public Hearing Fee</i>
Each additional 100 m ² (1,076 sq.ft.) of site area or part thereof	\$62.00
(b) Master Plan Rezonings	
First 40,000 m ² (430,556 sq.ft.) of site area or part thereof	\$205,500.00 <i>plus Public Hearing Fee</i>
Each additional 100 m ² (1,076 sq.ft.) of site area or part thereof	\$385.00
(c) CD Rezonings with FAR greater than or equal to 3.6, and Master Plan Amendments (FAR means “floor area ratio” as defined in Burnaby Zoning Bylaw, 1965)	
First 8,000 m ² (86,111 sq.ft.) of site area and 3.6 FAR or part thereof	\$28,770.00 <i>plus Public Hearing Fee</i>
Each additional 100 m ² (1,076 sq.ft.) of site area or part thereof	\$370.00
Each additional 0.1 FAR or part thereof	\$370.00
Administration of Servicing File:	
For a rezoning or Preliminary Plan Approval application that does not include a subdivision	\$1,112.00
Where there is only one servicing requirement	\$539.00

Public Hearing:	
(a) First Public Hearing	\$1,000.00
(b) Additional Public Hearing	\$1,000.00
Area Plan Notification Sign	\$250.00

(B/L No. 13665-16-12-12)

Where the purpose of the rezoning application is to create non-market housing for families or persons of low income, persons suffering from a disability or with special needs or seniors, operated on a not-for-profit basis, the Council may defer payment of the fees payable under this section until the earlier of:

- a) the date which is 24 months after the date upon which the rezoning bylaw is finally adopted by Council;
- b) the date upon which the occupation of any part of the non-market housing commences;

and on such terms and conditions as the Council may require.

(B/L No. 12587-09-05-04)

THIS IS EXHIBIT "26"
Referred to in the Affidavit of
Michael Davies
Sworn before me this 26th
day of October A.D. 2017



SHANNON DAVIDSON
Barrister & Solicitor
Osler, Hoskin & Harcourt LLP
Suite 1700, Guinness Tower
1055 West Hasting Street
Vancouver, BC V6E 2E9
Telephone: 604.692.2754

SECTION 3

DEFINITIONS

In this Bylaw unless the context otherwise requires:

"ACCESSORY BUILDING" means

- (1) a building, the use or intended use of which is ancillary to that of a principal building situated on the same lot, or
- (2) a building which is ancillary to a principal use being made of the lot upon which such building is located.

"ACCESSORY USE" means

- (1) a use which is ancillary to a principal building, or use of a principal building, situated on the same lot, or
- (2) a use which is ancillary to a principal use being made of the lot upon which such accessory use is located.
- (3) an accessory use in an R1, R2, R3, R4, R5, R6, R9, R10, R11, R12, A1, A2, A3 and RM6 District may include a secondary suite, subject to the following conditions:
 - (a) a secondary suite shall be permitted only in a single family dwelling;
 - (b) only one secondary suite shall be permitted in a dwelling;
 - (c) a secondary suite shall have:
 - (i) a minimum floor area of $32m^2$ (345 sq.ft.), and
 - (ii) a maximum floor area of the lesser of:
 - (A) $90m^2$ (970 sq.ft.), or
 - (B) Forty percent (40%) of the gross floor area of the principal building;
 - (d) a secondary suite and the principal building shall at all times remain a single parcel under a single title and shall not be subdivided into separate parcels by way of strata plan, air space plan or otherwise;
 - (e) a secondary suite shall not be permitted in a single family dwelling that contains an in-law suite;

- (f) neither the keeping of boarders or lodgers, the operation of a boarding, lodging or rooming house, the operation of a child care facility or home-based child care facility, the operation of a group home, private hospital or supportive housing facility nor the operation of a home occupation that includes on-site client services shall be permitted in a single family dwelling that contains a secondary suite.

(B/L No. 13639-16-12-12)

- (4) an accessory use on a lot in the R1, R2, R3, R4, R5, R10 and R11 Districts may include urban beekeeping for domestic purposes subject to the following conditions:

- (a) the lot shall have a width of not less than 15m (49.2 ft.) and an area of not less than 557.40 m² (6,000 sq.ft.);
- (b) the lot shall be used or occupied for single family dwelling purposes only;
- (c) not more than two beehives and two nucleus colonies shall be maintained on the lot; and
- (d) the hives or structures inhabited by the bees shall be located in the rear yard and, unless the rear yard is surrounded by a solid fence or hedge not less than 1.8m (5.91 ft.) in height, shall be
 - (i) set back not less than 7.5 m (25 ft.) from all lot lines; or
 - (ii) elevated not less than 2.5 m (8.0 ft.) above the surface of the ground.

(B/L No. 12627-09-06-22)

"ADAPTABLE HOUSING UNIT" means a dwelling unit that:

- (a) is designed and built with features that permit easy modification to accommodate changing accessibility requirements over time; and
- (b) conforms to the requirements and standards specified in section 3.8.5 and elsewhere in British Columbia Building Code for adaptable dwelling units.

(B/L No. 13335-14-06-23)

"AMENITY SPACE" means a communal non commercial recreational, social, or meeting space contained in, and provided for the exclusive use of the residents of a multiple family dwelling, other than a category B supportive housing facility, and having an above grade floor area that does not exceed five percent of the building's gross floor area, and includes a child care facility that would otherwise meet the foregoing conditions except for the fact that it serves persons other than or in addition to those residents.

(B/L No. 13259-13-12-09)

"AMENITY SPACE CATEGORY B SUPPORTIVE HOUSING" means communal space in a category B supportive housing facility that is provided primarily for the use of the residents of the facility for dining, recreation, social activity, personal service, meeting or lobby purposes, together with associated circulation areas. (B/L No. 11591-03-09-29)

"AMUSEMENT ARCADE" means a commercial undertaking containing six or more pinball, videogame or other game machines available for the use of its patrons, but does not include an establishment holding a Class "A", "C", "D", "F" or "I" licence under the Liquor Control and Licensing Act, a club or lodge nor a children's amusement facility where game machines are designed primarily for the use of children under the age of thirteen. (B/L No. 9952-93-09-07)

"ANIMAL HOSPITAL" means premises operated for the care, treatment and hospitalization of animals but does not include premises that keep or board healthy animals.

(B/L No. 9322-90-02-19)

"ANIMAL TRAINING AND DAY CARE FACILITIES" means the use of an enclosed building for the provision during the day of animal training and day care but does not include keeping animals overnight. (B/L No. 11272-01-09-17)

"ANTIQUE AND COLLECTIBLE STORE" means an establishment used for the retail sale of one or more of the following:

(a) objects having special value because of their age, including antique furniture and furnishings;

(b) specialty collectors' objects, including stamps, coins, cards and dolls.

(B/L No. 11725-04-05-10)

"APARTMENT BUILDING" means any building divided into not less than three dwelling units each of which is occupied, or intended to be occupied, as the permanent home or residence of one family as distinct from a hotel, motel, auto court or motor-hotel.

"AUTOMOBILE OR TRAILER SALES OR RENTAL LOT" means an open area used for the display, sale or rental of new or used passenger motor vehicles or trailers in operable condition, and where no repair work is done except minor incidental repair of vehicles to be displayed, sold or rented on the premises.

"AUTOMOBILE REPAIR SERVICES" means repairs to motor vehicles having a gross vehicle weight less than 4,600 kg (10,000 lb), but does not include motor vehicle manufacture, assembly, body building, manufacturing of motor vehicle parts, body repairs and modifications, painting or engine remanufacturing; nor does it include the following as principal uses in any district: engine rebuilding, radiator repairs, transmission repairs, upholstery repairs. (B/L No. 9530-91-02-25)

"AUTOMOBILE WRECKING YARD" means an area outside of an enclosed building where motor vehicles are disassembled, dismantled or junked or where vehicles not in operable condition or used parts of motor vehicles are stored.

"AUTOMOTIVE REPAIR SHOP" means a building used or intended to be used for motor vehicle inspections and for repairs to motor vehicles, trailers and parts thereof, but does not include the manufacture, assembly or body building of motor vehicles nor manufacturing of parts. (B/L No. 9530-91-02-25)

"BALCONY" means a cantilevered deck that projects from a building and that, except for a guard rail is not enclosed. (B/L No. 8737-87-05-25)

"BASEMENT" means the portion of a building between two floor levels that is partly underground but has at least one-half its height, from its finished floor to the underside of the joists of the floor next above it, above average natural grade as determined by the Building Inspector; and a basement shall be considered to be a storey. (B/L No. 9663-91-12-16)

"BAY WINDOW" means a projection from the wall of a building that contains a window, is wholly above the level of the adjacent floor surface and does not result in any projection of the adjacent floor structure. (B/L No. 8737-87-05-25)

"BEDROOM" when used as a unit of measurement for determining minimum suite floor area or usable open space requirements, includes dens, libraries, recreation rooms, sewing rooms or other rooms of like character or kind. (B/L No. 4993-66-10-03)

"BEVERAGE CONTAINER RETURN CENTRE" means a building that is used for the collection, temporary storage and shipment of used beverage containers.
(B/L No. 10799-98-10-05)

"BICYCLE PARKING FACILITIES, RESIDENT/EMPLOYEE" means bicycle parking facilities that are located within either:

- (a) a locked room or secured enclosure within a building, access to which room or enclosure is restricted to persons residing or employed in the building and who require access for the purpose of parking their bicycles; or
 - (b) fully enclosed and secured bicycle lockers for single bicycles, access to each of which is available only to the owner or operator of the bicycle stored in that locker.
- (B/L No. 11462-03-01-20)

"BICYCLE PARKING FACILITIES, VISITOR/CUSTOMER" means bicycle parking racks securely affixed to the ground or to a building. (B/L No. 11462-03-01-20)

"BILLIARD HALL" means a commercial undertaking containing two or more billiard or pool tables available for the use of its patrons, but does not include a liquor licence establishment for which a liquor primary licence is required under the Liquor Control and Licensing Act, an apartment building, a hotel or a club or lodge. (B/L No. 12586-09-03-09)

"BLOCK FRONT" means the frontage of private property along one side of a street between intersecting or intercepting streets or between a street and a railroad right-of-way or a street end. (B/L No. 9189-89-07-10)

"BOARDING, LODGING OR ROOMING HOUSE" means a dwelling in which more than 2 sleeping units are rented, with or without meals being provided, to more than 2 and not exceeding 15 persons, other than members of the family of the lessee, tenant or owner, and excludes the preparation of meals within the rented units.

"BODY RUB SALON" means an establishment where the touching, manipulation or massaging of a person's body or any part thereof is performed or offered, but does not include businesses or premises where hairdressing, haircutting or cosmetological services are performed or offered or where medical, therapeutic or cosmetic massage treatment is given by a person duly licensed, certified or registered under any statute of the Province of British Columbia governing such activities, and does not include a day spa or therapeutic touch treatment business as defined in the Burnaby Adult Service Business Regulation Bylaw 2001. (B/L No. 11693-04-04-19)

"BUILDING" means a structure, located on the ground, which is designed, erected or intended for the support, enclosure, or protection of persons or property. (B/L No. 7477-80-03-10)

"BUILDING, COMPLETELY ENCLOSED" means a building separated on all sides from the adjacent open spaces, or from other buildings or structures, by a permanent roof and by exterior walls or party walls, pierced only by windows and normal entrance or exit doors.

"BUILDING, FRONT LINE OF" means the extended line of the wall of the building, (or of any projecting portion of the building, except balconies, steps, sills, belt courses, cornices, eaves, fire escapes and unroofed porches) which faces the front line of the lot.

"BUILDING, REAR LINE OF" means the extended line of the wall of the building (or of any projecting portion of the building, except balconies, steps, sills, belt courses, cornices, eaves, fire escapes and unroofed porches) which faces the rear line of the lot.

"BUILDING, TEMPORARY" means a building or structure placed on a lot for a limited period of time but does not include a mobile home which is located in a mobile home park or a recreational vehicle. (B/L No. 12664-09-09-14)

"BULK" means the size and location of buildings and structures in relation to the lot. Bulk regulations include maximum height of a building, minimum lot area and width, minimum front, side and rear yards and maximum lot coverage and floor area.

"CAR WASH STALL" means a space that

- (a) has minimum dimensions 3.7 (12.14 ft.) x 5.5 m (18.04 ft.),
- (b) is located in an underground parking area or in a roofed covered area integrated with a building,
- (c) provides a facility for washing vehicles, and
- (d) drains to a sanitary sewer. (B/L No. 9429-90-09-17)

"CARPORT" means a detached accessory building or portion thereof or a portion of a principal building that is used as a private garage and has 60 percent or less of the perimeter enclosed by walls, doors or windows. (B/L No. 9590-91-07-22)

"CARTAGE, DELIVERY AND EXPRESS FACILITY" means a building or property used as an origin or destination point from which single unit, single axle trucks, of 13,600 kg GVW (29,982.36 lbs. GVW) (Gross Vehicle Weight) or less, are dispatched for the local delivery or pick-up of goods, and which may include necessary warehouse space for the transitory storage of such goods. (B/L No. 5884-71-09-20)

"CELLAR" means the portion of a building between two floor levels that is partly or wholly underground and has more than one-half its height, from its finished floor to the underside of the joists of the floor next above it, below average natural grade as determined by the Building Inspector; and a cellar shall not be considered to be a storey. (B/L No. 9663-91-12-16)

"CENTRAL VETERINARY HOSPITAL" means an animal hospital which operates 24 hours a day providing hospital facilities for the patients of participating member veterinarians and which serves a number of animal clinics on an area wide basis, and where no provision is made for the keeping or boarding of healthy animals. (B/L No. 7501-80-04-28)

"CHILD CARE FACILITY" means a community care facility for child care, all as defined in the Community Care and Assisted Living Act, that is licensed under the Child Care Licensing Regulation, but excludes a home-based child care facility.

(B/L No. 13639-16-12-12)

"CHILDREN'S INSTITUTION" means an orphanage, boarding home or other establishment for children wherein care, food and lodging are furnished, with or without charge, for five or more children under fifteen years of age living apart from their parents or guardians, excepting any home approved as a foster home by the Child Welfare Division, Department of Social Welfare, any home maintained by a person to whom the children are related by blood or marriage, and excepting hospitals. (B/L No. 10753-98-06-15)

"CITY" means the City of Burnaby. (B/L No. 11032-99-12-13)

"CLUB OR LODGE" means a building or establishment used by an association or organization for fraternal, social or recreational purposes which may include limited private sleeping unit accommodation without private cooking facilities, and which shall be operated for the use of club members and their guests only.

"COMMERCIAL VEHICLE" means a vehicle engaged in carrying or which is designed to carry goods, wares or merchandise and which is licensed as a commercial vehicle under the appropriate municipal or provincial laws or regulations.

"CONFORMING BUILDING OR USE" means any building or use which conforms with all the regulations of the Bylaw, or of any amendment thereto, for the zoning district in which such building or use is located.

"COUNCIL" means the Council of the City of Burnaby. (B/L No. 11032-99-12-13)

"COURT" means an open space unoccupied from the ground upwards or from an intermediate floor upwards, located on the same lot at the building which it serves, enclosed on three or more sides by the exterior walls of such building.

"CRAWL SPACE" means the space at or below natural grade between the underside of the joists of the floor next above and the floor slab on the ground surface below, having a vertical clear height less than 1.2 m (3.9 ft.). (B/L No. 9663-91-12-16)

"CURB LEVEL" means the level of the established curb in front of the building, measured at the centre of such front. When no curb has been established, the City Engineer may establish such curb level or its equivalent, for the purpose of this Bylaw. (B/L No. 11032-99-12-13)

"CYBER CENTRE" means a commercial establishment that has available for the use of its patrons six or more computer terminals or other electronic devices that provide or are capable of providing access to the internet or other computer network system, but does not include a school, college, university or other educational institution or a public library. (B/L No. 11380-02-08-26)

"DECK, COVERED" means a roofed deck that is not cantilevered, projects from a wall of a building, is accessible from the interior of a building and, except for a guard rail, is not enclosed. (B/L No. 9663-91-12-16)

"DEPTH, PRINCIPAL BUILDING" means for a principal building, the horizontal distance between the point of the building nearest the front lot line and the point of the building nearest the rear lot line (or in the case of a through lot, the other front lot line), excluding the following projections:

- a) belt courses, cornices, eaves, gutters, sills, chimneys, or other similar features, up to 900 mm (2.95 ft.) in length;

- b) bay windows up to 900 mm (2.95 ft.) in length; and
 - c) balconies, canopies, sunshades, open porches, verandas and sundecks, including supporting structures, up to 1.2m (3.94 ft.) in length.
- (B/L No. 12942-11-06-20)

"DEVELOPMENT" means a change in the use of any land, building or structure for any purpose, and shall include the carrying out of any building, engineering, construction or other operation in, on, over or under land, or the construction, addition, or alteration of any building or structure.

"DISCOTHEQUE" means an establishment which provides music and dancing facilities for patrons 13 to 18 years of age inclusive. Such an establishment may also include facilities for the consumption of food and non-alcoholic beverages, a game area, as well as ancillary office and storage spaces. (B/L No. 7130-77-11-14)

"DISPLAY YARD" means an open area used for the display of new or used passenger automobiles, motor vehicles, trailers, trucks, truck trailers, equipment, machinery or boats in operable condition, which are continually available for sale or rental, and where no repair work is done except of a minor incidental nature. A display yard shall also include an open area where samples of the finished products can be assembled or constructed from the materials (new only) available for sale on the premises may be displayed.

"DORMITORY UNIT" means a building in which sleeping units are provided and/or rented for occupancy by students and/or staff members affiliated with a college, hospital, private school, religious order, rest home, university or similar institution, and which is regulated by such institution. A dormitory unit may contain communal dining facilities but shall exclude the preparation of meals within the sleeping units which are provided.

"DRIVE-IN BUSINESS" means an establishment with facilities for attracting and servicing prospective customers travelling in motor vehicles which are driven on to the site where such business is carried on and where normally the customer remains in the vehicle for service, but shall not include car washing establishments, drive-in restaurants, drive-in theatres or gasoline service stations. (B/L No. 5791-70-11-09)

"DRIVE-IN RESTAURANT" means an eating establishment with facilities for attracting and servicing prospective customers travelling in motor vehicles which are driven on to the site where such establishment is located, and where the customer is permitted or encouraged, either by the design of the restaurant facilities or by service and/or packaging procedures, to:

- (a) remain in his vehicle for service and for consuming the food which is purchased, or
- (b) leave his vehicle to purchase food and is given the choice of either consuming the food in his vehicle or within the drive-in restaurant building. (B/L No. 5791-70-11-09)

"DWELLING, DUPLEX" means a two-family dwelling wherein the two dwelling units are placed one above the other. (B/L No. 7477-80-03-10)

"DWELLING, MULTIPLE FAMILY" means any building consisting of three or more dwelling units, each of which is occupied or intended to be occupied as the permanent home or residence of one family only. (B/L No. 7087-77-09-26)

"DWELLING, ROW HOUSING" means one dwelling unit in a block of at least two side-by-side dwelling units, each sharing a party wall with the neighbouring unit and each unit located on a separate lot that is not a strata lot. (B/L No. 11032-99-12-13)

"DWELLING, SEMI-DETACHED" means a two-family dwelling wherein the two dwelling units are placed side by side. (B/L No. 7477-80-03-10)

"DWELLING, SINGLE FAMILY" means any building consisting of one dwelling unit which is occupied or intended to be occupied as the permanent home or residence by one family only. Such a dwelling may include a secondary suite, subject to the Accessory Use provisions of Section 3 of this Bylaw. (B/L No. 13258-14-01-27)

"DWELLING, TOWNHOUSE" means one of two or more dwelling units, where each dwelling unit has individual direct access to the outside either at ground level or by stairs and is attached to at least one other dwelling unit by a shared floor or party wall. (B/L No. 11032-99-12-13)

"DWELLING, TWO FAMILY" means any building divided into two dwelling units, each of which is occupied or intended to be occupied as the permanent home or residence by one family only. (B/L No. 7087-77-09-26)

"DWELLING UNIT" means one or more habitable rooms constituting one self-contained unit with a separate entrance, and used or intended to be used for living and sleeping purposes for not more than one family and containing not more than one kitchen or one set of cooking facilities. (B/L No. 13258-14-01-27)

"ELEVATION, FRONT AVERAGE" means the average elevation of the natural grade along the exterior of the building facing the front lot line. (B/L No. 9663-91-12-16)

"ELEVATION, REAR AVERAGE" means the average elevation of the natural grade along the exterior of the building facing the rear lot line or, for a through lot, the other front lot line. (B/L No. 9663-91-12-16)

"FAMILY" means

- (a) persons related by blood, marriage, adoption or foster care, or

- (b) a group of not more than three unrelated non-transient persons living together as a single non-profit group in a dwelling unit and using common cooking facilities

and excludes boarders, lodgers and servants but includes a person living alone.
(B/L No. 10398-96-08-26)

"FLOOR AREA, GROSS" means the total area of all the floors measured to the extreme outer limits of the building in accordance with the regulations set out in section 6.20.

(B/L No. 9663-91-12-16)

"FLOOR AREA RATIO" means the figure obtained when the gross floor area of all buildings on a lot less the exclusions permitted in accordance with section 6.20 is divided by the area of the lot.
(B/L No. 9663-91-12-16)

"GAMING FACILITY" means any place that is customarily or regularly used for bingo or other games of chance or mixed chance and skill, excluding games of chance played on slot machines, pursuant to a licence issued by the British Columbia Gaming Commission or by such other person or authority as the Province of British Columbia may specify for the purpose of licensing gaming activities. (B/L No. 10708-98-04-06)

"GAMING HOUSE" means any place, including a social club, that is customarily or regularly used for bingo or other games of chance or mixed chance and skill, including games of chance played on slot machines, and for which a licence has been issued by the British Columbia Gaming Commission or by such other person or authority as the Province of British Columbia may specify for the purpose of licensing gaming activities. (B/L No. 10708-98-04-06)

"GARAGE, PRIVATE" means a detached accessory building or a portion of a principal building used solely for the parking or temporary storage of private motor vehicles and in which there are no facilities for repairing or servicing such vehicles.

"GASOLINE SERVICE STATION, CONVENTIONAL" means any building or land used or intended to be used for the retail sale of motor fuels and lubricants that are dispensed by an attendant for the customer and may include the sale of automobile accessories, automobile repair services and motor vehicle inspections. A self-serve facility for the dispensing of motor fuels and lubricants by the customer may also be provided as an accessory use on the site, but shall be limited to one pump island only. Pressurized air service for vehicle tires and water service for vehicle radiators shall be provided at all times without charge for customer use.
(B/L No. 11888-05-04-11)

"GASOLINE SERVICE STATION, SELF-SERVE" means any building or land used or intended to be used for the retail sale of motor fuels and lubricants that are dispensed

- (a) primarily by the customer from self-serve pumps; and
- (b) by an attendant on behalf of the customer from at least one dual sided full serve pump, that offers all grades of fuel that are offered at the self-serve pumps, between the hours of 7:00 a.m. and 11:00 p.m. or, where the service station is open for business for less than 16 hours a day, during the whole time that it is open for business, on each day that it is open for business;

and may include the sale of automobile accessories, automobile repair services and motor vehicle inspections. Pressurized air service for vehicle tires and water service for vehicle radiators shall be provided at all times without charge for customer use. (B/L No. 11888-05-04-11)

"GRADE OR GRADE LEVEL, NATURAL" means, for the purpose of measuring the height of a building or determining a basement or cellar, the ground level adjacent to the exposed wall of a building, with no adjustment having been made to the existing undisturbed ground level except for a minor slope equalization as approved by the Building Inspector.

(B/L No. 9663-91-12-16)

"GROUP HOME" means a residential care facility for not more than six persons in care that is operated in a private single family dwelling on a residential lot and licensed under the *Community Care Facility Act*. (B/L No. 12679-09-09-14)

"HABITABLE ROOM" means a room designed for living, sleeping, eating or food preparation, including a living room, dining room, bedroom or kitchen.

"HEIGHT" means the vertical dimension of a building or structure measured in accordance with section 6.4. (B/L No. 9663-91-12-16)

"HOME-BASED CHILD CARE FACILITY" means a community care facility for child care, all as defined in the Community Care and Assisted Living Act, that is licensed under the Child Care Licensing Regulation and is located in the personal residence of the facility operator.

(B/L No. 13639-16-12-12)

"HOME OCCUPATION" means an occupation or profession that is incidental to the use of a dwelling unit for residential purposes, or to the residential use of a lot occupied by a dwelling and includes:

- (a) the office or studio of a person engaged in business, art, health, crafts or instruction,
- (b) the keeping of not more than two boarders or lodgers in each dwelling unit,
- (c) the operation of a home-based child care facility. (B/L No. 13639-16-12-12)

"HOSPITAL" means a non-profit institution (operated for the reception and treatment of persons suffering from physical illness or disability) which has been designated as a hospital under the Hospital Act, but does not include private hospitals, nursing or convalescent homes.

"HOSPITAL, PRIVATE" means a house in which two or more patients, other than the spouse, parent or child of the owner or operator thereof, are living at the same time, and including a nursing home or convalescent home, but does not include a hospital as defined in this Bylaw or a hospital licensed under the Mental Hospitals Act.

"HOTEL" means a building in which there are more than six sleeping units wherein accommodation without private cooking facilities is provided for transient lodgers, and having a public dining room or cafe.

"HOTEL, ALL SUITE" means a building intended to provide comprehensive services including a restaurant, conference and banquet facility, lounge, recreational amenities and accommodation for transient lodgers wherein the accommodation is primarily suites that contain minor cooking facilities that do not exceed the following, namely, a two-burner cook top, a microwave oven, a sink and a small refrigerator. (B/L No. 10473-96-11-04)

"HOTEL, MOTOR" means a building in which there are more than six sleeping units wherein accommodation without private cooking facilities is provided, occupied or intended to be occupied primarily by transient motorists, and having a public dining room or cafe. Each sleeping unit shall be self contained with its own bathroom with a water closet, wash basin and bath or shower and having its own parking space conveniently located on the lot.

"INDUSTRIAL FUELLING INSTALLATION" means a building or land used or intended to be used for the sale of motor fuel and lubricants for use only in industrial equipment or commercial vehicles. (B/L No. 8560-86-06-23)

"IN-LAW SUITE" means one or more habitable rooms used for living and sleeping purposes by relatives of the owner or tenant pursuant to a licence issued by the Building Department the continued use of which is subject to section 911 of the Local Government Act.
(B/L No. 13258-14-01-27)

"JUNIOR ONE-BEDROOM UNIT" means a one bedroom living unit in a category B supportive housing facility having a floor area of less than 46m² (495.16 sq. ft.). (B/L No. 11591-03-09-29)

"JUNK YARD" means an area outside of an enclosed building where junk, waste, used building materials, used industrial materials, scrap metal, used discarded or salvaged materials are bought, sold, exchanged, stored, baled, packed, disassembled, or handled. A junk yard shall not be construed to include establishments for the sale, purchase, or storage of used furniture, used cars in operable conditions, or the processing of used, discarded or salvaged materials as a minor part of manufacturing operations.

"KENNEL" means any building, structure, compound, group of pens or cages or property in which or where 3 or more dogs or 5 or more cats are or are intended to be trained, cared for, bred, boarded or kept for any purpose whatsoever, and shall include any building or part thereof in which 2 or more dogs are kept for breeding purposes. For the purpose of this definition dogs and cats under the age of 4 months shall be excluded. (B/L No. 9276-89-12-18)

"LANDSCAPING" means the planting of lawns, shrubs and trees, and the addition of fencing, walks, drives, or other structures and materials as used in landscape architecture.

"LANE" means a public thoroughfare or way which affords only secondary means of access to a lot, at the side or rear.

"LEARNING CENTRE" means an establishment providing supplementary education or tutorial services, but does not provide accredited education courses. (B/L No. 12690-09-10-05)

"LICENSEE RETAIL STORE" means a store licensed under the provisions of the *Liquor Control and Licensing Act* to sell liquor for off-premises consumption and includes an agency store established under the provisions of the *Liquor Distribution Act*. (B/L No. 11883-05-04-11)

"LIQUOR LICENCE ESTABLISHMENT" means an establishment selling or dispensing liquor for which a liquor primary licence or a liquor primary club licence is required under the Liquor Control and Licensing Act. (B/L No. 11517-03-05-12)

"LIQUOR STORE" means a government liquor store, a government beer store or a government wine store established under the provisions of the *Liquor Distribution Act*.
(B/L No. 11883-05-04-11)

"LOT" means an area of land designated as a separate and distinct parcel on a legally recorded subdivision plan or description filed in the Land Registry Office, and having a principal frontage upon a public street or place.

"LOT AREA" means the total horizontal area within the lot lines of a lot.

"LOT COVERAGE" means the combined area covered by all buildings and structures on the lot, expressed as a percentage of the lot area, measured as the area of the projection of the outline of the buildings and structures onto a horizontal plane but excluding

- (a) belt courses, cornices, eaves, gutters, sills or other similar ornamental features;
- (b) bay windows;
- (c) chimneys, fire escapes and steps;
- (d) canopies and sun shades;
- (e) terraces;
- (f) balconies;
- (g) uncovered swimming pools; and

- (h) parking areas that are:
- (i) underground, or
 - (ii) open-sided and roofless. (B/L No. 8737-87-05-25)

"LOT DEPTH" means the shortest distance between the centre of the front lot line and the centre of the rear lot line or, in the case of a pie shaped lot or irregular lot with more than four sides, the shortest distance between the centre of the front lot line and the point at which the two side lot lines or the furthest point at which two rear lot lines intersect, or in the case of a through lot, the line joining the centre points of the two front lot lines.

(B/L No. 9663-91-12-16)

"LOT WIDTH" means the mean horizontal distance between side lot lines measured at right angles to the lot depth.

"LOT CORNER" means a lot at the intersection or junction of two or more streets.

"LOT, INTERIOR" means a lot other than a corner lot.

"LOT, THROUGH" means a lot abutting two parallel or approximately parallel streets.

"LOT LINE, FRONT" means the boundary line of the lot and the street on which the lot abuts. In the case of a corner lot, a lot line abutting a street shall be considered a front line if the adjacent lots front on the same street, except that only one front lot line need be provided. In the case of a through lot, the lot lines abutting two parallel or approximately parallel streets shall both be considered as front lot lines. (B/L No. 5310-68-07-08)

"LOT LINE, REAR" means the lot line opposite to, or in the case of an irregularly shaped lot, the lot lines more or less facing the front lot line. (B/L No. 9663-91-12-16)

"LOT LINE, SIDE" means a lot line marking the boundary between two lots, or between a lot and a lane, or between a lot and a public street in the case of a corner lot of which one or both ends intersect a front lot line.

"LUNCH BAR" means an eating establishment where cold lunches packed in containers, cold wrapped sandwiches, beverages or foods obtained from coin operated compartments are sold to the public for consumption either on or off the premises. (B/L No. 7103-77-10-03)

"MANUFACTURING OR PROCESSING" includes those operations which are a necessary part of, and clearly related to, the production of the articles or goods specified. For the purposes of this Bylaw, the term "manufacturing" may also include repairing of the items specified.

"MAUSOLEUM" means a building or structure used or intended to be used for the entombment of human remains or cremated remains and that extends vertically by more than 0.35m (1 ft.), at any point, above the lower of

- (a) the natural grade, or
 - (b) the finished ground level at the base of the exposed wall of the building or structure.
- (B/L No. 11941-05-08-29)

"MEDICAL MARIHUANA" means marihuana produced for medical use pursuant to a licence issued under the *Marihuana for Medical Purposes Regulations* to the *Controlled Drugs and Substances Act*. (B/L No. 13261-14-01-27)

"MINI-WAREHOUSE" means a completely enclosed building or series of completely enclosed buildings consisting of separate storage units which are rented to customers having exclusive and independent access to their respective units for the storage of residential, recreational, or commercial oriented goods. (B/L No. 7005-77-04-04)

"MOBILE HOME" means a single family dwelling, factory built as a unit or units, suitable for year round occupancy, and capable of being drawn or moved from place to place.
(B/L No. 6176-72-12-04)

"MOBILE HOME LOT" means an area of land located within a mobile home park occupied or intended to be occupied by one mobile home. (B/L No. 6176-72-12-04)

"MOBILE HOME PARK" means a parcel of land on which are installed or intended to be installed, two or more mobile homes. (B/L No. 6176-72-12-04)

"MOBILE RETAIL CART" means a cart having maximum ground coverage of 3.72 m² (40 sq.ft.) that is capable of being moved by one person and is intended for use as a temporary location for the retail of goods or services. (B/L No. 10155-95-01-23)

"MOTEL OR AUTO COURT" means a group of two or more detached or semi-detached buildings, providing separate sleeping or dwelling units, occupied or intended to be occupied primarily by transient motorists, and each sleeping unit being self contained and having its own bathroom with a water closet, wash basin and bath or shower.

"MOTOR VEHICLE INSPECTIONS" means inspection facilities that are licensed by the Motor Vehicle Branch and facilities that are not so licensed; but does not include facilities where the principal use is motor vehicle emission inspection. (B/L No. 9530-91-02-25)

"MULTI-FAMILY FLEX-UNIT" means a strata titled apartment or townhouse dwelling unit that has a gross floor area of not less than 74 m² (796.5 sq.ft.) and contains a defined area for potential rental accommodation, which area:

- (a) is not less than 24m² (258.3 sq.ft.) and not more than 35 per cent of the gross floor area of the apartment or townhouse dwelling unit in which it is located;

- (b) is not a separate strata lot;
- (c) contains a secondary kitchen area with a compact range or microwave oven and built-in cooktop, compact refrigerator, sink, counter, cabinets, and venting; and contains at least one closet, and a bathroom with a toilet, sink, and bathtub or shower;
- (d) is wired for independent telephone connection prior to occupancy and remains so; and
- (e) has a separate lockable entrance door providing direct access to the exterior of the dwelling unit.

(B/L No. 11462-03-01-20)

"NON-CONFORMING BUILDING OR USE" means any building or use which does not conform with all the regulations of the Bylaw, or any amendment thereto, for the zoning district in which such building or use is located.

"NON-RESIDENTIAL" when used with reference to a building, structure or use, means designed, intended or used for purposes other than those of a residential use building.

"OUTDOOR GARDEN SHOP" means an open area used for the display and retail sale of bedding plants, flowers, nursery stock or Christmas trees, but does not include commercial nurseries or greenhouses. (B/L No. 9780-92-10-13)

"OUTDOOR PRODUCE SHOP" means an open area that is attached to and on the same site as a grocery store or produce shop and is used for the display and retail sale of fruit and vegetables. (B/L No. 9780-92-10-13)

"PARKING AREA" means an open area of land, other than a street, used for the parking of vehicles of clients, customers, employees, members, residents or tenants.

"PARKING GARAGE" means a building the principal use of which is the parking or storage of vehicles and which is available to the public or as an accommodation to clients, customers or employees. (B/L No. 5170-67-06-26)

"PARKING SPACE" means a space within a building or a parking area, for the parking of one vehicle, excluding driveways, ramps, columns, office and work area.

"PAWNSHOP" means an establishment used for the loaning of money on the security and deposit of personal property. (B/L No. 11725-04-05-10)

"PAYDAY LOAN AND SIMILAR SERVICES" means the business of

- (a) making or offering to make payday loans (as defined in and regulated under the Businesses Practices and Consumer Protection Act of British Columbia); or

- (b) cashing or offering to cash cheques or other negotiable instruments for a fee or for less than the face value of the cheque or instrument;

carried on or undertaken by a person or other entity that is not governed by the Bank Act or Trust and Loan Companies Act of Canada or the Financial Institutions Act or Mortgage Brokers Act of British Columbia.

(B/L No. 13495-15-09-14)

"PERSON" includes a firm, association, organization, partnership, trust company or corporation as well as an individual.

"PRINCIPAL USE" means the main purpose for which land, buildings or structures are ordinarily used.

"PUBLIC ASSEMBLY AND ENTERTAINMENT USE" means the use of a building or an establishment for assembly or entertainment, including bowling alleys, meeting halls, theaters, auditoriums, swimming pools, curling rinks and similar uses, but excludes amusement arcades, billiard halls, discotheques, gaming facilities and gaming houses. (B/L No. 13731-17-04-10)

"RECREATIONAL VEHICLE" means a structure or vehicle that

- (a) is used or designed to be used for living or sleeping purposes
- (b) is designed or intended to be mobile on land, and
- (c) is either self-propelled or towed by a motor vehicle and includes a camper, travel trailer, motor home, converted bus or other vehicle and tent trailer. A recreational vehicle shall not be considered to be a dwelling unit. (B/L No. 8379-85-07-29)

"RECREATIONAL VEHICLE PARK" means a parcel of land used or intended to be used for the parking of recreational vehicles on a transitory basis, and includes all buildings or structures thereon. (B/L No. 8379-85-07-29)

"RECREATIONAL VEHICLE SPACE" means an area of land located within a recreational vehicle park occupied or intended to be occupied by one recreational vehicle.

(B/L No. 8379-85-07-29)

"RESIDENTIAL USE BUILDING" means a dwelling, boarding, lodging or rooming house; dormitory unit. (B/L No. 11888-05-04-11)

"RESTAURANT" means an eating establishment where food is sold to the public for immediate consumption within the premises, but where no provision is made for the consuming of food in motor vehicles which are parked on the site. (B/L No. 5791-70-11-09)

"RETAIL " in relation to a sale means a sale to a purchaser for purposes of consumption or use and not for resale, and "retail store" means a building where goods, wares, merchandise, substances, articles or things are sold at retail and are stored in quantities sufficient only to service that store, but a reference to "retail store" does not include any retail outlet otherwise classified or defined in this Bylaw. (B/L No. 10395-96-07-22)

"RIDING ACADEMY" means a stable for the housing of horses for hire or for a private riding club.

"ROOF, FLAT" means a roof on a building that has one or more roof surfaces that have a pitch of less than 4 in 12 and cover an area greater than 20 percent of the area of all roof surfaces as measured in plan view. (B/L No. 9663-91-12-16)

"ROOF, SLOPING" means a roof on a building that has one or more roof surfaces that have a pitch of 4 in 12 or greater and cover an area at least equal to 80 percent of the area of all roof surfaces as measured in plan view. (B/L No. 9663-91-12-16)

"SALES CENTRE, RESIDENTIAL" means a building used for the marketing of residential dwelling units in a newly constructed and unoccupied multi-family residential development or in a multi-family residential development under development. (B/L No. 12452-08-06-16)

"SCHOOL, COMMERCIAL" means an adult education institution that has not more than twenty-five percent of the students, to a maximum of fifty, who are under the age of eighteen years and enrolled in secondary education courses. (B/L No. 10732-98-04-06)

"SCHOOL, PRIVATE" means a school, other than a public school, where academic subjects are taught to elementary and secondary students. (B/L No. 10732-98-04-06)

"SCHOOL, PUBLIC" means a place of instruction, other than a commercial, trade or self-improvement school, maintained at public expense pursuant to the School Act.
(B/L No. 10732-98-04-06)

"SCHOOL, SELF-IMPROVEMENT" means:

- (a) a school that provides training or instruction in dance, drama, music, art, self-defence or other similar disciplines; or
- (b) a learning centre.
(B/L No. 12690-09-10-05)

"SCHOOL, TRADE" means a school other than a private or public school that offers training in a manual, mechanical or technical trade in an industrial setting that involves the use of industrial equipment or materials. (B/L No. 10732-98-04-06)

"SCREENING" means a continuous fence, wall, compact evergreen hedge or combination thereof, supplemented with landscape planting, that would effectively screen the property which it encloses, and is broken only by access drives and walks.

"SECONDARY SUITE" means an accessory dwelling unit fully contained within a single family dwelling. (B/L No. 13258-14-01-27)

"SECOND-HAND STORE" means an establishment where more than ten per cent of the floor area is used for the purchase and sale of:

- (a) used electronic equipment, including audio or video equipment and accessories, computers and computer equipment and accessories; or

- (a.2) used gold, silver or other precious metals; or
(B/L No. 12976-11-09-12)
- (b) two or more of the following types or classes of used goods, wares or merchandise:
- (i) bicycles;
 - (ii) sports equipment;
 - (iii) jewelry;
 - (iv) cameras and camera equipment;
 - (v) musical instruments and equipment;
 - (vi) compact discs (CDs) or digital video discs (DVDs), or both;
 - (vii) tools;
 - (viii) electronic office equipment, including photocopiers and fax machines;

but does not include:

- (c) an antique and collectible store;
- (d) an establishment where used goods, wares and merchandise are sold by a society, charity or other organization that operates on a not-for-profit basis;
- (e) an establishment where all of the used goods, wares and merchandise offered for sale have been acquired by donation or purchased from societies, charities or other organizations that operate on a not-for-profit basis; or
- (f) an establishment that sells goods, wares or merchandise on consignment.
(B/L No. 11725-04-05-10)

"SETBACK" means the required minimum distance between a building or use and each of the respective property lines.

"SHOPPING CENTRE" means a group of retail stores in one or more buildings designed as an integrated unit.

"SLEEPING UNIT" means one or more habitable rooms used or intended to be used for sleeping, or sleeping and living purposes, but not including a sink or cooking facilities. A bathroom containing a water closet, wash basin and a bath or shower may be shared.

"SLOT MACHINE" means a slot machine as defined in the Criminal Code of Canada on January 1, 1998, but shall not include an electronic machine programmed to allow personal play whereby a person is able to play bingo against a computer or to play e-tabs or e-scratches generated by a computer. (B/L No. 11791-04-10-18)

"STORAGE YARD" means an area outside of an enclosed building where contractors' or construction materials and equipment, solid fuels, lumber and new building materials, monuments and stone products, public service and utility equipment, or other materials, goods, products, vehicles, equipment or machinery are stored, baled, piled, handled, sold or distributed, whether a principal or an accessory use. A storage yard shall not be construed to include an automobile wrecking yard, a display yard or a junk yard.

"STOREY" means a habitable space between two floors, or between any floor and the upper surface of the floor next above, except that the topmost storey shall be that portion of a building included between the upper surface of the topmost floor and the ceiling above. A basement shall be considered as a storey. (B/L No. 7477-80-03-10)

"STOREY, HALF" means a storey under a gable, hip, gambrel or shed roof having a gross floor area not more than fifty percent of the gross floor area of the storey immediately below, and includes a roofed deck that is an extension of the topmost storey. (B/L No. 8737-87-05-25)

"STREET" means a public highway, road or thoroughfare which affords the principal means of access to abutting lots.

"STREET CANOPY" means a structure that is attached to a building by a cantilever, is not part of the building and consists of a lightweight rigid frame covered by a stretched fabric membrane. (B/L No. 8737-87-05-25)

"STRUCTURE" means anything constructed or erected, the use of which requires location on the ground or attachment to something having location on the ground, but shall not include fences and walls that are less than the maximum fence height permitted in any district.

"STUDIO UNIT" means a dwelling unit having no room used or intended to be used solely as a bedroom. (B/L No. 11032-99-12-13)

"SUNDECK" means a roofless deck that is not cantilevered, projects from a wall of a building, is accessible from the interior of the building and, except for a guard rail, is not enclosed. (B/L No. 8737-87-05-25)

"SUPPORTIVE HOUSING FACILITY" means a housing facility that

- (a) contains two or more living units, each of which is occupied or intended to be occupied by not more than two persons, at least one of whom is fifty-five years of age or older;
- (b) contains common amenity spaces and dining facilities for the residents;
- (c) provides at least one meal a day for the residents; and
- (d) provides continuous monitoring of the residents and on-site emergency medical response.

'supportive housing facility, Category A' means a supportive housing facility in which the living units do not contain a kitchen or cooking facilities.

'supportive housing facility, Category B' means a supportive housing facility in which the living units contain a kitchen or cooking facilities.

(B/L No. 11153-00-11-06)

"TAXI DISPATCH OFFICE" means an office from which taxis are dispatched by radio to pick up fares and where related office functions may be carried on, but excluding the servicing and outside parking or storage of taxis on the lot. (B/L No. 5752-70-08-24)

"TAXI SERVICE CENTRE" means an establishment from which taxis may be dispatched to pick up fares and where the servicing and outside parking or storage of taxis may be carried on in addition to related office functions. (B/L No. 5752-70-08-24)

"TERRACE" means a paved, planted or constructed area that is not more than 600mm (1.97 ft.) above the adjacent finished ground level. (B/L No. 8737-87-05-25)

"TRAILER" means any structure or vehicle used or designed to be used for living or sleeping purposes and which is designed or intended to be mobile on land, whether or not self-propelled.

"TRUCK TERMINAL" means a building or property used as an origin or destination point for the loading, unloading, assembling or transferring of goods transported by truck, or which provides containerized freight handling facilities or rail-truck services, and where the local pickup, delivery and transitory storage of goods is incidental to the primary function of motor freight shipment, provided, however, that any lot where trucking is the principal use and which operates any vehicles in excess of single unit, single axle, 13,600 kg GVW (29,982.36 lbs. GVW) (Gross Vehicle Weight) shall be considered for the purpose of this Bylaw, as a truck terminal. (B/L No. 5884-71-09-20)

"UNDERGROUND PARKING" means an area that

- (i) contains parking spaces and associated driveways and manoeuvring aisles;
- (ii) is located within a building, and
- (iii) has its roof or the finished floor next above it not more than 800mm (2.62 ft.) above the adjacent finished grade. (B/L No. 9185-89-05-29)

"USABLE OPEN SPACE" means a compact, level unobstructed area or areas available for safe and convenient use by all the building's occupants, having no dimension of less than 6.0m (19.69 ft.) and no slope greater than 10 percent, providing for greenery, recreational space and other leisure activities normally carried on outdoors. Usable open space shall exclude areas used for off-street parking, off-street loading, service driveways and required front yards, and roof areas unless otherwise permitted in this Bylaw.

"USE" means the purpose for which any lot, parcel, tract of land, building or structure is designed, arranged or intended, or for which it is occupied or maintained.

"UTILITY CORRIDOR" means a parcel or assemblage of parcels of land forming a linear tract that contains or is intended to contain as the principal use one or more of the following:

- (a) overhead electrical transmission lines and support structures;
- (b) underground electrical transmission lines;
- (c) underground sewer or water lines;

(d) underground telecommunications infrastructure;

(e) other underground infrastructure.

(B/L No. 13408-15-01-19)

"WHOLESALE" establishment means a building where goods, wares, merchandise, substances, articles or things are sold in bulk to retailers or to businesses, institutions or government agencies for their own use or for resale. (B/L No. 10395-96-07-22)

"YARD, FRONT" means that portion of the lot, extending from one side lot line to the other, between the front line of the lot and a line drawn parallel thereto. The depth of such yard shall mean the perpendicular distance between the front line of the lot and the parallel line. In the case of a through lot there shall be two such front yards.

"YARD, REAR" means that portion of the lot, extending from one side lot line to the other, between the rear line of the lot and a line drawn parallel thereto. The depth of such yard shall mean the perpendicular distance between the rear line of the lot and the parallel line.

"YARD, SIDE" means that portion of the lot, extending from the front yard to the rear yard, between the side line of the lot and a line drawn parallel thereto. The width of such yard shall mean the perpendicular distance between the side line of the lot and the parallel line.

THIS IS EXHIBIT "27"

Referred to in the Affidavit of

Michael Davies

Sworn before me this 26th

day of October A.D. 2017

A handwritten signature in black ink, appearing to read "Michael Davies". It is enclosed within a decorative oval border.

A COMMISSIONER FOR OATHS
IN AND FOR BRITISH COLUMBIA

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TRANS MOUNTAIN EXPANSION PROJECT

Pre-Technical Working Group Meeting With City of Burnaby Meeting Summary for Distribution

AGENDA TOPICS: 1. Review Agenda 2. TWG draft Terms of Reference (TOR) 3. Project Status and Key Issues 4. Confirm List of Outstanding Concerns 5. Environmental Protection Plans Review 6. Closing and Next Steps		LOCATION: City of Burnaby Offices, Clerk's Office 4949 Canada Way Burnaby, BC		
MEETING DATE (yyyymmdd): 20170404	TIME: (24hr): 1400-1600	PREPARED BY: Lexa Hobenshield		
REFERENCE NUMBER: (to be added by Document Control)		<input checked="" type="checkbox"/> DRAFT (summary provided to participants for input) <input type="checkbox"/> FINAL (submit to kmc_document_control@kindermorgan.com and roc@kindermorgan.com)		
ATTACHMENTS TO ACCOMPANY MEETING SUMMARY: Agenda (not circulated), Project Status and Key Issues presentation, Draft List of Outstanding Concerns, Environmental Protection Plan list of plans available for consultation, draft Rolling Action Plan (distributed but not reviewed in detail)				
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ADDITIONAL DISTRIBUTION				

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Agenda Item	Discussion Summary	Action & Responsible	Due Date (yyymmdd)
1	<p><u>Review Draft Agenda</u></p> <ul style="list-style-type: none"> • The draft agenda was not circulated. The City advised that an agreed to TOR will set the stage for continued discussion. The group agreed to review the City's proposed edits to the draft Terms of Reference (TOR). • <u>The City advised that they consider this a pre-TWG meeting as the City has not yet agreed to the TORs for the TWGs. Until the City agrees to the TORs, no TWGs will occur.</u> • The City requested clarification as to who will Chair the meetings. TMEP proposed that D Dattani and L Hobenshield co-chair the meetings. The City agreed. • The City has received three permit applications from TMEP. The City requested that future permit applications be directed to the TWG meetings. TMEP agreed. • TMEP appreciates the City's review and explanation of proposed edits to the TOR and confirmed that there are likely items that TMEP can agree to today, items for discussion within TMEP and there may be things that TMEP is unable to accept. TMEP confirmed that it will respond in writing to all proposed edits either accepting the edits, proposing revisions to the edits or if it is unable to accept edits then providing a reason why. • TMEP introduced Susan Campbell as an independent note taker. Susan will take notes; the meeting note summary will be prepared for review and edit by the City. The Rolling Action Plan (RAP) and meeting summary will form the basis of future NEB consultation filings. • The City requested further explanation about the outcome of the December 15, 2016 meeting once TMEP learned that the City planned file legal action against TMEP. <ul style="list-style-type: none"> • TMEP confirmed that it had learned on the morning of December 17, 2016 about the impending legal action, but left the meeting with the impression that the discussion was productive and positive, and followed up on February 20, 2017 with a request to meet. 	LH: TMEP will respond in writing to the City's proposed revisions to the TOR.	May 3, 2017

	<ul style="list-style-type: none"> TMEP reinforced its interest in seeking input and incorporating it where possible given the importance of the Project on the City. 		
2	<p><u>TWG Draft Terms of Reference (TOR)</u></p> <p>The City reviewed its proposed edits to the TOR.</p> <p><u>Purpose</u></p> <ul style="list-style-type: none"> The City edited for brevity. <p><u>Scope and Mandate</u></p> <ul style="list-style-type: none"> The City proposes edits to emphasize the intent of the TWGs are as a forum for discussion about topics of mutual interest. <p><u>TWG Goals</u></p> <ul style="list-style-type: none"> The City proposed more practical language for the City. <p><u>Topics</u></p> <p>Items (A) through (Y) are the topics of interest to the City.</p> <ul style="list-style-type: none"> A (Abandonment) - the City seeks to understand what is intended and what approvals are required. It seeks to understand the reason for upsizing from 24 to 30" pipeline in the tunnel. B (Burnaby Terminal) and C (Westridge Marine Terminal) - e.g. the water reservoir at Burnaby Terminal (source water, capacity, how interim conditions will be managed, channel movements, existing pipe vs. open channel areas, exit strategies, egress points – short and long term strategies; the proposed Gaglardi access – will the traffic management plan be filed with the City of Burnaby or will it just follow the NEB requirements. The City wants to understand TMEP's intent around seeking permits from the City and clarification around level of engagement. <ul style="list-style-type: none"> TMEP intends to comply with applicable permits. The City will process TMEP's permits in the regular queue. The expediency of the permit depends on the completeness of the application. There is no timeline set out in the City's bylaws for processing applications. TMEP plans to begin construction in September 2017. The City has not yet received notices as land owners for the reference book (PPBOR). KLTP provide a summary of the construction scope and 	<p>LH: TMEP provide a plan for sorting topics of discussion (i.e. rolling agenda)</p> <p>LH: Add to TOR: permit timing expectations / process</p>	

Send records to kmc_document_control@kindermorgan.com and ROC@transmountain.com.

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	<p>timelines.</p> <ul style="list-style-type: none"> • KLTP asks whether the permitting timing could be addressed in the Terms of Reference as it would provide clarity about how permits will be handled. <ul style="list-style-type: none"> ◦ The City agreed that it would appreciate language in Terms of Reference related to timing. However, the details would need to be determined once the materials are received. ◦ TMEP indicated that the presentation on today's agenda may provide some additional clarification for the City. • The City requested clarification about situations where TMEP elements do not meet the City's bylaw requirements. What guides TMEPs work? Does TMEP apply and comply where able and then where not apply directly with the NEB? <ul style="list-style-type: none"> ◦ TMEP confirmed it would need to look at each on a case-by-case basis. TMEP plans to submit a PPA to the City. • <u>The City</u><u>TMEP</u> confirmed Eagle Creek is not classified as fish-bearing <u>within Burnaby Terminal</u>. • D (marine traffic) - the City seeks clarification about how vessel movements will be managed – sequencing and details. • K (air quality) - the City also seeks clarification as it relates to the two terminals in Burnaby. <ul style="list-style-type: none"> ◦ TMEP has had discussion related to air quality with Metro Vancouver (MV). Is there value in duplicating discussions or is it better under Metro Vancouver's umbrella? • TMEP added that the FEMP and AEMP for both terminals were available for consultation. The window for consultation has closed and TMEP either has or is about to file the plans with the NEB. <ul style="list-style-type: none"> ◦ The City seeks clarity on the plans. They don't mind working with MV or developing a sub-group and have experts attend from MV to streamline the process. • E (pre to post-construction Emergency Response including mitigation and Cost Recovery) – the City requests holistic discussion. The City does not want to search through different plans to pull information together. • The City requests un-redacted versions of the Plans to understand the risks their first responders will be working with. <ul style="list-style-type: none"> ◦ TMEP confirmed their interest in having Emergency 		
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	<p>Management discussions as part of the TWGs.</p> <ul style="list-style-type: none"> • F (fire safety and evacuation), g (permitting) and h (information sharing) - <u>the City requests that Trans Mountain bring all the requests to share information and seek input to the TWG meeting for tasking City requires TMEP's responses to begin to share information.</u> • I (environmental impact) - This is integral to the segments for the City and will take on a case-by-case basis as a part of a standard permitting requirement. • J (socio-economic effects) and K (air quality emissions) - the City seeks a better understanding • L (visual impacts) - the City seeks the full plan. The City will provide comments on the Brunette location, however there are other points of interest along the alignment and related to terminals. • M (watercourse crossings) - the City reviewed specific crossings related to valve locations. TMEP will see the City's feedback on that plan. On the Brunette corridor, there are stream crossings not indicated in TMEP's document. The City seeks understanding how TMEP will reduce the release rate and implications in the event of a spill. The City seeks to understand how TMEP would manage the valves to reduce impact • N (community benefits) and O (construction methodology) - the City needs to understand the work. • Q (traffic management) - The City indicates a traffic management strategy is critical to understand. <ul style="list-style-type: none"> ○ TMEP indicated that an overarching traffic plan is about to be released for consultation. This will be followed by specific plans. <ul style="list-style-type: none"> • The City indicated that high level plans don't mean much. <u>The impacts of TMEP's work are great. The high level plans don't have connectivity to the core issues being faced by Burnaby. The City will bring a traffic engineer to meetings.</u> • R (timing and communication), s (existing and future infrastructure) - the City seeks to understand these aspects. • T (avoid operational impacts on City interests) - <u>when the City will files applications with KMC for Capital projects located near Trans Mountain pipelines, it hopes there are no delays and hopes there won't be delays.</u> The concern about permit application delays is two ways. 		
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Commented [HL1]: Confirmed wording from raw notes.
Edited for clarity.

<ul style="list-style-type: none"> • U (parks) – the City seeks to review their concerns about alignment through park spaces with TMEP. • V (highway, utility and land use) – the City is interested in reviewing these details with TMEP. • W (cost recovery) – the City is seeking mechanisms for cost-recovery and feel that we shouldn't be bearing costs. • X (commitments) – the City seeks an update on the status of each commitment made by TMEP. • Y (other interests) – the City seeks to explore other interests. • The City added the phrase, "<i>without limiting the generality of the topics listed above</i>" and added the CPCN Conditions that are of significance to the City. • TMEP confirmed that some items will be out of scope of the TWGs. for example, items (n), (d) and (w). Although these may not be part of discussions within the TWG framework, TMEP agrees to discuss these topics outside of the TWG meeting scope. • TMEP clarified that it is bound by NEB filing deadlines on NEB Conditions, which drives the consultation windows. However, TMEP is interested in the City's feedback to Plans that have already been filed and will use the feedback to make project changes if it is able. <p><u>Meeting Materials, Structure, Frequency and Details</u></p> <ul style="list-style-type: none"> • The City requests information related to meetings two weeks in advance of the meeting. This will allow them to include other subject matter experts. • TMEP indicates the challenge with overlapping timeframes (two weeks in advance for materials, but one week in advance for the City to revise the agenda.) TMEP will do its best to provide as much notice as possible. • TMEP prefers to meet in person conference calls are an option if needed. • KLTP has developed a draft list of permits that it believes TMEP will require to comply with. TMEP will seek to review this list with the City at a future meeting. • The group discussed TWG and sub-TWG meeting process. The City will review information with a variety of lenses – permits, public safety, environmental issues, etc. Some sorting of the work will have to be done to 		
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	<p>determine the lenses prior to the TWG meeting.</p> <ul style="list-style-type: none"> • TMEP will develop a plan for sorting agenda topics. • The City requests electronic copies of documentation. <p><u>Accountability and Meeting Attendance</u></p> <ul style="list-style-type: none"> • David Safari is TMEP's executive sponsor for TMEP. Dipak Dattani is the executive sponsor for the City. • The City requests that all feedback is initiated through the TWG (entry point) and then depending upon work sort out to the sub-groups or for individual direct conversation. The City requests tight work packages from TMEP. • TMEP will maintain the RAP, but a draft after every meeting will be reviewed and edited by the City. The RAP will track TWG and sub-group work. <p><u>Reporting and Communicating</u></p> <ul style="list-style-type: none"> • The City requests that TMEP not file documentation with the NEB until Burnaby's concerns are noted. If there is a difference of opinion at the TWG meetings, the City wants to ensure this is clear. • Burnaby Council is opposed to TMEP. Council and staff have legitimate issues and hopes the TWGs provide a forum to share information and see possibility for solution-oriented outcomes. • Given Trans Mountain seeks feedback from multiple stakeholders and given Condition submission timelines, it is impractical to allow for review of the Condition filings by each stakeholder along the Project in advance of the filing. The City however has an opportunity to provide its feedback to the NEB once the filing has been made. Trans Mountain is committed to transparently working together through the TWGs. • In addition, as part of the TWG process, Trans Mountain will share draft TWG meeting summaries and a Rolling Action Plan (RAP) with the City for feedback within an agreed to timeframe. These documents will form the basis of the Condition filings related to consultation. <p><u>Protocols and Mechanism for Implementing Recommendations / Decision</u></p> <p>The City wants to emphasize that disagreements are recorded. The City wants the record to show that the issue was considered and that there was disagreement. We want</p>		
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	<p>to ensure that those comments are archived. We want to see a clear rationale as to why there isn't a resolution and we want clarity so that the NEB can see what the disagreement was about.</p> <p>TMEP appreciates the City outlining their proposed revisions to the TWG TOR.</p>		
6	<p><u>Closing and Next Steps</u></p> <p>The group agreed to monthly meetings on the first Wednesday of every month, from 2 to 4pm.</p> <p>TMEP will issue meeting invites to the end of 2017.</p> <p><u>Other</u></p> <ul style="list-style-type: none"> • 17 draft TMEP filings are soon to be released for consultation. TMEP would like to review any of the filings of interest before the filing. • TMEP left behind hard copies of a PowerPoint presentation that provides an update on activities and schedules in Burnaby. • The City will review and be mindful of KM's filing priorities. • TMEP left hard copies of the Draft List of Outstanding Concerns for the City's feedback. • TMEP is seeking the City's feedback on the Rolling Action Plan format. • The City will review the materials provided today and will provide comments/clarifications back to TMEP. • The City requested clarification about Kinder Morgan's Financial Decision timing. <ul style="list-style-type: none"> ◦ TMEP confirmed the KM Board of Directors approval of the capital plan did not take place in March, KM is looking to bring a partner in for the project and so final approval for the capital project, by the Board of Directors, has been pushed to May 2017. • TMEP asked the City, if agreement is not achieved on the TWG TOR would the TWG still proceed. <ul style="list-style-type: none"> ◦ The City would go back to the plan and examine from Burnaby's viewpoint. However, they hope there aren't too many areas of disagreement. It is Burnaby's intention that they are willing to be at the table. 	<p>ACTION ITEM:</p> <p>LH: TMEP will respond to the City's proposed edits to TOR. Will respond to Burnaby on outstanding issues and likely will be a couple of points of disagreement but will set out clearly why there is a difference of opinion.</p> <p>LH: TMEP will circulate a draft agenda for May 3, 2017</p> <p>LH: TMEP will issue meeting invites for TWG meetings to the end of the year.</p> <p>DD: City to review materials provided at April 4, 2017 meeting and provide comments / clarifications back to TMEP.</p>	COMPLETE

	TMEP indicated that draft documents related to the TWG meetings will be issued through KMC's Document Control process.		
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NEXT MEETING DATE & TOPICS:

May 3, 2017	<ul style="list-style-type: none"> • Potential agenda items for the next meeting: <ul style="list-style-type: none"> • The City would like to finalize the TOR. • The City acknowledges TMEP's priorities. • The City will review the draft Condition filings in the context of the plan and note which plans TMEP indicates are closed for comment. • TMEP confirms its top priorities are: <ul style="list-style-type: none"> ◦ Traffic management plan including the proposed secondary access from Gagliardi Way into Burnaby Terminal ◦ Eagles nest relocation, tree removals, water courses ◦ Conditions need to be filed and need Burnaby's response (in particular Condition 86) <ul style="list-style-type: none"> - <i>as per the list of environmental plans related to Condition filings that TMEP circulated</i> ◦ Lands and utilities ◦ Applicable Permit list confirmation
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THIS IS EXHIBIT "28"
Referred to in the Affidavit of
Michael Davies
Sworn before me this 26th
day of October A.D. 2017



A COMMISSIONER FOR OATHS
IN AND FOR BRITISH COLUMBIA

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Engineering Department

2017 May 09

FILE: 33200 10

Reference: Kinder Morgan

Ms. Lexa Hobenshield
Manager, External Relations
Kinder Morgan Canada Inc.
2844 Bainbridge Ave
PO Box 84028 Bainbridge
Burnaby BC V5A 4T9

Dear Ms. Hobenshield:

**SUBJECT: TRANS MOUNTAIN EXPANSION PROJECT
TECHNICAL WORKING GROUP DRAFT TERMS OF REFERENCE**

At our last Trans Mountain Expansion Project Technical Working Group meeting on 2017 May 03, you advised that Kinder Morgan did not intend to apply for any permits from Burnaby. This was a substantial change from our previous meeting on 2017 April 04, when you confirmed that Kinder Morgan would apply for all permits required.

It is important that we have clarification on this issue, as a priority to understanding our involvement in the Trans Mountain Expansion Project Technical Working Group.

We have agreed to work with you in good faith, towards authorization on multiple matters, but the permitting process is important for a number of reasons. It is not just about approval, but also about fair payment of fees that offset our staff costs, about accessing our multi-departmental assessment processes, and about finding priority for staff time relative to on-going permit applications by other applicants. It also ensures that any conditions that are imposed and agreed will be enforceable.

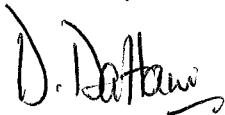
While the courts have indicated that Burnaby should not deny permits which sterilize or go to the core of an interprovincial undertaking, we have not understood that to mean that you (and your contractors) are immune from all permitting requirements whatever the subject. We suggest it is appropriate to follow our procedures where possible.

We remind you that on p. 254 of the NEB report, the NEB directed:

“Generally speaking, companies are expected to obtain any federal, provincial or municipal permits or authorizations required by those jurisdictions, and Trans Mountain has committed to comply with, or seek variance from, all municipal bylaws, including those involving noise.”

We would request that you provide a clear response, for inclusion in the draft Terms of Reference, outlining which permits Trans Mountain will agree to obtain before undertaking the activity, and which permits you are refusing to seek. Once that is done, we are prepared to schedule the next Trans Mountain Expansion Group Technical Working Group meeting to discuss proceeding with project and permit assessments.

Yours truly,



Dipak Dattani
Deputy Director Engineering

DD/ac

Copied to: Director Planning and Building
 Director Public Safety and Community Services