

PER No.:	19-162
Tenant:	Trans Mountain Pipeline ULC
Project:	Westridge Marine Terminal Upgrade and Expansion
Project Location:	7065 Bayview Drive, Burnaby
VFPA SID No.:	BBY 092
Land Use Designation:	Port Terminal
Permit Holder(s):	Trans Mountain Pipeline ULC
Category of Review:	Designated
Date of Approval:	SEPTEMBER 27, 2019
Date of Expiry:	DECEMBER 31, 2022

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 250 m (820 ft) into Burrard Inlet, new circular sheet pile retaining wall, and land infill in Burrard Inlet
- The construction of associated office and control building, utilities, fire suppression systems and mechanical systems
- Construction of new marine 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; no VFPA owned utilities would be impacted
- Modifications to existing mechanical systems at the Terminal
- Removal of existing Pier 59
- Temporary re-location of an existing utility dock from Pier 59 to Pier 61
- 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 (4.59 ft) to 2.0 m (6.56 ft) in diameter)
- Construction of a new three-berth dock complex encompassing approximately 275,000 m² (2,960,172 sqft) 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 (96,878 sqft)) and riparian plantings (approximately 2,350 m² (25,296 sqft))
- 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 (5,382 sqft)
- A new concrete railway derailment protection barrier north of the property line to protect the facility from existing train tracks (320 m (1,050 ft) long by 2.2 m (7.2 ft) 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 (20 ft) 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
- Emissions management equipment and control system
- A new fire-water and foam pumping system
- New electrical equipment and control system
- A stormwater management system including new oil water separators
- Stormwater 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 stormwater, 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 350 m 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

The 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 Permit Holder fails to comply with any of the project and environmental conditions set out in the Permit below, or if VFPA determines that the Permit Holder 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.

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

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

All VFPA Guidelines and Record Drawing Standards referenced in this document can be located at: <https://www.portvancouver.com/development-and-permits/project-and-environmental-reviews/technical-guidelines/>.

No.	GENERAL CONDITIONS
1.	The Permit Holder must have a valid lease, licence, or access agreement for the Project site prior to accessing the Project site or commencing construction or any other physical activities on the Project site. This Permit shall in no way limit any of the Permit Holder's obligations, or VFPA's rights, under such lease, licence, or access agreement.
2.	The Permit Holder shall at all times and in all respects, comply with and abide by all applicable statutes, laws, regulations and orders from time to time in force and effect, including all applicable environmental, labour and safety laws and regulations.
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.	The Permit Holder shall indemnify and save harmless VFPA in respect of all claims, losses, costs, fines, penalties or other liabilities, including legal fees, arising out of: (a) any bodily injury or death, property damage or any loss or damage arising out of or in any way connected with the Project; and (b) any breach by the Permit Holder of its obligations under this Permit.
5.	The Permit Holder shall adhere to Certificate of Public Convenience and Necessity OC-65, including all terms and conditions, and any subsequent amending orders.
6.	The Permit Holder 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 Permit Holder is responsible for locating all existing site services and utilities including any located underground. The Permit Holder 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 Permit Holder shall undertake and deliver the Project to total completion in a professional, timely and diligent manner in accordance with 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. 19-162-A1 to A49 . The Permit Holder shall not carry out any other physical activities unless expressly authorized by VFPA.
9.	The Permit Holder shall cooperate fully with VFPA in respect of any review by VFPA of the Permit Holder's compliance with this Permit, including providing information and documentation in a timely manner, as required by VFPA. The Permit Holder is solely responsible for demonstrating the Permit Holder's compliance with this Permit.
10.	The Permit Holder shall review the Permit with all employees, agents, contractors, licensees and invitees working on the Project site, prior to such parties participating in any construction or other physical activities on the Project site. The Permit Holder shall be solely responsible for ensuring that all such employees, agents, contractors, licensees and invitees comply with this Permit.
11.	The Permit Holder shall make available upon request by any regulatory authority a copy of this Permit.

12.	Unless otherwise specified, the Permit Holder shall provide all plans, documents, and notices required under this Permit to the following email address: per@portvancouver.com and referencing PER No. 19-162 .
13.	Unless otherwise specified, all plans, schedules, and other Project-related documentation that the Permit Holder is required to provide under this Permit must be to VFPA's satisfaction.
14.	The Permit Holder shall prepare and submit a self-report form to VFPA demonstrating compliance with conditions at each of the following project phases: <ul style="list-style-type: none"> a) Prior to construction conditions (self-report shall be submitted prior to the commencement of construction, or any physical activities); b) Construction conditions (self-report shall be submitted bi-annually during construction); c) Conditions upon Project completion (self-report shall be submitted within 60 business days of completion of construction); and d) Conditions prior to commissioning (self-report shall be submitted 15 business days prior to operation).
15.	VFPA shall have unfettered access to environmental compliance documentation and the Project site at all times during construction without notice. The Permit Holder shall cooperate with VFPA during the course of the visit or inspection.
16.	The Permit Holder must maintain and retain any records associated with, or produced by, actions or activities undertaken to achieve compliance or that indicate non-compliance with Permit conditions. These records must be made available at the request of VFPA.
17.	All conditions in this Permit which expressly or by their nature survive expiration or termination of this Permit shall remain in effect after the expiration or termination of this Permit.
18.	The Permit Holder shall strictly comply with all enforcement actions issued by VFPA in response to the Permit Holder's failure to comply with this Permit.
19.	The Permit Holder shall carry out the Project in accordance with the approved mitigation plans and 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.
CONDITIONS - PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	
SUBMISSION TIMING	
20.	The Permit Holder 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.
21.	The Permit Holder 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.

22.	The Permit Holder 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 the rail crossing
23.	The Permit Holder 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 either the Burnaby Fire Department or consultant(s) having experience with municipal firefighting command and control, and firefighting in an industrial setting similar to the Project. 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 Permit Holder on an alternative solution basis pursuant to NBC Division A, Article 1.2.1.1.	Before commencing construction of any permanent facilities
24.	The Permit Holder shall submit a signed and sealed Approach to Building and Fire Code Compliance Report prepared by the Permit Holder'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 VFPA during the review of the 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, Emergency Management, Trans Mountain 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 Permit Holder'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
25.	The Permit Holder shall submit a Construction Fire Safety Plan for VFPA review and approval.	Before commencing construction or any physical activities
26.	For construction activities in and around the City of Burnaby's underground sewer facilities generally shown on Lease Plan 2017-127, dated July 31, 2017 and licensed under VFPA's Wastewater System License to the City of Burnaby under License No.BBY093-0008F-002, dated May 1, 2011, the Permit Holder 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
27.	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

	under VFPA's outfall license under License No. BBY092-00753F-001 (formerly L-0753 (01)) dated October 1, 2004, the Permit Holder 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.	
28.	<p>The Permit Holder shall submit a final construction communications plan in accordance with VFPA's Public Consultation Guidelines. The plan shall outline how the Permit Holder shall 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 the following information:</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 public and stakeholders are provided with relevant information as it becomes available. The Permit Holder shall carry out the Project in accordance with the construction communications plan, and any subsequent amendments approved by VFPA.</p> <p>The Permit Holder shall provide quarterly updates to VFPA which detail all complaints, how they were dealt with/resolved and a summary of any additional communications undertaken by the Permit Holder.</p>	Before commencing construction or any physical activities
29.	<p>The Permit Holder 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 19-162 PER Report located here:</p> <p>https://www.portvancouver.com/development-and-permits/status-of-applications/</p> <p>The notice shall be approved by VFPA prior to distribution. The Permit Holder shall copy VFPA when construction notices are distributed.</p>	5 business days before commencing construction or any physical activities
30.	<p>The Permit Holder 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); 	Before commencing construction or any physical activities

	<ul style="list-style-type: none"> • Method of preferred communication with marine users; • Proposals to accommodate Indigenous traditional marine resource use activities potentially affected by construction activities; and • Special requests and/or additional information. 	
31.	For structures and proposed interior changes to structures that are reviewable under the National Building Code and National Fire Code, the Permit Holder 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 Project.	40 business days before commencing construction or any physical activities on structures reviewable under code
32.	Prior to the commencement of any vessel-related activities, the Permit Holder shall contact Canadian Coast Guard (CCG) Marine Communications and Traffic Services (MCTS), (email: NAVWARN.MCTSPRinceRupert@innav.gc.ca; Phone: 250-627-3070) regarding the issuance of a Navigational Warning (NAVWARN) to advise the marine community of potential hazards associated with the Project.	As per Coast Guard requirements
33.	If the Permit Holder 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 business days before commencing intake or discharge of hydrostatic testing water
34.	<p>The Permit Holder shall submit an updated <i>Stormwater Pollution Prevention Plan</i>, PER Submission TR.04, 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 on behalf of Tsleil-Waututh Nation. • 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 business days prior to construction of the new stormwater system
35.	Any proposed alterations to the Marine Construction and Safety Boom footprint, anchoring system or design must be submitted to and approved by VFPA.	20 business days prior to implementing alterations
36.	The Permit Holder shall provide a Project schedule to VFPA showing the anticipated start dates for all major phases of the Project as identified by VFPA. The Permit Holder shall notify VFPA of any material changes to the Project schedule and, upon request, shall provide an updated Project schedule.	Before commencing construction or any physical activities

	CONDITIONS - DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES
37.	The Permit Holder shall notify VFPA upon commencement of construction, or any physical activities (e.g., mobilization to the Project site).
38.	The Permit Holder shall discuss with the Indigenous Advisory and Monitoring Committee (IAMC), 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 Permit Holder under this permit shall be shared with IAMC, potentially affected Indigenous groups, and/or other persons or entities as specified by VFPA, from time to time.
39.	<p>All general construction and physical activities related to the Project shall be conducted from Monday to Saturday between the hours of 7:00 am and 8:00 pm. 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). No construction works shall occur on Sundays or statutory holidays.</p> <p>The following exceptions apply for the duration of the Permit:</p> <ul style="list-style-type: none"> • Non-motorized hand labor activities, which do not increase the background noise levels within the surrounding community, can be carried out at all times; and • Welding works related to shear lug installation for the mooring dolphins can be undertaken outside of regular hours as follows: Monday to Saturday between the hours of 8:00pm and 7:00am, including between 8:00pm Saturday and 7:00am Sunday. <p>These hours shall not be modified without prior approval of VFPA. To request permission to conduct activities outside these hours, the Permit Holder must submit a written request no less than 20 business days prior to the desired start date.</p>
40.	<p>The Permit Holder shall ensure that noise levels within the surrounding community as identified in <i>Noise Management Plan for Construction at Pump Stations and Terminal</i>, PER Submission TR.07, table C-3 and as described in the memo dated April 1, 2019 (as applicable), remain below the following thresholds:</p> <ul style="list-style-type: none"> • WMT_1; Location of Northcliffe Crescent and North Clide Ave, Burnaby <ul style="list-style-type: none"> ◦ Daytime limit (7 am to 10 pm) – 61 dBA ◦ Nighttime limit (10 pm to 7 am) – 51 dBA • WMT_2; Location of Bayview Drive and Malibu Drive, Burnaby <ul style="list-style-type: none"> ◦ Daytime limit (7 am to 10 pm) – 62 dBA ◦ Nighttime limit (10 pm to 7 am) – 51 dBA • WMT_3; Location of Bayview Drive and Barnet Road, Burnaby <ul style="list-style-type: none"> ◦ Daytime limit (7 am to 10 pm) – 68 dBA ◦ Nighttime limit (10 pm to 5 am) – 60 dBA ◦ Morning limit (5 am to 7 am) – 68 dBA <p>As part of planned monitoring described in <i>Noise Management Plan for Construction at Pump Stations and Terminal</i> the Permit Holder shall submit to VFPA the implemented monitoring plan details (locations, equipment specifications, site photos, expected time periods, etc.) and weekly summary</p>

	reports. The Permit Holder shall also grant VFPA staff access to historical and real-time levels from continuous monitors.
41.	The Permit Holder shall notify VFPA within 5 business days of any complaints received from the community and stakeholders during construction and indicate how the Permit Holder has responded to such complaints.
42.	The Permit Holder shall remove all abandoned utilities from the Project site, both underground and aboveground. At locations of connection to municipal work (i.e., at property lines), the abandoned utilities shall be capped.
43.	The Permit Holder 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 Permit Holder shall not permit any anchoring or operation of marine vessels or equipment within this restricted area.
44.	The Permit Holder may place temporary construction trailers on the Project site while this Permit remains in effect, provided that the Permit Holder first obtains a VFPA Building Permit for any trailers reviewable under the 2015 National Building Code of Canada.
45.	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.
46.	The Permit Holder 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.
47.	The Permit Holder 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 Permit Holder shall remove the remaining pile stubs with the least amount of disturbance of the seabed as possible. Particular effort shall be made to extract or reduce the height of pile stubs which may pose a hazard to navigation. If pile stubs are left in place, the location shall be surveyed and the location coordinates provided to VFPA within five days of Project completion
48.	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 Port Authority 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.
49.	The Permit Holder, or their contractor, shall engage a qualified environmental professional to monitor the Project in order to ensure that the works are carried out in compliance with this Permit. Monitoring events shall take place as required by the environmental monitor, the Environmental Protection Plan, or VFPA, provided that monitoring shall be full time when works are underway that have the potential to adversely affect fish or fish habitat.
50.	The Permit Holder shall provide weekly environmental monitoring reports to VFPA. In addition, a summary report for the whole monitoring period shall be forwarded to VFPA within 30 business days of the conclusion of the monitoring period.

51.	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.
52.	<p>During any vessel-related activities, the Permit Holder shall:</p> <ul style="list-style-type: none"> a) 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; b) Exhibit the appropriate lights and day shapes at all times; c) Monitor the VHF channel used for MCTS communications in the respective area at all times and participate as necessary; d) Be familiar with vessel movements in areas affected by the Project. e) Plan and execute the Project in a manner that shall not impede navigation or interfere with vessel operations; and, f) During night hours, unless working 24 hours per day, ensure that the rig and associated equipment is moored outside the navigation channel, approaches to adjacent terminal facilities and/or anchorage areas, and lit in accordance with all applicable regulations. g) 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.
53.	<p>The Permit Holder shall retain a qualified environmental professional to act as an Independent Monitor responsible for reviewing the construction environmental records and on-site construction activities for compliance with the Environmental Protection Plan and this Permit. The Independent Monitor shall possess the following qualifications:</p> <ul style="list-style-type: none"> a) Suitable education and knowledge demonstrating that they may be reasonably relied on to provide advice within their area of expertise; b) A minimum of five years of experience monitoring related types of construction activities in similar environments. <p>The Independent Monitor shall not be an employee of the Permit Holder's organization or of a contractor/consultant retained by the Permit Holder to work on the Project in other capacities.</p>
54.	<p>The Permit Holder shall submit a Monitoring Work Plan. At a minimum, the Monitoring Work Plan shall describe the following:</p> <ul style="list-style-type: none"> a) The role and responsibilities of the Independent Monitor, including the following provisions: <ul style="list-style-type: none"> i. The Independent Monitor shall have unfettered access to environmental compliance documentation and the Project site at all times during construction without notice. ii. The Independent Monitor shall have the authority to direct the Permit Holder to stop a construction activity that is causing an adverse effect. iii. The Independent Monitor shall report directly to VFPA and obtain direction from VFPA on matters that arise during construction that are not described in the Permit and cannot be resolved by discussion with the Permit Holder. iv. The Independent Monitor shall concurrently submit compliance reports directly to the Permit Holder and VFPA within one week of site visits. b) The frequency of site visits by the Independent Monitor, with a higher frequency of site visits to occur during in-water works as compared to those scheduled for

	<p>land-based construction activities.</p> <p>c) The manner in which notice shall be given to the Permit Holder and VFPA for an activity not in compliance with permit conditions or having unforeseen adverse effects.</p> <p>d) The name and qualifications of the Independent Monitor.</p> <p>e) The name(s), role(s) and qualifications of other individuals providing specialized expertise or designated to act as the Independent Monitor during specific construction activities or times.</p> <p>The Permit Holder shall carry out the Project in accordance with the approved Monitoring Work Plan, and any subsequent amendments, to the satisfaction of VFPA.</p>	
	CONDITIONS – PRIOR TO OPERATION	
55.	The Permit Holder 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.	
56.	The Permit Holder shall submit a berthing simulation study for VFPA review and approval.	
57.	The Permit Holder shall submit an updated Operational Emergency and Fire Safety Plan for VFPA review and approval.	
	CONDITIONS - UPON COMPLETION	SUBMISSION TIMING
58.	The Permit Holder shall notify VFPA upon completion of the Project.	Within 10 business days of substantial completion
59.	Upon completion of the deep-sea berth(s) construction, the Permit Holder 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 substantial completion
60.	The Permit Holder 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 substantial completion
61.	The Permit Holder shall provide record drawings in accordance with VFPA's Record Drawing Standards, in both AutoCAD and Adobe (PDF) format to VFPA, including a Project site plan that clearly identifies the location of works.	Within business 40 days of completion
62.	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 business days of completion
63.	The Permit Holder 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 of commencing operations

64.	The Permit Holder shall provide to VFPA reports and all 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 growing season after completing final clean up
LENGTH OF PERMIT VALIDITY		
The Project must commence by 30 September 2020 (Commencement Date) and be completed no later than 31 December 2022 (Expiry Date).		
AMENDMENTS		
<ul style="list-style-type: none"> Details of any material proposed changes to the Project, including days and hours when construction and any physical activities shall be conducted, must be submitted to VFPA for consideration of an amendment to this Permit. For an extension to the Commencement Date, the Permit Holder must apply to VFPA in writing no later than 30 days prior to that date. For an extension to the Expiry Date, the Permit Holder must apply in writing to VFPA no later than 30 days prior to that date. <p>Failure to apply for an extension as required may, at the sole discretion of VFPA, result in termination of this Permit.</p>		

PROJECT AND ENVIRONMENTAL REVIEW DECISION

Project Permit PER No. 19-162 is approved by:

Original Copy Signed

PETER XOTTA
VICE PRESIDENT, PLANNING & OPERATIONS
CHAIR OF PROJECT AND ENVIRONMENTAL
REVIEW COMMITTEE

September 27, 2019
DATE OF APPROVAL

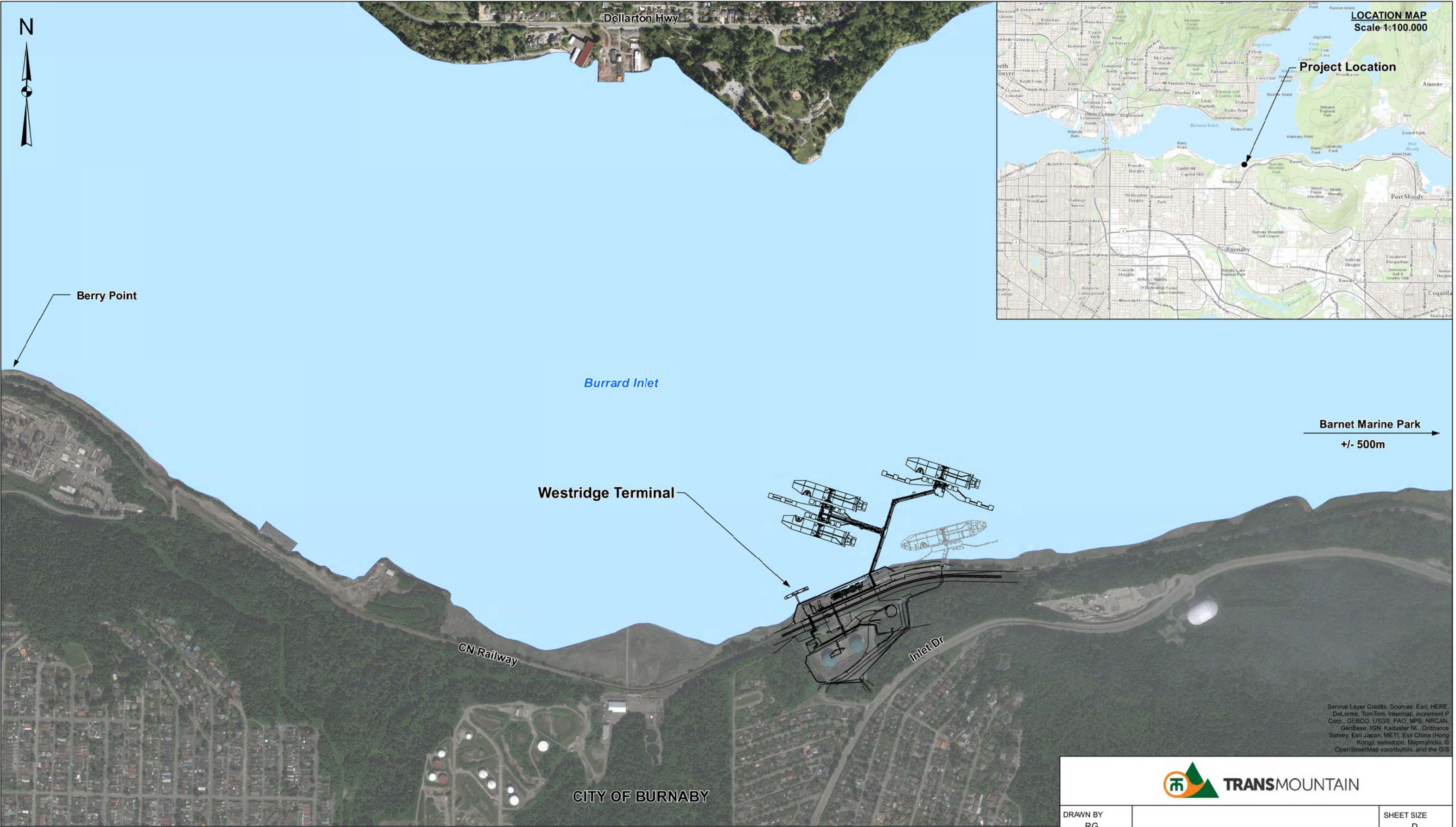
CONTACT INFORMATION

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


After normal business hours:

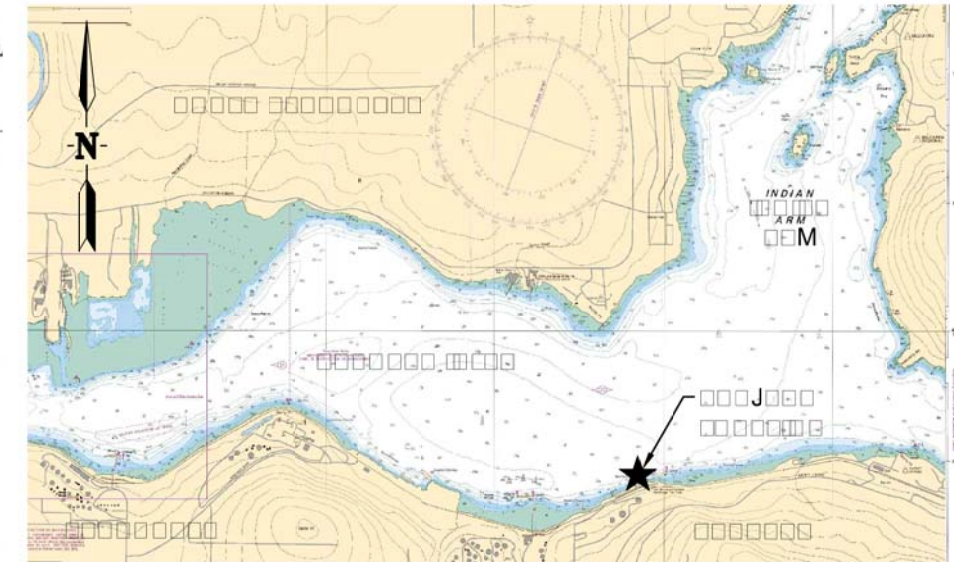
In the event of any land or marine construction incidents or concerns related to works carried out on-site under this permit, please contact the 24/7 Port Operations Centre 604-665-9086. In the event of an emergency requiring 'First Responders', please call 911 first.



VANCOUVER FRASER PORT AUTHORITY
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NO.	DRAWING NUMBER	REFERENCE DRAWING TITLE	NO.	DATE	REVISION	DR.	CHK.
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<div><div></div><div>TRANS MOUNTAIN</div></div>				
DRAWN BY RG	TMEP PERMIT DRAWING WESTRIDGE TERMINAL LOCATION PLAN			SHEET SIZE D
CHECKED BY JH				SCALE 1:5000
APPROVED BY GS				DATE 16/02/22
PROJECT CODING		DRAWING NUMBER		
AFE	FACILITY ID	DOCUMENT NO	SHT NO	REV
01-13283	WT00	GA01053	01	0



KEY PLAN
SCALE NTS

SITE PLAN
SCALE 1:4000

- REFERENCES:

1. CANADIAN HYDROGRAPHIC SERVICES CHART No. 3494.
2. WESTRIDGE TERMINAL SITE PLAN WT00-GA1001.



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PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION



777 WEST BROADWAY, SUITE 301
VANCOUVER, BC, CANADA, V5Z 4J7
604-707-9004



TRANSMOUNTAIN

KEY PLAN & SITE PLAN

SHEET SIZE	A1
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A1
SCALE

NONE
DATE

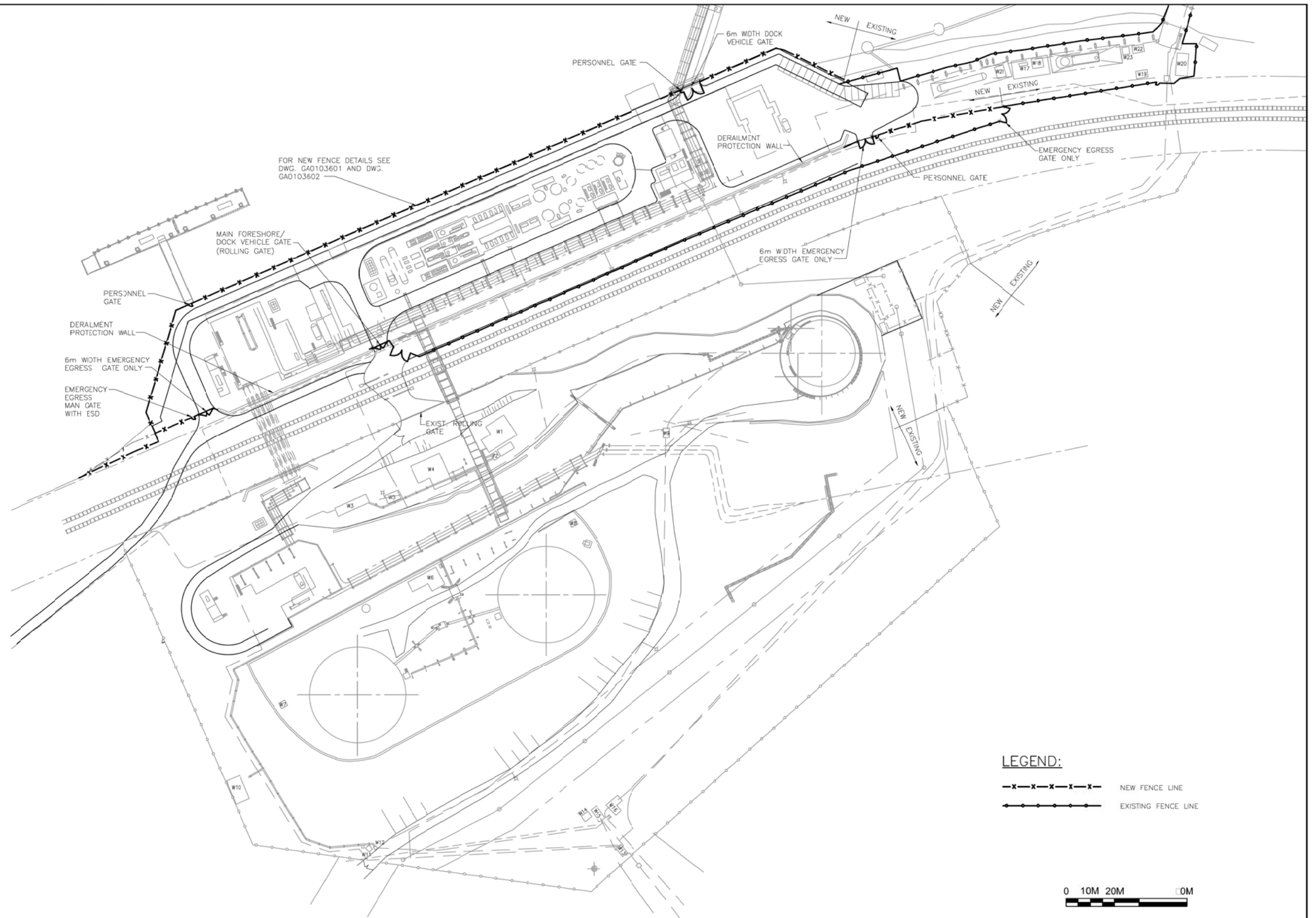
WESTRIDGE TERMINAL

	DRAWING NUMBER	
	FACILITY ID	DOCUMENT


SHT NO	REV
--------	-----

SHI NO	REV
01	C

										DRAWING E2		KEY PLAN & SITE PLAN				SHEET NO. A1					
										CHECKED BY JT						SCALE NONE					
										APPROVED BY RB		WESTRIDGE TERMINAL				DATE 13/12/20					
										C		17/02/02		ISSUED FOR PERMIT APPLICATION				AVM		RB	
										B		17/01/05		WATERLOT BOUNDARIES UPDATED -- ISSUED FOR REVIEW				AM		JT	
										A		16/11/14		ISSUED FOR REVIEW				AM		JT	
																		DRN		CHK	
																		APPR			
																		01-13283			
																		WT00		GA01008	
																		01		C	



LEGEND:



NEW FENCE LINE

EXISTING FENCE LINE

0 10M 20M 30M

ch2m:
Jan 31 2016
ISSUED
FOR
PERMIT APPLICATION

ch2m:
PROJECT # 660356



DRAWN BY YZ	TMPE PERMIT DRAWING FENCE LINE LAYOUT				SHEET SIZE A1	
CHECKED BY HY					SCALE 1:800	
APPROVED BY FH	WESTRIDGE TERMINAL				DATE 2016/11/22	
PROJECT CODING AFE		FACILITY ID		DRAWING NUMBER		
				DOCUMENT NO		REV
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				SH1 NO		0

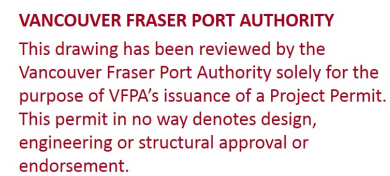
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				D	2017/01/31	ISSUED FOR PERMIT APPLICATION AFE #01-13283 (CH2M PROJ. #660356)				YZ	RO	RB		
NO.	REFERENCE DRAWING TITLE	REFERENCE DRAWING NO.	NO	DATE	REVISION					DRN	CHK	APPR		

VANCOUVER FRASER PORT AUTHORITY

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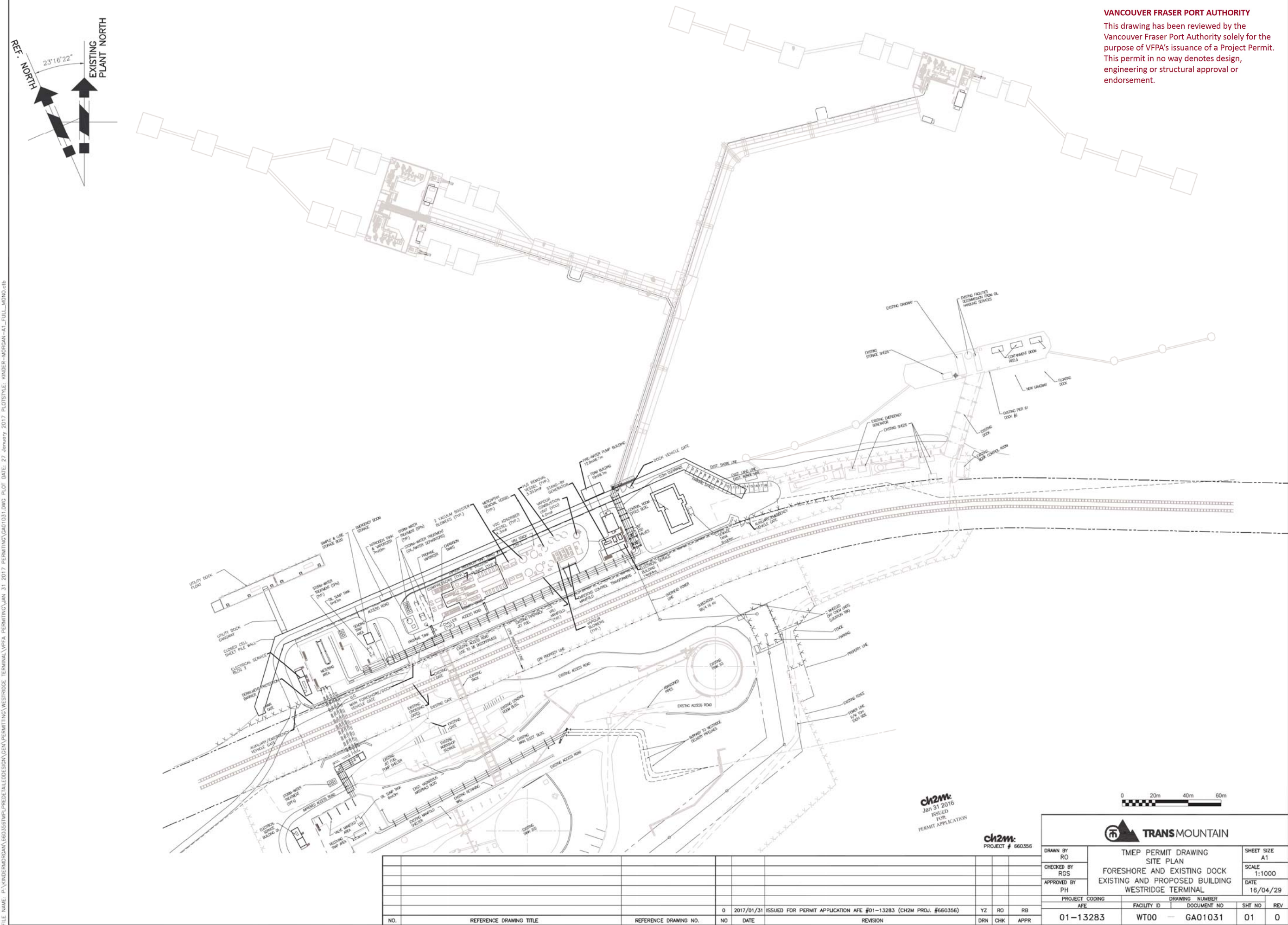
[illegible]



												DRAWN RO	TMEP PERMIT DRAWING SITE PLAN	SHEET SIZE A1
												CHECKED BY RGS	HIGH WATER MARK & WATER LEVELS	SCALE AS SHOWN
												APPROVED BY PH	WESTRIDGE TERMINAL	DATE 16/04/29
												PROJECT CODING	FACILITY ID	DRAWING NUMBER
												A/E	DOCUMENT NO.	SHIT NO.
														REV
NO.	REFERENCE DRAWING TITLE	REFERENCE DRAWING NO.	NO	DATE	REVISION	ISSUED FOR PERMIT APPLICATION AFE #01-13283 (CH2M PROJ. #660356)	YZ	RO	RB			01-13283	WT00 — GA01033	01 0
							DRN	CHK	APP					

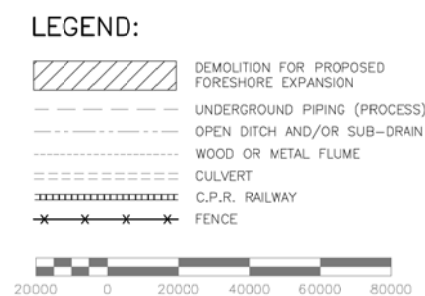
VANCOUVER FRASER PORT AUTHORITY
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FILE NAME: P:\KINDERMORGAN\660356\TMP\PRELIM\DESIGN\GEN\PERMITTING\WESTRIDGE_TERMINAL_VFPA_PERMITTING\JAN_31_2017_PERMITTING\GA01031.DWG PLOT DATE: 27 January 2017 PLOT STYLE: KINDER-MORGAN-A1_FULL.MDLNO.ctb



NO.		REFERENCE DRAWING TITLE	REFERENCE DRAWING NO.	NO	DATE	REVISION	DRN	CHK	APPR
0		2017/01/31	ISSUED FOR PERMIT APPLICATION AFE #01-13283 (CH2M PROJ. #660356)	YZ	RO	RB			

DRAWN BY RO		TMEP PERMIT DRAWING SITE PLAN				SHEET SIZE A1	
CHECKED BY RGS		FORESHORE AND EXISTING DOCK				SCALE 1:1000	
APPROVED BY PH		EXISTING AND PROPOSED BUILDING WESTRIDGE TERMINAL				DATE 16/04/29	
PROJECT CODING AFE		DRAWING NUMBER DOCUMENT NO		SHT NO		REV	
01-13283		WT00 - GA01031		01		0	

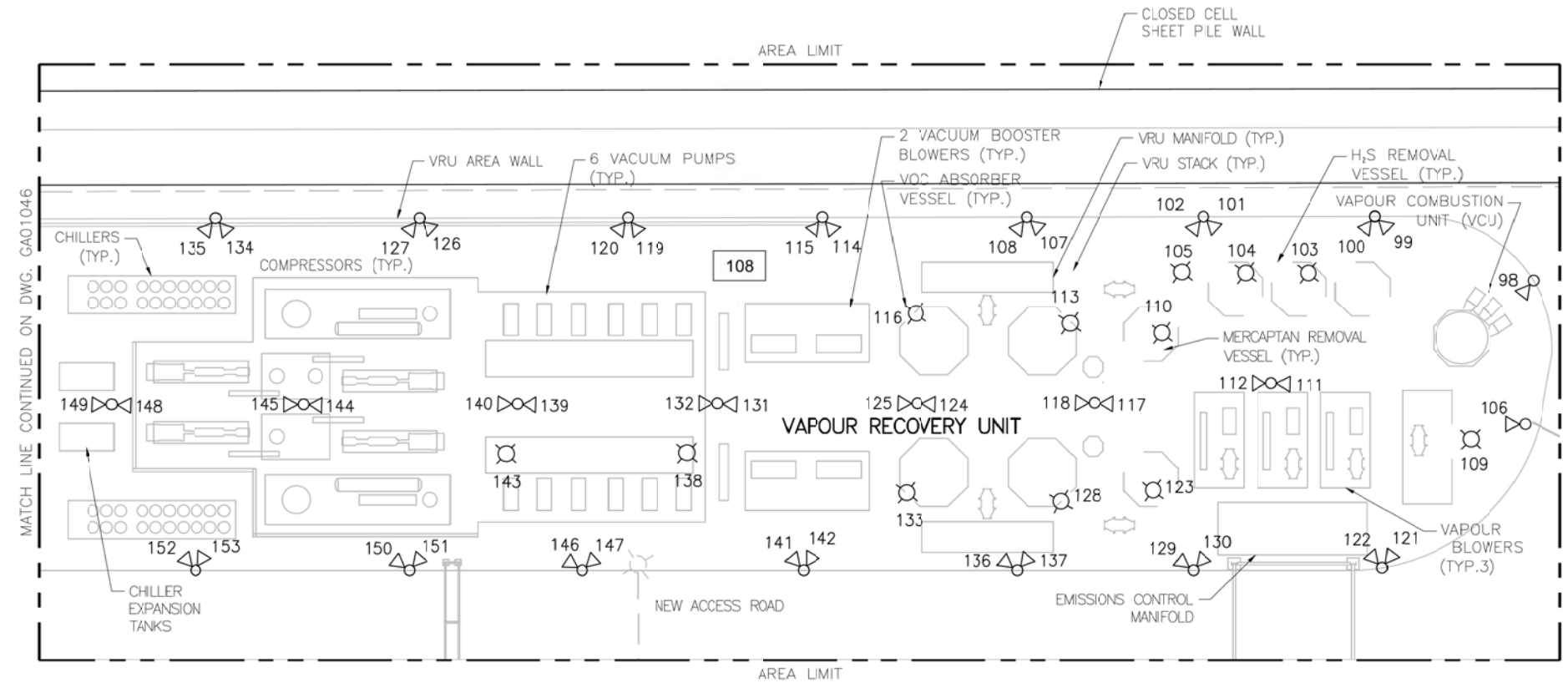
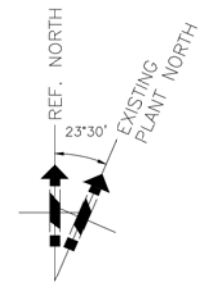


SCALE: 1:1000

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[illegible]

SEE LIGHTING SCHEDULE (DWG.
GA01052) FOR LUMINAIRE TYPE,
MOUNTING HEIGHT AND ORIENTATION.



ch2m:
Jan 31 2016
ISSUED
FOR
PERMIT APPLICATION

VANCOUVER FRASER PORT AUTHORITY

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											DRAWING NY	TMEP PRMIT DRAWING	SHEET SIZE A1		
											CHECKED BY JE	LIGHTING PLAN			
											APPROVED BY PH	VRU / VCU SKIDS CWA #108 WESTRIDGE TERMINAL	SCALE 1:200 DATE 2016/10/27		
3	LIGHTING PLAN FIRE PROTECTION BLDG/ESB1/FORESHORE PIPE RACK CWA #109	GAO1048									PROJECT CODING AFE	DRAWING NUMBER			
2	LIGHTING PLAN NITROGEN AND PROPANE CWA #107 & 108	GAO1046									FACILITY ID	DOCUMENT NO	SHT NO		
1	LIGHTING SCHEDULE - EXTERIOR LIGHTING FORESHORE	GAO1052	0	2017/01/31	ISSUED FOR PERMIT APPLICATION AFE #01-13283 (CH2M PROJ. #660356)	YZ	RJ	RB			01-13283	WT00	GAO1047	01	0
NO.	REFERENCE DRAWING TITLE	REFERENCE DRAWING NO.	NO.	DATE	REVISION	DRN	CHK	APPR							



ch2m
Jan 31 2016
ISSUED
FOR
PERMIT APPLICATION



DRAWN BY NY	TMEP PERMIT DRAWING LIGHTING PLAN CWA #109 FIRE PROTECTION BLDG/ESB1/ FORESHORE PIPE RACK WESTRIDGE TERMINAL	SHEET SIZE A1		
CHECKED BY JE		SCALE 1:100		
APPROVED BY PH		DATE 2016/10/27		
PROJECT CODING		DRAWING NUMBER		
AFE	FACILITY ID	DOCUMENT NO	SHT NO	REV
01-13283	WT00	GA01048	01	0

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[illegible]

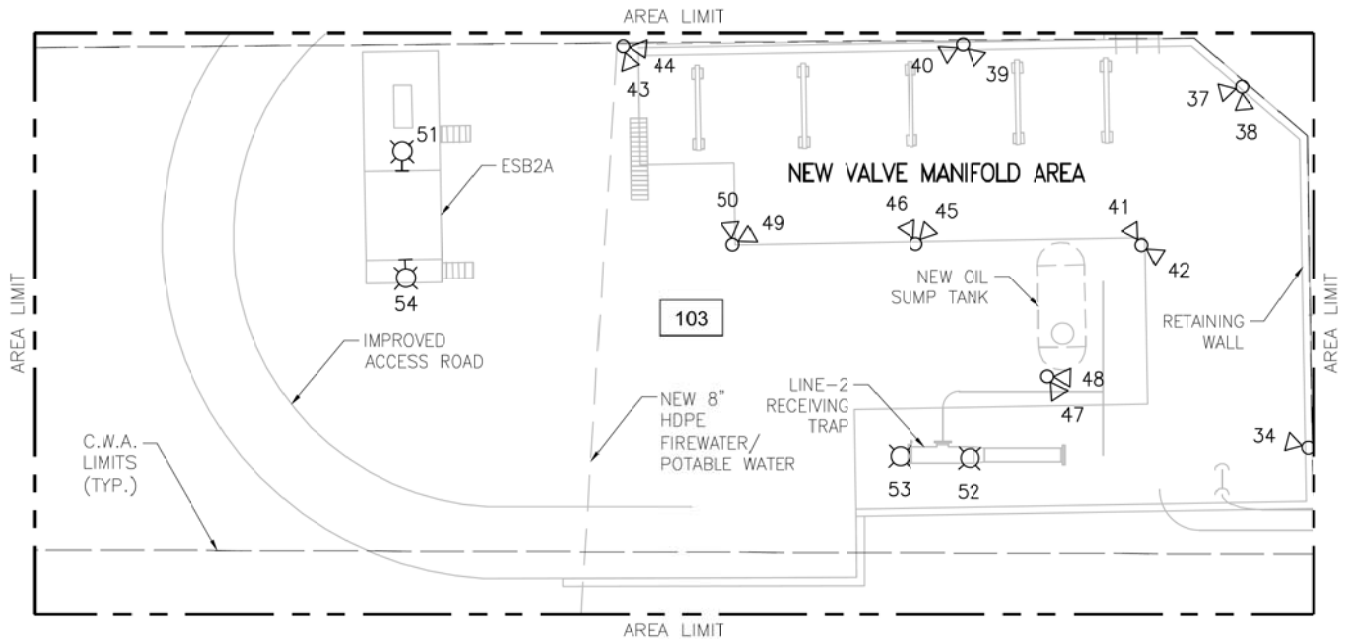
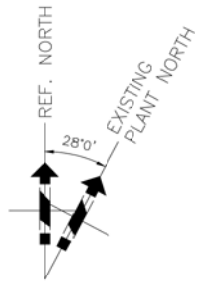


ch2m
Jan 31 2016
ISSUED
FOR
PERMIT APPLICATION

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NOTE:
SEE LIGHTING SCHEDULE (DWG.
#WT00-GA01052) FOR LUMINAIRE
TYPE, MOUNTING HEIGHT AND
ORIENTATION.









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ch2m
Jan 31 2016
ISSUED
FOR
PERMIT APPLICATION

ch2m
PROJECT # 660356

										NY		LIGHTING PLAN				A1	
										CHECKED BY JE		VALVE MANIFOLD / ESB2A				SCALE 1:200	
										APPROVED BY PH		CWA #4, 24 WESTRIDGE TERMINAL				DATE 2016/10/27	
										PROJECT CODING		DRAWING NUMBER					
										AFE		FACILITY ID		DOCUMENT NO		SHT NO	
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										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
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										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01	
										01-1283		WT00		GA01051		01</	

LUMINAIRE TYPE				
TYPE	DESCRIPTION	PART NUMBER	QTY	SYMBOL
A	109W FLOOD POLE MOUNT LED T2 3000K, CSA APPROVED CLASS 1 ZONE 2 GROUP IIC T4, 347V, 1 PHASE	NEMALUX RSLED-WW-MFK-GY-C1D2-POL-347 3000K 10000LM 109W	80	
B	175W FLOOD POLE MOUNT LED T2 3000K, CSA APPROVED CLASS 1 ZONE 2 GROUP IIC T4, 347V, 1 PHASE	NEMALUX RS15-WW-MFK-GY-C1D2-POL-347 3000K 10000LM 175W	32	
C	30W STANCHION OR SURFACE MOUNT LED OVAL OPTIC 3000K, CSA APPROVED CLASS 1 ZONE 2 GROUP IIC T4, 347V, 1 PHASE	NEMALUX MR3-WW-OF-GY-C1D2-HV	21	
D	68W WALL PACK LED T2 3000K CSA APPROVED, 347V, 1 PHASE	NEMALUX MR6-WW-2F-GY-GEN-HV	19	
E	91W ROADWAY COBRA HEAD LED TYPE II, MEDIUM, 3000K CSA APPROVED, 347V, 1 PHASE	GE EVOLVE ERL1 D E3 C1 30 2 GREY Y	15	
F	91W ROADWAY COBRA HEAD LED TYPE III, SHORT, 3000K CSA APPROVED, 347V, 1 PHASE	GE EVOLVE ERL1 D E3 D1 30 2 GREY Y	10	

[illegible]

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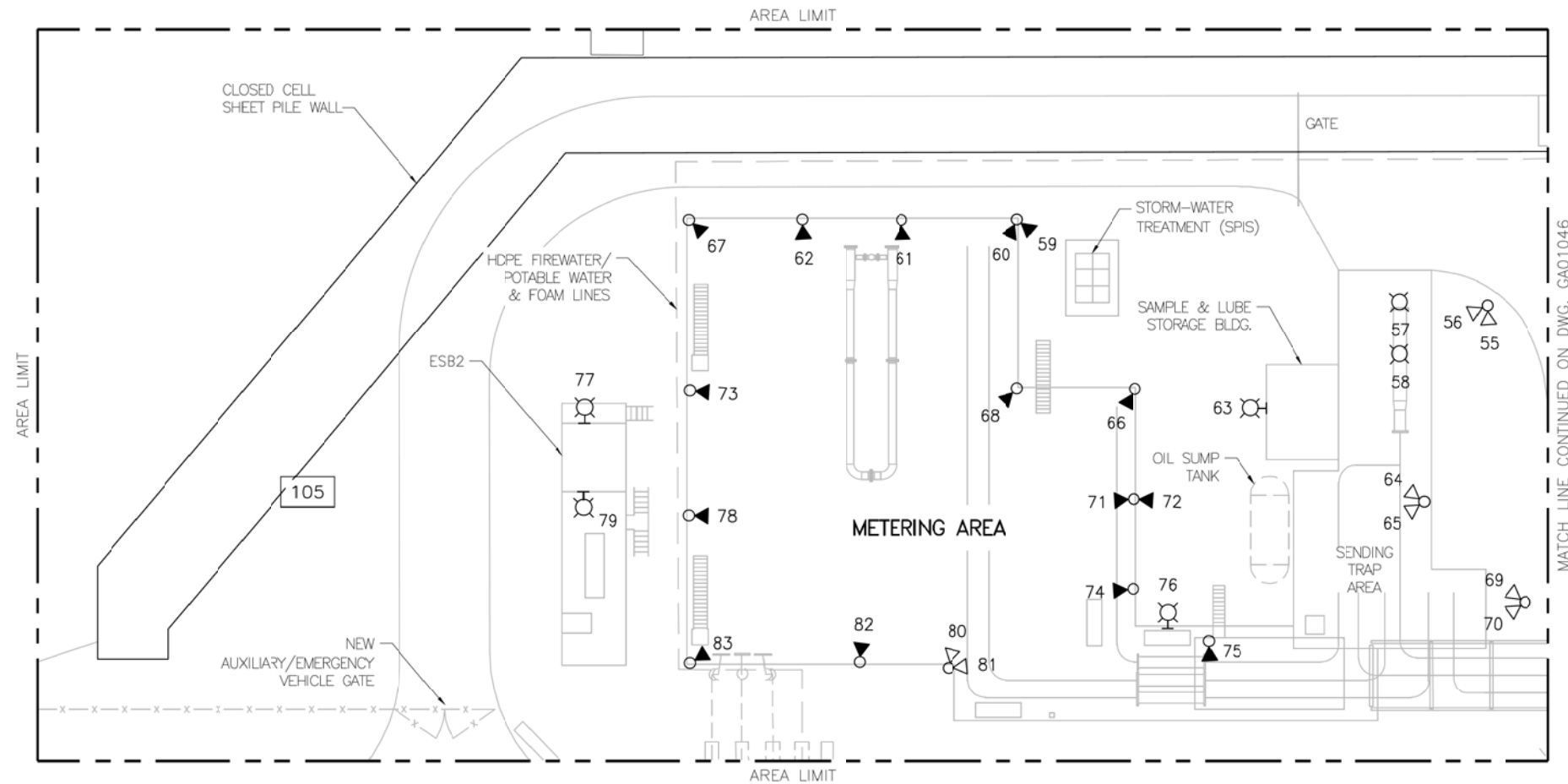
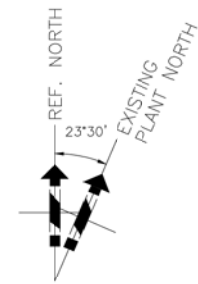
ch2m:
PROJECT # 660356

1. LUMINAIRE FIXTURE ORIENTATION ANGLE IS CLOCKWISE FROM PLANT NORTH (COMPASS NORTH) STARTING AT 0 DEGREES.

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DESIGN NOTE:
(FOR ALL LIGHTING PLAN DRAWINGS)
NEMALUX IS UPDATING THEIR IES
FILES IN JANUARY 2017 AND
THEREFORE THE LIGHTING DESIGN
IS NOT FINAL.



A diagram of a 24m race track. The track is represented by a horizontal bar divided into three sections. The first section, from 0 to 8m, is checkered. The second section, from 8m to 16m, is solid black. The third section, from 16m to 24m, is white. The labels 0, 8m, 16m, and 24m are placed above the corresponding points on the track.

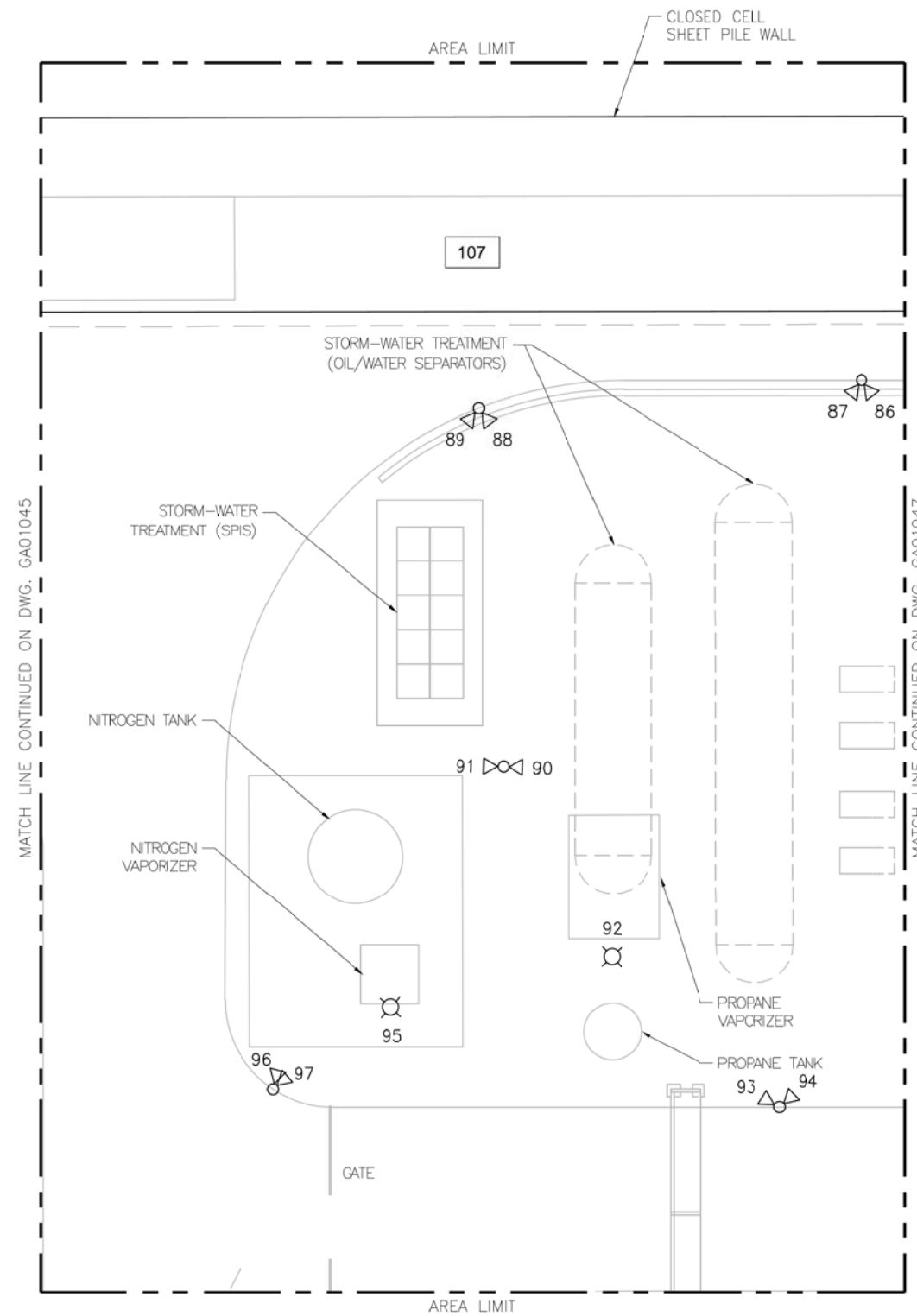


DRAWN BY NY	TMEP PERMIT DRAWING				SHEET SIZE A1	
CHECKED BY JE	LIGHTING PLAN				SCALE 1:200	
APPROVED BY PH	METERING STATION / SENDING TRAP CWA #105 WESTRIDGE TERMINAL				DATE 2016/10/27	
PROJECT CODING		DRAWING NUMBER				
AFE	FACILITY ID	DOCUMENT NO	SHT NO	REV		
01-13283	WT00	GA01045	01	0		

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[illegible]



MATCH LINE CONTINUED ON DWG. GAO1045

MATCH LINE CONTINUED ON DWG. GAO1047



DRAWN BY NY	TMEP PERMIT DRAWING LIGHTING PLAN NITROGEN & PROPANE CWA #107 WESTRIDGE TERMINAL	SHEET SIZE A1	
CHECKED BY JE		SCALE 1:100	
APPROVED BY PH		DATE 2016/10/27	
PROJECT CODING		DRAWINGS NUMBER	
AFE	FACILITY ID	DOCUMENT NO	SHT NO REV
01-13283	WT00	GA01046	01 0

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[illegible]

1	PARKING AND ACCESS — TRUCK TURNING	GAO1039	0	2017/01/31	ISSUED FOR PERMIT APPLICATION AFE #01-13283 (CH2M PROJ. #660356)		YZ	R3	RB	
NO.	REFERENCE DRAWING TITLE	REFERENCE DRAWING NO.	NO	DATE	REVISION		DRN	CHK	APPR	

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PROJECT # 66035



DRAWN BY YZ	TMEP PERMIT DRAWING PARKING & ACCESS ROADS FORESHORE				SHEET SIZE A1
CHECKED BY RGS					SCALE 1:500
APPROVED BY PH	WESTRIDGE TERMINAL				DATE 16/04/29
PROJECT CODING		DRAWING NUMBER			
AFE		FACILITY ID	DOCUMENT NO		SHT NO
01-13283		WT00	GA01037		01
					0

PLAN
SCALE: 1:500

CABLE TRAY SUPPORT

PIPE RACK

EXISTING PIPE RACK AT THE NORTH SIDE DERAILMENT PROTECTION BARRIER

NOTE: (NO EXISTING PIPE RACK AT THE SOUTH SIDE DERAILMENT PROTECTION BARRIER)

4350± (FOR NORTH SIDE DERAILMENT PROTECTION BARRIER)

4790± (FOR SOUTH SIDE DERAILMENT PROTECTION BARRIER)

DERAILMENT PROTECTION BARRIER WALL

EL. 7.40m

20M Ø 300 (IN 4 ROWS AS SHOWN)

25M Ø 300

25M Ø 300

25M Ø 300

30M Ø 300

20M Ø 300 ALTERNATING WITH 30M Ø 300

F.G. EL. 5.50m

20M Ø 300

20M Ø 300 TOP AND BOT. BARS

3-25M CONTINUOUS BAR

20M Ø 300

30M Ø 300

100 CRUSHED GRAVEL

COMPACTED NATURE SUBGRADE

RIGHT OF WAY

25M CONTINUOUS BAR

25M Ø 300

30M Ø 300

20M Ø 300 ALTERNATING WITH 30M Ø 300


F.G. EL. 5.20m

U/S FOOTING EL. 3.80m

SECTION A


SCALE: 1:30

[illegible]

 TRANSMOUNTAIN				
DRAWN BY RO		TMEP PERMIT DRAWING DERAILMENT PROTECTION BARRIER PLAN AND SECTION		SHEET SIZE A1
CHECKED BY MA	SCALE 1:500			
APPROVED BY PH	DATE 16/10/27			
PROJECT CODING		DRAWING NUMBER		
AFE	FACILITY ID	DOCUMENT NO	SHT NO	REV
01 - 13283	WT00	GA01080	01	0

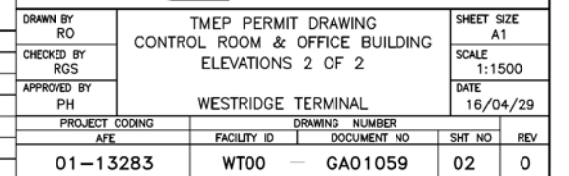


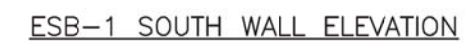
This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

 TRANSMOUNTAIN					
DRAWN BY RO CHECKED BY RGS APPROVED BY PH	TMEP PERMIT DRAWING CONTROL ROOM & OFFICE BUILDING ELEVATIONS 1 OF 2				SHEET SIZE A1
					SCALE 1:1500
	WESTRIDGE TERMINAL				DATE 16/04/29
PROJECT CODING		DRAWING NUMBER			
AFE		FACILITY ID	DOCUMENT NO	SHT NO	REV
01-13283		WT00	GA01059	01	0



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TRANSMOUNTAIN

DRAWN BY RO	TMPE PERMIT DRAWING			SHEET SIZE A1
CHECKED BY RGS	ELECTRICAL SERVICE BUILDING — 1			SCALE 1:50
APPROVED BY PH	WESTRIDGE TERMINAL			DATE 16/04/29
PROJECT CODING AFE		FACILITY ID	DRAWING NUMBER DOCUMENT NO	SHT NO
01-13283		WT00	GA01061	01 0

[illegible]



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										DRAWING NO.		TEMP PERMIT DRAWING		SHEET NO. A1	
										CHECKED BY RGS		ELECTRICAL SERVICE BUILDING		SCALE 1:50	
										APPROVED BY PH		EXTERIOR ELEVATIONS		DATE 16/04/29	
												WESTRIDGE TERMINAL			
										PROJECT CODING		DRAWING NUMBER		REV	
										AFE		FACILITY ID		DOCUMENT NO	
										01-13283		WT00		GA01061	
										YZ RO RB		SHIT NO		02 0	
										DRN CHK APPR					



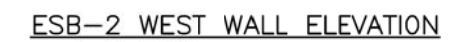
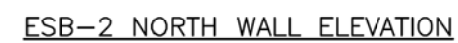
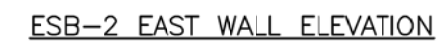
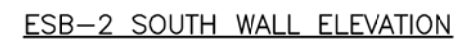
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TRANSMOUNTAIN

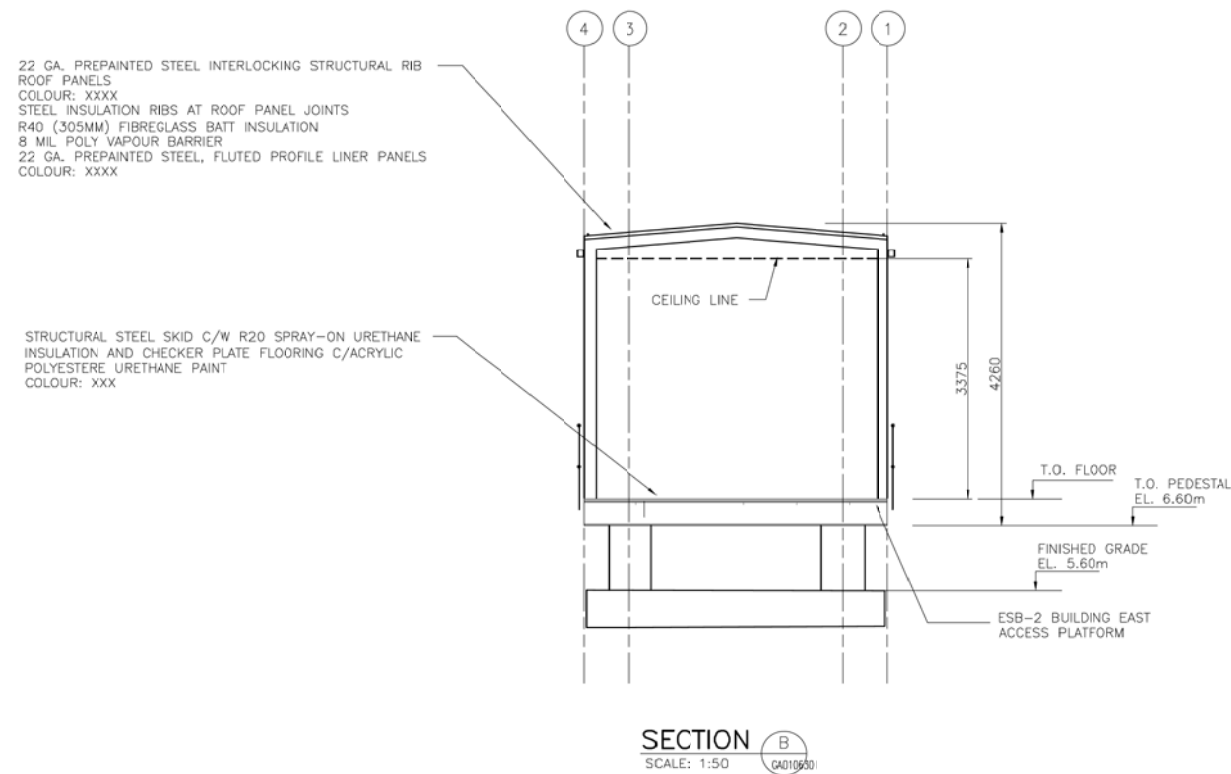
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CHECKED BY RGS	ELECTRICAL SERVICE BUILDING - 1				SCALE 1:50	
APPROVED BY PH	CROSS SECTIONS				DATE 16/04/29	
PROJECT CODING AFE		DRAWING NUMBER				
FACILITY ID		DOCUMENT NO		SHT NO		REV
01-13283		WT00 - GA01061		03		0

[illegible]




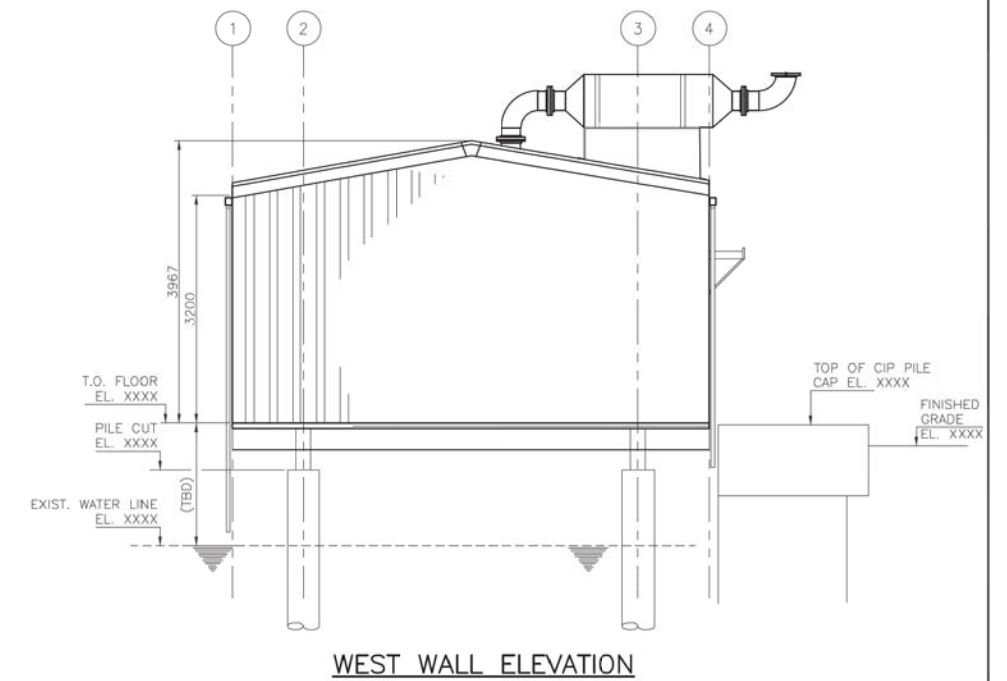
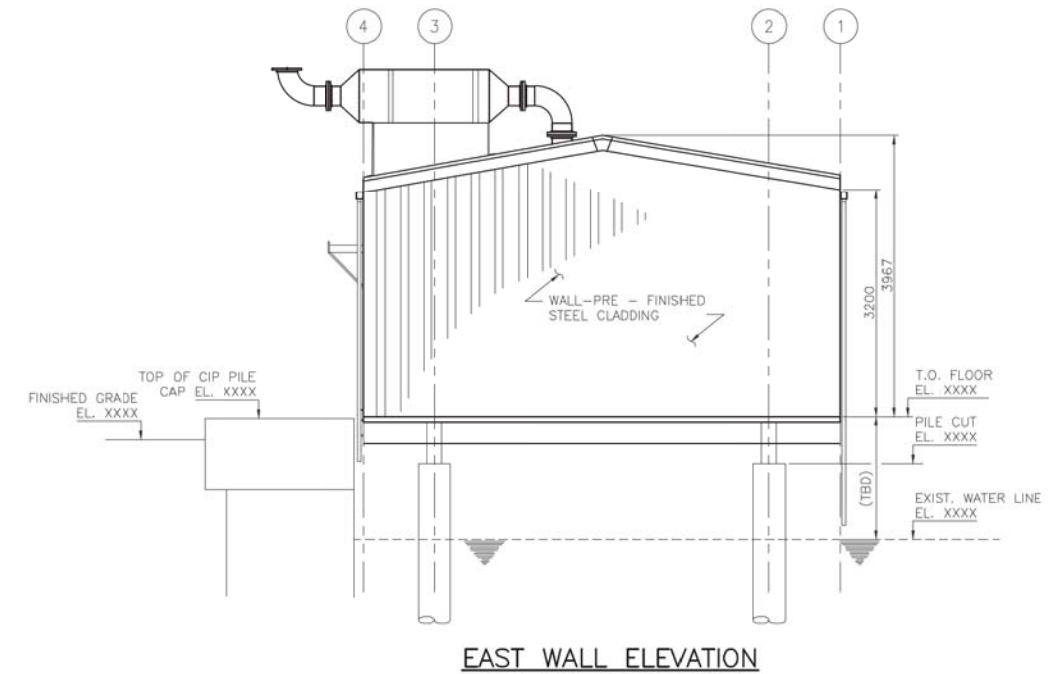
This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

										TIME PERMIT DRAWING			SHEET NO. A1		
										ELECTRICAL SERVICE BUILDING - 2			SCALE 1:50		
										EXTERIOR ELEVATIONS			DATE 16/04/29		
										WESTRIDGE TERMINAL					
										PROJECT CODING			DRAWING NUMBER		
										AFE			FACILITY ID		
													DOCUMENT NO		
													SHT NO		
													REV		
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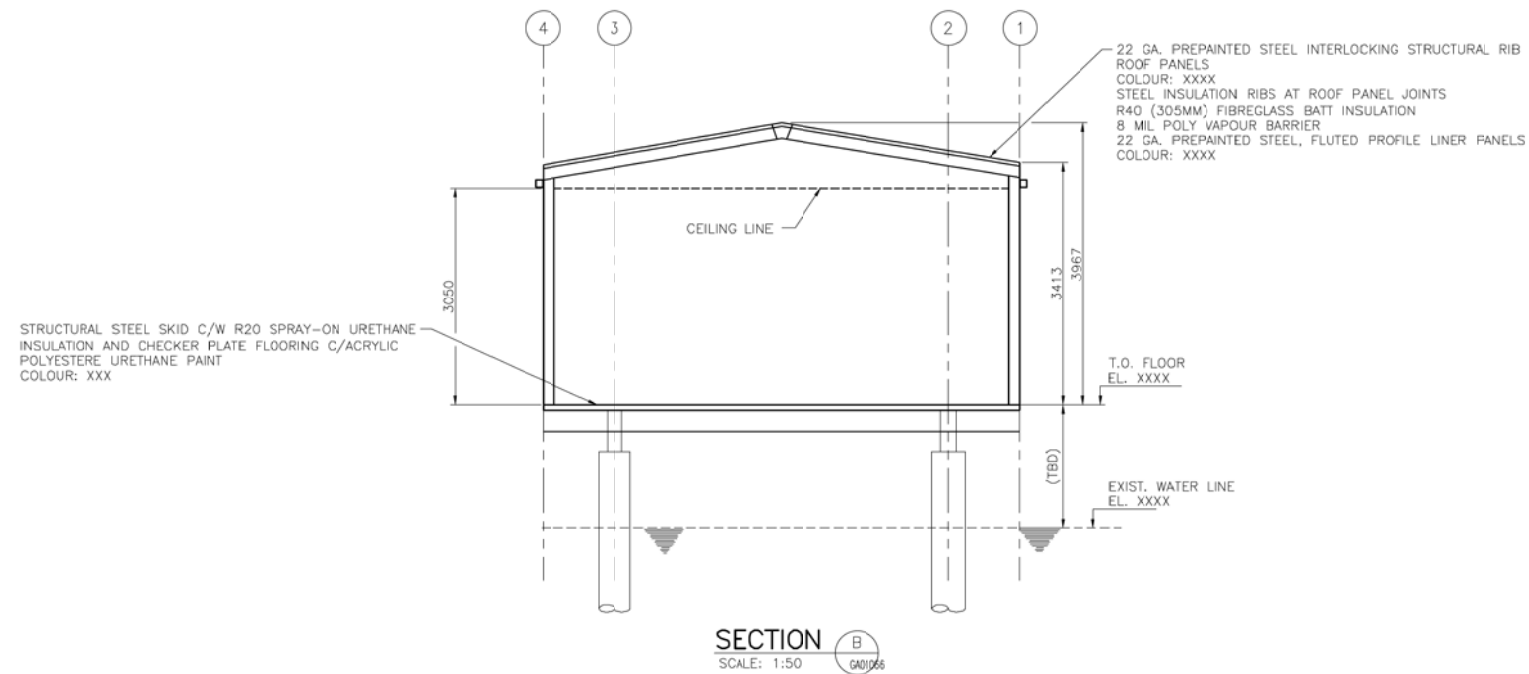
 TRANS MOUNTAIN		SHEET SIZE	
		A1	
		SCALE	
		1:50	
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CHECKED BY RGS			16/04/29
APPROVED BY PH			
PROJECT CODING		DRAWING NUMBER	
AFE	FACILITY ID	DOCUMENT NO	SHT NO
01-13283	WT00	GA01064	02
			REV
			0



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PROJECT # 660356

										DRAWN RO			TEMPERATURE PERMIT DRAWING FIRE-WATER PUMP BUILDING EXTERIOR ELEVATIONS				SHEET NO. A1		
										CHECKED BY RGS							SCALE 1:50		
										APPROVED BY PH			WESTRIDGE TERMINAL				DATE 16/04/29		
										PROJECT CODING			DRAWING NUMBER						
										AFE		FACILITY ID		DOCUMENT NO		SHT NO		REV	
										01-13283		WT00		GA01067		01		0	
NO. REFERENCE DRAWING TITLE										NO DATE		REVISION		DRN CHK APPR					
										0 2017/01/31		ISSUED FOR PERMIT APPLICATION AFE #01-13283 (CH2M PROJ. #660356)		YZ RO RB					



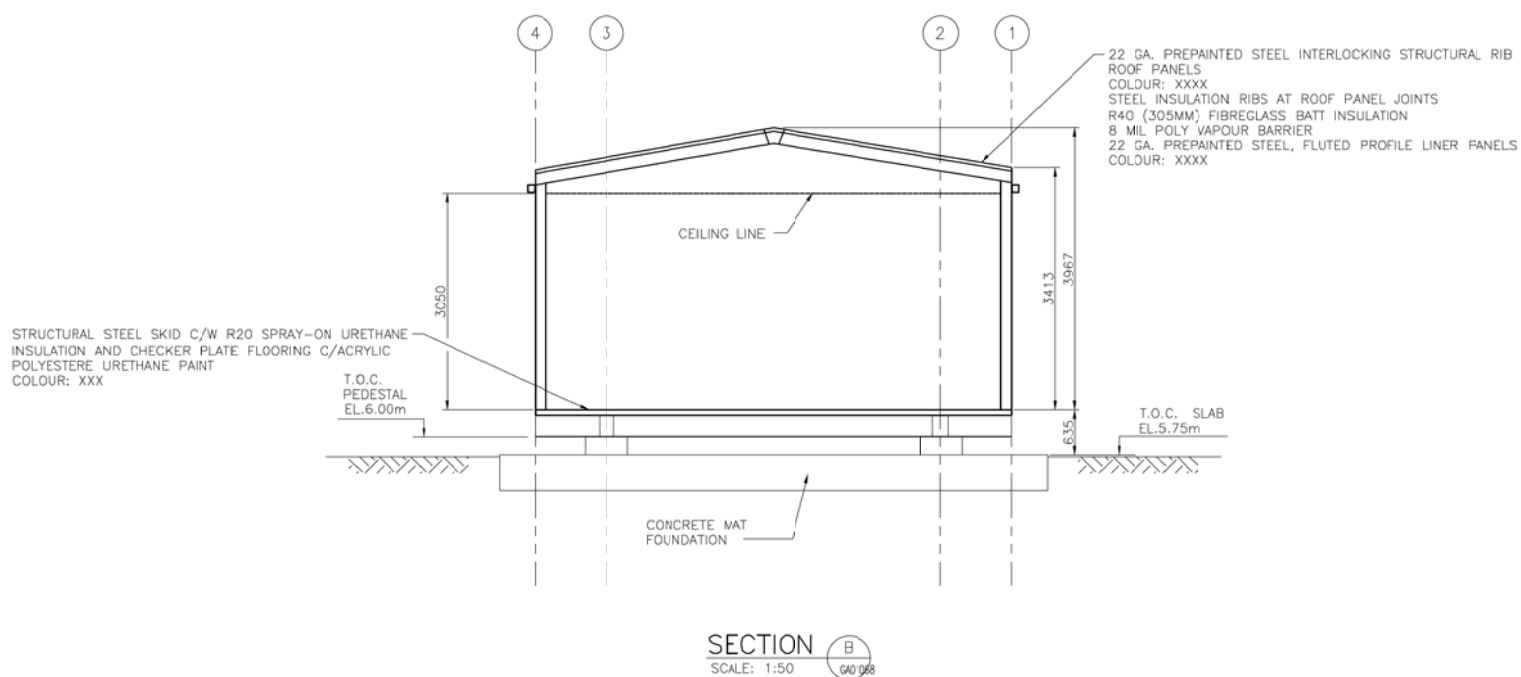
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[illegible]



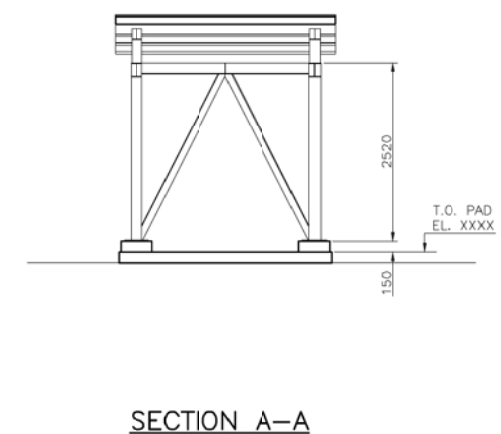
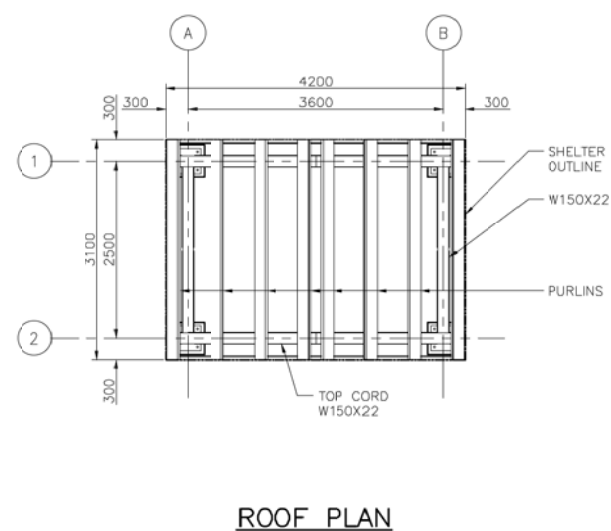
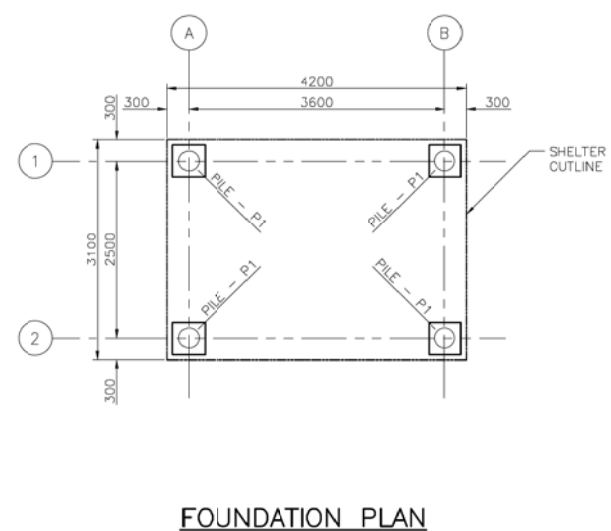
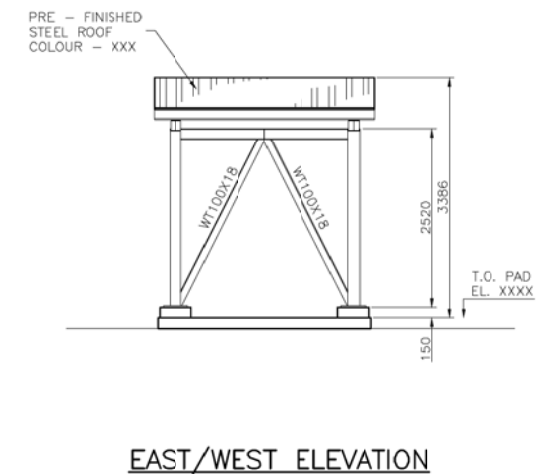
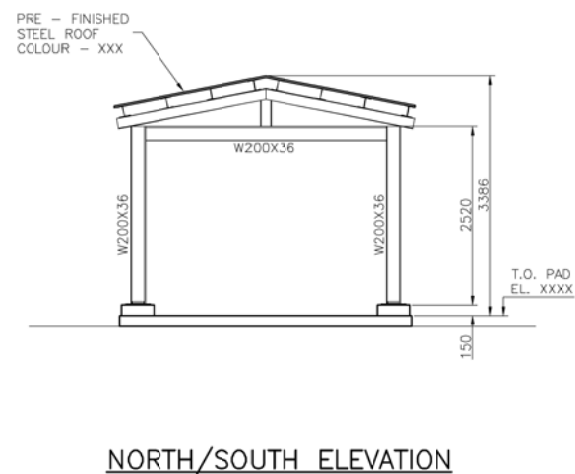
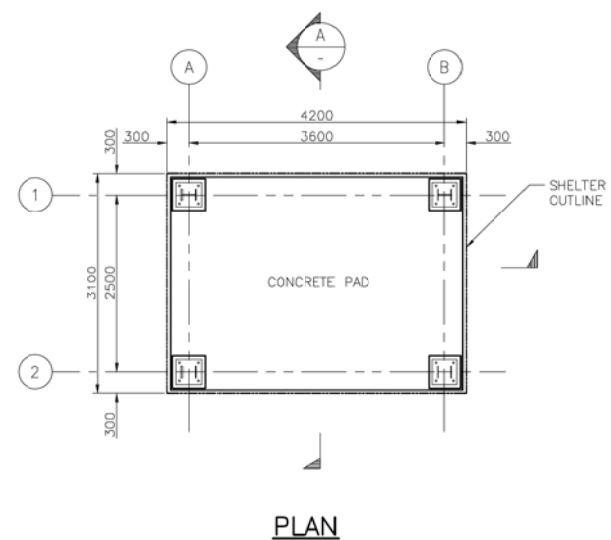
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[illegible]



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[illegible]



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[illegible]

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PROJECT # 660356

ch2m:
PROJECT # 660356



TRANSMOUNTAIN

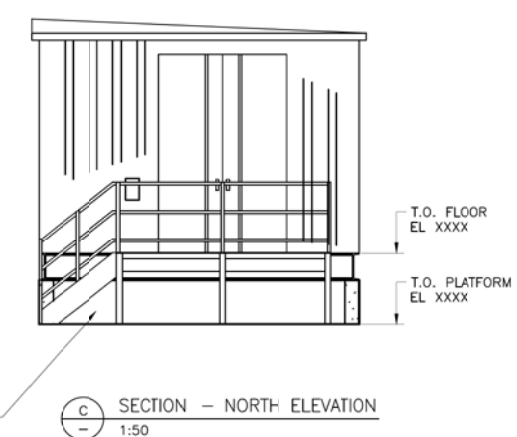
DRAWN BY RO	TMEP PERMIT DRAWING				SHEET SIZE A1
CHECKED BY RGS	PROPANE VAPOURIZER SHELTER PLANS, ELEVATIONS AND SECTION				SCALE 1:50
APPROVED BY PH	WESTRIDGE TERMINAL				DATE 16/04/29
PROJECT CODING		DRAWINGS NUMBER			
AFF		FACILITY ID	DOCUMENT NO	SHT NO	REV
01-13283		WT00	GA01070	01	0



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PROJECT # 660356

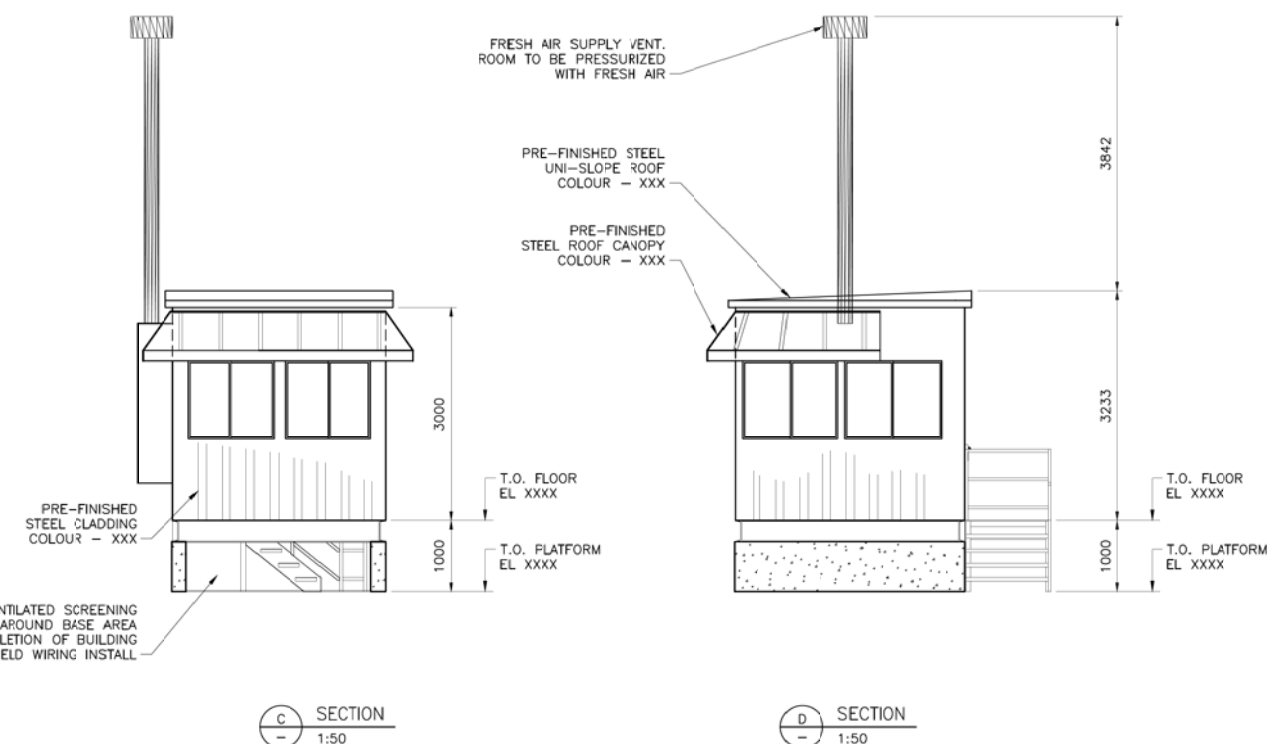
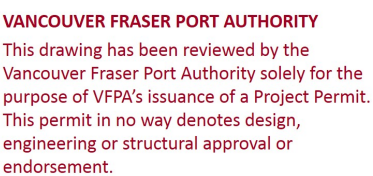
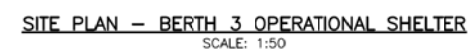
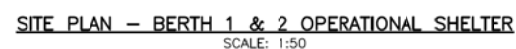
[illegible]



1. SEE DWG QA01009-SHEET 01 FOR ON-SITE BUILDING LOCATION AND ORIENTATION.
2. DETAIL SHOWN IS TYPICAL OF TWO (2) BUILDINGS. ONLY THE UNIT AT BERTH 1&2 IS SHOWN FOR CLARITY.


PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION


[illegible]



1. SEE DWG GA01009-SHEET 01 FOR ON-SITE BUILDING LOCATION AND ORIENTATION.

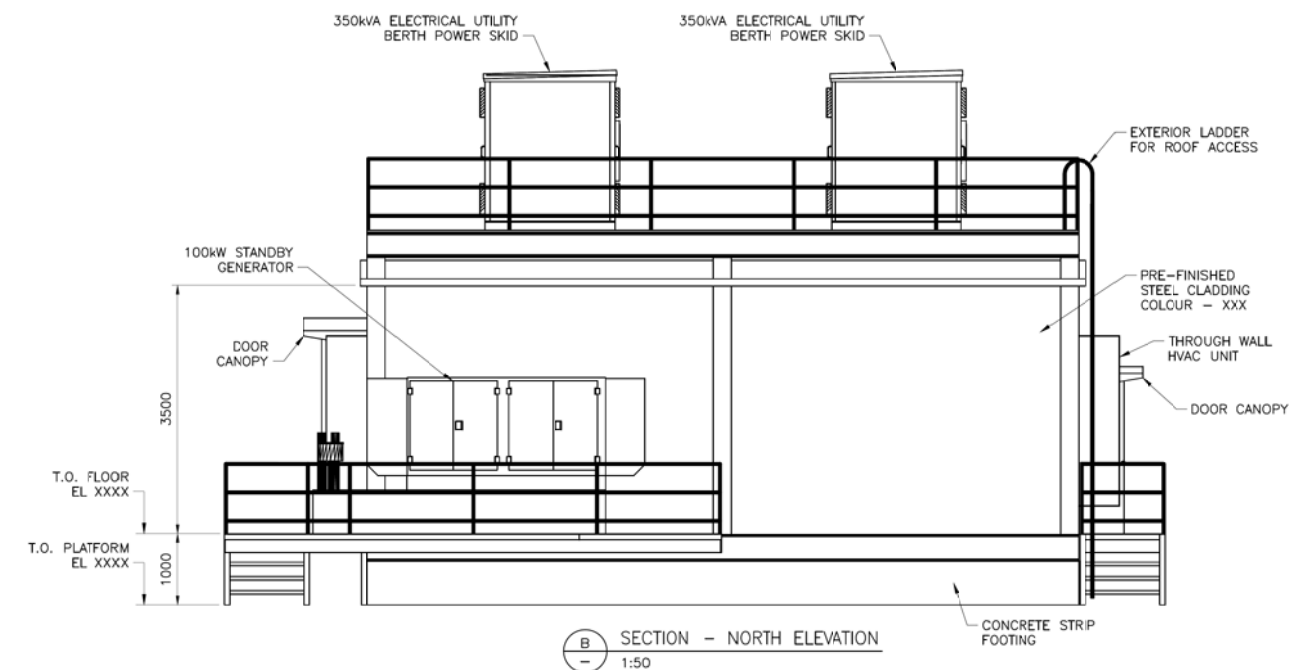
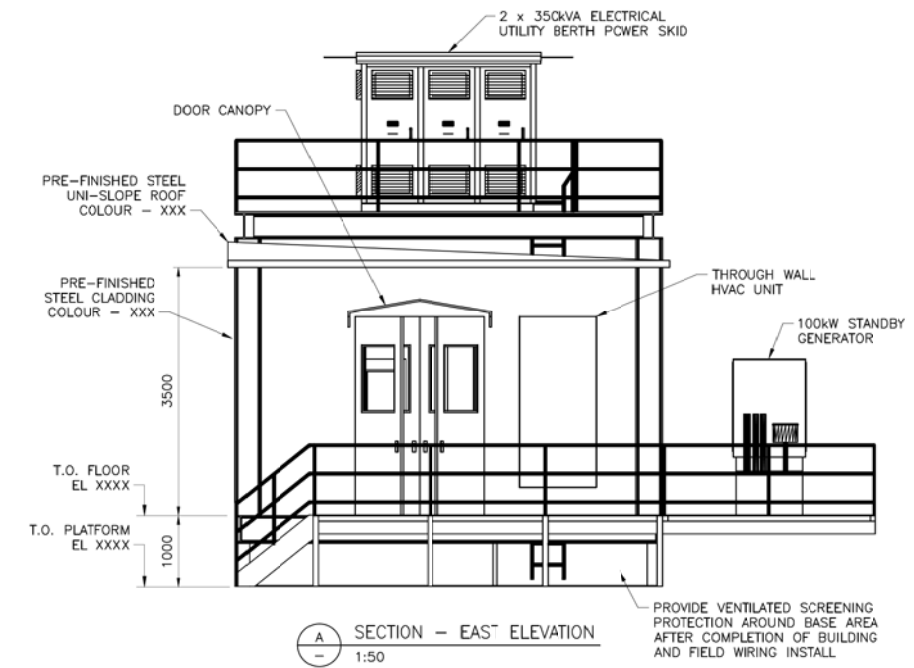


 moffatt & nichol	777 WEST BROADWAY, SUITE 301 VANCOUVER, BC, CANADA, V5Z 4J7 604-707-9004
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	TRANSMOUNTAIN
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DRAWN BY DS	OPERATOR SHELTER	SHEET SIZE A1
CHECKED BY JFE	WESTRIDGE TERMINAL	SCALE NONE
APPROVED BY RB		DATE 14/04/16

PROJECT CODING	DRAWING NUMBER			
AFE	FACILITY ID	DOCUMENT NO	SHT NO	REV
01-13283	WT00	AB06002	01	C

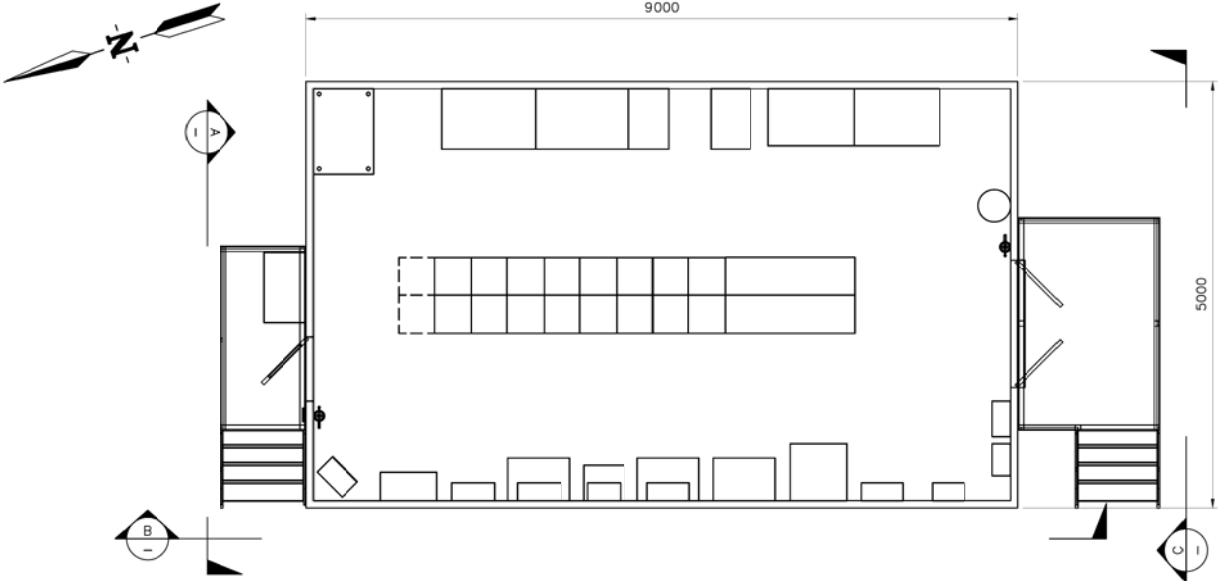


PRELIMINARY
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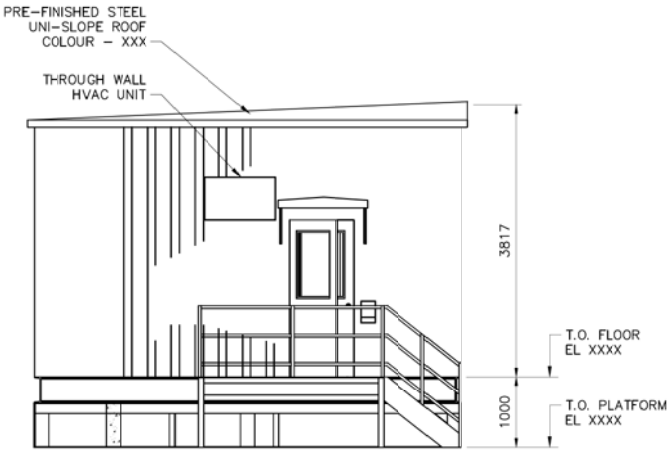
[illegible]

File: P:\06GMT-2017.02.02-15.00.09\7773 Kinder Morgan TMX Expansion\CADD\Active\WT00-AB0600401; Plotted: 2/22/2017 11:28 AM by MANUZON, ALLEN; Saved: 11/22/2016 4:03 PM by AMANUZON

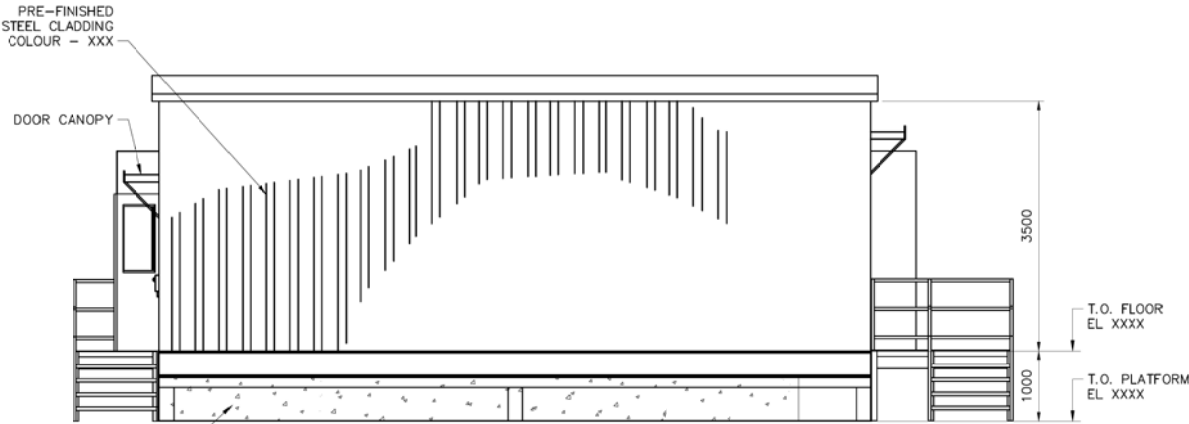


ELECTRICAL ROOM FLOOR PLAN - BERTH 3

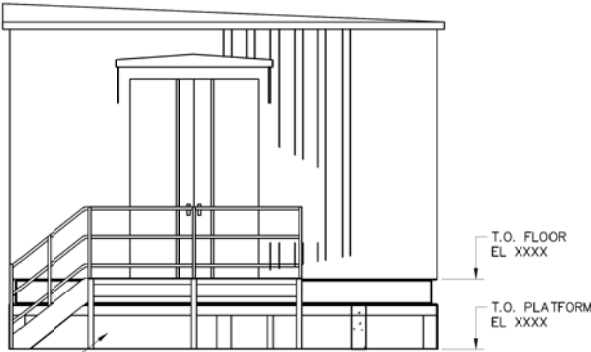
SCALE: 1:50



A SECTION - EAST ELEVATION
1:50

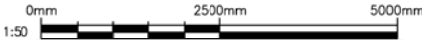


B SECTION - NORTH ELEVATION
1:50



C SECTION - WEST ELEVATION
1:50

- NOTES:
- SEE DWG GA01009-SHEET 01 FOR ON-SITE BUILDING LOCATION AND ORIENTATION.

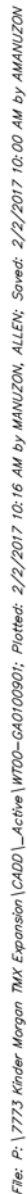


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PRELIMINARY
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NO.	REFERENCE DRAWING TITLE	REFERENCE DRAWING NO.	NO	DATE	REVISION	DRN	CHK	APPR
			C	17/02/02	ISSUED FOR PERMIT APPLICATION	AVM		RB
			B	16/05/04	ISSUED FOR REVIEW			
			A	16/11/14	ISSUED FOR REVIEW	AM	JT	RB

		777 WEST BROADWAY, SUITE 301 VANCOUVER, BC, CANADA, V5Z 4J7 604-707-9004			
		ELECTRICAL ROOM - BERTH 3			
DRAWN BY DS/AM		PROJECT CODING AFE		DRAWING NUMBER DOCUMENT NO	
CHECKED BY JFE		FACILITY ID WT00		SHEET NO 01	
APPROVED BY RB		REVISION 01-13283		DATE 16/03/29	
		WESTRIDGE TERMINAL		SHEET SIZE A1	
				SCALE NONE	



S.N.	BUILDING	SIZE (m)	REF. DWG.
1	UTILITY BERTH STORAGE	2.0x6.0	—
2	POWER SKID FOR TUG SHORE POWER	2.0x6.0	AB6005
3	ELECTRICAL ROOM – BERTH 1 & 2	6.0x10.0	AB6003
4	MAINTENANCE EQUIPMENT BUILDING – BERTH 1 & 2	3.0x6.0	AB6001
5	OPERATOR SHELTER – BERTH 1 & 2	3.0x4.0	AB6002
7	GANGWAY TOWER – BERTH 1	4.0x4.0	—
8	GANGWAY TOWER – BERTH 2	4.0x4.0	—
9	ELECTRICAL ROOM – BERTH 3	5.0x9.0	AB6004
10	MAINTENANCE EQUIPMENT BUILDING – BERTH 3	3.0x6.0	AB6001
11	OPERATOR SHELTER – BERTH 3	3.0x3.25	AB6002
12	GANGWAY TOWER – BERTH 3	4.0x4.0	—

WP	EASTING (m)	NORTHING (m)
WP1	503255.9076	5459853.2482
WP2	503272.1439	5459903.6999
WP3	503595.2305	5459967.8259
WP4	503398.3938	5459709.2394

VANCOUVER FRASER PORT AUTHORITY
This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

1. SOUNDINGS ARE FROM GOLDER ASSOCIATES HYDROGRAPHIC SURVEY, DATED MARCH 2014.
2. CONTOURS IN METRES TO GEODEIC DATUM (GD).
3. THE LOCATION AND CONFIGURATION OF ALL PROPOSED FACILITIES IS FOR CONCEPTUAL PURPOSES ONLY AND SUBJECT TO CHANGE.
4. COORDINATES BASED ON NAD83, UTM ZONE 10.
5. HORIZONTAL PIPE EXPANSION LOOPS (IF REQUIRED) NOT SHOWN.

		D	17/02/02	ISSUED FOR PERMIT APPLICATION		AVM		RBR
		C	17/01/05	WATERLOT BOUNDARY UPDATED – ISSUED FOR REVIEW		AM	JT	RBR
		B	16/12/20	TRESTLE NUMBERING CORRECTED		AM		RBR
		A	16/11/10	ISSUED FOR REVIEW		AM		RBR
G TITLE	REFERENCE DRAWING NO.	NO	DATE	REVISION		DRN	CHK	APPR

BD	BERTHING DOLPHIN
C	CATWALK
FP	FIRE PUMP PLATFORM
JP	JUNCTION PLATFORM
LP	LOADING PLATFORM
TP	TRESTLE PIPE RACK SPANS
TR	TRESTLE ROAD SPANS
TS	TRESTLE SUPPORT PILE CAPS
UF	UTILITY DOCK FLOAT
UG	UTILITY DOCK GANGWAY

0 50000 100000
1:1000mm

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION



777 WEST BROADWAY, SUITE 301
VANCOUVER, BC, CANADA, V5Z 4J7
604-707-9004

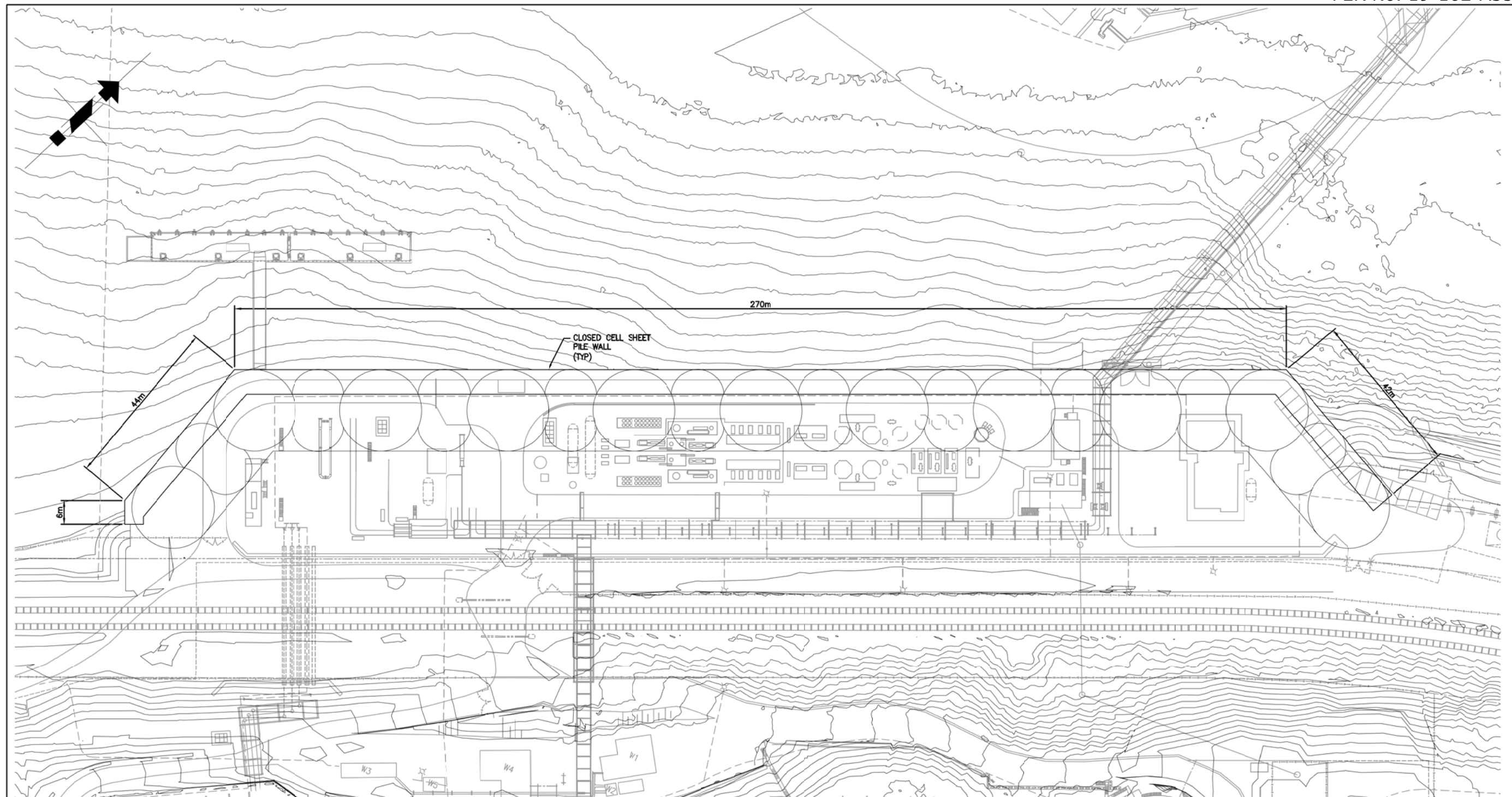


GENERAL ARRANGEMENT

WESTRIDGE TERMINAL	AT
	SCALE NONE
	DATE 13/12/20

DRAWN BY	EZ/AM
CHECKED BY	JT
APPROVED BY	RB

PROJECT CODING	DRAWING NUMBER			REV
A/E	FACILITY ID	DOCUMENT NO	SHT NO	
01-13283	WT00	GA01009	01	



SITE PLAN
SCALE 1:500

5 0 25 m
1:500

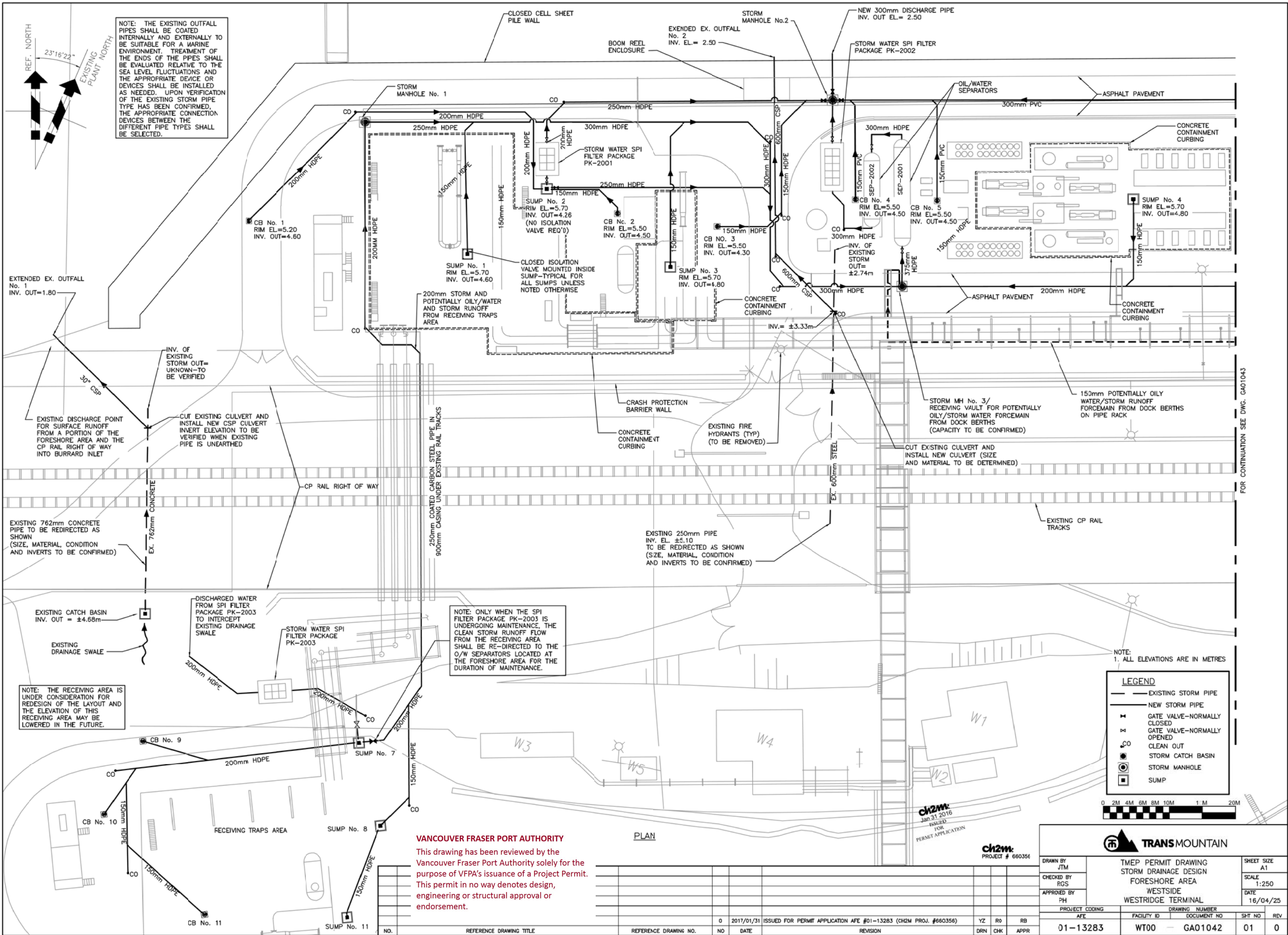
ch2m:
Jan 31 2016
ISSUED
FOR
PERMIT APPLICATION

ch2m:
PROJECT # B60356

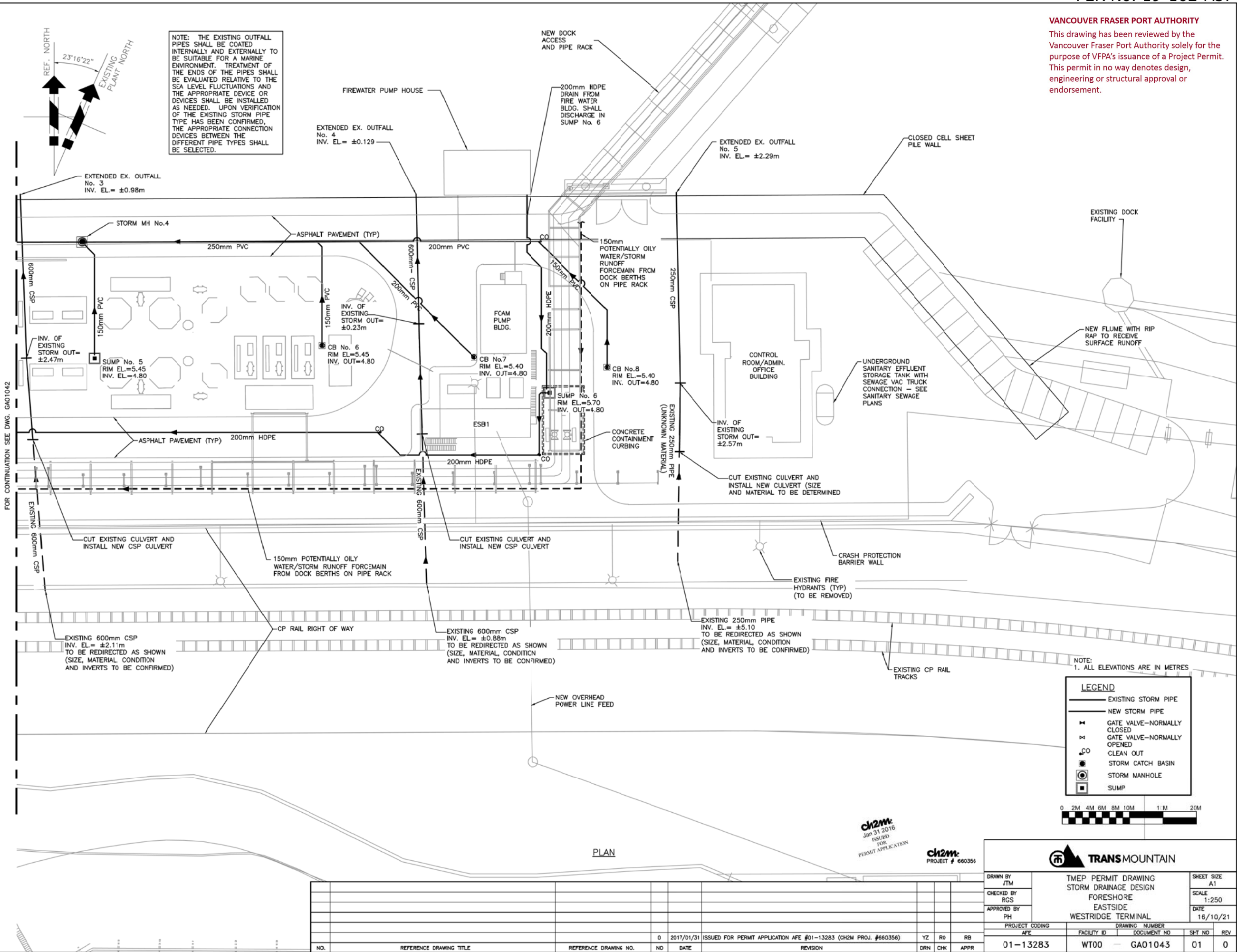
VANCOUVER FRASER PORT AUTHORITY

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										DRAWING AP			TMEP PERMIT DRAWING SITE PLAN				SHEET SIZE A1						
										CHECKED BY BP			CLOSED CELL SHEET PILE WALL				SCALE 1:500						
										APPROVED BY PH			WESTRIDGE TERMINAL				DATE 2016/03/28						
										PROJECT CODING		DRAWING NUMBER											
										AFE		FACILITY ID		DOCUMENT NO		SHT NO		REV					
										01-13283		WT00		GA01032		01		0					
NO. REFERENCE DRAWING TITLE										REFERENCE DRAWING NO.		NO		DATE		REVISION		DRN		CHK		APPR	
										O		2017/01/31		ISSUED FOR PERMIT APPLICATION AFE #01-13283 (CH2M PROJ. #660356)		YZ		R3		RB			



VANCOUVER FRASER PORT AUTHORITY
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PLAN



This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

[illegible]

ch2m:
Jan 31 2016
ISSUED
FOR
PERMIT APPLICATION

 TRANS MOUNTAIN				
DRAWN BY BY	TMEP PERMIT DRAWING LOT GRADING & DRAINAGE FORESHORE STORM WATER MANAGEMENT PLAN WESTRIDGE TERMINAL			SHEET SIZE A1
				SCALE 1:500
CHECKED BY RGS	APPROVED BY PH			DATE 04/11/21
PROJECT CODING AFE	FACILITY ID	DRAWING NUMBER	SHT NO	REV
01-13283	WT00	GA01044	01	0

[illegible]

ch2m:
Jan 31 2016
ISSUED
FOR
PERMIT APPLICATION





- | | |
|-----------------------------|----------------------|
| <input type="checkbox"/> M | FIRE MONITOR TOWER |
| <input type="checkbox"/> VR | VAPOUR RECOVERY ARM |
| <input type="checkbox"/> C | CRUDE LOADING ARMS |
| <input type="checkbox"/> J | JET FUEL LOADING ARM |

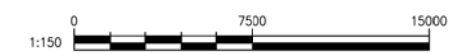
1. THE LOCATION AND CONFIGURATION OF ALL PROPOSED FACILITIES IS FOR CONCEPTUAL PURPOSES ONLY AND SUBJECT TO CHANGE.
2. HANDRAILS NOT SHOWN.
3. TOP SIDES MECHANICAL LAYOUT SHOWN IS SCHEMATIC ONLY AND IS BASED ON CH2M DRAWING "2D Berth 1-2 VE Plan.cwg", DATED OCTOBER 18, 2016.

LOADING PLATFORM 1-2 GENERAL ARRANGEMENT
SCALE 1:150

This drawing has been reviewed by the Vancouver Fraser Port Authority solely for the purpose of VFPA's issuance of a Project Permit. This permit in no way denotes design, engineering or structural approval or endorsement.

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

[illegible]



SCALE 1:150

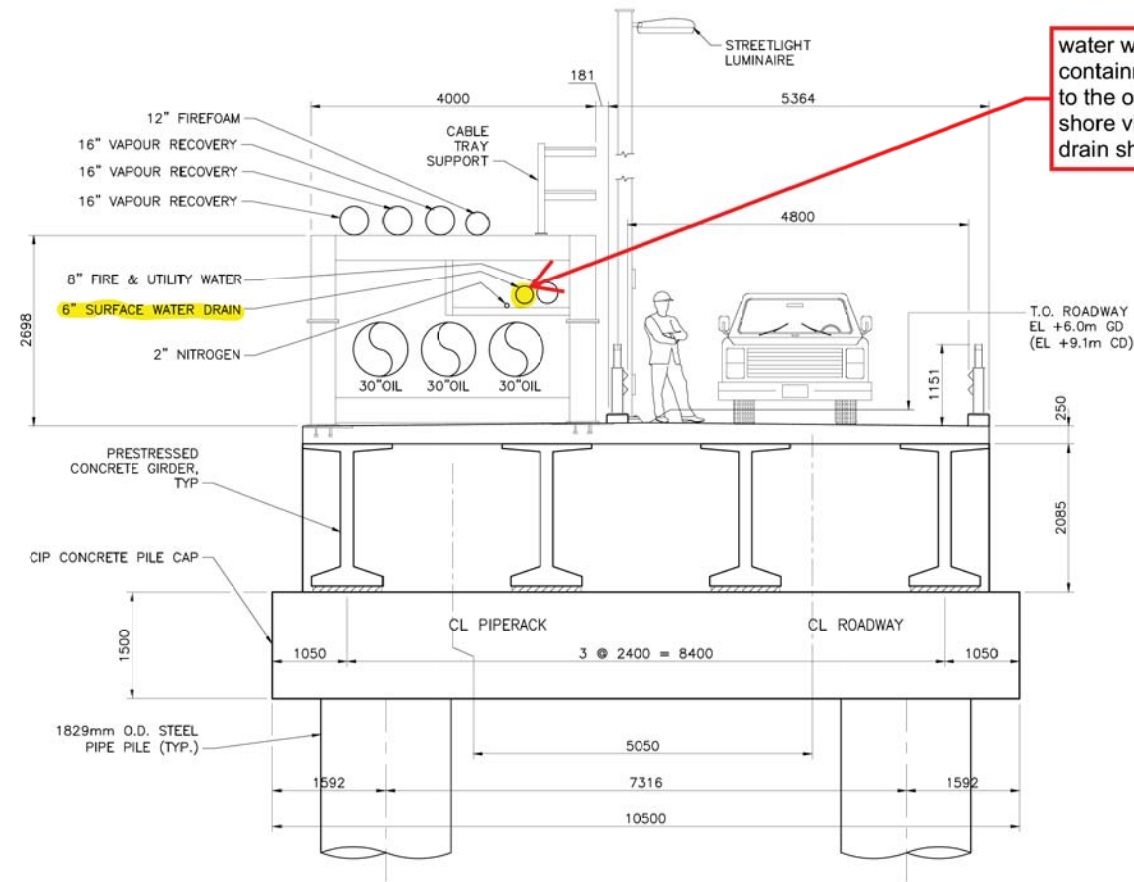
[M]	FIRE MONITOR TOWER
[VR]	VAPOUR RECOVERY ARM
[C]	CRUDE LOADING ARMS
[J]	JET FUEL LOADING ARM

1. THE LOCATION AND CONFIGURATION OF ALL PROPOSED FACILITIES IS FOR CONCEPTUAL PURPOSES ONLY AND SUBJECT TO CHANGE.
2. HANDRAILS NOT SHOWN.
3. TOP SIDES MECHANICAL LAYOUT SHOWN IS SCHEMATIC ONLY AND IS BASED ON CH2M DRAWING "2D Berth 1-2 VE Plan.cwg", DATED OCTOBER 18, 2016.

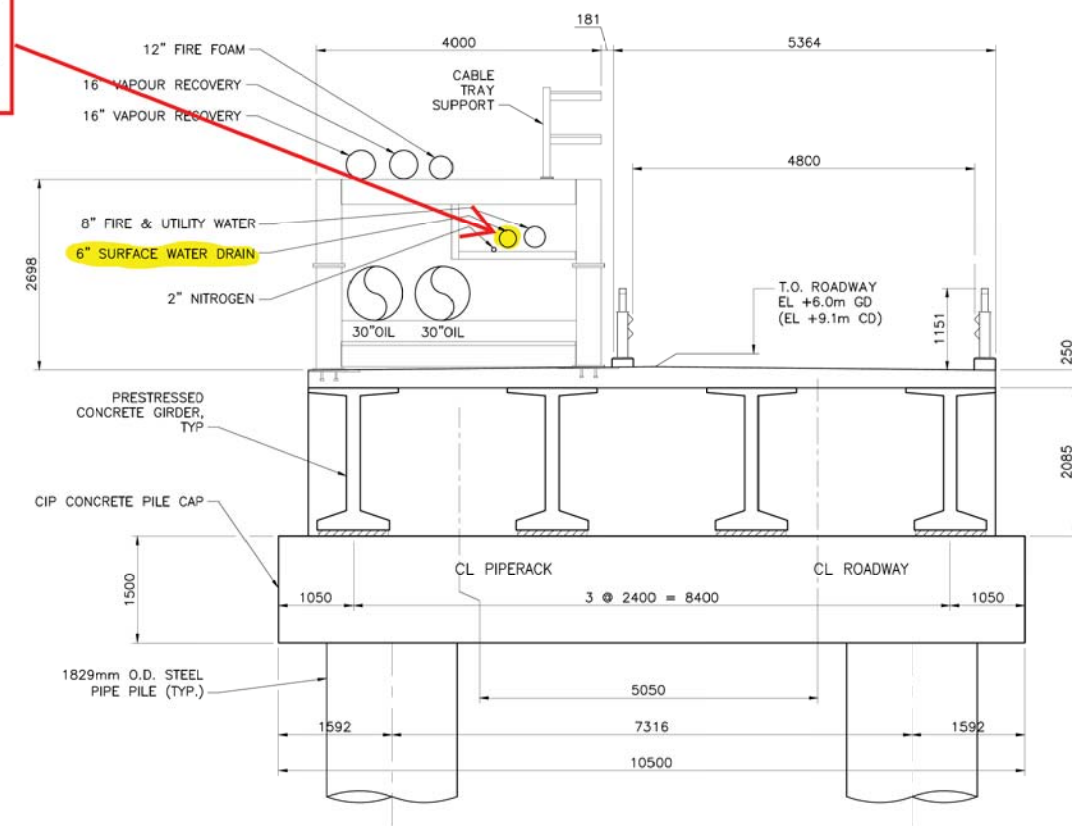
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PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

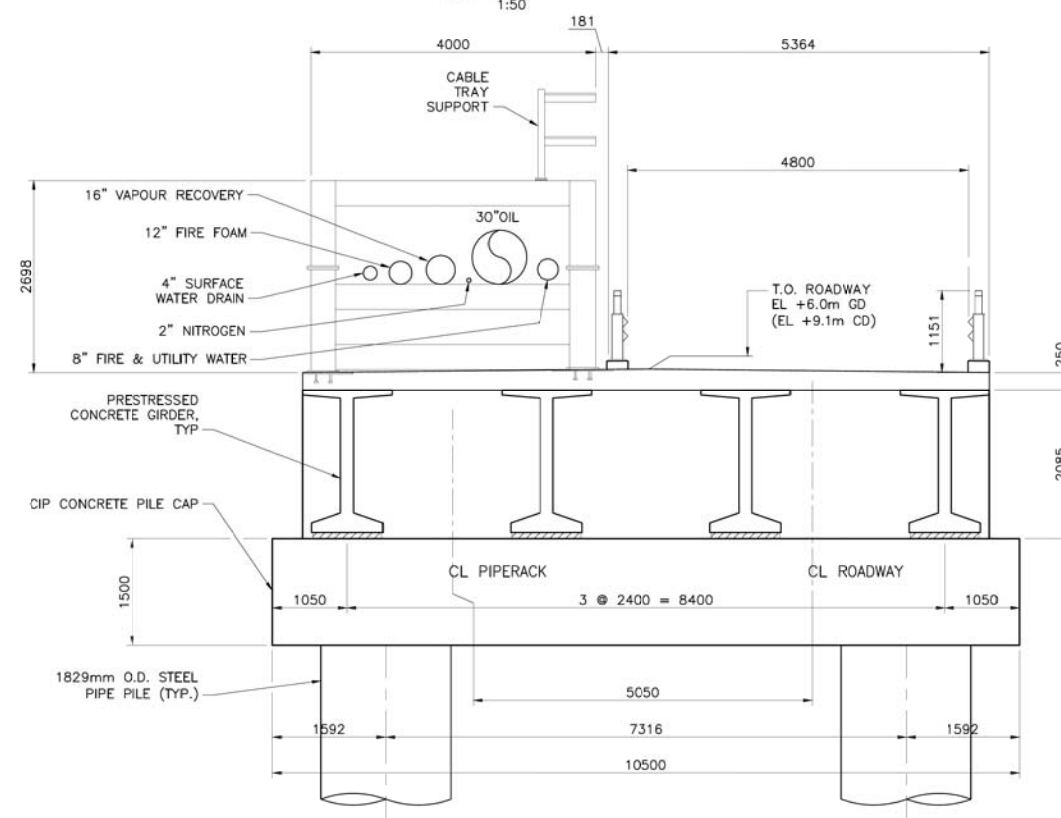
										DRAWING AM			LOADING PLATFORM 3			SHEET SIZE A1													
										CHECKED BY JT						SCALE NONE													
										APPROVED BY RB			WESTRIDGE TERMINAL			DATE 16/10/25													
										PROJECT CODING AFE			DRAWING NUMBER WT00		DOCUMENT NO CS03008		SHT NO 01												
										AVM			JT		RB		REV B												
										AM			JT		RB														
										DRN			CHK		APPR														
										01-13283																			
										B			17/02/02		ISSUED FOR PERMIT APPLICATION														
										A			16/11/14		ISSUED FOR REVIEW														
										NO			DATE		REVISION														
NO.										REFERENCE DRAWING TITLE										REFERENCE DRAWING NO.									



SECTION - ACCESS TRESTLE FROM SHORE
CS3015
1:50



SECTION - ACCESS TRESTLE TO BERTHS 1 & 2
CS3015
1:50



SECTION - ACCESS TRESTLE TO BERTH 3
CS3015
1:50

VANCOUVER FRASER PORT AUTHORITY

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NOTE:

1. ALL DIMENSIONS ARE PRELIMINARY AND SUBJECT TO VERIFICATION.
2. PIPE RACK LAYOUT AND DETAILS ARE SCHEMATIC ONLY. REFER TO CH2M PIPE RACK DRAWINGS FOR DETAILS.



PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

										DRAWN AM		TYP TRESTLE SECTIONS				SHEET SIZE A1													
										CHECKED BY MN/JT						SCALE NONE													
										APPROVED BY RB		WESTRIDGE TERMINAL				DATE 14/03/27													
										PROJECT CODING AFE		DRAWING NUMBER FACILITY ID		DOCUMENT NO		SHT NO		REV											
										AVM		RB		01-13283		WT00		CS03017											
										RB		RB		01		B													
										DM		CHK		APR															
										B		17/02/02		ISSUED FOR PERMIT APPLICATION															
										A		16/11/14		ISSUED FOR REVIEW															
										NO		DATE		REVISION															
NO.										REFERENCE DRAWING TITLE										REFERENCE DRAWING NO.									



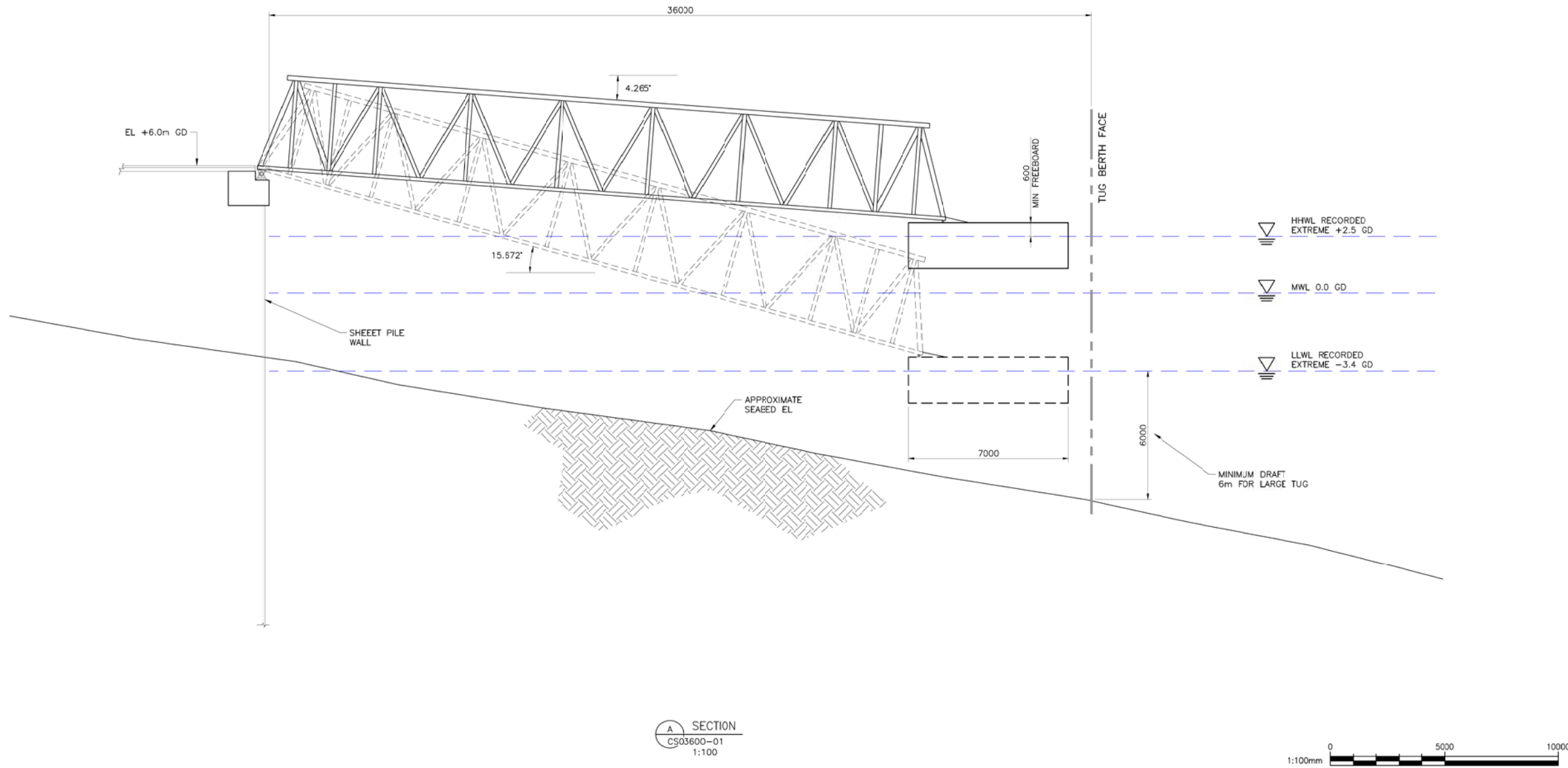
NOTES:

- VANCOUVER FRASER PORT AUTHORITY

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

[illegible]

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A SECTION
CS03600-01
1:100

1:100mm 0 5000 10000

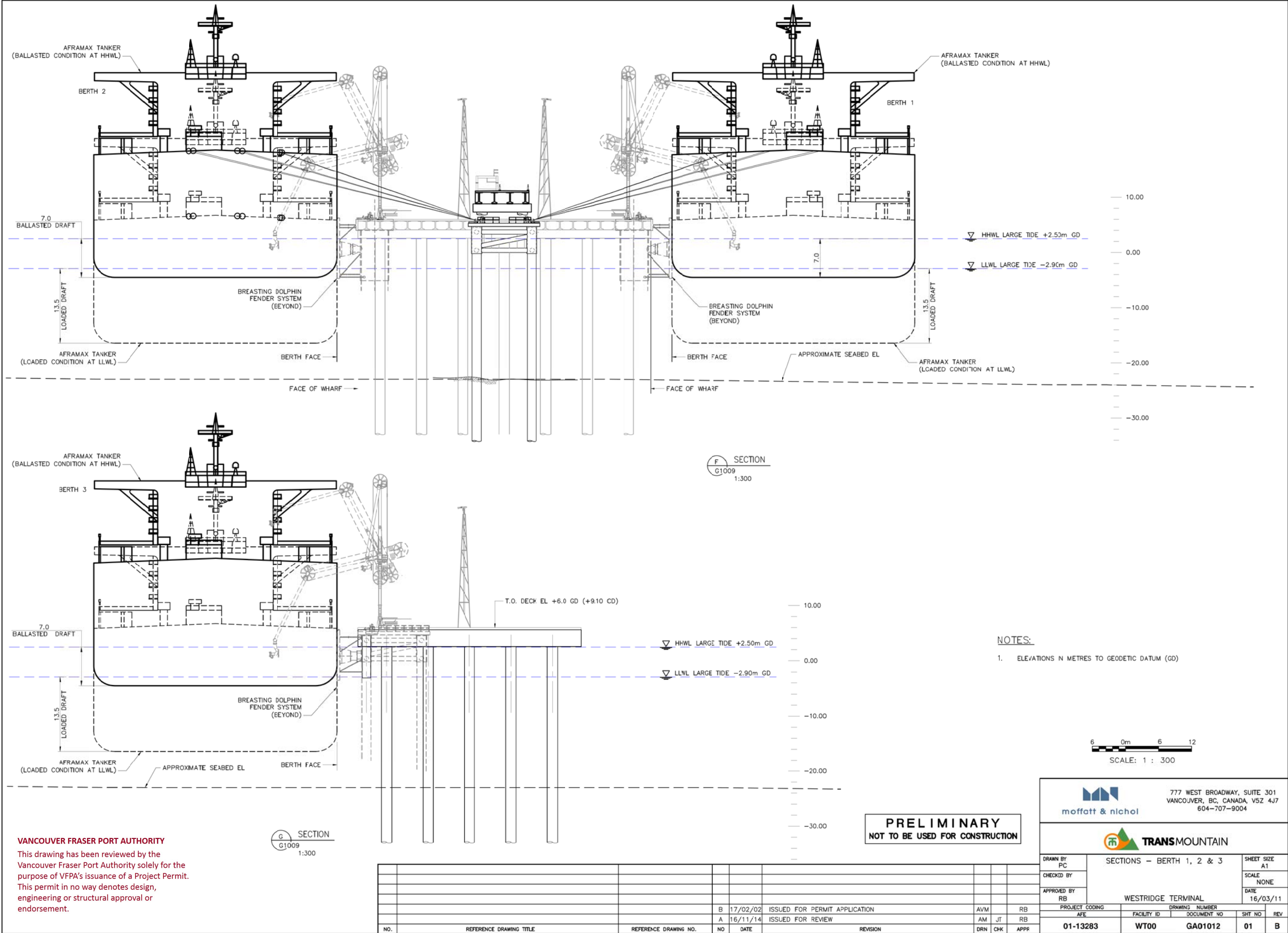
VANCOUVER FRASER PORT AUTHORITY
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PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

NO.	REFERENCE DRAWING TITLE	REFERENCE DRAWING NO.	NO	DATE	REVISION	DRN	CHK	APPR
			B	17/02/02	ISSUED FOR PERMIT APPLICATION	AVM		RB
			A	16/11/14	ISSUED FOR REVIEW	AM	JT	RB

		777 WEST BROADWAY, SUITE 301 VANCOUVER, BC, CANADA, V5Z 4J7 604-707-9004			
		TRANSMOUNTAIN			
DRAWN BY AM	UTILITY DOCK				SHEET SIZE A1
CHECKED BY MP					SCALE NONE
APPROVED BY RB					DATE 16/11/09
PROJECT CODING AFE		WESTRIDGE TERMINAL			
01-13283		FACILITY ID WT00	DOCUMENT NO CS03600	SHT NO 02	REV B

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Existing 762mm Culvert
Currently drains Western portion of tank area and West side storm water. Under Permit #3678

Existing 600mm Culvert
Currently drains water from upper channels north of the future portal area. Also drains from catchments around the site entrance road and CP Rail ditch.

Outlet Detail

Diagram illustrating the outlet detail of a culvert. The structure is shown in cross-section, with a culvert diameter of 3 feet (3' DIA). The outlet is labeled "CULVERT DIA x 3 (OUTLET)". The inlet/outlet is labeled "CULVERT INLET/OUTLET IE". The structure is shown with a 1:1 slope and a 100 MIN. depth. The outlet is shown with a 300 MIN. depth. The structure is shown with a 1200 width.

Existing 600mm Culvert
Currently drains eastern tank area and portion of drainage pickup along site access road. Under Permit #3678

REVISIONS						DESCRIPTION	DATE	REVISION
TRANS	DRAWN	CHKD	APPR	LTR				
N/A	PAG	PLS	PLS	---		PRELIMINARY - NOT FOR CONSTRUCTION	25 MAY 17	0
N/A	PAG	PLS	PLS	---		ADDED EAST & WEST SHORE TERMINATIONS; ADDED BUOY AND ANCHOR COORDINATES	09 JUN 17	01
N/A	PAG	PLS	PLS	---		ADDED PHASE 2 BUOY LOCATIONS; REVISED BUOY AND ANCHOR COORDINATES	22 JUN 17	02
N/A	PAG	PLS	PLS	---		CORRECTED COORDINATES FOR ANCHORS B1, B2, B3	23 JUN 17	03
N/A	PAG	PLS	PLS	---		ADDED SHEET 2 OF 2 FOR PHASE 2; GENERAL REVISIONS	03 JUL 17	04
N/A	PAG	PLS	PLS	---		FINAL SUBMITTAL	07 JUL 17	05

FINAL SUBMITTAL
07 JULY 2017

BUOY AND ANCHOR COORDINATES *

COMPONENT	EASTINGS (METERS)	NORTHINGS (METERS)
WEST SHORE ANCHOR	503093.00	5459523.00
Buoy A	503013.51	5459695.28
Anchor A1	502951.55	5459706.66
Anchor A2	503054.35	5459743.26
Buoy B	502938.09	5459864.85
Anchor B1	502878.60	5459872.70
Anchor B2	502974.63	5459912.41
Anchor B3	502962.11	5459806.63
Buoy C	502943.16	5459902.44
Anchor C1	502883.12	5459901.36
Anchor C2	502972.16	5459955.21
Anchor C3	502974.39	5459851.24
Buoy D	503010.67	5460112.35
Anchor D1	502958.80	5460082.51
Anchor D2	503010.73	5460177.56
Anchor D3	503062.73	5460082.60
Buoy E	503185.71	5460116.02
Anchor E1	503184.38	5460187.01
Anchor E2	503186.94	5460056.04
Buoy F	503360.67	5460119.49
Anchor F1	503359.19	5460197.57
Anchor F2	503361.98	5460053.50
Buoy G	503535.64	5460122.96
Anchor G1	503534.02	5460206.92
Anchor G2	503536.98	5460053.87
Buoy H	503695.51	5460126.11
Anchor H1	503630.60	5460088.60
Anchor H2	503695.51	5460210.11
Anchor H3	503760.47	5460088.68
Buoy I	503792.25	5459842.28
Anchor I1	503750.70	5459818.25
Anchor I2	503792.14	5459914.28
Anchor I3	503820.80	5459825.74
EAST SHORE ANCHOR	503807.00	5459710.00

* NAD83 UTM ZONE 10

VANCOUVER FRASER PORT AUTHORITY

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NOTE:
1. CONTOURS ARE IN METRES TO GEODETIC DATUM (GD).
0.0m GD = 3.10m CHART DATUM (CD).

MARINE SAFETY BOOM MOORING LAYOUT - H2017-003-01-A
NOT TO SCALE

NOTICE

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QUANTITY		LIST OF MATERIAL			
DO NOT SCALE					
UNLESS OTHERWISE SPECIFIED TOLERANCES ARE IN INCHES. METRIC DIM'S ARE FOR REF. ONLY.					
1 PLACE DEC. 2 PLACE DEC. 3 PLACE DEC.					
± .1 ± .03 ± .010		ANGLES, ± 0°-30°			
GENERAL NOTES					
1. DIMENSIONS ARE IN INCHES, (X)=REF DIM.					
2. REMOVE BURRS AND SHARP EDGES .015 MAX.					
3. ALL SURFACE ROUGHNESS PER MIL-STD-10.					
4. DIMENSION LIMITS HELD AFTER COATING.					
5. MACHINED FILLET RADII .015-.030.					
6. SUBSTITUTIONS MUST BE PREAPPROVED IN WRITING					
7. NORMALITY, SQUARENESS AND PARALLELISM OF MACHINED SURFACES .002 PER INCH, TO A MAX. OF .012 INCHES FOR A SINGLE SURFACE.					
8. VERIFY ALL DIMENSIONS & CONDITIONS BEFORE STARTING WORK. NOTIFY HOI OF ANY DISCREPANCIES OR INCONSISTENCIES.					
Finish	Weight	Approved	---	Scale:	AS NOTED
		Drawn	PAG	19 MAY 17	SIZE
		Check	PLS	25 MAY 17	Project No.
		Approved	PLS	25 MAY 17	2017-003
				Discipline Code:	B02
				Customer Dwg No.	H2017-003-01
					M1
				CAD File Name	----
				Sheet	1 OF 2



HARBOR OFFSHORE
TEL(805)677-2102 • FAX(805)677-5806

TRANS MOUNTAIN EXPANSION PROJECT
VANCOUVER, BRITISH COLUMBIA
WESTRIDGE TERMINAL - MARINE SAFETY BOOM
MOORING LAYOUT - PHASE 1

Project No.
2017-003

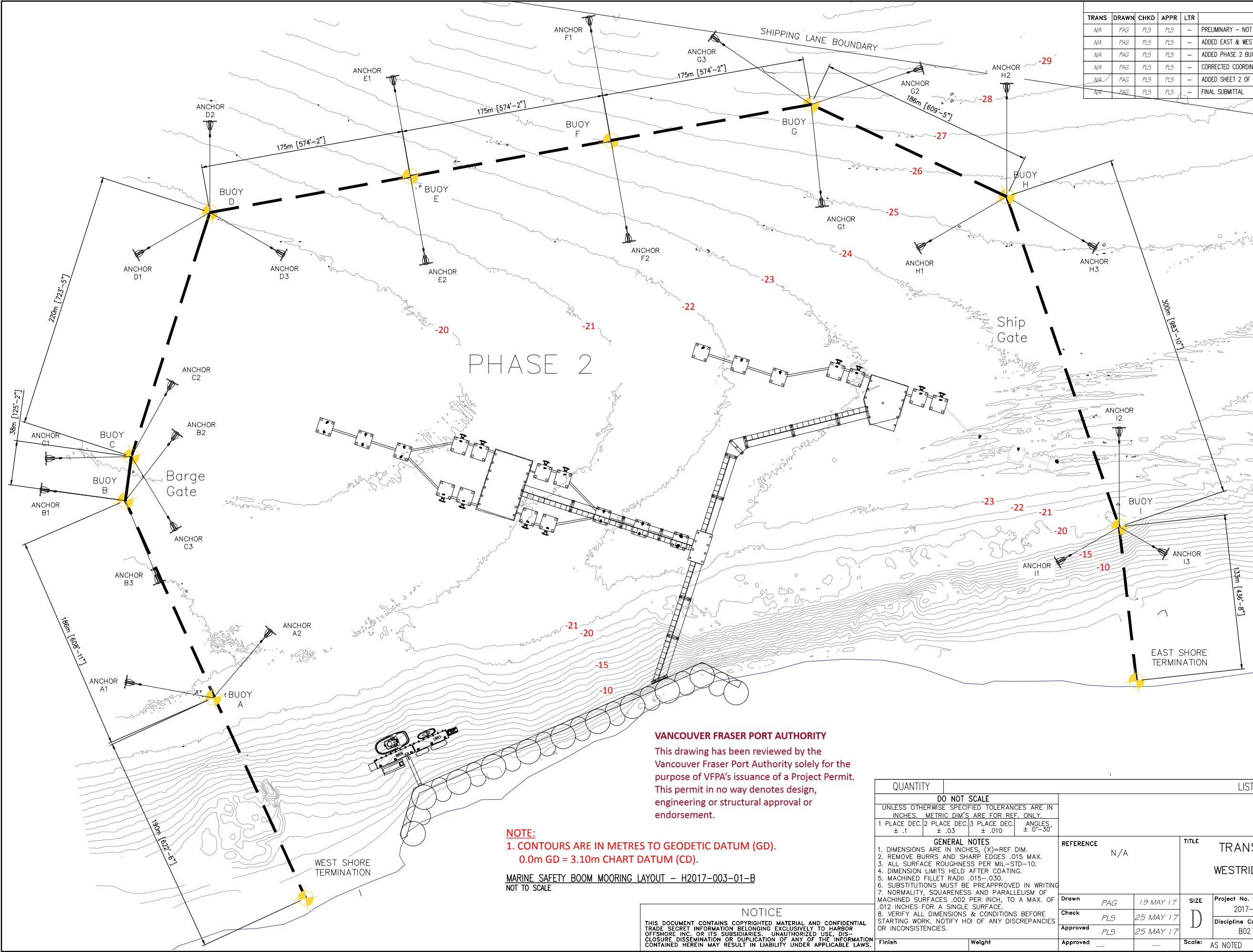
Discipline Code:
B02

Customer Dwg No.
M1

Scale: AS NOTED

CAD File Name: ----

Sheet: 1 OF 2



REVISIONS						
TRANS	DRAWN	CHKD	APPR	LTR	DESCRIPTION	DATE
N/A	PAG	PLS	PLS	-	PRELIMINARY - NOT FOR CONSTRUCTION	25 MAY 17
N/A	PAG	PLS	PLS	-	ADDED EAST & WEST SHORE TERMINATIONS; ADDED BUOY AND ANCHOR COORDINATES	09 JUN 17
N/A	PAG	PLS	PLS	-	ADDED PHASE 2 BUOY LOCATIONS; REVISED BUOY AND ANCHOR COORDINATES	22 JUN 17
N/A	PAG	PLS	PLS	-	CORRECTED COORDINATES FOR ANCHORS B1, B2, B3	23 JUN 17
N/A	PAG	PLS	PLS	-	ADDED SHEET 2 OF 2 FOR PHASE 2; GENERAL REVISIONS	03 JUL 17
N/A	PAG	PLS	PLS	-	FINAL SUBMITTAL	07 JUL 17

FINAL SUBMITTAL
07 JULY 2017

BUOY AND ANCHOR COORDINATES *		
COMPONENT	EASTINGS (METERS)	NORTHINGS (METERS)
WEST SHORE ANCHOR	503093.00	5459523.00
Buoy A	503013.51	5459695.28
Anchor A1	502951.55	5459706.66
Anchor A2	503054.35	5459743.26
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Anchor B1	502878.60	5459872.70
Anchor B2	502974.63	5459912.41
Anchor B3	502962.11	5459806.63
Buoy C	502943.16	5459902.44
Anchor C1	502883.12	5459901.36
Anchor C2	502972.16	5459955.21
Anchor C3	502974.39	5459851.24
Buoy D	503010.67	5460112.35
Anchor D1	502958.80	5460082.51
Anchor D2	503010.73	5460177.56
Anchor D3	503062.73	5460082.60
Buoy E	503182.99	5460143.48
Anchor E1	503170.00	5460216.34
Anchor E2	503194.13	5460081.47
Buoy F	503355.23	5460174.40
Anchor F1	503338.51	5460267.71
Anchor F2	503368.53	5460100.38
Buoy G	503527.45	5460205.32
Anchor G1	503535.39	5460130.75
Anchor G2	503610.09	5460232.61
Anchor G3	503452.95	5460256.12
Buoy H	503695.51	5460126.11
Anchor H1	503630.60	5460088.60
Anchor H2	503695.51	5460210.11
Anchor H3	503760.47	5460088.68
Buoy I	503792.25	5459842.28
Anchor I1	503750.70	5459818.25
Anchor I2	503792.14	5459914.28
Anchor I3	503820.80	5459825.74
EAST SHORE ANCHOR	503807.00	5459710.00

* NAD83 UTM ZONE 10

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NOTE:
1. CONTOURS ARE IN METRES TO GEODETIC DATUM (GD).
0.0m GD = 3.10m CHART DATUM (CD).

MARINE SAFETY BOOM MOORING LAYOUT - H2017-003-01-B
NOT TO SCALE

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QUANTITY		LIST OF MATERIAL			
DO NOT SCALE UNLESS OTHERWISE SPECIFIED TOLERANCES ARE IN INCHES. METRIC DIM'S ARE FOR REF. ONLY. 1 PLACE DEC. 2 PLACE DEC. 3 PLACE DEC. ANGLES, ± .1 ± .03 ± .010 ± 0°-30°					
GENERAL NOTES 1. DIMENSIONS ARE IN INCHES, (X)=REF DIM. 2. REMOVE BURRS AND SHARP EDGES .015 MAX. 3. ALL SURFACE ROUGHNESS PER MIL-STD-10. 4. DIMENSION LIMITS HELD AFTER COATING. 5. MACHINED FILLET RADII .015-.030. 6. SUBSTITUTIONS MUST BE PREAPPROVED IN WRITING. 7. NORMALITY, SQUARENESS AND PARALLELISM OF MACHINED SURFACES .002 PER INCH, TO A MAX. OF .012 INCHES FOR A SINGLE SURFACE. 8. VERIFY ALL DIMENSIONS & CONDITIONS BEFORE STARTING WORK. NOTIFY HOI OF ANY DISCREPANCIES OR INCONSISTENCIES.		REFERENCE N/A		TITLE TRANS MOUNTAIN EXPANSION PROJECT VANCOUVER, BRITISH COLUMBIA WESTRIDGE TERMINAL - MARINE SAFETY BOOM MOORING LAYOUT - PHASE 2	
Drawn PAG 19 MAY 17	SIZE D	Project No. 2017-003	HOI Dwg No. H2017-003-01		
Check PLS 25 MAY 17		Discipline Code: B02	Customer Dwg No. M1		
Approved PLS 25 MAY 17		Scale: AS NOTED	CAD File Name ----	Sheet 2 OF 2	