



**PORT of
vancouver**

Vancouver Fraser
Port Authority

**VANCOUVER FRASER PORT AUTHORITY
PROJECT AND ENVIRONMENTAL REVIEW
PROJECT PERMIT**

PER No.:	21-057
Tenant:	Richardson International Ltd.
Project:	Railyard Expansion - Richardson
Project Location:	375 Low Level Road, North Vancouver
Vancouver Fraser Port Authority SID No.:	CNV044
Land Use Designation:	Port Terminal
Permit Holder(s):	Richardson International Ltd.
Category of Review:	C
Date of Approval:	MAY 11, 2022
Date of Expiry:	MAY 31, 2024

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 (“Port Authority”) property:

- Construction of 15 additional rail storage tracks
- Realignment of rail tracks within the existing yard
- Addition of crossovers and turnouts within the existing yard
- Installation of a vehicle hammerhead turnaround area, service access road and construction of new vehicular access gates (security and emergency)
- Various associated works such as installation of new lighting, fencing and utilities

PROJECT AND ENVIRONMENTAL CONDITIONS

The Port Authority 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* and, as applicable, Section 82 of the *Impact Assessment Act*.

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 the Port Authority determines that the Permit Holder has provided any incomplete, incorrect or misleading information in relation to the Project, the Port Authority 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*, the Port Authority 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 the Port Authority 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 Permit Holder to mitigate potential or foreseeable adverse environmental and other effects.

Port Authority Guidelines and Record Drawing Standards referenced in this document can be located at:

<https://www.portvancouver.com/permitting-and-reviews/per/project-and-environment-review-applicant/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 the Port Authority'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 the Port Authority 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 the Port Authority 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 is responsible for locating all existing site services and utilities, including any located underground. The Permit Holder shall provide an Infrastructure Surveyed Data Drawing that includes topographic and utility locate data based on surveys in accordance with the Port Authority's Record Drawing Standards. The Permit Holder is responsible for repair or replacement of any damage to existing site services and utilities, to the satisfaction of the Port Authority, that result from construction and operation of the Project.
6.	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. 21-057 - A to F . The Permit Holder shall not carry out any other physical activities unless expressly authorized by the Port Authority.
7.	The Permit Holder shall cooperate fully with the Port Authority in respect of any review by the Port Authority of the Permit Holder's compliance with this Permit, including providing information and documentation in a timely manner, as required by the Port Authority. The Permit Holder is solely responsible for demonstrating the Permit Holder's compliance with this Permit.
8.	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.
9.	The Permit Holder shall make available upon request by any regulatory authority (such as a Fishery Officer) a copy of this Permit.
10.	Unless otherwise specified, the Permit Holder shall provide plans, documents, and notices required under this Permit to the following email address: per@portvancouver.com and referencing PER No. 21-057 .
11.	Unless otherwise specified, all plans, schedules, and other Project-related documentation that the Permit Holder is required to provide under this Permit, and any subsequent updates, must be to the Port Authority's satisfaction.
12.	The Permit Holder shall prepare and submit a self-report form to the Port Authority demonstrating compliance with conditions at each of the following project phases:

	<p>a) Prior to construction Conditions (self-report shall be submitted a minimum of 15 business days prior to the commencement of construction, or any physical activities, to a maximum of 90 business days prior to construction, or any physical activities)</p> <p>b) Construction Conditions (self-report shall be submitted at 50% of construction)</p> <p>c) Conditions Upon Project Completion (self-report shall be submitted within 60 business days of completion of construction)</p>	
13.	The Port Authority shall have unfettered access to environmental compliance documentation and the Project site at all times during construction without notice.	
14.	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 project permit conditions. These records must be made available at the request of the Port Authority.	
15.	All conditions in this Permit which expressly or by their nature survive expiration or termination of this Permit will remain in effect after the expiration or termination of this Permit.	
	CONDITIONS - PRIOR TO COMMENCING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES	SUBMISSION TIMING (business days)
16.	The Permit Holder shall submit Issued For Construction drawings for proposed works in accordance with the Port Authority's Record Drawing Standards. These drawings shall be signed and sealed and approved for construction by a professional engineer licensed to practice in the Province of British Columbia. In addition, these drawings shall be submitted in both AutoCAD and PDF format and shall be named according to the record drawing index numbering system set out at Section 2.10 of the Port Authority's Record Drawing Standards.	5 business days before commencing construction or any physical activities
17.	The Permit Holder shall provide a draft construction notification to the Port Authority's satisfaction in accordance with the Port Authority's Public Engagement Guidelines.	20 business days before commencing construction or any physical activities
18.	The Permit Holder shall submit a draft construction communications plan and construction notification in accordance with the Port Authority's Public Engagement Guidelines. The plan shall outline how the Permit Holder will engage and communicate with the public from the date of permit issuance to the completion of construction, including mechanisms for contact, and details on how the Permit Holder intends to provide more clarity on impact mitigation measures. The plan shall be updated as necessary and upon request by the Port Authority 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 updates made to the Port Authority's satisfaction.	20 business days before commencing construction or any physical activities
19.	The Permit Holder shall distribute a construction notification to residents and businesses within 500 metres of the project site, as indicated in the PER report. This shall be completed to the Port Authority's satisfaction. The Permit Holder shall notify the Port Authority when such distribution has been completed.	10 business days before commencing construction or any physical activities
20.	The Permit Holder shall submit a construction parking and traffic management plan to the Port Authority's satisfaction. The Permit Holder shall carry out the Project in accordance with the construction parking and traffic management plan, and any subsequent updates to the Port Authority's satisfaction.	20 business days before commencing construction or any physical activities

21.	The Permit Holder shall provide a Project schedule to the Port Authority showing the anticipated start dates for all major phases of the Project as identified by the Port Authority. The Permit Holder shall notify the Port Authority of any material changes to the Project schedule and, upon request, shall provide an updated Project schedule.	20 business days before commencing construction or any physical activities
22.	If there is potential to affect birds and/or their active nests and eggs, including ground nesting birds such as killdeer, the Permit Holder shall conduct nest surveys. For any nests identified in surveys, a qualified environmental professional shall confirm that the nest is not occupied by a species protected at that time of year under applicable legislation. To reduce the risk of Project-related harm, the Permit Holder should avoid certain physical activities during the general bird breeding season, which falls between April 1 and July 31, or outside of this time span if occupied nests are present.	Immediately prior to activities with the potential to affect birds and/or their active nests and eggs
23.	The Permit Holder shall submit an updated soil management plan to the Port Authority's satisfaction. The updated soil management plan shall outline how soils will be tested, appropriately handled to prevent migration/run-off, and disposed of at a licensed facility if unsuitable for reuse. Soils intended for reuse on site shall be tested according to the BC Ministry of Environment Technical Guidance 1 on Contaminated Sites. All excavated soil to be reused on site shall meet Canadian Council of Ministers of the Environment (CCME) Industrial Land (IL) guidelines (including the Canada-Wide Standards for Petroleum Hydrocarbons) and/or the BC Contaminated Sites Regulations (CSR) soil standards for industrial use. Backfilling/reusing excavated soils on site is not permitted without the written consent of the Port Authority.	15 business days before commencing excavation or moving soil on site
CONDITIONS - DURING CONSTRUCTION OR ANY PHYSICAL ACTIVITIES		
24.	The Permit Holder shall notify the Port Authority upon commencement of construction, or any physical activities (e.g., mobilization to the Project site).	
25.	All general construction and physical activities related to the Project shall be conducted from Monday to Saturday between the hours of 7:00 a.m. and 8:00 p.m. No construction and physical activities shall take place on Sundays or holidays. These hours shall not be modified without prior approval of the Port Authority. To request permission to conduct activities outside these hours, the Permit Holder must submit a written request no less than 30 business days prior to the desired start date.	
26.	The Permit Holder shall notify the Port Authority of any complaints received from the community and stakeholders during construction within two business days of being received, and indicate how the Permit Holder has responded to such complaints.	
27.	The Permit Holder shall remove all abandoned utilities from the Project site, both underground and aboveground. At locations of connection to municipal works (i.e., at property lines), the abandoned utilities shall be capped. The Permit Holder shall provide detailed drawings of abandoned utilities and capped connections in both AutoCAD and PDF format in accordance with the Port Authority's Record Drawing Standards.	
28.	The Permit Holder shall carry out the project in accordance with the management recommendations provided in the interim Archaeological Impact Assessment from ISL Engineering and Land Services (dated April 18, 2022, Version 1). Archaeological monitoring by a qualified archaeologist is required during any construction activities within the newly identified archaeological site boundary (Arch-T001-ISL).	
29.	Should ground disturbing activities be required to the north of the newly identified archaeological site (Arch-T0001-ISL), additional subsurface testing such as test pits or soil probes to better delineate the northern site boundary must be undertaken by a qualified archaeologist. This work can be undertaken during the initial removal of the above ground structure and upper layers of fill.	

30.	The Permit Holder shall provide opportunities for interested Indigenous groups to monitor and be present on the Project site during any ground disturbing works which require a professional archaeologist to be on site.
31.	The Permit Holder shall carry out the Project in accordance with the Port Authority's Archaeological Chance Find Procedure, or a similar Archaeological Chance Find Procedure accepted in writing by the Port Authority at least five business days prior to groundbreaking activities, and any subsequent updates made to the Port Authority's satisfaction.
32.	The Permit Holder may place temporary construction trailers on the Project site while this permit remains in effect, provided such trailers meet all of the criteria set out in the Port Authority's Temporary Construction Trailer Criteria, available at: https://www.portvancouver.com/permitting-and-reviews/building-permits/ . Should one or more of the criteria not be met, a Port Authority Building Permit is required.
33.	The Permit Holder shall carry out the Project in accordance with the Construction Environmental Management Plan provided by the Permit Holder, and any subsequent updates made to the Port Authority's satisfaction.
34.	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 construction environmental management plan, or the Port Authority, provided that monitoring will be full time at the start of works that have the potential to adversely affect birds and their active nests or eggs.
35.	The Permit Holder shall provide environmental monitoring reports to the Port Authority as specified in the construction environmental management plan or more frequently if the Port Authority requires.
36.	The Permit Holder shall not dewater excavations unless a dewatering plan has been submitted to the Port Authority's satisfaction.
37.	Without limiting the generality of permit condition #2, the Permit Holder shall not, directly or indirectly: (a) deposit or permit the deposit of a deleterious substance of any type in water frequented by fish in a manner contrary to Section 36(3) of the <i>Fisheries Act</i> ; or (b) adversely affect fish or fish habitat in a manner contrary to Section 35(1) of the <i>Fisheries Act</i> .
38.	Without limiting the generality of permit condition #2, materials brought onto the Project site to be used for backfilling, site preparation, or other uses shall be from sources demonstrated to be clean and free of environmental contamination, invasive species and noxious weeds. The Permit Holder shall maintain records to verify this.
39.	The Permit Holder shall dispose of any soils excavated from the Project site that are not suitable for backfill at appropriate off-site facilities and maintain records of off-site disposal.
40.	The Permit Holder shall manage invasive plants in a manner that prevents their spread. Invasive plants and potentially affected materials, such as soil, shall be appropriately contained, collected and disposed of.
41.	Without limiting the generality of permit condition #2, the Permit Holder shall decommission any groundwater monitoring wells encountered within the Project footprint in compliance with the requirements set out in Appendix C of the Port Authority's Construction Environmental Management Plan Guideline.
42.	The Permit Holder shall provide the Environmental Protection Plan (EPP) to interested Indigenous groups, once the EPP is completed.
43.	The Permit Holder shall provide any sub-plans developed in support of the Construction Environmental Management Plan to interested Indigenous groups.

	CONDITIONS – PRIOR TO OPERATION	SUBMISSION TIMING (Business Days)
44.	The Permit Holder shall submit an updated Stormwater Pollution Prevention Plan that incorporates the expanded railyard, to the Port Authority's satisfaction.	30 days before commencing operation of the expanded railyard
	CONDITIONS - UPON COMPLETION	SUBMISSION TIMING (Business Days)
45.	The Permit Holder shall notify the Port Authority upon completion of the Project.	Upon substantial completion
46.	The Permit Holder shall conduct noise monitoring to confirm the predictions of the environmental noise assessment and validate the effects on the surrounding community. The Permit Holder shall provide the final report to the Port Authority, and the Port Authority may require additional mitigation measures if results deviate from the assessment.	Within 180 days of operation of the expanded railyard or at the direction of the Port Authority
47.	The Permit Holder shall provide record drawings, including a Project site plan that clearly identifies the location of works, in both AutoCAD and PDF format (with an Engineers stamp where applicable) in accordance with the Port Authority's Record Drawing Standards. All drawings shall be named according to the record drawing index numbering system set out at Section 2.10 of the Port Authority's Record Drawing Standards.	Within 40 business days of completion
The Port Authority reserves the right to rescind or revise these conditions at any time that new information warranting this action is made available to the Port Authority.		
LENGTH OF PERMIT VALIDITY		
The Project must commence by May 31, 2023 (the "Commencement Date") and be completed no later than May 31, 2024 (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 the Port Authority for consideration of an amendment to this Permit.
- For an extension to the Commencement Date, the Permit Holder must apply to the Port Authority in writing no later than 40 business days prior to that date.
- For an extension to the Expiry Date, the Permit Holder must apply in writing to the Port Authority no later than 40 business days prior to that date.

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

PROJECT AND ENVIRONMENTAL REVIEW DECISION

In completing the project and environmental effects review, the Port Authority has reviewed and taken into account relevant information available on the proposed Project and has considered any adverse impact that the Project may have on the rights of Indigenous peoples, Indigenous knowledge, community knowledge, comments received from the public, and measures that would mitigate any significant adverse environmental effects of the Project. We conclude that with the implementation of proposed mitigation measures and Permit conditions, the Project is not likely to cause significant adverse environmental effects.

The Port Authority concludes that the Project has appropriately addressed all identified concerns subject to conformance with the project and environmental conditions in the Permit.

Project Permit PER No. 21-057 is approved by:

ORIGINAL COPY SIGNED

ANDREA MACLEOD
DIRECTOR, PROJECT & ENVIRONMENTAL REVIEW

May 11, 2022

DATE OF APPROVAL

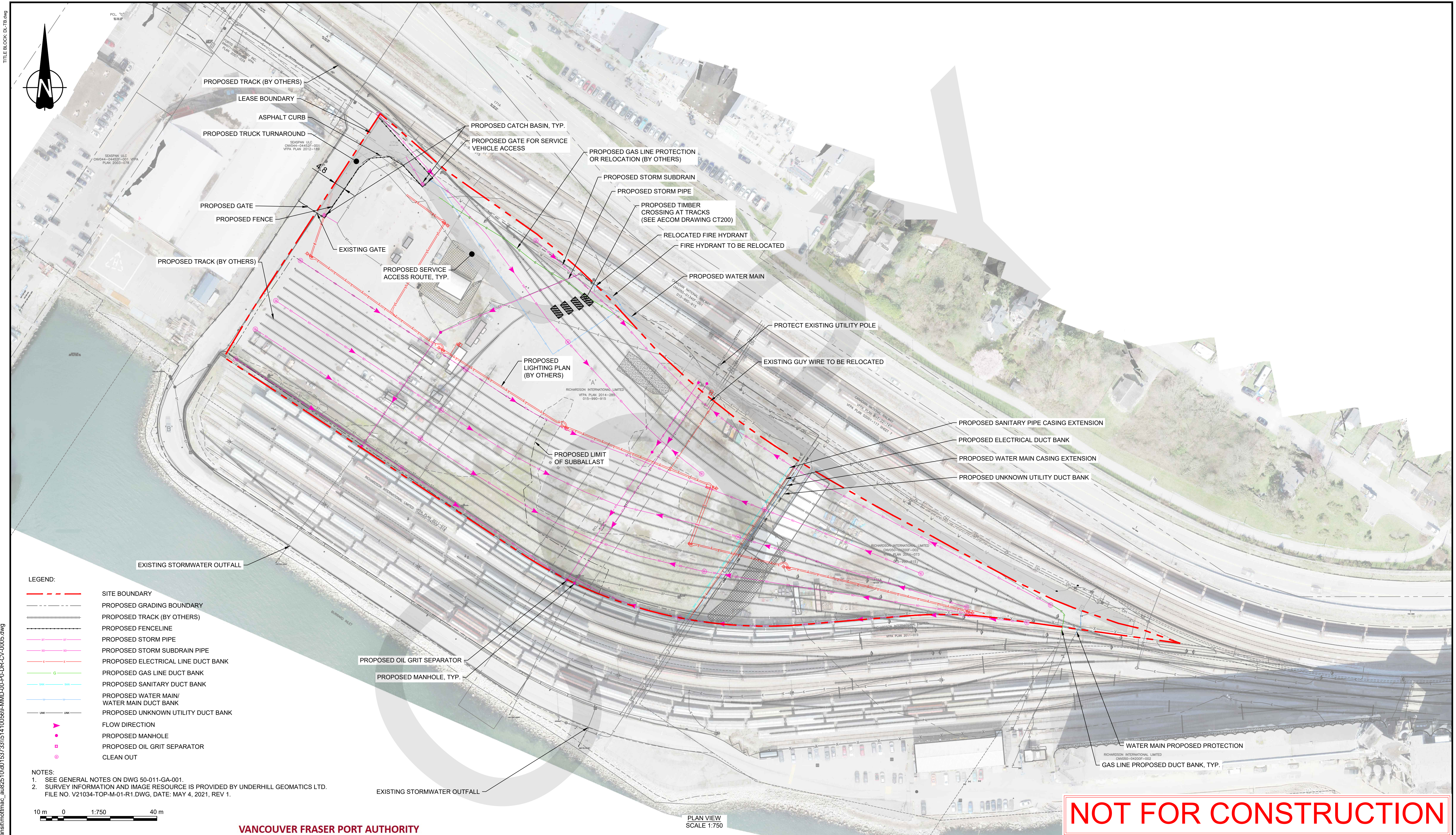
CONTACT INFORMATION

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

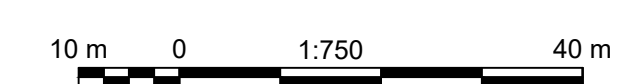
After normal business hours:

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.



- LEGEND:**
- SITE BOUNDARY
 - PROPOSED GRADING BOUNDARY
 - PROPOSED TRACK (BY OTHERS)
 - PROPOSED FENCELINE
 - PROPOSED STORM PIPE
 - PROPOSED STORM SUBDRAIN PIPE
 - PROPOSED ELECTRICAL LINE DUCT BANK
 - PROPOSED GAS LINE DUCT BANK
 - PROPOSED SANITARY DUCT BANK
 - PROPOSED WATER MAIN/ WATER MAIN DUCT BANK
 - PROPOSED UNKNOWN UTILITY DUCT BANK
 - ▶ FLOW DIRECTION
 - PROPOSED MANHOLE
 - PROPOSED OIL GRIT SEPARATOR
 - CLEAN OUT

NOTES:
 1. SEE GENERAL NOTES ON DWG 50-011-GA-001.
 2. SURVEY INFORMATION AND IMAGE RESOURCE IS PROVIDED BY UNDERHILL GEOMATICS LTD.
 FILE NO. V21034-TOP-M-01-R1.DWG, DATE: MAY 4, 2021, REV 1.



PLAN VIEW
SCALE 1:750

NOT FOR CONSTRUCTION

DATE: 2022/04/08 - 12:30pm
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Ref. No.	REFERENCE

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.

MOTT MACDONALD
 ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA
 PERMIT TO PRACTICE NUMBER: 1001591
 514100569-MMD-00-P0-DR-CV-0005

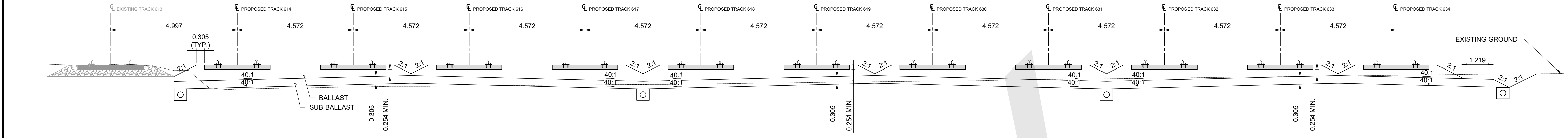
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F	2022/APR/08	ISSUED FOR PERMIT 3	CA	DR
E	2022/APR/06	ISSUED FOR PERMIT 3	JP	DR
D	2021/DEC/10	ISSUED FOR 90% CLIENT REVIEW	AL	DR
C	2021/DEC/02	ISSUED FOR PERMIT 2	KW	DR
B	2021/AUG/27	ISSUED FOR PERMIT	CF	DR

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Vancouver Fraser Port Authority
 ENGINEERING DEPARTMENT

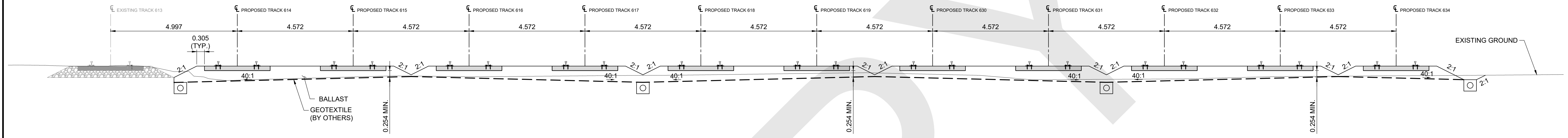
DESIGN BY	A. LAIDLAW V. DO
DRAWN BY	K.WU
APPROVED	C. OTERO
DATE	2022-APR-08
SCALE	AS SHOWN
VFPA SITE	CNV050

VANCOUVER FRASER PORT AUTHORITY		300 LOW LEVEL ROAD, NORTH VANCOUVER		RAILYARD EXPANSION - RICHARDSON		SITE PLAN	
SIZE	DWG	50-011-CI-005		SHEET	1 of 1	REV	F

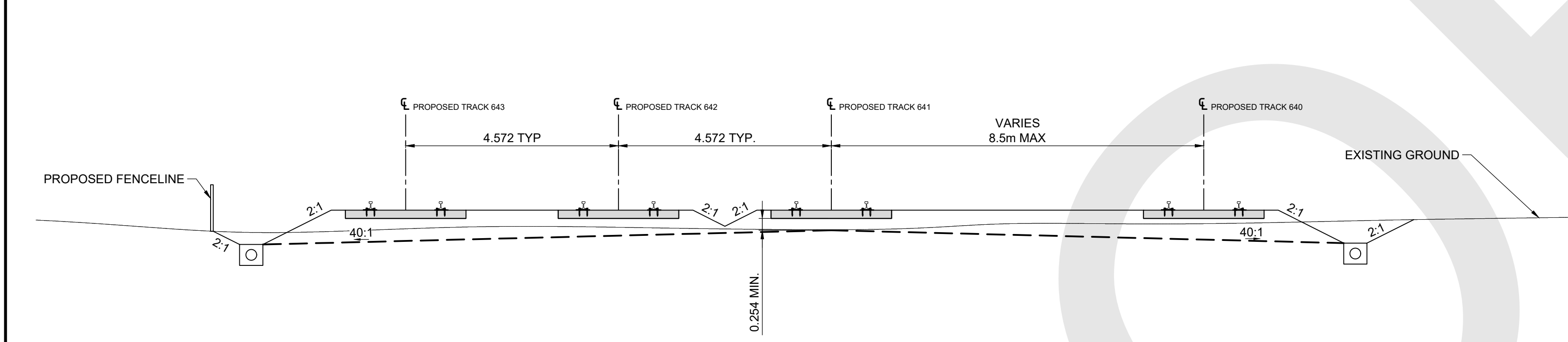
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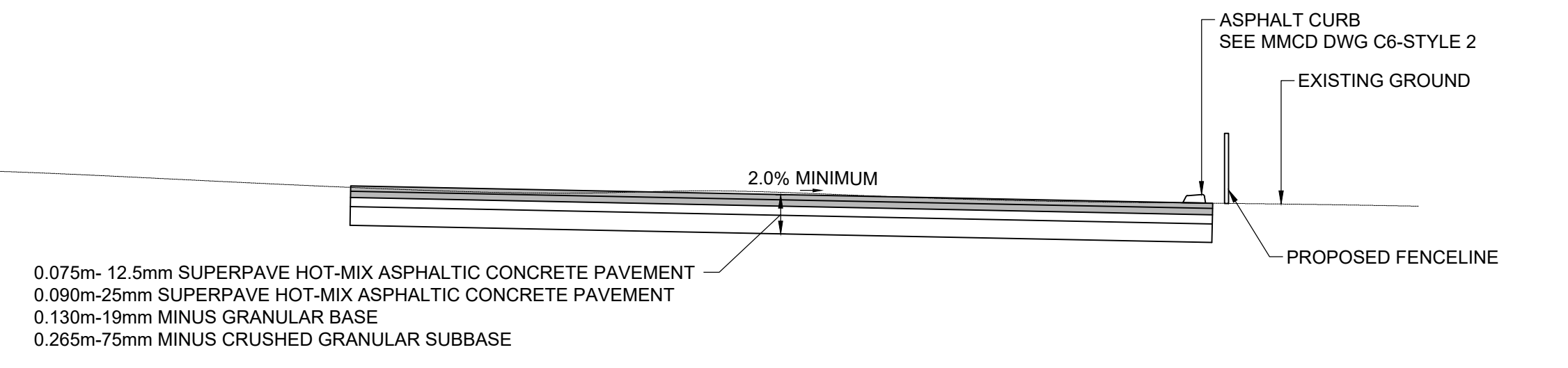
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10" BALLAST
 SCALE: 1:75



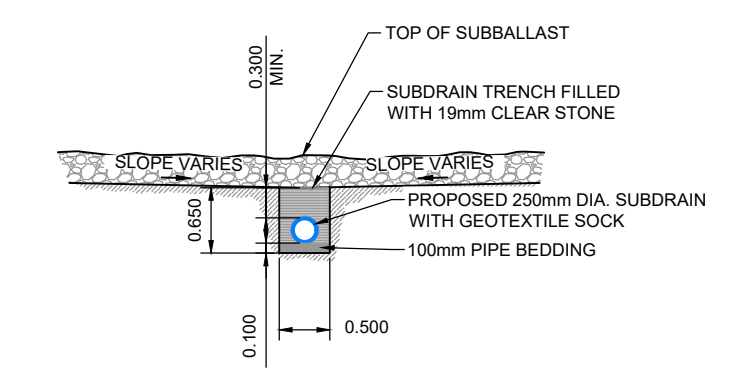
TYPICAL SECTION - PROPOSED TRACKS AT YARD
10" BALLAST AND GEOTEXTILE
 SCALE: 1:75



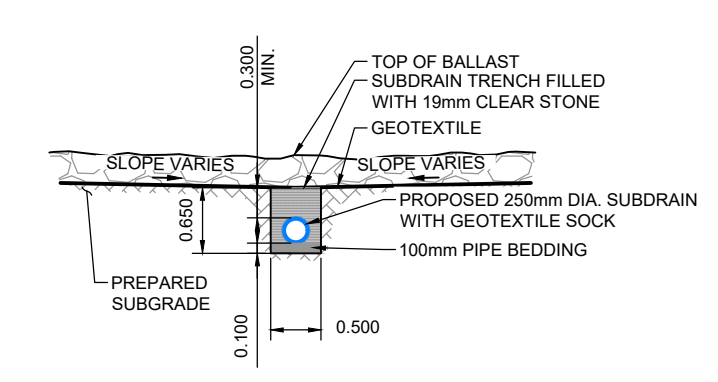
TYPICAL SECTION - PROPOSED CN CONNECTION
10" BALLAST AND GEOTEXTILE
 SCALE: 1:75



TYPICAL SECTION - PROPOSED PAVEMENT FOR TRUCK TURNAROUND
 SCALE: 1:75



DETAIL - SUBDRAIN IN SUBBALLAST
 SCALE: 1:75



DETAIL - SUBDRAIN
 SCALE: 1:75

NOT FOR CONSTRUCTION

DATE: 2022/04/06 - 3:51 pm
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VANCOUVER FRASER PORT AUTHORITY
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Ref. No.	REFERENCE

MOTT MACDONALD
 ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA
 PERMIT TO PRACTICE NUMBER: 1001591
 514100569-MMD-00-P0-DR-CV-0030

Suite 1888, Bentall 5
 550 Burrard Street
 Vancouver, BC, V6C 2B5
 Canada
 T 604.681.4400
 W www.mottmac.com

No.	Date	REVISION	Dr'n	Ch'd
D	2022/APR/06	ISSUED FOR PERMIT 2	JP	DR
C	2021/DEC/10	ISSUED FOR 90% CLIENT REVIEW	AL	DR
B	2021/AUG/27	ISSUED FOR PERMIT	AL	DR
A	2021/AUG/10	ISSUED FOR REVIEW	AL	DR

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Vancouver Fraser Port Authority
 ENGINEERING DEPARTMENT

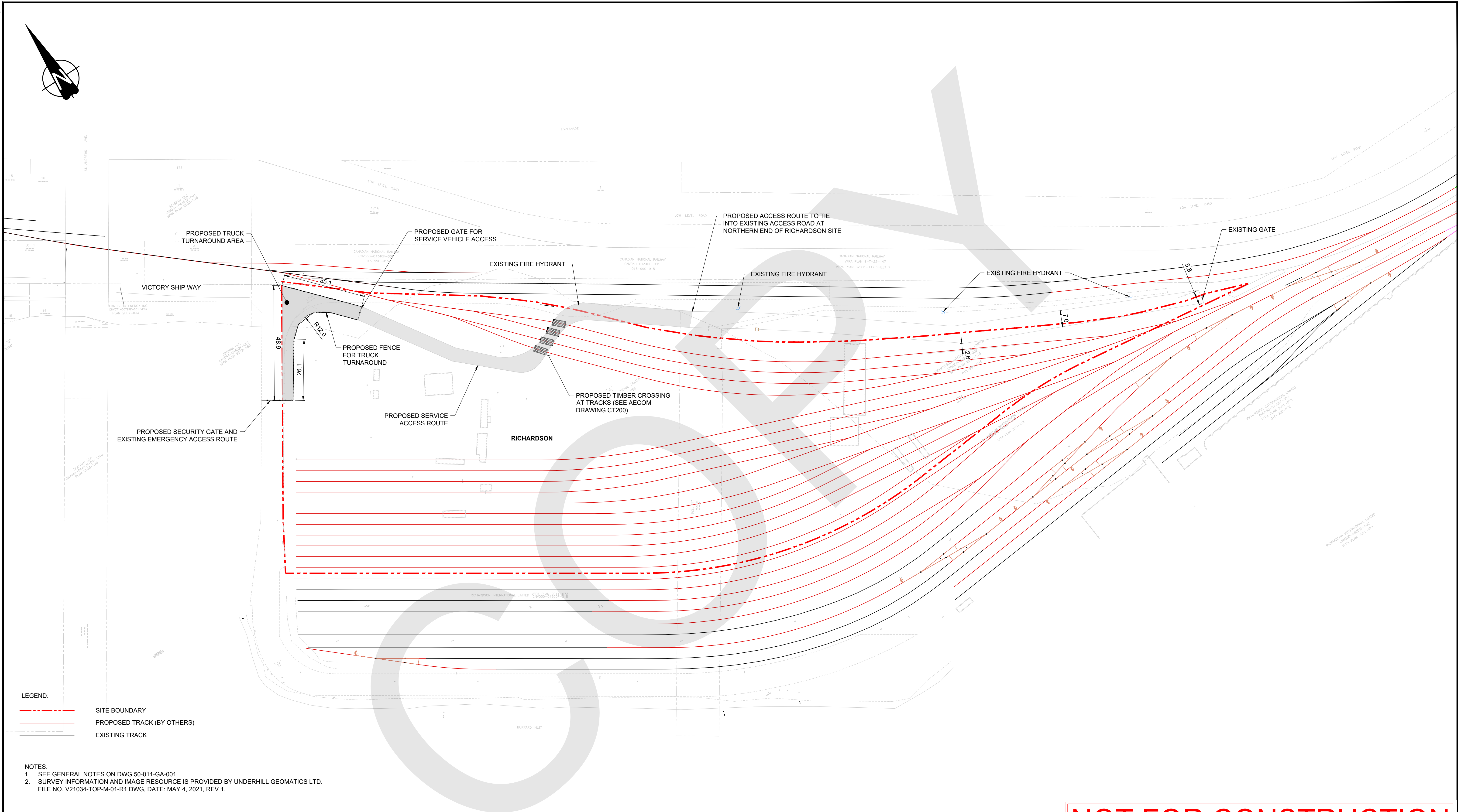
DESIGN BY	A. LAIDLAW V. DO
DRAWN BY	K. WU
APPROVED	C. OTERO
DATE	2022-APR-06
SCALE	AS SHOWN
VFPA SITE	CNV050

VANCOUVER FRASER PORT AUTHORITY
 300 LOW LEVEL ROAD, NORTH VANCOUVER
RAILYARD EXPANSION - RICHARDSON GRADING TYPICAL SECTIONS

SIZE DWG. **50-011-CI-010**

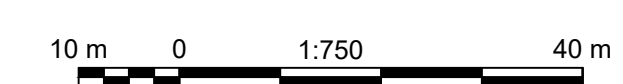
SHEET **1 of 1** REV **D**

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LEGEND:
 - - - - - SITE BOUNDARY
 - - - - - PROPOSED TRACK (BY OTHERS)
 - - - - - EXISTING TRACK

NOTES:
 1. SEE GENERAL NOTES ON DWG 50-011-GA-001.
 2. SURVEY INFORMATION AND IMAGE RESOURCE IS PROVIDED BY UNDERHILL GEOMATICS LTD. FILE NO. V21034-TOP-M-01-R1.DWG, DATE: MAY 4, 2021, REV 1.



PLAN VIEW
 SCALE 1:750

NOT FOR CONSTRUCTION

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 PERMIT TO PRACTICE NUMBER: 1001591
 514100569-MMD-00-P0-DR-CV-2000

Suite 1888, Bentall 5
 550 Burrard Street
 Vancouver, BC, V6C 2B5
 Canada
 T 604.681.4400
 W www.mottmac.com

No.	Date	REVISION	Dr'n	Ch'd
E	2022/APR/08	ISSUED FOR PERMIT 2	CA	AL
D	2022/APR/06	ISSUED FOR PERMIT 2	CA	AL
C	2021/AUG/27	ISSUED FOR PERMIT	CA	AL
B	2021/AUG/24	ISSUED FOR REVIEW	CA	AL
A	2021/AUG/11	ISSUED FOR REVIEW	CA	AL

PORT of vancouver
Vancouver Fraser Port Authority
 ENGINEERING DEPARTMENT

DESIGN BY	A. LAIDLAW
DRAWN BY	C. AU
APPROVED	C. OTERO
DATE	2022-APR-08
SCALE	AS SHOWN
VFPA SITE	CNV050

VANCOUVER FRASER PORT AUTHORITY
 300 LOW LEVEL ROAD, NORTH VANCOUVER
RAILYARD EXPANSION - RICHARDSON
TRUCK TURNAROUND AND INNER YARD ACCESS

SIZE	DWG	50-011-CI-012	SHEET	1 of 1	REV	E
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DATE: 2022/04/08 - 12:47pm
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Ref. No.	REFERENCE

PROJECT
 NORTH VANCOUVER
 TERMINAL
 CN MILE MILE 5
 NEW WESTMINSTER
 SUBDIVISION

CLIENT
 RICHARDSON
 INTERNATIONAL LTD.

375 LOW LEVEL RD.
 NORTH VANCOUVER, BC V7L 1A7
 604.987.8855 tel 604.987.9532 fax
 www.richardson.ca

CONSULTANT
 AECOM Canada Ltd.
 300, 48 Quarry Park Blvd SE
 Calgary, Alberta T2C 5P2
 403.254.3301 tel
 www.aecom.com

ISSUE/REVISION

ISSUE/REVISION	DATE	DESCRIPTION
B	21-08-11	ISSUED FOR TENDER
A	21-07-27	ISSUED FOR REVIEW
I/R	YY-MM-DD	DESCRIPTION

INITIALS

DH	OG	CP	KL
DRAFTER	DESIGNER	CHECKER	ENGINEER

REGISTRATION

**ISSUED FOR PERMIT
 NOT FOR CONSTRUCTION**

PROJECT NUMBER

60641178

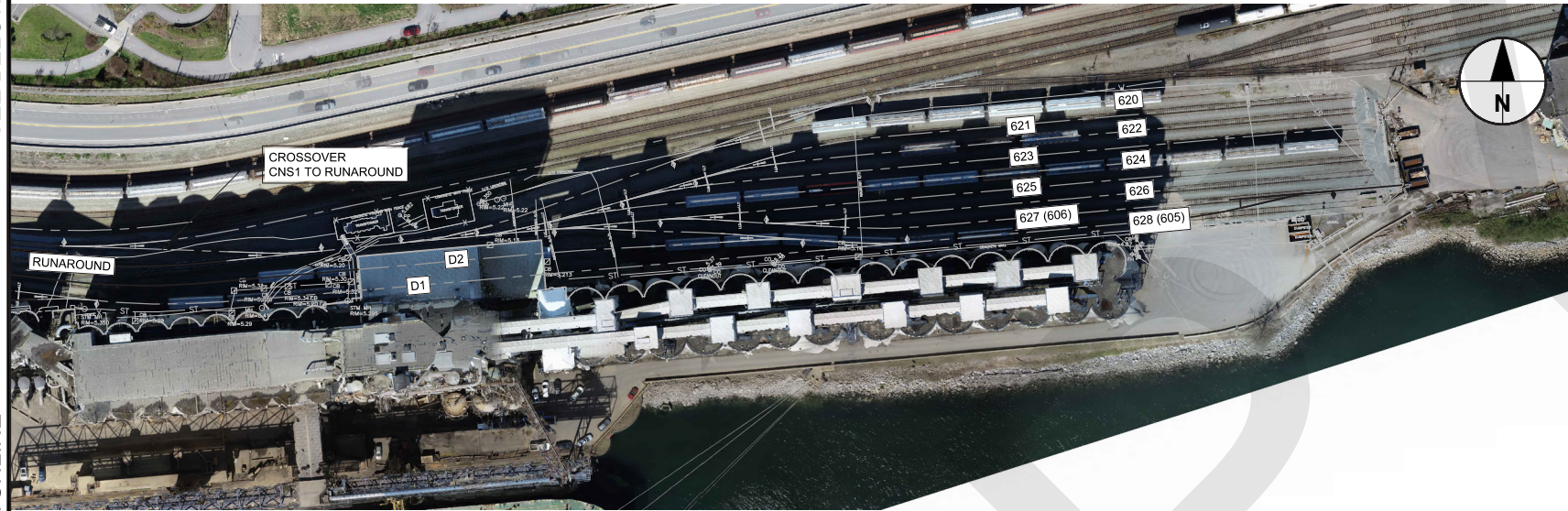
SHEET TITLE

PROPOSED LAYOUT

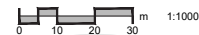
SHEET NUMBER

SK200

SEE BELOW
 MATCHLINE



PLAN



SEE ABOVE

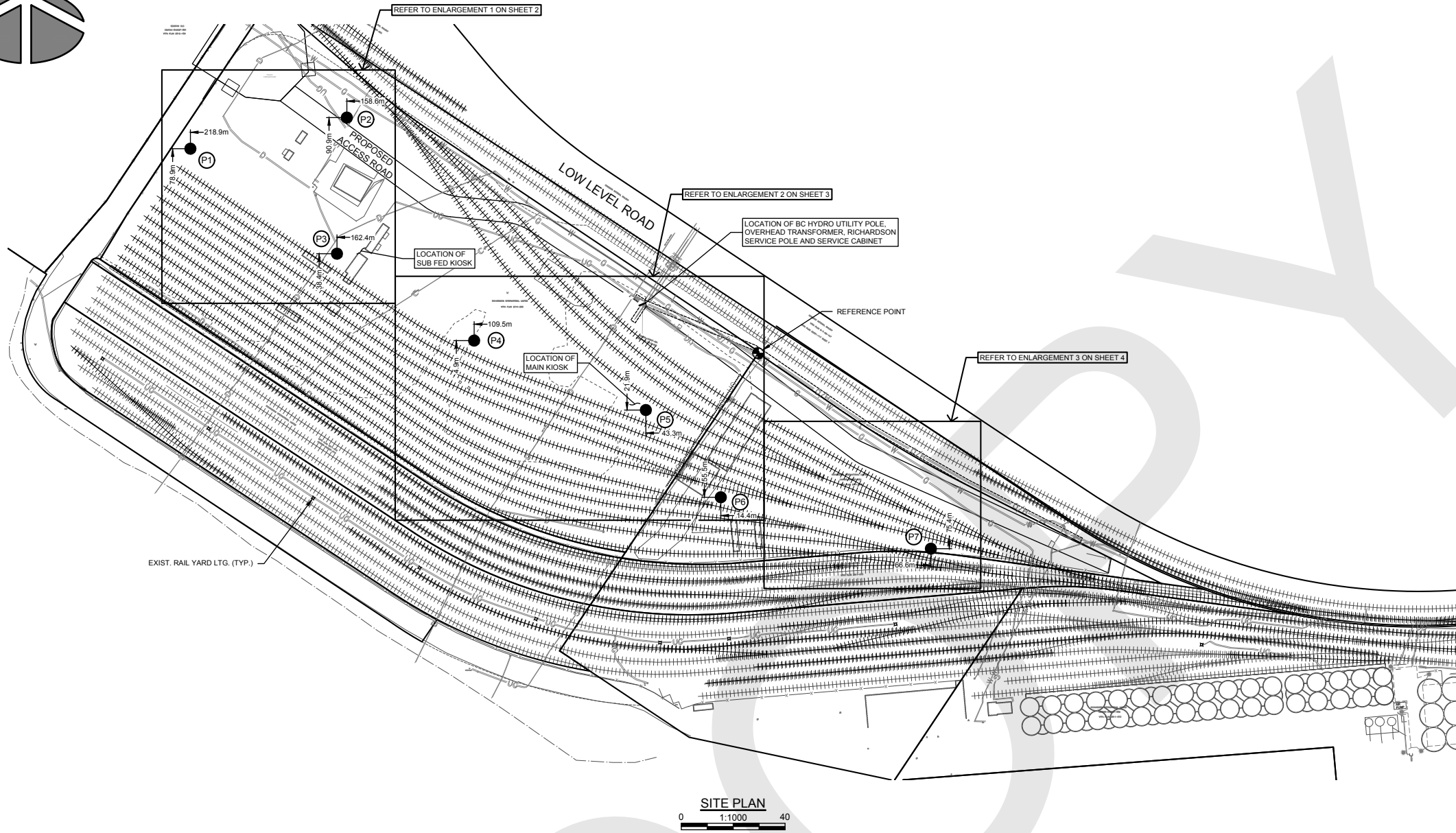
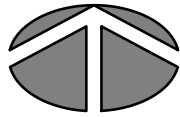


PLAN



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LEGEND

- LARGE ROUND JUNCTION BOX (MOTI SPEC) 2 SECTIONS DEEP C/W BOTTOM SECTION AND BONDED GALVANIZED STEEL SECURITY LID.
- C LARGE ROUND COMMUNICATIONS JUNCTION BOX (MOTI SPEC) 2 SECTIONS DEEP C/W BOTTOM SECTION AND BONDED GALVANIZED STEEL SECURITY LID.
- TYPE 4040 SERVICE VAULT WITH BONDED HINGED CHECKER PLATE LID WITH PADLOCK RECESS MARKED "ELEC"
- UNDERGROUND RPVC ELECTRICAL CONDUIT (120/240) IN STEEL CASING PIPE (SIZE AS SHOWN)
- UNDERGROUND RPVC COMMUNICATIONS CONDUIT IN STEEL CASING PIPE (SIZE AS SHOWN)
- ⊗ RAIL YARD LIGHTING POLE NUMBER
- ⊙ EXISTING OVERHEAD UTILITY POLE
- CONDUIT STUB
- 120/240V KIOSK C/W 3" CONCRETE SERVICE PAD 1m AROUND ALL ACCESS DOORS AND BOLLARDS. SEE DETAIL.

NOTES

1. ALL WORKS SHALL BE DONE IN ACCORDANCE WITH MASTER THE MUNICIPAL CONSTRUCTION DOCUMENTS (MMCD) PLATINUM EDITION AND CANADIAN ELECTRICAL CODE.
2. ALL CONDUCTORS SHALL BE RW90 STRANDED COPPER (UNLESS OTHERWISE NOTED), RAIL YARD LIGHTING CONDUCTORS SHALL RUN CONTINUOUS WITH NO SPLICES.
3. CONTRACTOR SHALL GAIN APPROVAL FROM RAIL LIGHTING SUPPLIER'S GEOTECHNICAL ENGINEER PRIOR TO FOUNDATION INSTALLATION. BACK FILL SHALL MEET THE APPROVAL OF THE GEOTECHNICAL ENGINEER.
4. BC HYDRO DB2 CONDUITS SHALL BE MIN. 900mm DEEP. ALL OTHER CONDUITS SHALL BE BURIED A MIN. 600mm DEEP (UNLESS OTHERWISE NOTED, IE. RAIL CROSSINGS). A 'BURIED CABLE' MARKER TAPE SHALL BE INSTALLED IN ALL TRENCHES.
5. CONTRACTOR SHALL OBTAIN ALL PERMITS AND LICENSES PRIOR TO CONSTRUCTION.
6. CONTRACTOR SHALL LOCATE AND AVOID ALL UNDERGROUND SERVICES.
7. THE CONTRACTOR SHALL REPLACE ALL ASPHALT, CONCRETE SIDEWALK PANELS, CURB & GUTTER, LANDSCAPE, ETC. REMOVED OR DAMAGED DURING CONSTRUCTION TO THE SATISFACTION OF THE OWNER.
8. CONDUITS SHALL BE RIGID P.V.C. MANUFACTURED IN ACCORDANCE WITH C.S.A. C22.2 No. 211.2. (NOT DB2) (UNLESS OTHERWISE NOTED). ABOVE GROUND CONDUIT SHALL BE RIGID METAL.
9. ALL EQUIPMENT SHALL BE BONDED IN COMPLIANCE WITH THE CANADIAN ELECTRICAL CODE.
10. CONTRACTOR SHALL COORDINATE WITH BC HYDRO CIVIL INSPECTOR TO REVIEW AND SIGN OFF ON CONDUITS FOR SERVICE.
11. CONTRACTOR SHALL ENSURE ALL LOADS ARE BALANCED
12. SEE B.C. HYDRO REGULATIONS FOR SERVICE CONNECTION DETAILS.
13. CONTRACTOR TO COORDINATE DE-ENERGIZATION OF EXISTING SERVICE AND ENERGIZATION OF NEW SERVICE TO MINIMIZE DOWNTIME OF EXISTING RAIL YARD.

EXISTING ELECTRICAL SYSTEM SHALL REMAIN IN OPERATION THROUGHOUT CONSTRUCTION. IF EXTENDED DE-ENERGIZATION IS REQUIRED CONTRACTOR SHALL ENSURE GENERATOR BACK UP. COORDINATE SWITCH OVER WITH RICHARDSON.

CAUTION!
EXCAVATION NEAR OVERHEAD UTILITY POLE
 ANY UNDERGROUND EXCAVATION WITHIN SOIL FOUNDATION INTERACTION AREA REQUIRES TEMPORARY UTILITY POLE SUPPORT. REFER TO ES55 E3-04 GUIDE FOR CIVIL EXCAVATION NEAR DISTRIBUTION POLES FOR DETAILS. REFER TO BC HYDRO WORK ON WOOD POLES MANUAL (ON SAFEHUB) AND BC HYDRO 2017-1-F POLE HOLDING REQUIREMENTS FOR APPROVED TEMPORARY POLE SUPPORT METHODS. FOR MORE INFORMATION CONTACT workmethods@bchydro.com

LOCATING EQUIPMENT
 FOR CLARITY CONDUITS, JUNCTION BOXES AND STREETLIGHT POLES MAY NOT BE SHOWN AT DESIGN OFFSETS. CONTRACTOR SHALL LOCATE ALL EQUIPMENT BASED ON STATIONS AND/OR OFFSETS AS NOTED AND SHALL NOT RELY ON COORDINATES OBTAINED FROM DMD DIGITAL DRAWINGS. CONTRACTOR TO REPORT ANY CONFLICTS OR DISCREPANCIES TO DMD & ASSOCIATES PRIOR TO ORDERING EQUIPMENT.

CHECK BEFORE YOU DIG
 CONTRACTOR SHALL REFER TO MUNICIPAL RECORD / CIVIL DESIGN DRAWINGS FOR ALL OTHER UTILITIES, SERVICE LOCATIONS, AND DETAILS. THE EXACT LOCATION OF THESE UTILITIES SHALL BE DETERMINED ON SITE BY THE CONTRACTOR. CONTRACTOR TO REPORT ANY CONFLICTS OR DISCREPANCIES TO DMD & ASSOCIATES PRIOR TO ORDERING BASES.

OVERHEAD POWER LINE CONFLICTS
 CONTRACTOR SHALL CONFIRM ON SITE PRIOR TO CONSTRUCTION THAT POLES & EQUIPMENT WILL MEET WorkSafeBC CLEARANCE REQUIREMENTS FOR OVERHEAD PRIMARY AND SECONDARY LINES. CONTRACTOR TO REPORT ANY CONFLICTS OR DISCREPANCIES TO DMD & ASSOCIATES PRIOR TO ORDERING POLES AND INSTALLING CONCRETE BASES.

DMD
DMD & Associates
Electrical Consultants Ltd.
 #12-17358 104A Avenue
 Surrey, BC, Canada V4N 5M3
 604/589-9010
www.dmdeng.com
office@dmdeng.com Fax 604/589-9012

DESIGNED	MIKE SPOUGE
DRAWN	MARLON ELBO
CHECKED	AUBURN LEUNG
E.O.R.	MARTIN STERLING
DATE	JULY 23, 2021
SCALE:	1:1000



LIGHTING DESIGN CRITERIA		
ITEM	DESIGN REQUIREMENTS	DESIGN ACHIEVED ***
LOCATION	RICHARDSON LLR	
FIELD TYPE	RAIL YARD	
EQUIPMENT TYPE	TLC-LED-550 (540W MAX)	
MAINTAINED ILLUMINANCE LEVEL (AVG.)	20 LUX**	38.5 LUX*
ILLUMINANCE UNIFORMITY RATIO (AVG. MIN.)	3.0:1**	3.0:1

* LIGHTING SHALL BE COMPLETE WITH DIMMING FUNCTION INITIALLY SET AT 60% (23 LUX AVERAGE)
 ** BASED ON CANADA OCCUPATIONAL HEALTH AND SAFETY REGULATIONS SECTION 6.6 SCHEDULE III, BUILDING EXTERIORS, AREAS USED BY PERSONS AND MOBILE EQUIPMENT IN WHICH THERE IS A HIGH OR MODERATE LEVEL OF ACTIVITY
 *** FOR SPILL LIGHTING CALCULATIONS ON WATER SIDE AND RESIDENTIAL SIDE OF THE PROJECT REFER TO SUPPLIERS LIGHTING LAYOUT

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600V
 120/240V
ISSUED FOR PERMIT
NOT FOR CONSTRUCTION
 2021-09-14

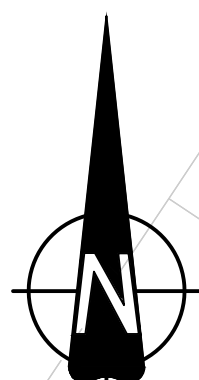
No.	DATE	BY	CHK'D	REVISION
-	2021-08-04	AB	MGDS	PRELIMINARY DRAWINGS
-	2021-08-24	ME	MGDS	75% SUBMISSION
-	2021-09-14	RF	MGDS	ISSUED FOR PERMIT

Mott MacDonald
 550 Burrard Street Suite 1888, Bentall 5, Vancouver, BC, V6C 2B5 Tel: 604.681.4400

RICHARDSON LLR RAILYARD EXPANSION
303 LOW LEVEL ROAD
LIGHTING PLAN
 NORTH VANCOUVER, BC

PROJECT No.	7310-21-01 of 06	SHEET No.	1 of 6	REVISION	.
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TITLE BLOCK CL-1B.rwg
DATE: 2021/12/02 - 8:28am
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SEASPAR ULC
OWNER: 044027-001 VFP
PLAN: 2003-078

EXISTING FIRE HYDRANT
TO BE RELOCATED

EXISTING FENCE TO BE
REMOVED, TYP.

EXISTING SANITARY PIPE
TO BE REMOVED, TYP.

EXISTING MANHOLE TO
BE REMOVED, TYP.

EXISTING ASPHALT
TO BE REMOVED

EXISTING VALVE
TO BE REMOVED

EXISTING STORM PIPE TO BE
REPLACED, FOR DETAIL SEE DWG
513100569-MMD-00-P0-DR-CV-0102

EXISTING ABANDONED TRACK
TO BE REMOVED, TYP.

EXISTING CATCH BASIN
TO BE REMOVED, TYP.

EXISTING STORM PIPE
TO BE REMOVED, TYP.

EXISTING STEEL PIPE
TO BE REMOVED,
APPROX. 1.8 m DEEP

EXISTING CONCRETE
PAD TO BE REMOVED

EXISTING ABADONED
STORM PIPE TO BE
REMOVED, TYP.

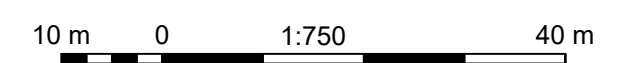
EXISTING CONCRETE
SLAB TO BE REMOVED

EXISTING STORM PIPE TO BE
REPLACED, FOR DETAIL SEE DWG
513100569-MMD-00-P0-DR-CV-0103

LEGEND:

—ST—ST—	EXISTING STORM PIPE TO BE REMOVED
—SAN—SAN—	EXISTING SANITARY PIPE TO BE REMOVED
—E—E—	EXISTING ELECTRICAL LINE TO BE REMOVED
—G—G—	EXISTING GAS LINE TO BE REMOVED (BY OTHERS)
—UNK—UNK—	EXISTING U/G UTILITIES TO BE REMOVED (BY OTHERS)
=====	EXISTING TRACK TO BE REMOVED (BY OTHERS)
- - - - -	PROPOSED TRACK TO BE REMOVED (BY OTHERS)
- X - X -	EXISTING FENCE TO BE REMOVED
●	EXISTING MANHOLE TO BE REMOVED
⊕	EXISTING FIRE HYDRANT TO BE REMOVED
■	EXISTING CATCH BASIN TO BE REMOVED

NOTES:
1. SEE GENERAL NOTES ON DWG 513100569-MMD-00-P0-DR-CV-0002.



PLAN VIEW
SCALE 1:750

NOT FOR CONSTRUCTION

VANCOUVER FRASER PORT AUTHORITY
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Ref. No.	REFERENCE

<p>MOTT MACDONALD ENGINEERS AND GEOSCIENTISTS BRITISH COLUMBIA PERMIT TO PRACTICE NUMBER: 1001591 514100569-MMD-00-P0-DR-CV-0103</p>	Suite 1888, Bentall 5 550 Burrard Street Vancouver, BC, V6C 2B5 Canada T 604.681.4400 W www.mottmac.com						
	B 2021/DEC/02 ISSUED FOR PERMIT 2 A 2021/AUG/27 ISSUED FOR PERMIT						
		No.	Date	REVISION	Dr'n	Ch'd	

Vancouver Fraser Port Authority
ENGINEERING DEPARTMENT

DESIGN BY	A. LAIDLAW, V. DO
DRAWN BY	K.WU
APPROVED	C. OTERO
DATE	2021-DEC-02
SCALE	AS SHOWN
VFPA SITE	CNV050

VANCOUVER FRASER PORT AUTHORITY 300 LOW LEVEL ROAD, NORTH VANCOUVER RAILYARD EXPANSION - RICHARDSON PROPOSED REMOVALS PLAN				
SIZE	DWG	50-011-CI-006	SHEET	REV
D			1 of 1	B