Appendix C
Canadian Pacific Rail
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1. WESTRIDGE MARINE TERMINAL

1.1 PROJECT OVERVIEW

Kiewit Ledcor Trans Mountain Partnership (KLTP) is currently planning and scheduling construction activities at the Kinder Morgan Canada (KMC) Westridge Marine Terminal (WMT) for the Trans Mountain Expansion Project (TMEP).

The WMT scope of work includes a new dock complex with three berths, expansion of the foreshore to accommodate new mechanical equipment, installation of new equipment in the facility, a tunnel connecting WMT to Burnaby Terminal and underground conduit connecting the WMT facilities south of the rail to the foreshore area (refer to Figure 1-1 and Figure 1-2).

Figure 1-1: Westridge Marine Terminal Expansion
In order to perform the work at WMT, KLTP requires access to the Canadian Pacific Railway (CPR) right of way (ROW), both North and South of the tracks, in the area immediately adjacent to the WMT. The access is requested for the following purposes:

1) Construction traffic crossing the railway, using the existing rail crossing
2) Set-up of dewatering equipment to support under rail boring activities
3) Installation of bore pits for trenchless crossing
4) Installation of derailment protection barrier
5) Construction traffic access and temporary laydown space
6) Road widening
7) Water Main Tie-in

1.1.1 RAILWAY CROSSING

Construction traffic will use the existing railway crossings to access the foreshore area. These include the primary crossing through the Westridge Marine Terminal as well as the secondary crossing accessed through North Cliff Avenue.

While it is planned to maximize bulk material deliveries via marine equipment (barge shipments), there will be an increase in equipment crossing the railway in order to perform the work as not all materials can be logistically or feasibly transported to the site via marine equipment.
1.1.2 DEWATERING EQUIPMENT

KLTP intends to set up dewatering equipment on the CPR ROW for the duration of the project (refer to Figure 1-3). The treated water coming out from the water treatment plant will be released into ocean through exiting culverts.

Figure 1-3: Example Dewatering Equipment

1.1.3 TRENCHLESS CROSSING

Two sheet pile bore pits (refer to Figure 1-4) will need to be installed on the CPR ROW to allow for the trenchless crossing. These bore pits will be constructed of sheet pile cells, excavated to the required depth from which the underground conduit will be installed. Upon completion of the work, the ROW will be returned to grade. The trenchless crossing will be performed via Guided Horizontal Auger Bore (GHAB) from one bore pit into the other.
1.1.4 DERAILMENT PROTECTION BARRIERS

Two derailment protection barriers will be installed during project construction as an added safety feature for future operations. One barrier, installed north of the CPR ROW, is approximately 285 meters in length covering the full length of the expanded foreshore. The second barrier, approximately 35 meters in length, is installed south of the CPR ROW in the area of the UG railway crossing.

Both installed barriers are outside of the CPR ROW, but require excavation onto the CPR ROW to allow for their construction.

1.1.5 CONSTRUCTION TRAFFIC ACCESS AND LAYDOWN

For the duration of the project, KLTP requests use of the CPR ROW for construction equipment access and material laydown.

1.1.6 ROAD WIDENING

Road widening will take place at WMT to accommodate the increase traffic flow. This road widening includes a MSE wall south of the CPR ROW and a widening of the existing railway crossing. To perform both scopes of work, KLTP will require temporary construction access from the CPR ROW for material staging and equipment placement.

1.1.7 WATER MAIN TIE-IN

KLTP will need to install a tee (refer to Figure 1-5) into the fire main to provide fire water supply throughout the project. The tie-in is on CPR ROW and is planned to be a 6 inch live tap half saddle tee complete with valve. The tie-in is the only work to be completed on CPR ROW and will be connected to
the fire main on the existing foreshore to support the project during construction. Once the construction work has been completed, the tie-in will be removed and the ground returned to original condition.

Figure 1-5: Water Main Tie-in

1.2 RECLAMATION

After construction activities are completed in way of the CPR ROW, the ROW will be returned to its original condition.

1.3 CONSTRUCTION SCHEDULE

Work is scheduled to commence at WMT in late summer 2017 and continue through to April 2020.

Construction activities are planned to take place in accordance with the hours established within the City of Burnaby noise bylaw. Bulk construction activities will take place Monday to Friday, 7:00 am to 8:00pm and Saturday, 9:00am to 8:00pm. Selected work activities will be performed outside of these hours, including nightshift and Sunday work.

Work at the Burnaby Mountain Tunnel will take place 24 hours per day up to 7 days per week.

1.4 SAFETY

All work performed within close proximity of the rail tracks will be performed under the direction and supervision of a CPR flag person.

Separation of the construction work from the railway will be maintained through a construction fence installed with a 4 meter offset from the tracks (refer to Figure 1-6).
Figure 1-6: Example Construction Fencing
APPENDIX 1

Westrige Design Drawings