SEASPAN VANCOUVER DRYDOCK WATER LOT PROJECT

Vancouver Fraser Port Authority
Project and Environmental Review Application

Appendix A8a View and Shade Renderings

June 14, 2021

seaspan

APPENDIX A8A VIEW AND SHADE IMPACT ANALYSIS

View and shade impacts associated with the proposed development have been assessed based on the surrounding private and public living spaces.

Shading from the new drydocks and new work pontoon will be restricted to the water lot. Relative to the existing structures (Careen, Panamax, and the service pier), there is not expected to be any shade impact on private or public space. Some of the viewpoints selected show potential shading and its limited footprint on the water (Figure A8a.2). Therefore, the primary effort for this analysis is focused on view impacts.

The selection of viewpoints for the impact analysis considers residents living north of Esplanade, residents living immediately west of Vancouver Drydock Company (VDC), public access points from the west, and water side views from the south and southeast. Some of the representative images are views at elevation and others displaying the viewpoint of the observer at street level. Figure A8a.1 indicates the locations where photographs were taken to create renderings:

1. Public pier – looking southeast;
2. Shipyard square – looking south;
3. Public walkway – looking southwest;
4. Victory Ship Way – looking southwest;
5. From Esplanade Avenue – looking southwest;
6. From the intersection of St. Georges Ave and 5th St. – looking southwest;
7. Aerial water side – looking north;
8. Aerial land side – looking southwest;
9. Aerial water side – looking northeast; and
10. Aerial land side – looking west.

Figure A8a.1 Existing Seaspan VDC and viewpoints. Numbers relate to the locations listed above.

Legend

- Viewpoint
- Viewpoint Direction
- Bathymetry (Interval 10m)
- Vancouver Fraser Port Authority Boundary

Proposed Project Features

- New Work Pontoon
- New 100m Dry Dock
- New 55m Dry Dock
- Relocated Existing Careen

0 50 100 200 m N

Scale: 1:8,000

Projection: NAD 1983 UTM Zone 10N

Data Sources:
a) Project features, Advisian 2021.
b) Viewpoints and directions, water lot boundaries, Seaspan 2021.
b) Bathymetry, DFO 2020.
c) Vancouver Fraser Port Authority Boundary, Port of Vancouver 2018.
d) GeoEye-01 50 cm, 15 March 2020, Esri Online Service.

Hatfield

Images from the selected viewpoints show before and after representations of the Project. The two new drydocks have not yet been purchased, so the exact design and configuration of these structures are not known. Thus, conservatively, the renderings within this appendix show the most elaborate configuration, with four large cranes on the larger drydock, which is the maximum number of cranes that would be considered for operations. The smaller drydock will not have any cranes since lift capacity will be provided by the larger drydock.

The renderings also show the largest ships that may be docked for service with the new infrastructure. A ferry is shown on the larger drydock, which can service vessels up to 95 m long by 26 m wide. A tug boat is shown on the smaller drydock, which can service vessels up to 50 m long by 18 m wide. The new work pontoon can service vessels that do not need to be dry docked. For example, a barge is shown moored to the new work pontoon in Figure A8a.5 through Figure A8a.8. The maximum possible capacity for vessels in the water lot would be one per drydock, one moored to the existing 190 water storage barge (e.g., various vessels shown in this location throughout the photos below), and one moored to the new work pontoon. Some photos illustrate that there are times when the Panamax and Careen are not in use.

All new floating structures are significantly shorter than the adjacent Careen and Panamax. The wing walls of the larger 100 m drydock reach 8 m above the waterline, whereas the wing walls of the Careen are about twice as high (15 m above the waterline). Consequently, the new drydocks are not visible when viewing from east of VDC, looking west. Similarly, the size of vessels serviced within the two new drydocks will be notably smaller than those serviced in the existing Panamax and Careen drydocks (Table 3 in the main PER Supplemental Report).

When the drydocks are empty, a minor change in the view is expected for observers directly to the north of the VDC facility (Appendix A8, Figures A8.4 to A8.7). For example, viewers standing on Esplanade Ave. could just observe the new drydocks behind existing VDC buildings. Viewers standing on the waterfront walkway could still see the shore across Burrard Inlet. The new infrastructure mostly covers the view of the water. However, when the water lot is at maximum indicated capacity, with larger vessels in drydock, the view across Burrard Inlet of the Centerm terminal would be blocked from observers at lower elevations (Figure A8a.6 and Figure A8a.7). A similar condition is observed in the photos when a large bulk carrier is moored in the Inlet as shown in Figure A8a.7. Downtown Vancouver and points west would still be visible.

Only a minor change in the view will be observed from locations further northwest of VDC, for example on St. Georges street (e.g., at 5th street) since it is higher in elevation than the VDC facilities. The impact from this viewpoint is primarily on the amount of water covered by the new infrastructure (Figure A8a.12). Even with a 25 m high vessel on the 100 m drydock, there is no impact on the view of the shoreline on the opposite side of the Inlet (downtown/east Vancouver) from that elevation.

A change in the view is expected for observers west of VDC at street level and higher, for example from the end of the public pier and Shipyard Square (Figure A8a.8 and Figure A8a.9). From these vantage points, the biggest impact is on the amount of water covered by infrastructure. The new

drydocks and any additional vessels in the western water lot will not block any scenery behind them (to the east), but rather, will blend in with the existing Careen. The new work pontoon deck sits approximately a half meter above the waterline and will not obstruct the view of the service pier and Panamax behind it although there may be equipment sitting on the new work pontoon that will be visible from the west side.

The new drydocks will come with their own lighting and new light posts will be installed on the new work pontoon (see Section 3.2.2). The orientation and arrangement of these lights have been designed to minimize the light glare observed from shore (Figure A8a.10).

Aerial View of Project

Figure A8a.2 Aerial view of VDC facilities from the south, facing northeast. Current (top) and proposed (bottom) drydock infrastructure. Point 9 in Figure A8a.1.

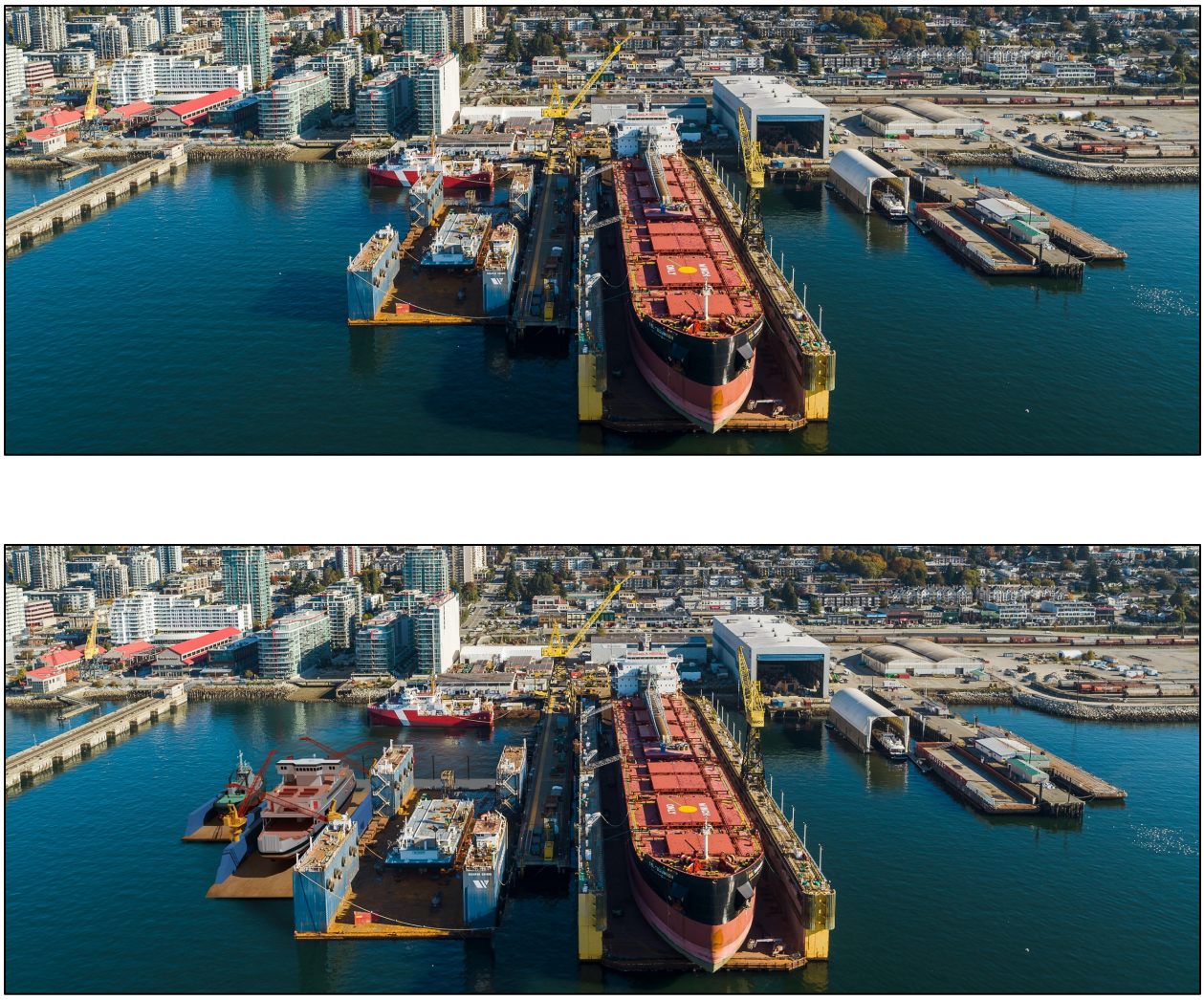

Figure A8a.3 Aerial view of the Project area facing north, with the current view (top) and proposed view (bottom). Point 7 on Figure A8a.1.

Figure A8a.4 Aerial view of the Project area facing southwest, with the current view (top) and proposed view (bottom). Point 8 on Figure A8a.1.

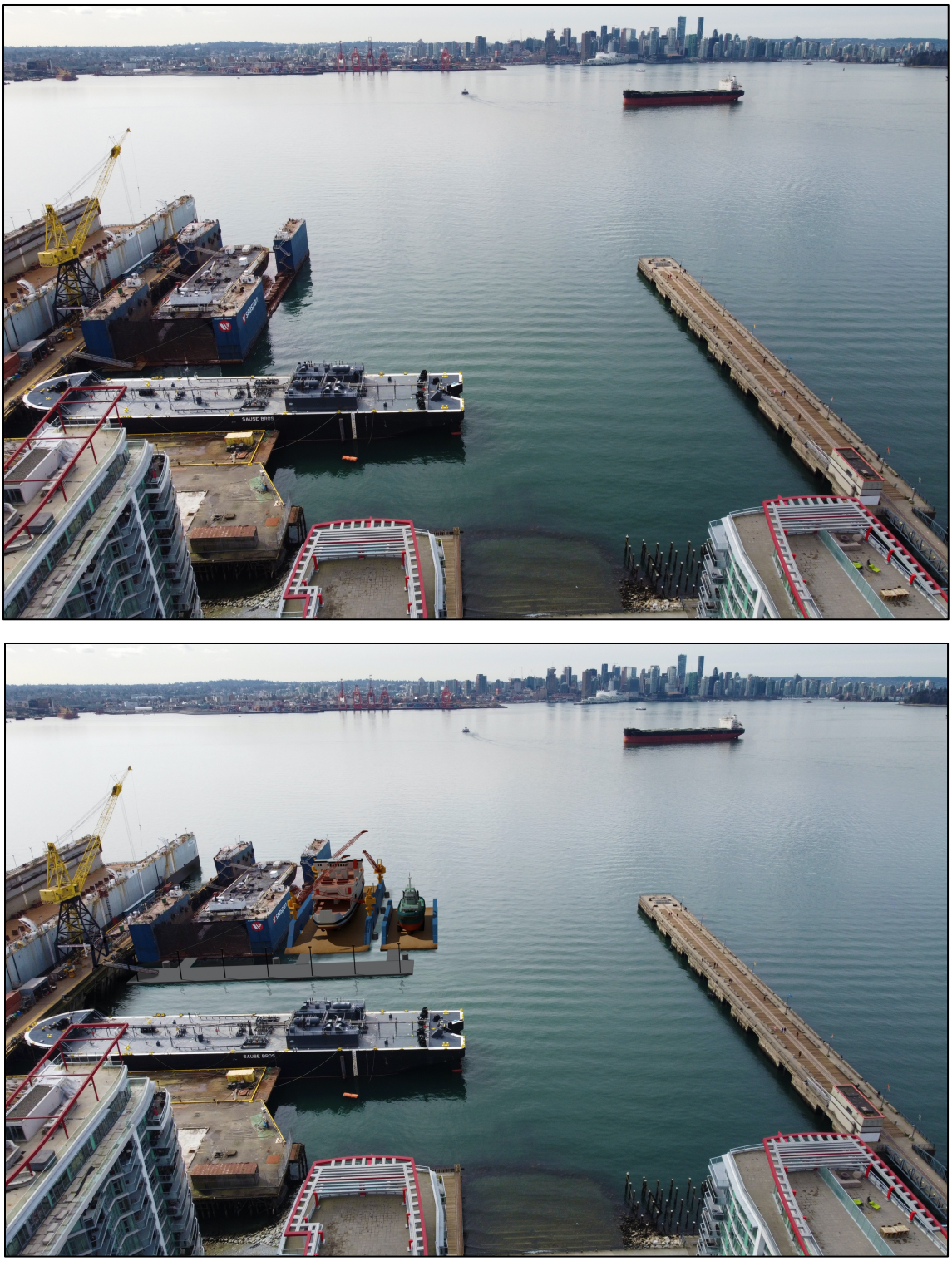

Figure A8a.5 Aerial view of the Project area facing west, with the current view (top) and proposed view (bottom). Point 10 on Figure A8a.1.

Street Level View of Project

Figure A8a.6 Street view of the Project area from the public waterfront walkway, facing southwest, with the current view (top) and proposed view (bottom). Point 3 on Figure A8a.1.

Figure A8a.7 Street view of the Project area, at Victory Ship Way, facing southwest, with the current view (top) and proposed view (bottom). Point 4 on Figure A8a.1.

Figure A8a.8 Street view of the Project area from the end of the public pier, facing southeast, with the current view (top) and proposed view (bottom). Point 1 in Figure A8a.1.

Figure A8a.9 View from Shipyard Square (west of VDC), facing south. Current (top) and proposed (bottom) drydock infrastructure. Point 2 in Figure A8a.1.

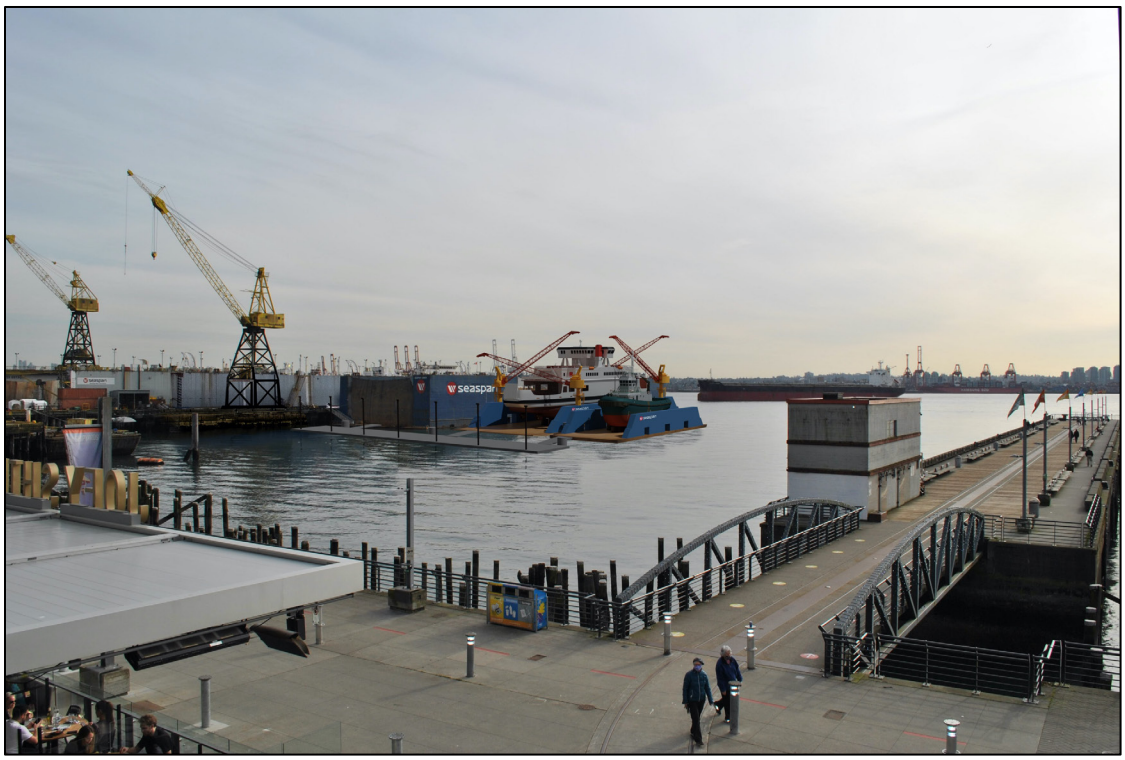

Figure A8a.10 View from Shipyard Square (west of VDC), at night, with the proposed infrastructure. Point 2 in Figure A8a.1.

Figure A8a.11 Street view of the Project area, at Esplanade Ave, facing southwest, with the current view (top) and proposed view (bottom). Point 5 in Figure A8a.1.

Figure A8a.12 Street view of the Project area, at the intersection of St. Georges Ave. and 5th St., facing southwest, with the current view (top) and proposed view (bottom). Point 6 in Figure A8a.1.