1

Welcome!

Aquatic Centre Dock Rebuild

The City of Vancouver is proceeding with construction to improve the dock at the Vancouver Aquatic Centre, which is nearing the end of its service life and is in need of replacement.

The new dock facilities will have improved accessibility, a ferry shelter and more.

Key Project Objectives

1. Improve universal accessibility so that it is safe and comfortable for people of all ages and abilities to use the dock facility.
2. Improve ferry accessibility to the floating dock by preventing grounding at low tide levels.
3. Preserve as much of the natural surroundings and characteristics as possible.

Did You Know...?

In December 1998, the Vancouver City Council adopted the Blueways Policies and Guidelines, which included recommendations for the future use and preservation of Vancouver's waterfront and waterways.

Included in these policies and guidelines was a commitment from the City of Vancouver to make improvements to existing and new docks at strategic transportation nodes around False Creek to be accessible for people with disabilities.

CITY OF VANCOUVER | GREENEST CITY

2

Project Timeline

ENGAGEMENT

May 2016
- Meetings with key stakeholders, Vancouver Park Board, and Disabilities Advisory Committee

Jun 2016
- Public open house to gather feedback and help identify challenges and opportunities

ANALYSIS & DESIGN

Jun 2016
- Review and incorporate feedback into design

Jun/Jul 2016
- Proceed into detailed design with approved concept

PERMITTING (2017-2018)

2017/2018
- Obtain regulatory approvals including from Fisheries and Oceans Canada

2017/2018
- Obtain development permit

2017/2018
- Obtain building permit

TENDER & CONSTRUCTION

Oct 2019
- Contractor commerce work

Oct/Dec 2019
- On-site construction

Dec 2019
- New dock facility in operation

CITY OF VANCOUVER | GREENEST CITY

3

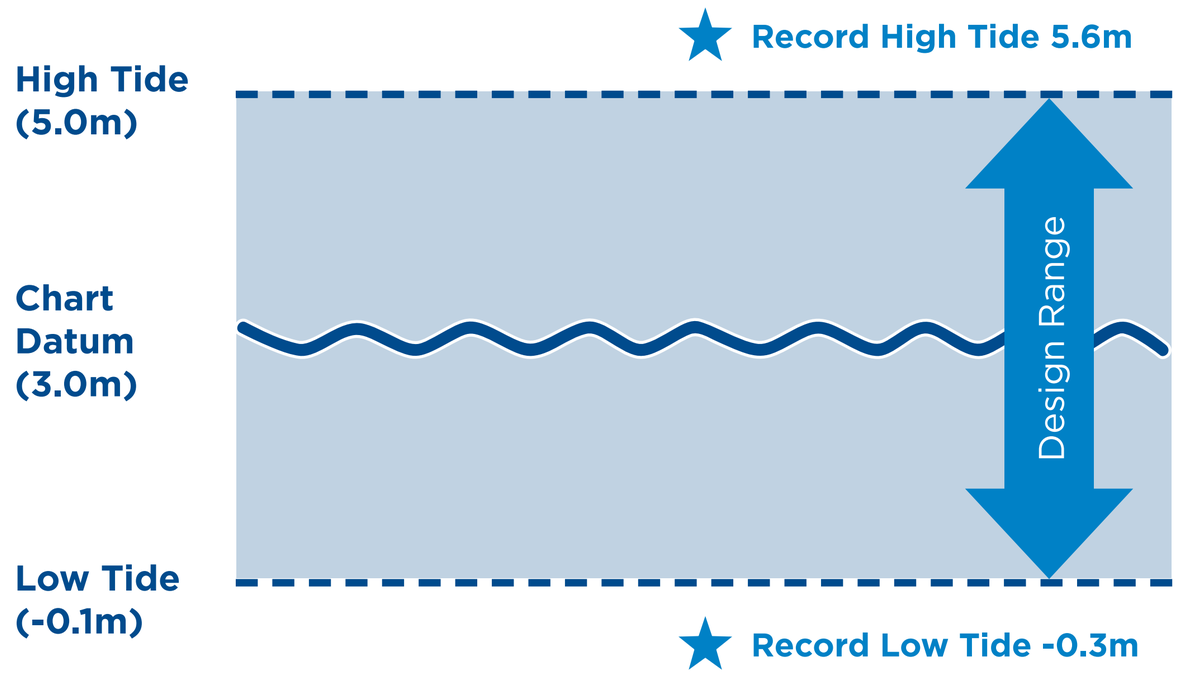
Project Challenges and Constraints

Restrictive Waterlot Boundaries

The City of Vancouver leases the waterlot from the Province, within which the public docks must be constructed.

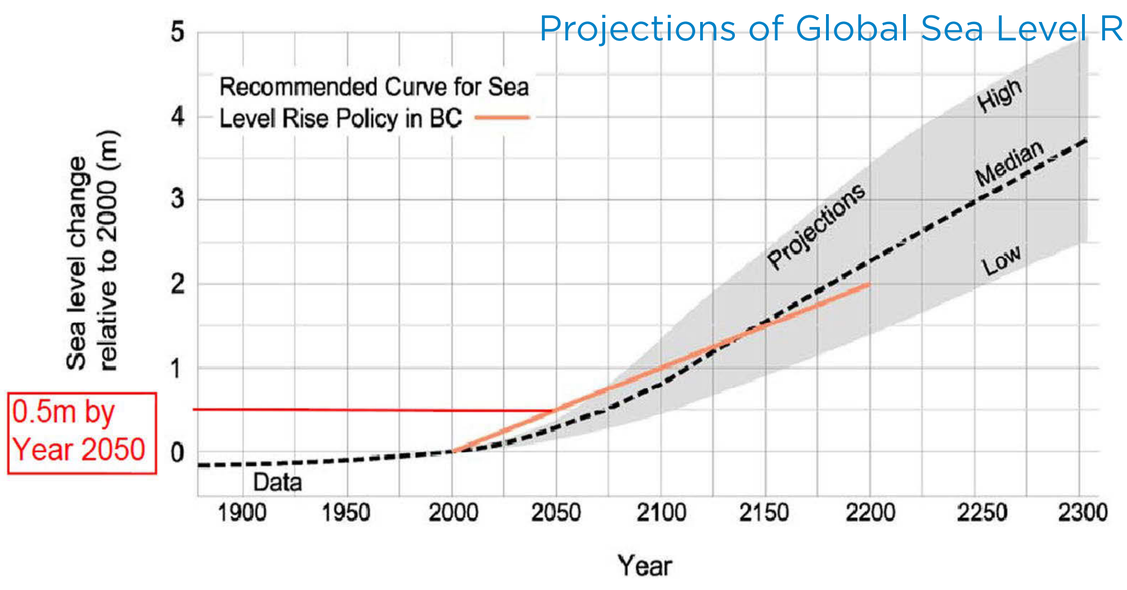
One of the main site challenges is the small size of the water lot boundary. The dimensions of the water lot often dictate the orientation of the dock float and use of zig-zag gangways instead of straight runs in the design.

Large Tide Range



False Creek experiences a 5.1m tidal range between the high tide and low tide elevations. During low tides, the existing dock presents accessibility challenges due to the steepness of the gangway.

Sea Level Rise



The BC Ministry of Environment Climate Change Adaptation Guidelines for Sea Dikes and Coastal Flood Hazard Land Use states "Sea level rise is predicted to be moderate in the period from 2010 to 2025. However, the rate is predicted to increase more quickly in the period leading up to 2100, and then continue to increase steadily." The floating dock will be designed with the provision to allow adjustments for the predicted sea level rise based on the design service life of the dock structure.

Grounding

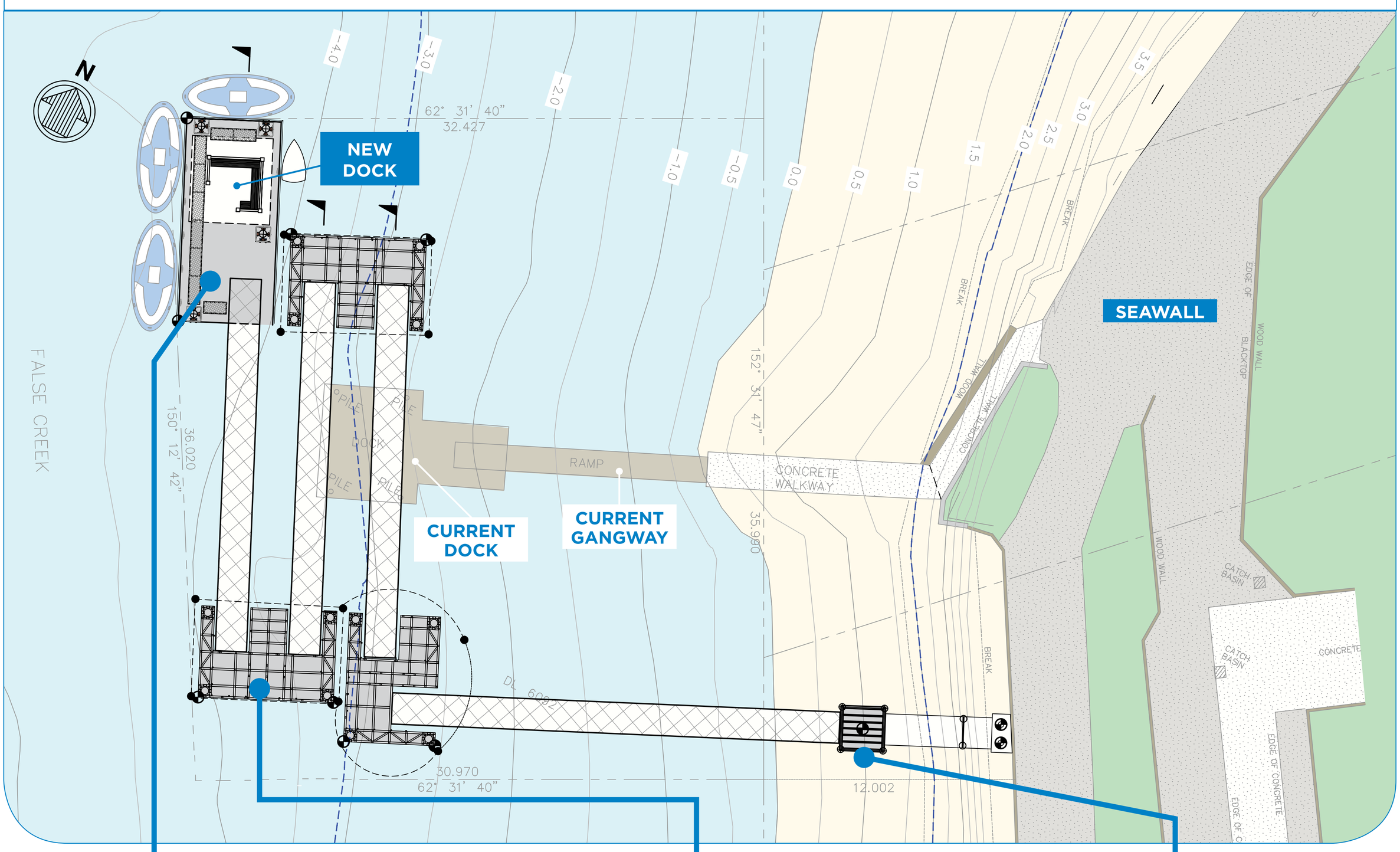
The existing Aquatic Centre dock site is located in a beach area with relatively shallow water depth. It may also be susceptible to some sediment deposits slowly over time by tidal processes. During very low tides, portions of the existing dock hit ground (i.e. dock float is in contact with the seabed floor), which affects ferry operations.

4

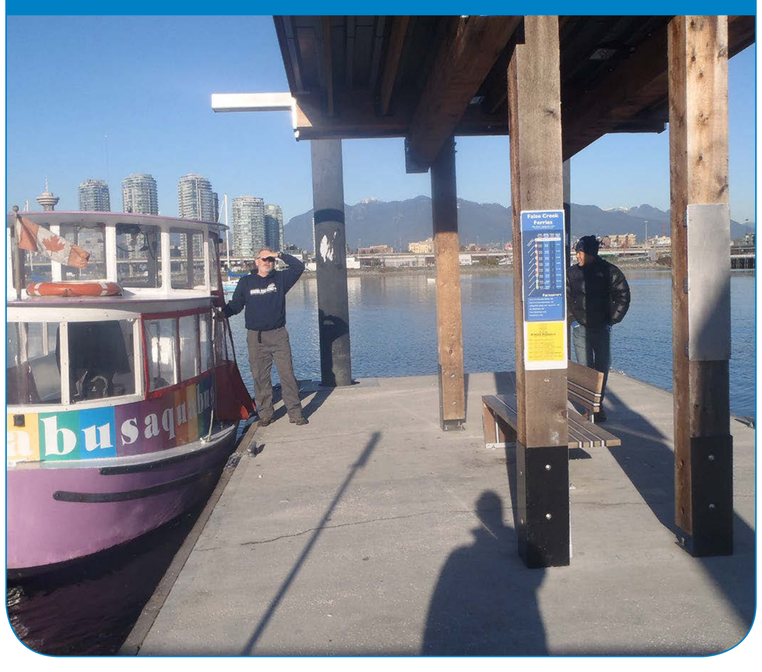
New Dock Design

Proposed New Aquatic Centre Dock Concept

The new Aquatic Centre dock design is a compound gangway system connected to a floating aluminium dock. A compound gangway system consists of a combination of gangways, fixed platforms and floating platforms. The elevations of the floating platforms vary with water level, with a minimum elevation limited by a support collar underneath the platform. This feature restricts the gangway from becoming steeper than the maximum design slope of 8.3%.

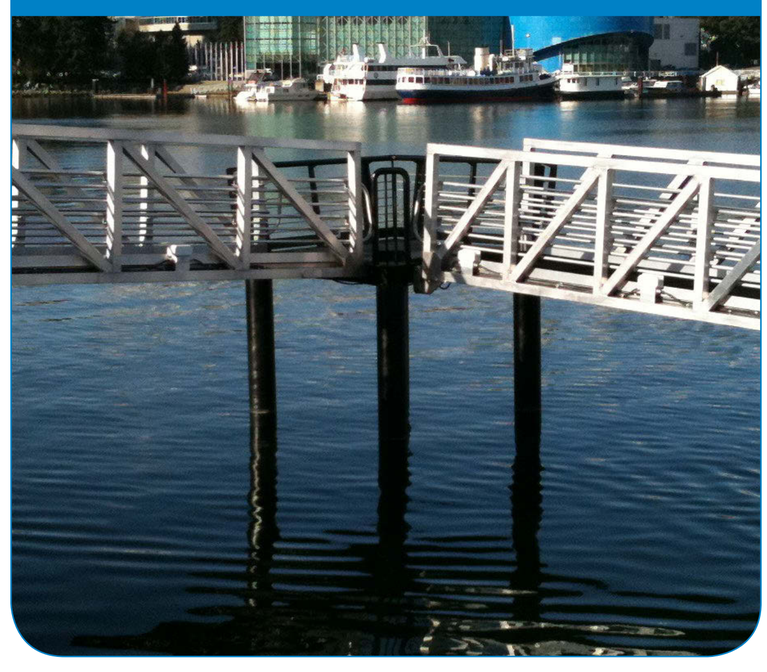


Example Ferry Dock



Example Floating Platform

Example Fixed Platform

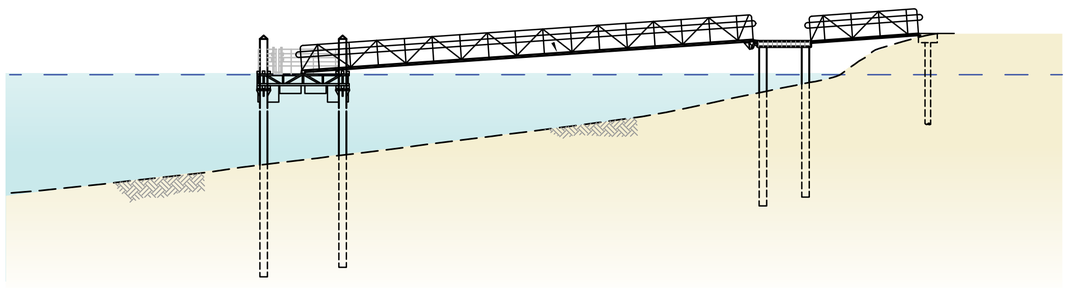


CITY OF VANCOUVER | GREENEST CITY

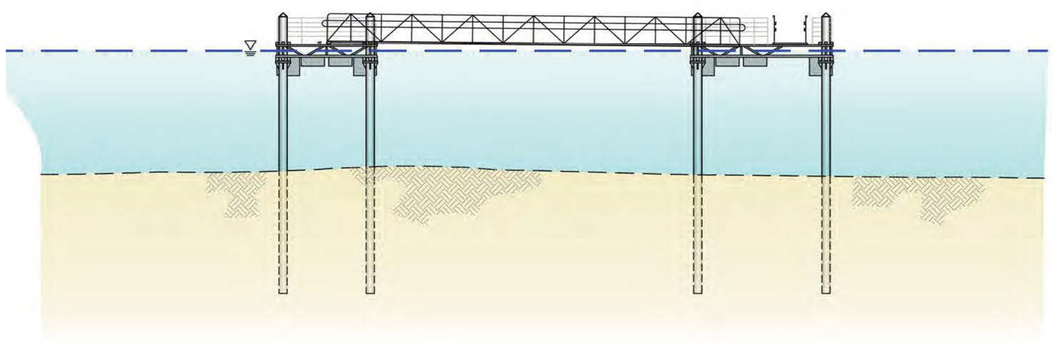
5

New Dock Design

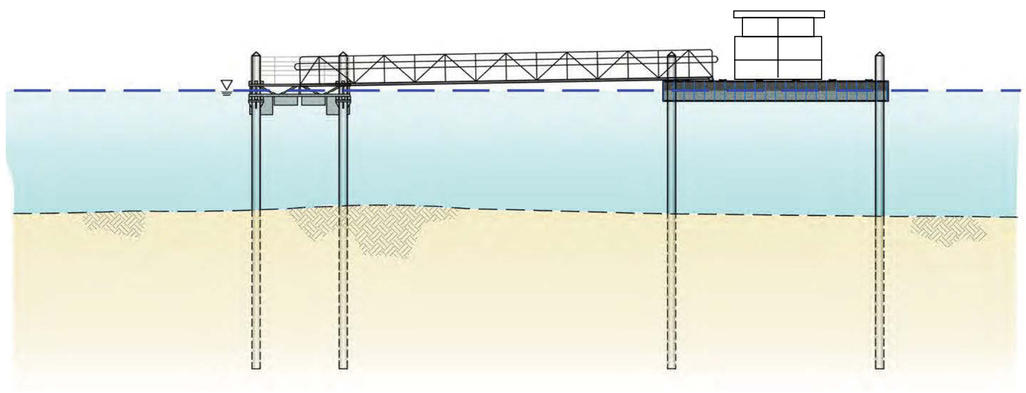
Gangway Slopes Under High Tide



A — SECTION

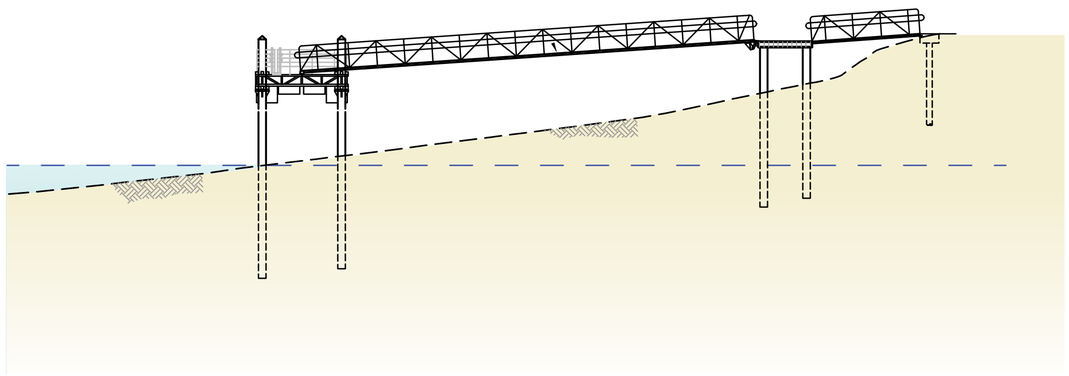


B — SECTION

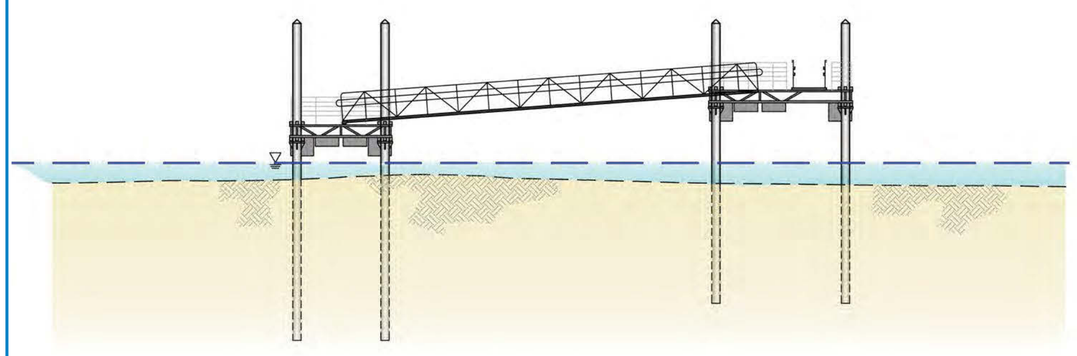


C — SECTION

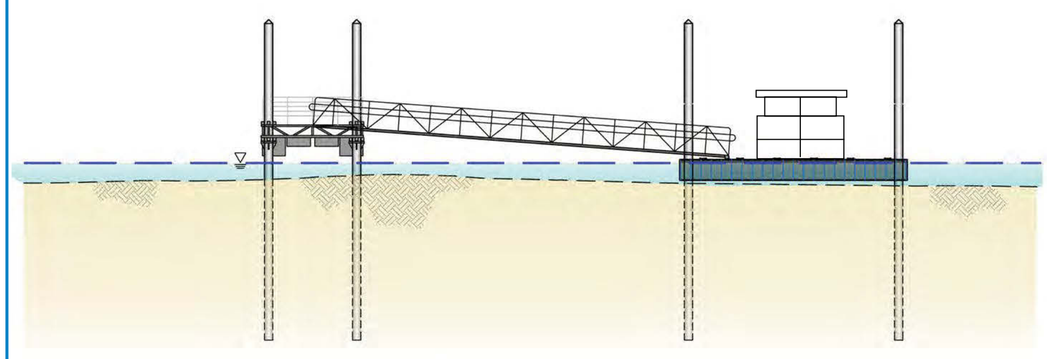
Gangway Slopes Under Low Tide



A — SECTION



B — SECTION



C — SECTION

Example Compound Gangway at David Lam Ferry Dock

CITY OF VANCOUVER | GREENEST CITY

6

New Dock Features

A variety of design features will help improve accessibility for users of all ages and abilities.

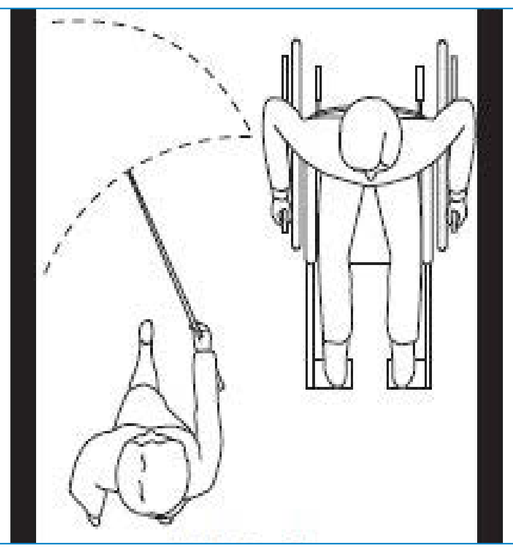
Maximum 1:12 (8.3%) Gangway Slope

High Contrast Signage

Black / Yellow	Black / Yellow
Black / White	Black / White
Black / Orange	Black / Orange
Blue / White	Blue / White

Non-Climbable Gangway Railings

Minimum Gangway Width of 1.5m



Ferry Shelter with Bench

Slip-Resistant Surfaces

Detectable Warning Surfaces

Low-Energy LED Lighting