

# Nanaimo Waterfront Walkway Project Summary

2018-DEC-17





# Today

- Project Overview
- Community Engagement
- Alignment and Route
- Priority Projects
- Next Steps

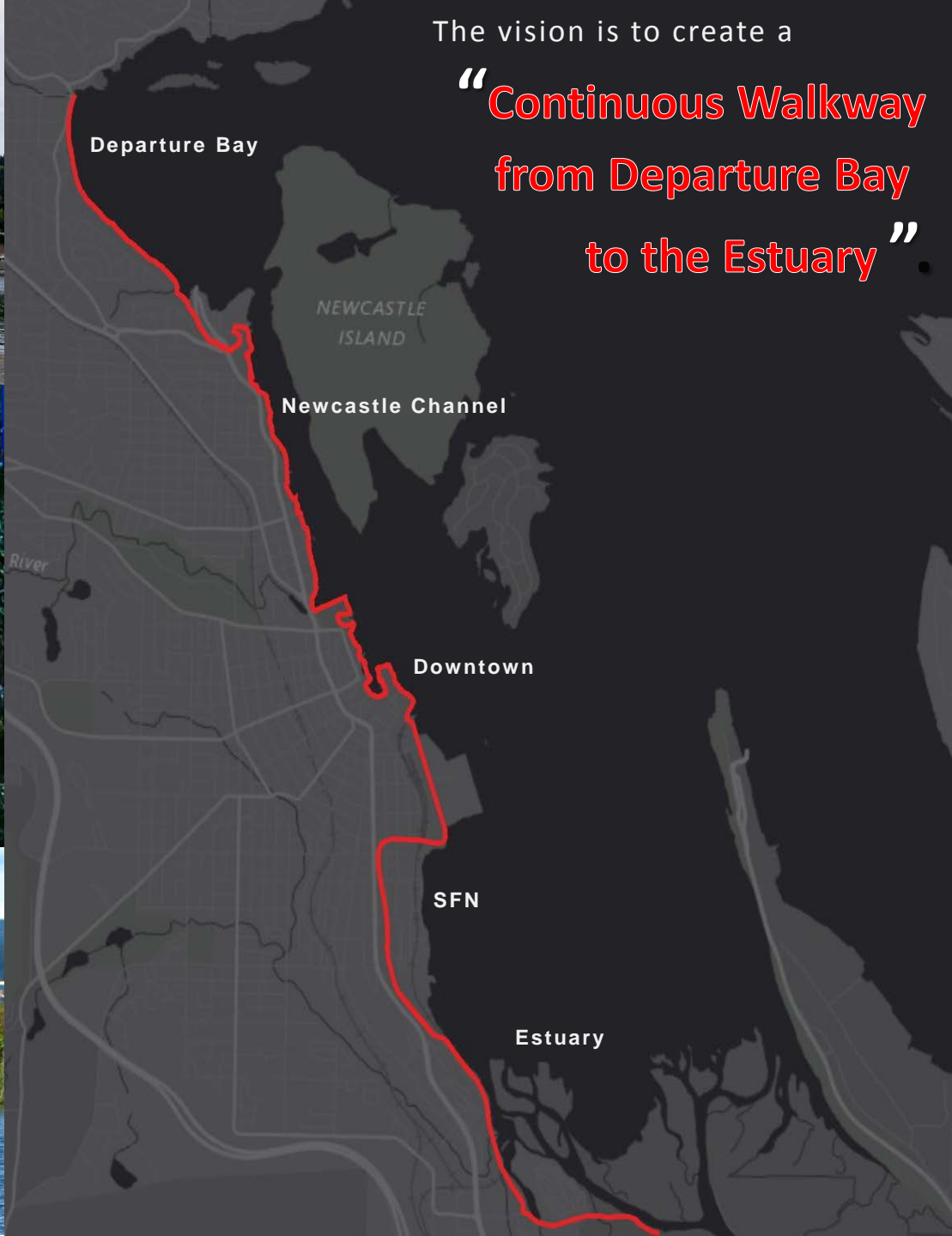


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# Goals & Objectives

- Create a continuous, uninterrupted & accessible waterfront trail/connection from Departure Bay to the Nanaimo River Estuary
- Support businesses that rely on the waterfront for marine industries, transportation connections, entertainment & tourism
- Enhance public access & use of the waterfront walkway
- Protect view corridors to the waterfront
- Protect & enhance marine habitat





# Background Research

- Review of supporting policy documents
- Review of previous plans
- Prepare overview reports:
  - Environment
  - Geotechnical
  - Archaeological
- Consult Stakeholders

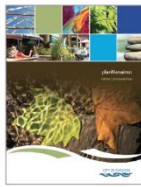
## Supporting Documents



TRAILS, RECREATION  
AND CULTURE  
MASTER PLAN  
(2005)



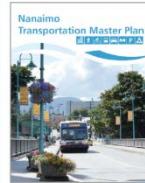
TRAIL  
IMPLEMENTATION  
PLAN  
(2007)



PLANNANAIMO  
(OFFICIAL  
COMMUNITY PLAN,  
2008)



SOUTH DOWNTOWN  
WATERFRONT  
INITIATIVE  
(2013)



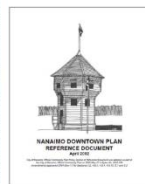
NANAIMO  
TRANSPORTATION  
MASTER PLAN  
(2014)



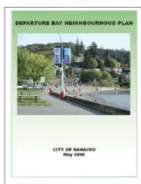
STRATEGIC PLAN  
(2016-2019 UPDATE)



CHASE RIVER  
NEIGHBORHOOD PLAN  
(1999)



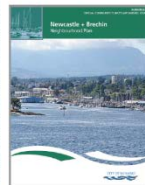
DOWNTOWN PLAN  
(2002)



DEPARTURE BAY  
NEIGHBORHOOD PLAN  
(2008)



SOUTH END  
NEIGHBORHOOD PLAN  
(2010)



NEWCASTLE  
AND BRECHIN  
NEIGHBORHOOD PLAN  
(2011)



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# Community Engagement

- Council provided the vision of creating a continuous waterfront walkway from Departure Bay to the Estuary.
- Details, such as what the walkway may look like, how it would be used, and what sections should be priority, were left to the public.
- We reached out to the community through:
  - **6 Open Houses** (over 1,400 attendees)
  - **3 Public Surveys** (over 2,600 respondents)
  - **1 Design Workshop** (over 25 community participants)



# Open Houses #1-3

- May 17 & 20, 2017 at Kin Hut
- May 18, 2017 at Maffeo Sutton
- Presented the overall concepts to over 700 community members who attended the three open houses
- Approximately 1,900 residents participated in the initial survey





# Survey #1 – Key Findings

Majority of respondents want Sections 1 and 2 developed first



**89%** of respondents want new sections built before upgrading existing sections

In reviewing the comments, **six key themes** were identified:

- Signage, pavement markings, public education,
- Modes and uses,
- Amenities,
- Parking,
- Environment
- Accessibility



# Design Workshop

- June 22, 2017 at the VICC
- Invitees included:
  - Council
  - Snuneymuxw First Nation
  - Government agencies
  - Business Owners
  - Neighbourhood Associations
  - Special Interest Groups
- The public was invited to attend after the workshop for information sharing and additional input
- We obtained input on:
  - vision,
  - route alignment,
  - walkway treatments and design, priorities, and
  - other items important to attendees





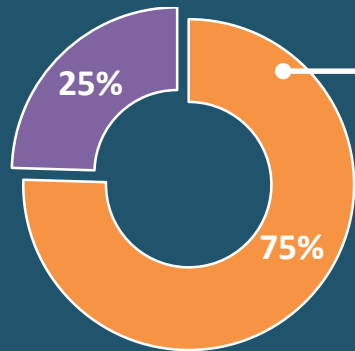
# Open Houses #4-5

- September 28 & 30, 2017 at Maffeo Sutton
- Draft plans and details were presented to ensure the material was consistent with the previous feedback received
- Approximately 700 residents participated in the second survey



# Survey #2 – Key Findings

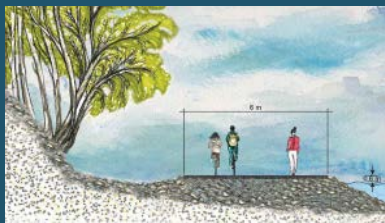
**82%** of respondents strongly support the development of the waterfront walkway



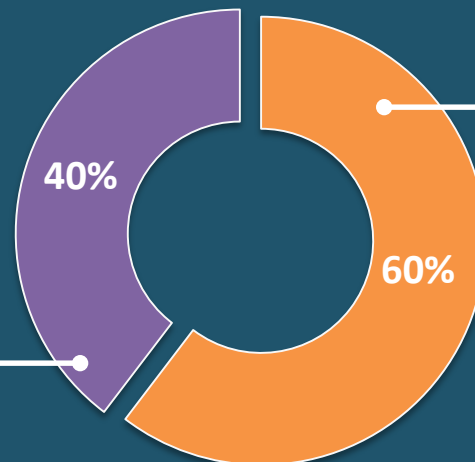
**75%** of respondents agree that Section 1 (Departure Bay to BC Ferries) should be the top priority for development

Out of the 25% opposed, almost half identified Section 2 (BC Ferries to Millstone River) as the top priority.

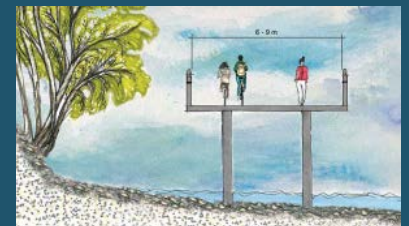
We presented two options for Section 1 (Departure Bay to BC Ferries):



40% of respondents prefer on- beach path option



60% of respondents prefer elevated boardwalk option





# Open House #6

- June 5, 2018 at Maffeo Sutton
- Preliminary designs for the section from BC Ferries Departure Bay Ferry Terminal to White Eagle Terrace and for a section in the South Downtown Waterfront were presented to ensure the designs addressed the community's goals and gather input on how the design could be improved.
- Approximately 315 residents participated in the third survey



# Survey #3 – Key Findings

**50%** of respondents participated in previous waterfront walkway public consultation.

**50%** of respondents represented new & first time feedback.

**90%** of respondents support how the Northfield Creek 7.2m wide elevated walkway could look.

In reviewing the comments, **six key amenities** were identified:

- Washrooms
- Water Fountains
- Vendors
- Garbage / Recycling Cans
- Beach Access / Access Points
- Emergency Phones / Features





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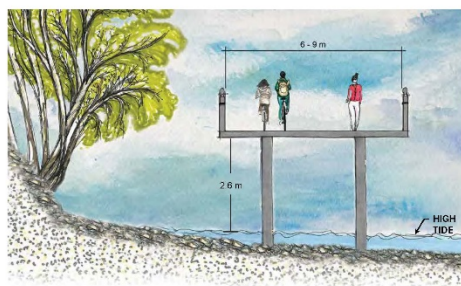


# SECTION 1

## Departure Bay to BC Ferries Terminal



### Cross Section Options



Elevated Boardwalk

#### COMPARING THE OPTIONS FOR CILAIRE SECTION

Elevated Boardwalk	Beach Access	Raised On-Beach Path
Limited	Protection from Cilaire Bluff	Unrestricted
Best	Environmental Impact	Good
Low	Built for Sea Level Rise	Higher
Yes	Walkway Lighting	No
Yes	Accessible During Storms	No
Yes	Capital Cost	
\$15.5M	see plan above for conceptual cost breakdown	\$4.5M
\$	Maintenance Costs	\$\$



Raised On-Beach Path

### Issues

City to work with property owners to secure riparian rights

On-beach path to be offset from toe of Cilaire Bluff to protect path and users from instability and erosion of bluff

### Considerations

Walkway to be consistent with goals and objectives of Departure Bay Neighbourhood Plan

Elevated boardwalk option to be offset from RDN sanitary sewer to avoid disturbance to sewer when installing piles

Existing path at north end and beside BC Ferries can be improved to full width standard when future use warrants

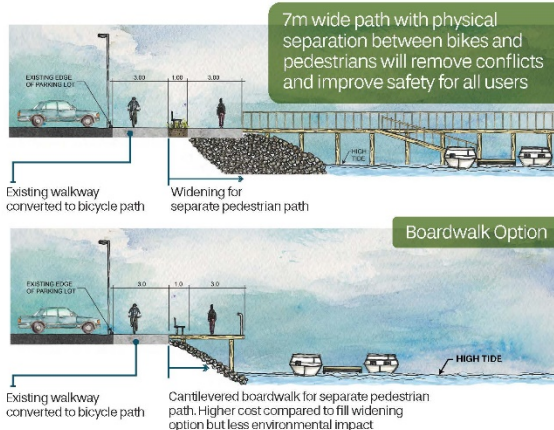


## SECTION 2

# BC Ferries Terminal to Millstone River



## Cross Section Options



### 1 Narrow Bridge over Millstone River



Replace existing bridge with wider structure to accommodate multi-use path

### 2 Nanaimo Shipyard



Viewpoints and interpretive signage to connect with and celebrate the shipyard's historical significance

### 3 Queen Elizabeth Promenade



Promenade to be widened in the future to provide full width standard and additional amenities when future use warrants

### 4 Commuter Cyclists on Stewart Ave



Waterfront Walkway is intended for recreational slow-speed cycling only. Provisions on Stewart Ave for commuter cyclists to be coordinated with Province and Nanaimo Transportation Master Plan

## Issues

Near-term goal is to construct missing sections of pathway to provide continuity between BC Ferries and Downtown Waterfront. Long-term goal is to improve existing sections to full width standard

City of Nanaimo and Nanaimo Yacht Club to widen existing walkway by 2019

Path design and construction to ensure continued operation of existing boatyards and other active businesses

## Considerations

City to work with NPA and property owners to identify location and create public washroom facility. City and Nanaimo Port Authority will coordinate maintenance and liability to ensure consistent approach

Include signage to provide good wayfinding throughout, particularly during phasing of build-out. Walkway to be consistent with goals and objectives of Newcastle Brechin Neighbourhood Plan

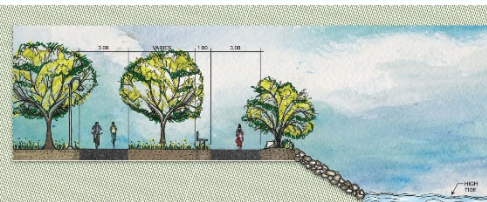


# SECTION 3 & 4

## Maffeo Sutton Park to Cameron Island



### Cross Section Options



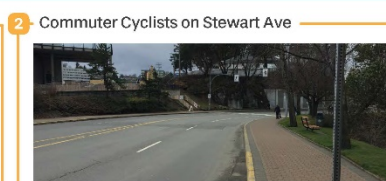
**Maffeo Sutton Section**  
Waterfront Walkway Improvements will be coordinated with Maffeo Sutton Park Improvement Plan



7m boardwalk in Boat Basin is an extension of the existing cantilevered boardwalk  
3m bi-directional on-road cycle track on Front St. to be accommodated by reducing traffic lanes



Heavy pedestrian traffic and narrow walkway along shorefronts results in potential user conflicts. Cyclists are required to dismount and walk between Pacifica and Boat Basin



Provisions on Front St for commuter cyclists accommodated by reducing traffic lanes



Complete Missing Boat Basin Section

### Issues

Congested area with businesses and narrow walkway results in potential conflicts. Cyclists required to dismount and walk between Pacifica and Boat Basin.

Shoreline infill area requires geotechnical measures to strengthen ground and reduce potential earthquake damage where boardwalk is constructed.

### Considerations

Coordinate walkway improvements with Maffeo Sutton Park Improvement Plan.

Detour around BC Ferry terminal and potential to improve walkway through terminal property with future terminal improvements to be considered by BC Ferries.

Potential to provide additional and enhanced amenities in downtown area to reflect the high value of the public space.

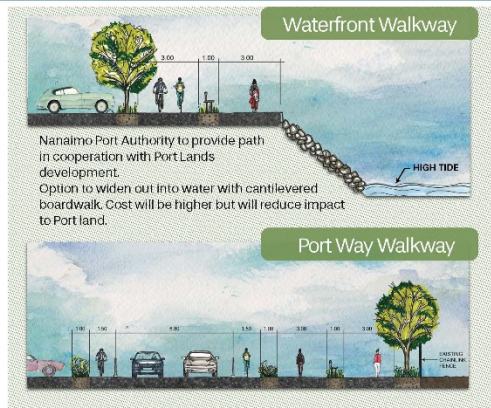


# SECTION 5

## Cameron Island to South Downtown Waterfront



### Cross Section Options



#### 1 BC Ferries Access



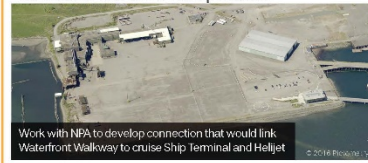
#### 2 Waterfront Walkway



#### 3 Stakeholder Coordination



#### 4 Waterfront Section: Connect to Tourism & Transportation



### Issues

Nanaimo Port Authority to connect walkway to NPA land and cruise ship terminal / Helijet  
Coordinate walkway with Front Street extension

Coordinate with BC Ferries to develop safe walkway crossing through Gabriola Ferry Terminal as part of future terminal upgrades

Design of a safe walkway across tracks at rail loading ramp required and to be coordinated with Front Street extension and Rail Authority

### Considerations

Nanaimo Waterfront Walkway alignment to be coordinated with Secondary Access Study and Front Street Extension

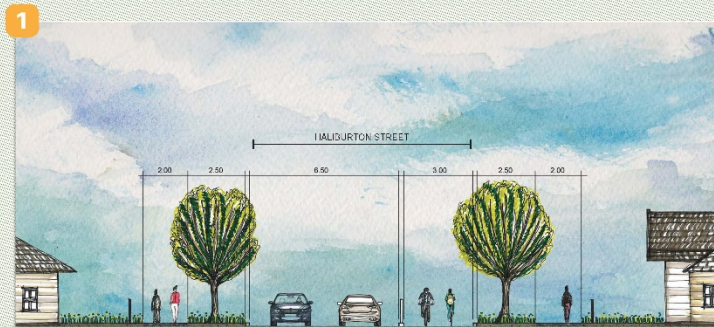


# SECTION 6a

## South Downtown Waterfront to Coastland Wood Industries



### Cross Section Options



On-road Multi-use Path



On-road Multi-use Path  
Constrained Corridor

### Issues

Narrow right of way and steep slopes on east side of Haliburton St. constrains the design of the multi-use path. Reallocation of road space needed to accommodate path. 4m path may be reduced to 3m locally where space is highly constrained.

Crossing of path across Coastland Wood Industries entrance to consider conflicts with industrial truck traffic.

### Considerations

Haliburton St. in residential neighbourhood allows opportunity to reallocate space from road to construct multi-use path. Parking lane can be replaced with local parking pull-out bays spaced throughout corridor.

Safe separation between road and multi-use path achieved by physical barrier (i.e., road curb, bollards, raised plantings, etc.).

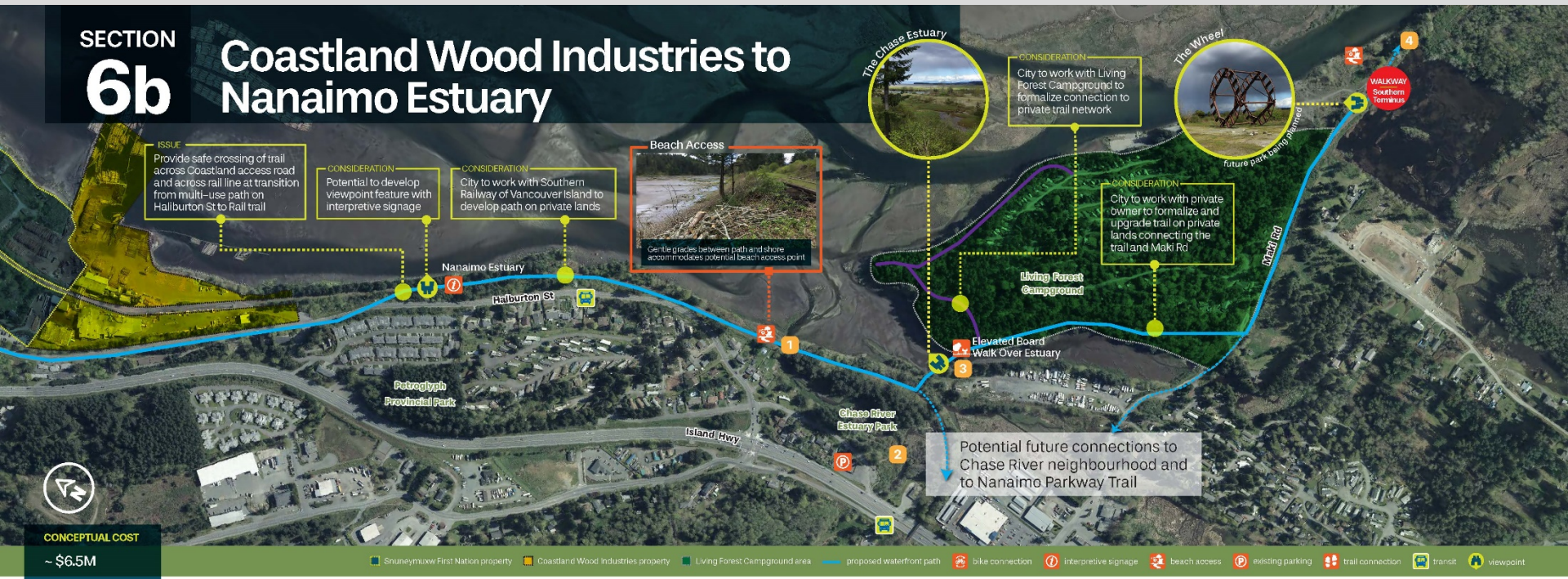
Narrow ROW, driveways, utilities, and truck/transit route provide constraints to pathway width.

Path to link with major goals and objectives of South End Neighbourhood Plan.



# SECTION 6b

## Coastland Wood Industries to Nanaimo Estuary



### Cross Section Options



Width of path may be reduced to 3m locally where constrained by steep slope adjacent to path

Rail Trail



Path Through Forest Area

#### 1 Existing Trestle



New structure required for path access across Chase River

#### 2 Connection to Chase River Estuary Park



#### 3 New Estuary Crossing



#### 4 Potential Connection to IR#4



### Issues

Nanaimo Estuary and Chase River Riparian Zone and Floodplain are home to sensitive fish and wildlife habitat.

### Considerations

Additional viewpoints can be considered to establish view corridors from the path to the estuary.

Separation between rail and trail can be achieved by fence, vertical difference, or vegetated barrier.

Crime Prevention Through Environmental Design (CPTED) principles to be applied to establish a safe and enjoyable environment in the more isolated sections of the path.

Consideration to construct interim path (i.e., narrower gravel path) to facilitate faster implementation of connection to Nanaimo Estuary. Improvements to full width standard to be made when future use warrants.

Path to link with major goals and objectives of Chase River Neighbourhood Plan.



# Today

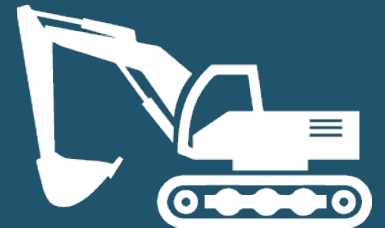
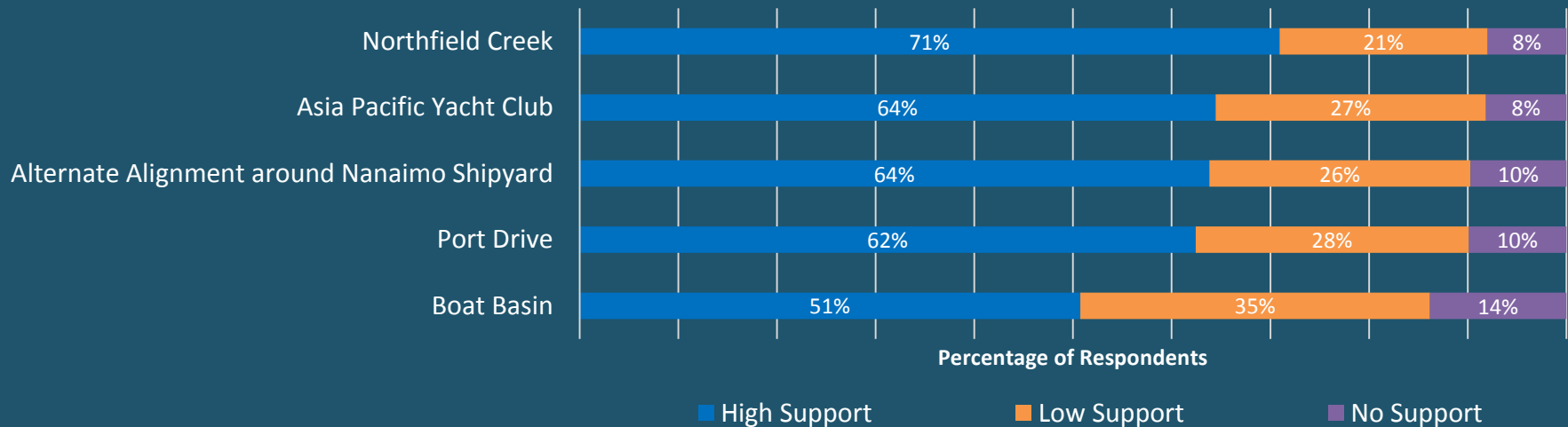
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# Priority Projects

- Council identified 5 projects that could be delivered in the short term
- Goal is to fill gaps or extend the walkway
- We asked the public how they supported each project:



# Implementation Phasing Plan

Year	Segment	Estimated Cost
2018/2019	<ul style="list-style-type: none"> <li>• BC Ferries to White Eagle</li> <li>• 1 Port Drive</li> <li>• Newcastle Channel Gaps</li> <li>• Shipyard Bypass</li> <li>• Boat Basin</li> <li>• Nanaimo Yacht Club Upgrade</li> </ul>	\$3,400,000 \$1,000,000 \$500,000 \$100,000 \$2,000,000 ★ \$1,200,000 ★
2020/2021	<ul style="list-style-type: none"> <li>• White Eagle to Battersea</li> <li>• Battersea to Kin Hut</li> <li>• Gabriola Ferry Terminal Redevelopment</li> </ul>	\$14,000,000 \$500,000 \$ Unknown ▲
2022/2024	<ul style="list-style-type: none"> <li>• Haliburton to Nanaimo River Estuary</li> </ul>	\$9,750,000
2024/2027	<ul style="list-style-type: none"> <li>• Maffeo Sutton Park Upgrade</li> <li>• Georgia Park Upgrade</li> <li>• South Downtown Waterfront Secondary Access</li> </ul>	\$1,250,000 \$Developer Cost ★ \$ With road project
2027+	<ul style="list-style-type: none"> <li>• Widening of interim segments as traffic warrants</li> <li>• Esso and former Lafarge Concrete site</li> </ul>	\$Unknown ▲

▲ denotes Timing is dependent on development

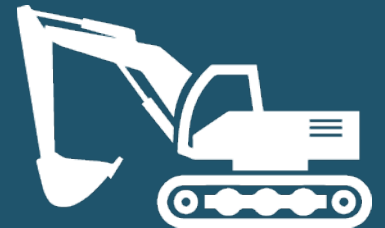
★ denotes cost share with partner





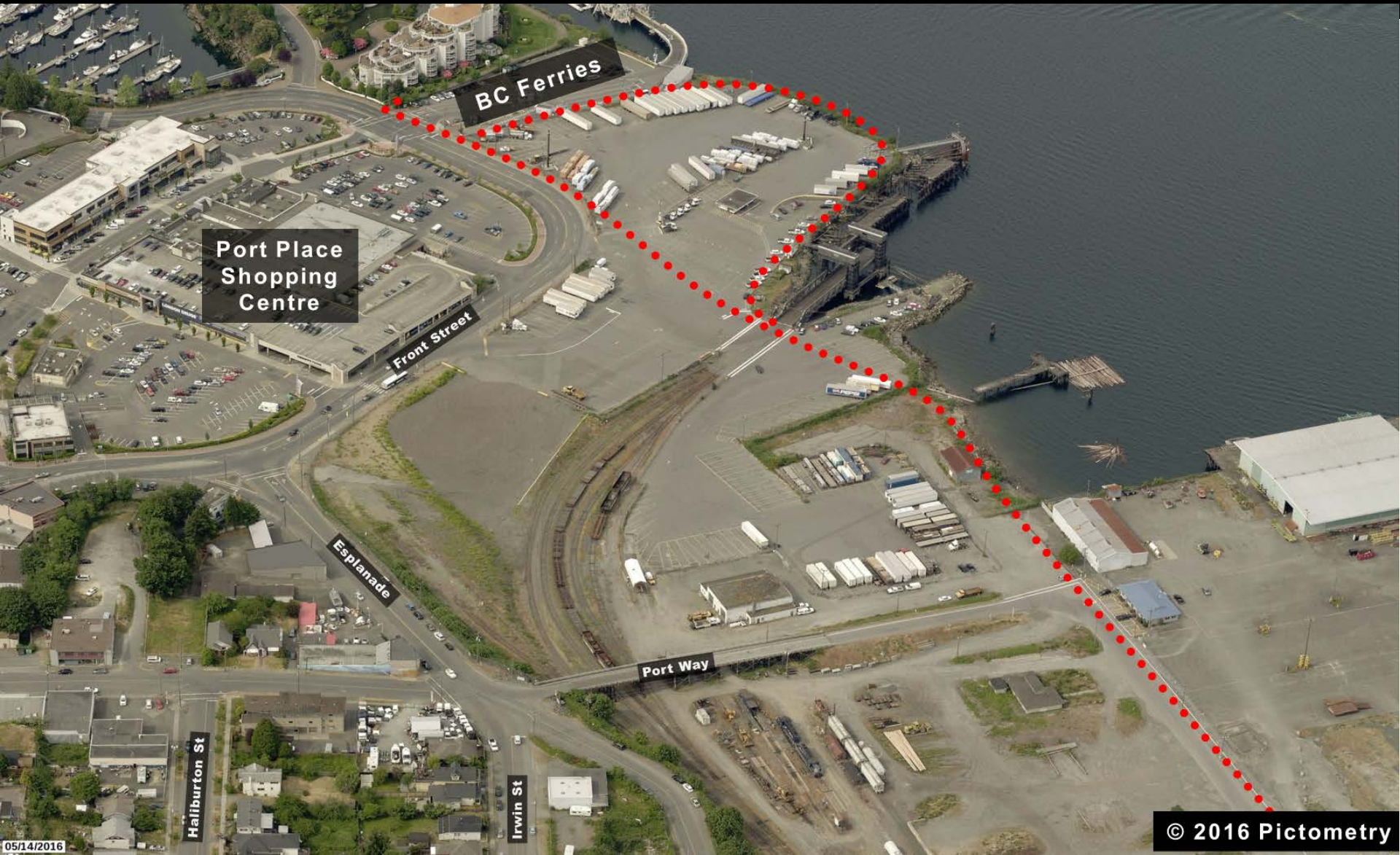
# 2018/2019 Funding Commitment

Quick Win	Budget	Funding Source	Amount Spent to Date
1 Port Drive	\$1,000,000	Gas Tax Grant	\$0
NPA Boat Basin	\$200,000 \$1,350,000 \$650,000	2018 Community Works Gas Tax Grant 2019 Community Works	\$0
Newcastle Channel Asia Pacific	\$50,000 \$500,000	2018 Community Works 2019 Community Works	\$0
Newcastle Channel Nanaimo Shipyard	\$50,000 \$500,000	2018 Community Works 2019 Community Works	\$0
Newcastle Channel Nanaimo Yacht Club	\$125,000 \$671,000 \$579,000	PILTs PILTs Nanaimo Yacht Club	\$0
Northfield Creek	\$131,657 \$1,350,000 \$2,050,000	PILTs Gas Tax Grant 2018 Community Works	\$295,879



# Nanaimo Waterfront Walkway Priority Project – 1 Port Drive

Length = 1,000m





# Preliminary Concept Render





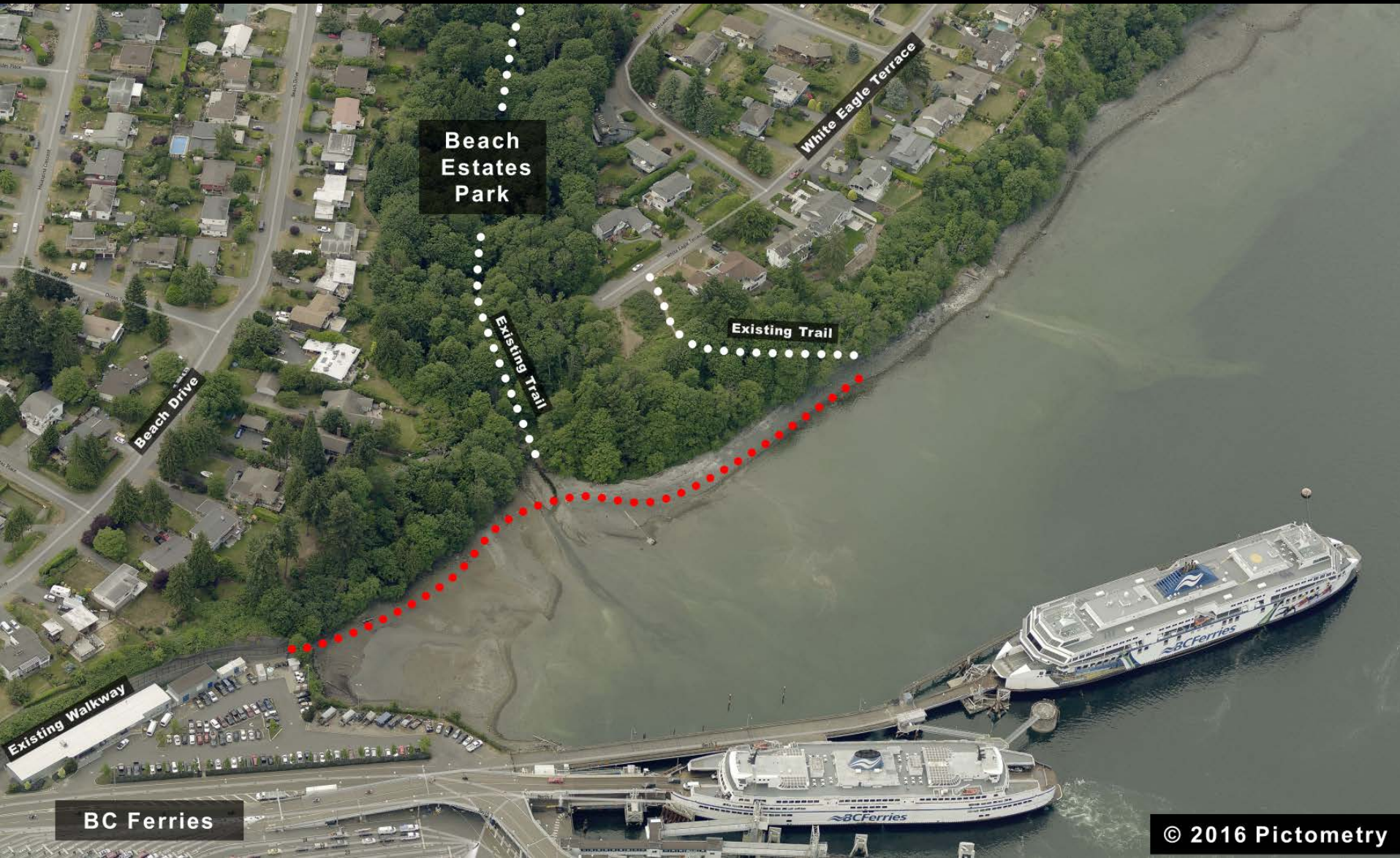


Preliminary Concept Render



# Nanaimo Waterfront Walkway Priority Project – Northfield Creek

Length = 350m







Preliminary Concept Render





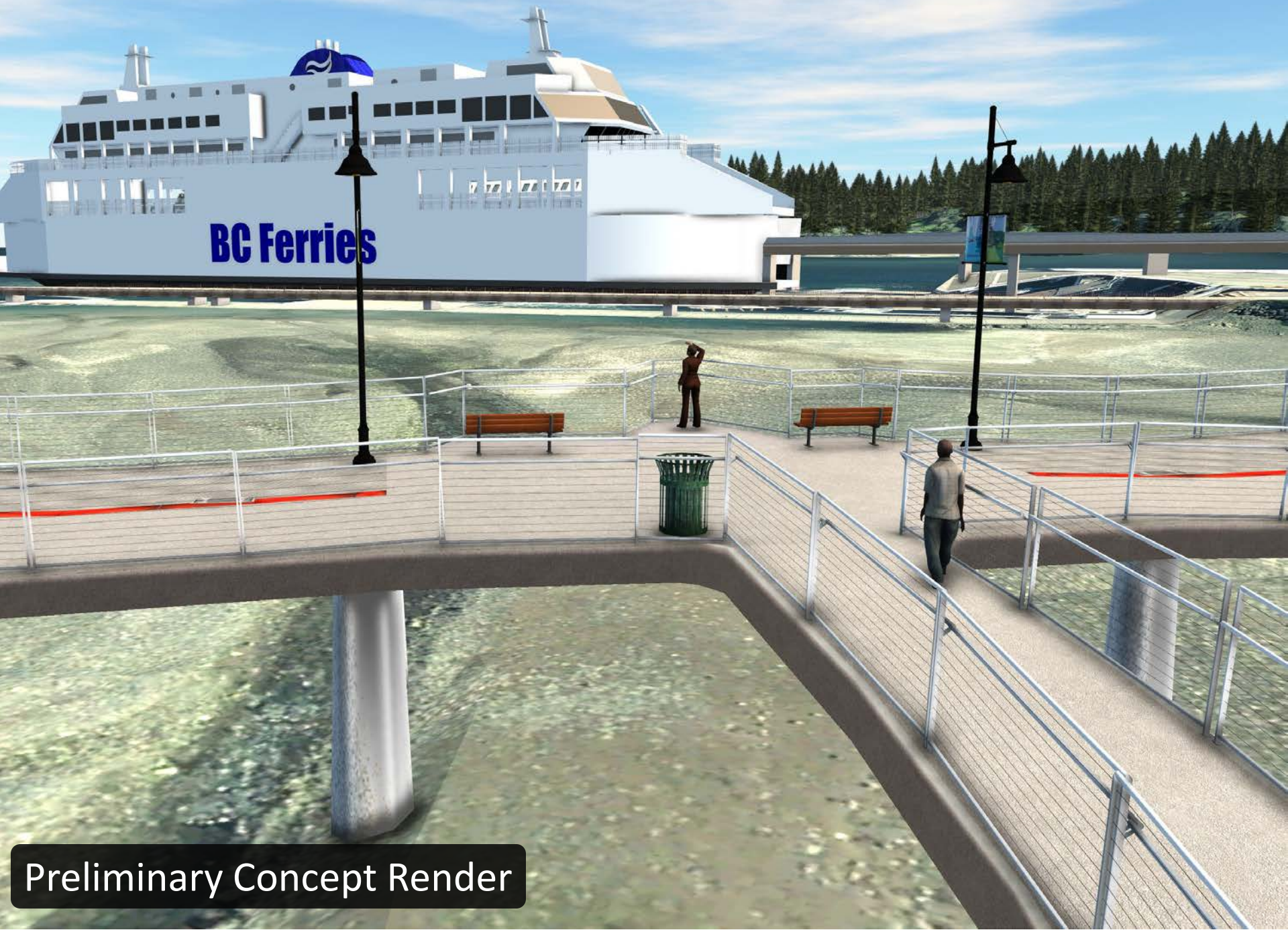
Preliminary Concept Render



# Preliminary Concept Render



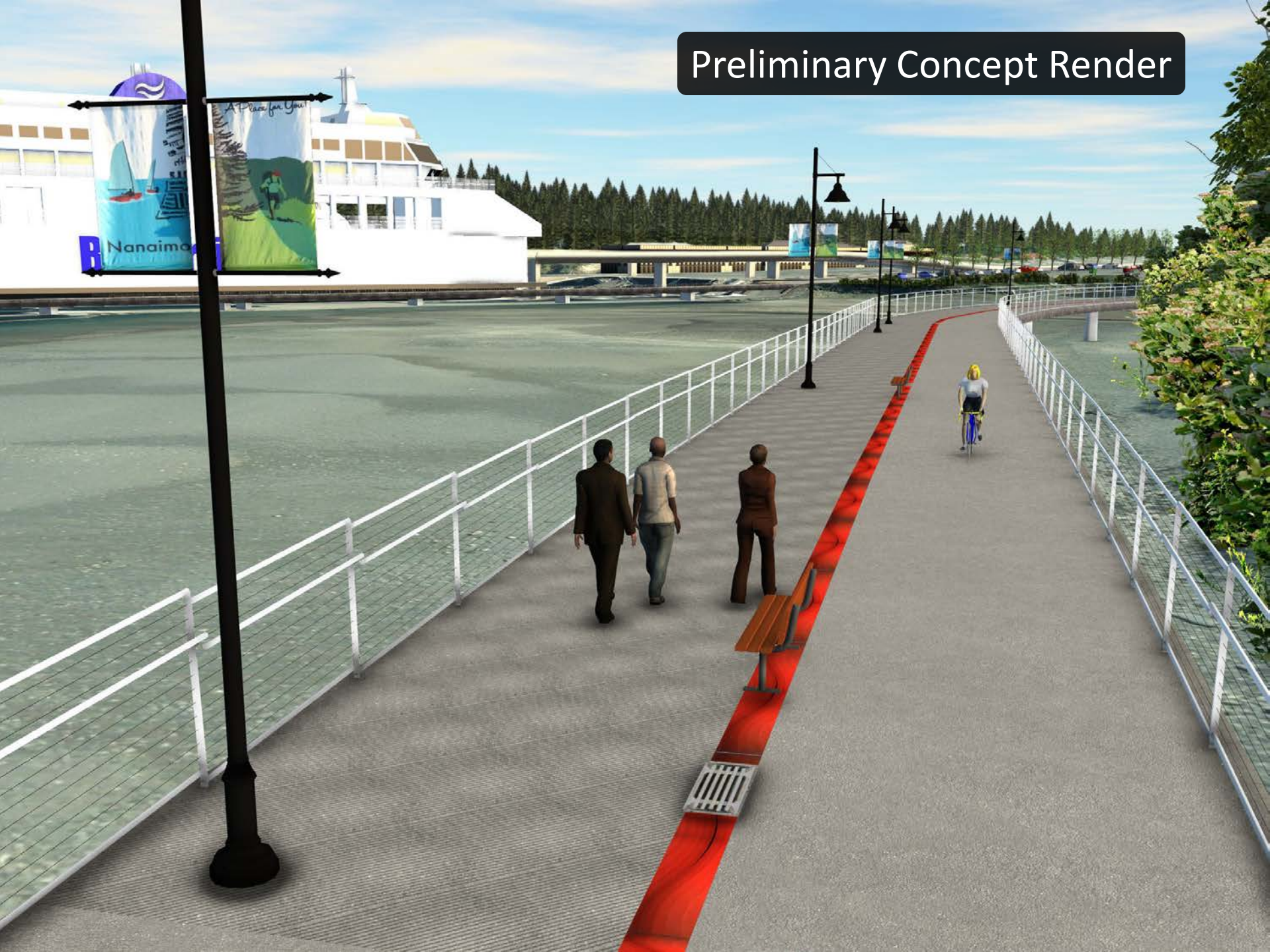




Preliminary Concept Render



# Preliminary Concept Render







**BC Ferries**

Preliminary Concept Render



# Northfield Creek Value Engineering

An Independent Consultant team reviewed current preliminary design details.

**14** ideas were evaluated based on criteria such as:

- Capital Cost
- Traffic & Safety
- Environment
- Constructability
- Operations & Maintenance Costs
- Risk & Associated Costs

**5** ideas were documented as potential for

- Risk Reduction
- Environmental Mitigation & Enhancement

IDEA GENERATION			IDEA EVALUATION									
Northfield Creek Waterfront Walkway			Cost Comparison	Traffic & Safety Issues	Environment	Construction Issues	O&M & R Impacts	Qualitative/Risk Issue	Generate VEP (Y/N)	Design Notes (Y/N)	Lead	Support
City of Nanaimo												
Idea No.	Idea Description	Objectives										
1	Evaluate benefits of timber structural members	Reduce costs	✓		✓	✓	✓		Y		Matt	Ernie
2	Evaluate deck width	Reduce costs	✓	✓		✓	✓		Y		Ernie	Dave
3	Evaluate need for lighting systems and type	Reduce costs	✓		✓	✓	✓	✓		Y	Dave	Ralph
4	Evaluate different superstructure options	Reduce costs, improve constructability	✓			✓			Y		Ernie	Matt
5	Examine alternative railing systems	Reduce costs	✓	✓		✓	✓		Y		Dave	Egils
6	Examine alternative surfacing systems	Reduce costs, improve performance	✓	✓		✓	✓		Y		Ernie	Egils
7	Review structure alignment	Reduce costs, improve constructability	✓			✓			Y		Russ	Ernie
8	Review self-supported construction	Reduce construction risk and costs	✓		✓	✓	✓		Y		Matt	Ernie
9	Review span lengths	Reduce costs, improve constructability	✓			✓			Y		Ernie	Matt
10	Review construction access options	Reduce construction risk	✓		✓	✓			Y		Bill	Matt
11	Review current construction estimate	Reduce pricing risk	✓					✓		Y	Egils	
12	Examine a walkway at toe of slope	Reduce costs, improve constructability	✓		✓	✓			Y		Russ	Bill
13	Examine headland pocket bench	Reduce costs, improve constructability	✓		✓	✓			Y		Dave	Sarah
14	Examine marginal boardwalk option	Reduce costs, improve constructability	✓		✓	✓			Y		Matt	Bill
15	Examine elevation of walkway	Reduce costs	✓	✓		✓	✓	✓		Y	Dave	Russ
16	Review extents of works at White Eagle trail	Reduce costs	✓	✓		✓			Y		Bill	Ralph
17	Review opportunities for habitat compensation	Improve schedule, enhance scope	✓		✓		✓	✓		Y	Sarah	Dave
18	Evaluate substructure options	Reduce costs, improve constructability	✓			✓			Y		Matt	Ernie
19	Review options to meet current budget	Address budget pressure	✓			✓		✓		Y	Ralph	

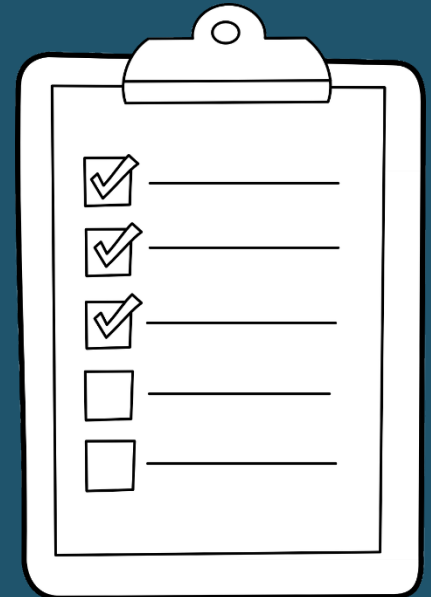
Table 1 – Idea Generation Results



# Northfield Creek Value Engineering

Recommendations include:

- Capital Costs of Elevated Walkway could be reduced with changes to current design.
- Construction access risks with an Elevated Walkway are high and will likely increase construction costs significantly.
- Alternative walkway options are available that could:
  - Significantly reduce capital and construction cost
  - Reduce construction risk
  - Provide greater opportunity for environmental mitigation
  - Provide potential for environmental enhancement





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# Next Steps

- Return to Council with options for Northfield Creek in early 2019.
- Tender 1 Port Drive Waterfront Walkway early 2019.
- Undertake design work for Nanaimo Yacht Club in 2019 with construction in 2020.
- Design of Shipyard Detour in 2019. Construction in 2020.
- Continue to work with BC Ferries on Gabriola Ferry Terminal redevelopment.

