

"A powerful strategy for helping to maintain ecological integrity in human-dominated landscapes, especially with regard to preserving biological diversity and maintaining high-quality water resources" (Smith 1993, Ecology of Greenways)

MAMAM GREEN QUAY WAY

SQUAMISH, BC

PAUL PETERS
CLIENT DISTRICT OF SQUAMISH
COMMITTEE CYNTHIA GIRLING
DOUG PATTERSON
JOE DAHMEN



THE CHIEF

HOWE SOUND

DOWNTOWN

ESTUARY

SQUAMISH RIVER

SMOKE BLUFFS

HWY 99

MAMQUAM RIVER

INITIAL SITE IMPRESSIONS



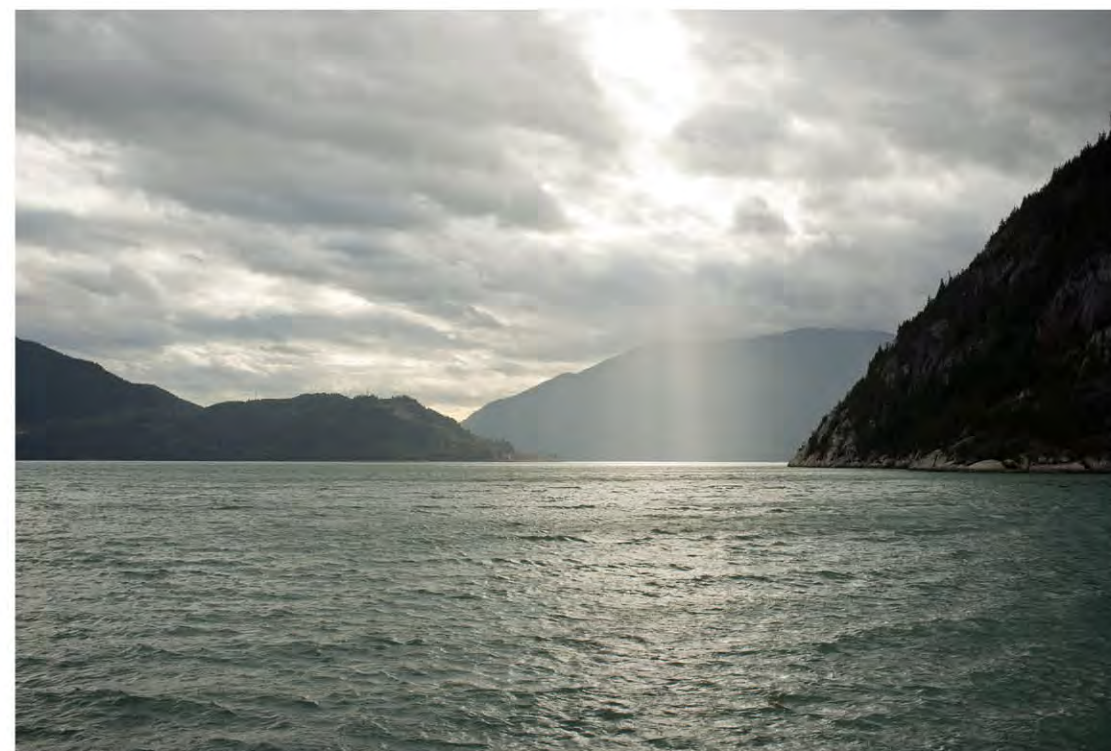
MOUNTAINS MEET OCEAN



INDUSTRIAL PAST



PATTERNS IN THE LANDSCAPE



HOWE SOUND

VIEWS FROM THE SITE



ATWELL PEAK & GARIBALDI MOUNTAIN



THE CHIEF



HOWE SOUND

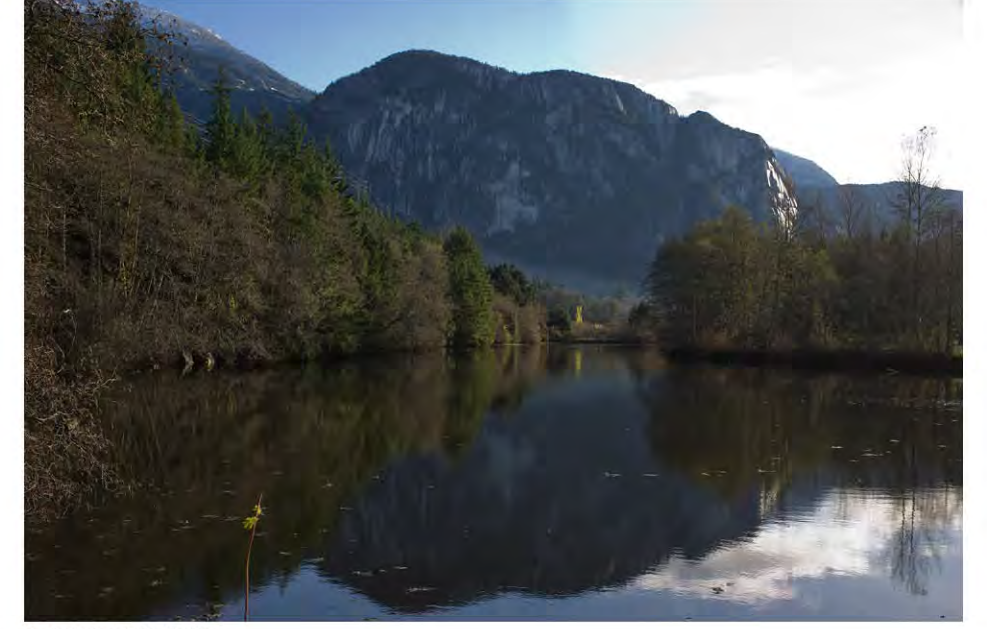
DISCOVERING THE SITE



INDUSTRIAL REMNANTS IN HOWE SOUND



RELATIONSHIP TO WATER



MOMENTS



FRAGMENTED WATERWAYS

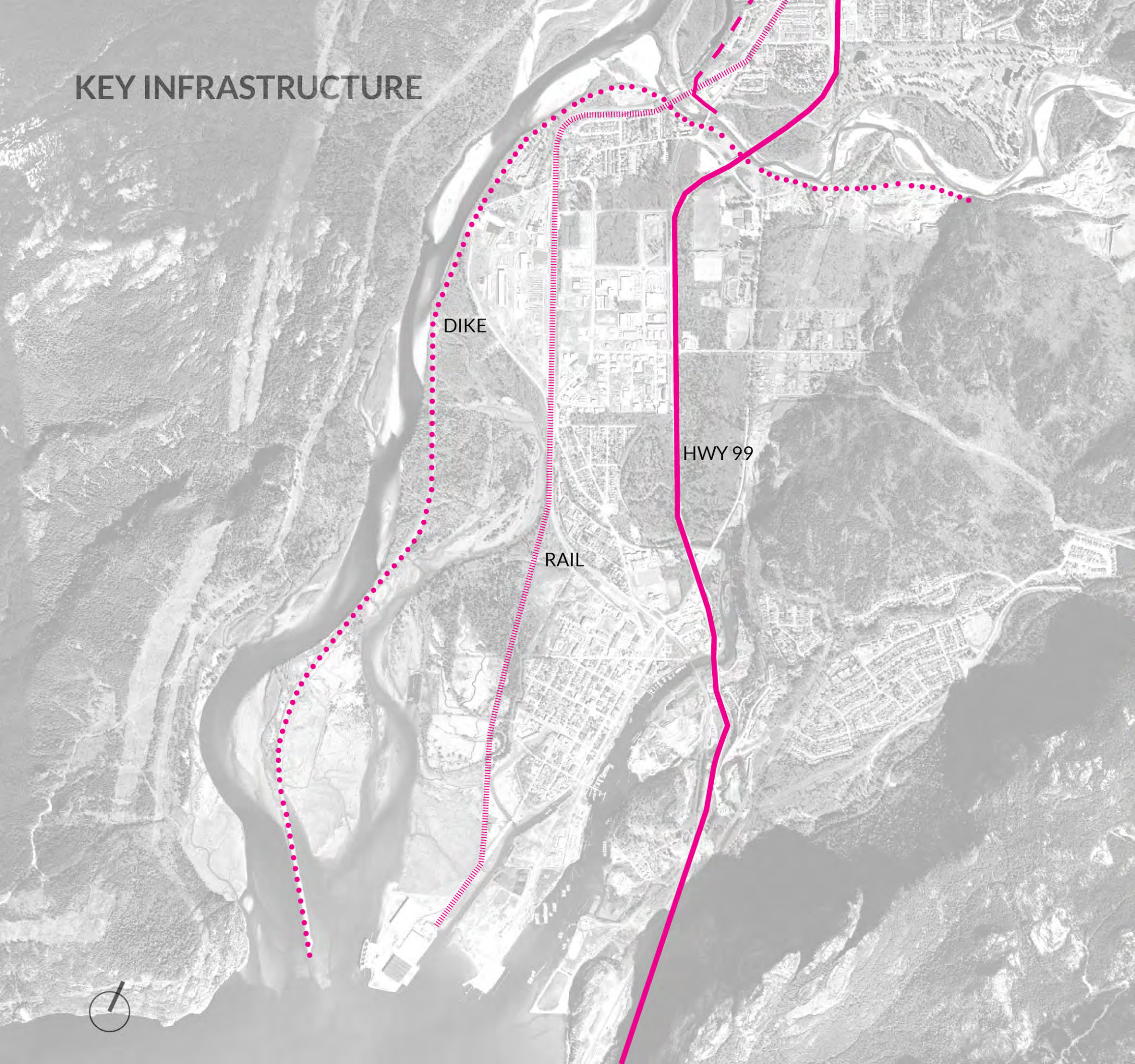


SALMON HABITAT



DISCONNECTIONS BY INFRASTRUCTURE

KEY INFRASTRUCTURE



COASTAL MORPHOLOGY: IMPACT OF INFRASTRUCTURE



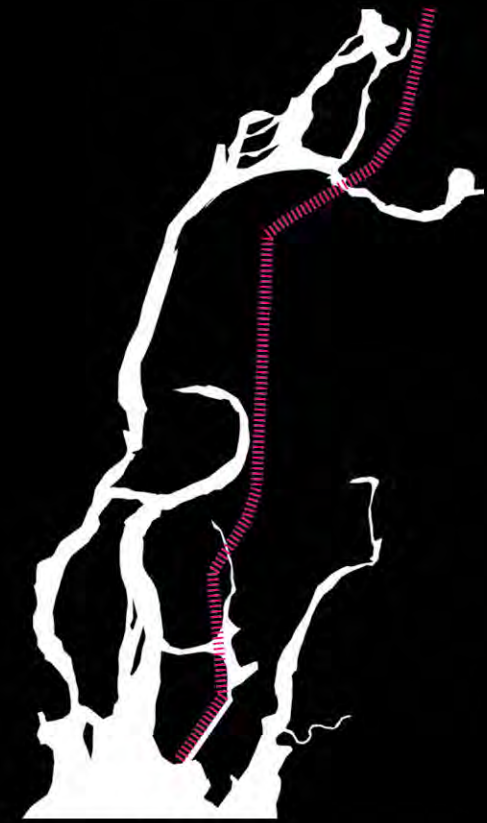
1889



1952



1964



1973



1971



1994



2013



2045

INITIAL ANALYSIS >> 3 PROBLEMS

1

Flooding

Ensure adequate inventories of suitable land and resources for future settlement and employment (2010 OCP Principle)



2

Economic Development

Encourage economic development and the creation of local employment opportunities (2010 OCP Objective)



3

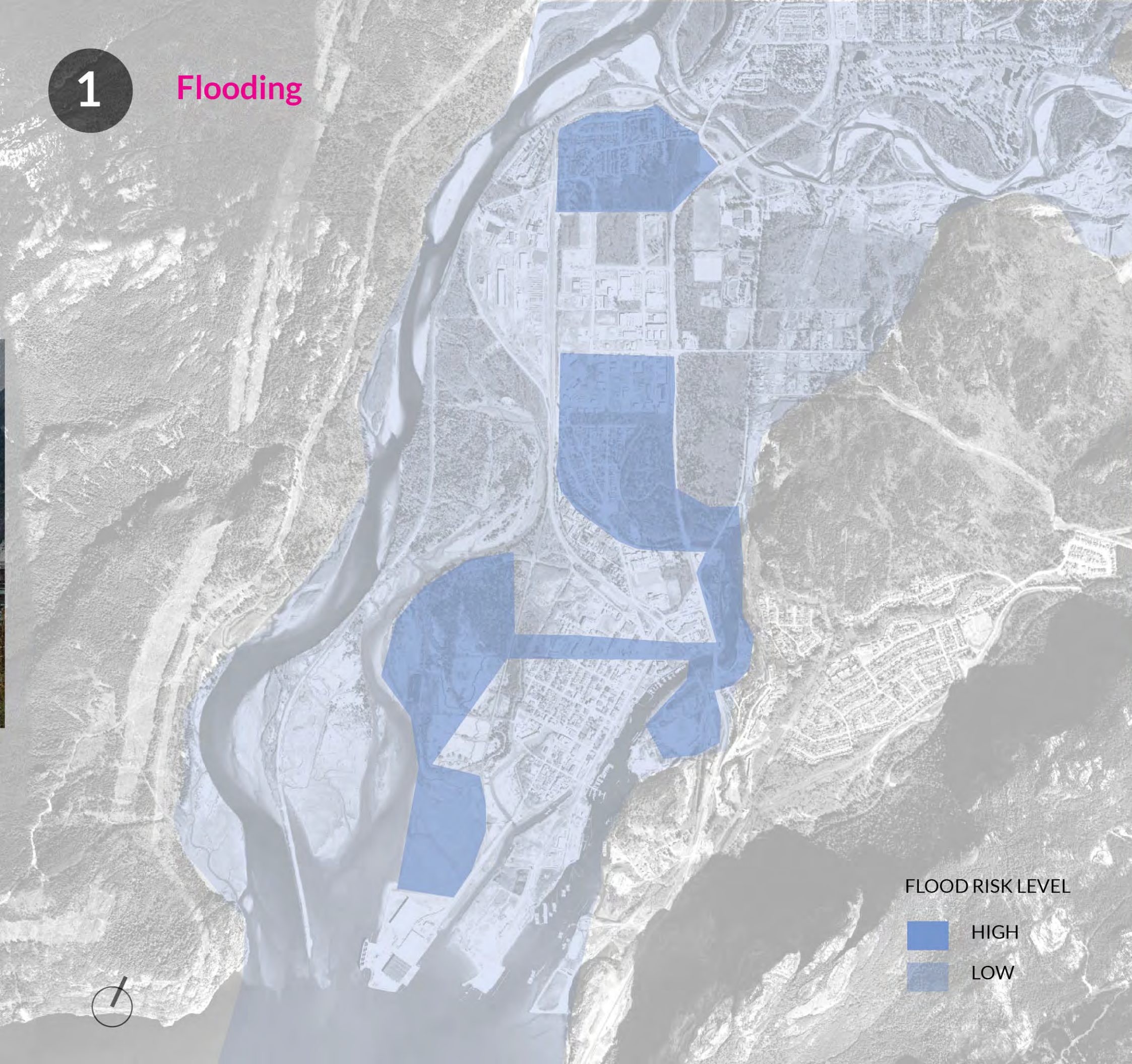
Habitat + People Connectivity

Create complete communities and promote the connections between land and sea activities (2010 OCP Objective)



1

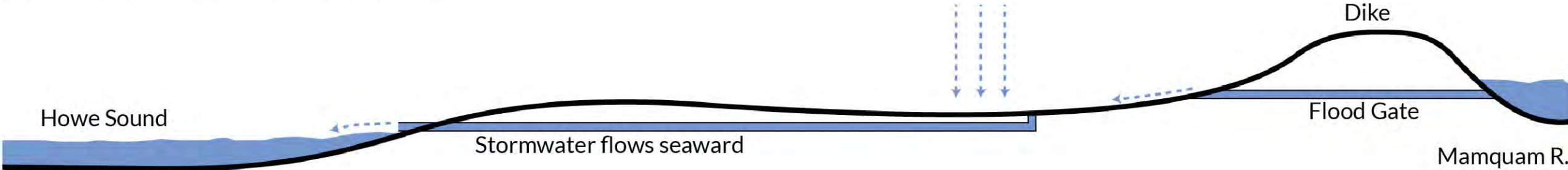
Flooding



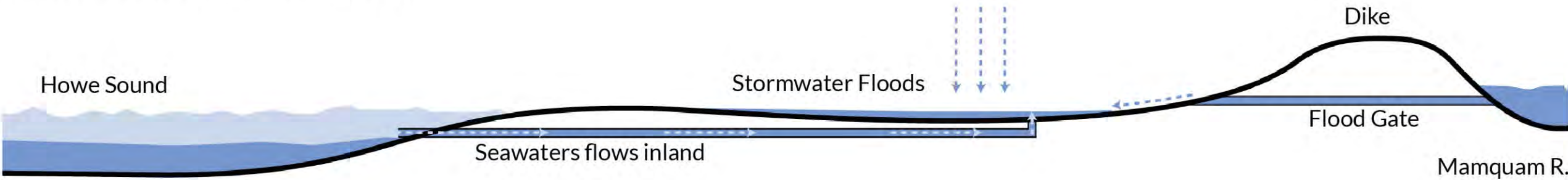
Squamish's history of drainage problems is mainly due to flat topography, low elevation and tidal influences (Squamish Drainage Study 1995)

BLIND CHANNEL TO MAMQUAM RIVER DIAGRAM

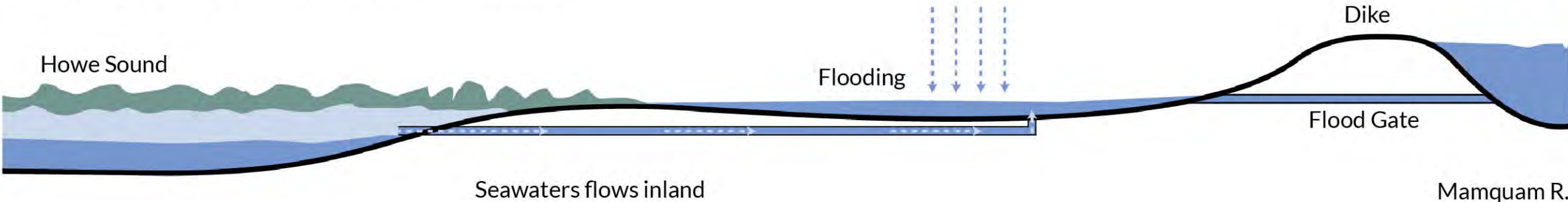
LOW TIDE & TYPICAL RAINFALL EVENT



HIGH TIDE & TYPICAL RAINFALL EVENT



HIGH TIDE, STORM SURGE & HEAVY RAINFALL EVENT



2

Economic Development

From Industry > Olympics > ...

Squamish lost 600 resource sector jobs and \$3 million in tax revenue between 2003 and 2006 (OCP 2010)

Festivals & Events: Squamish Live

“If the summer weekend of concerts is to continue successfully in the future his company needs more space to accommodate larger crowds.”

~ Festival organizer Paul Runnals of Brand Live

“Hosting large events and festivals like this is a competitive environment”

~ Dan McRae, the economic development officer for the District of Squamish.

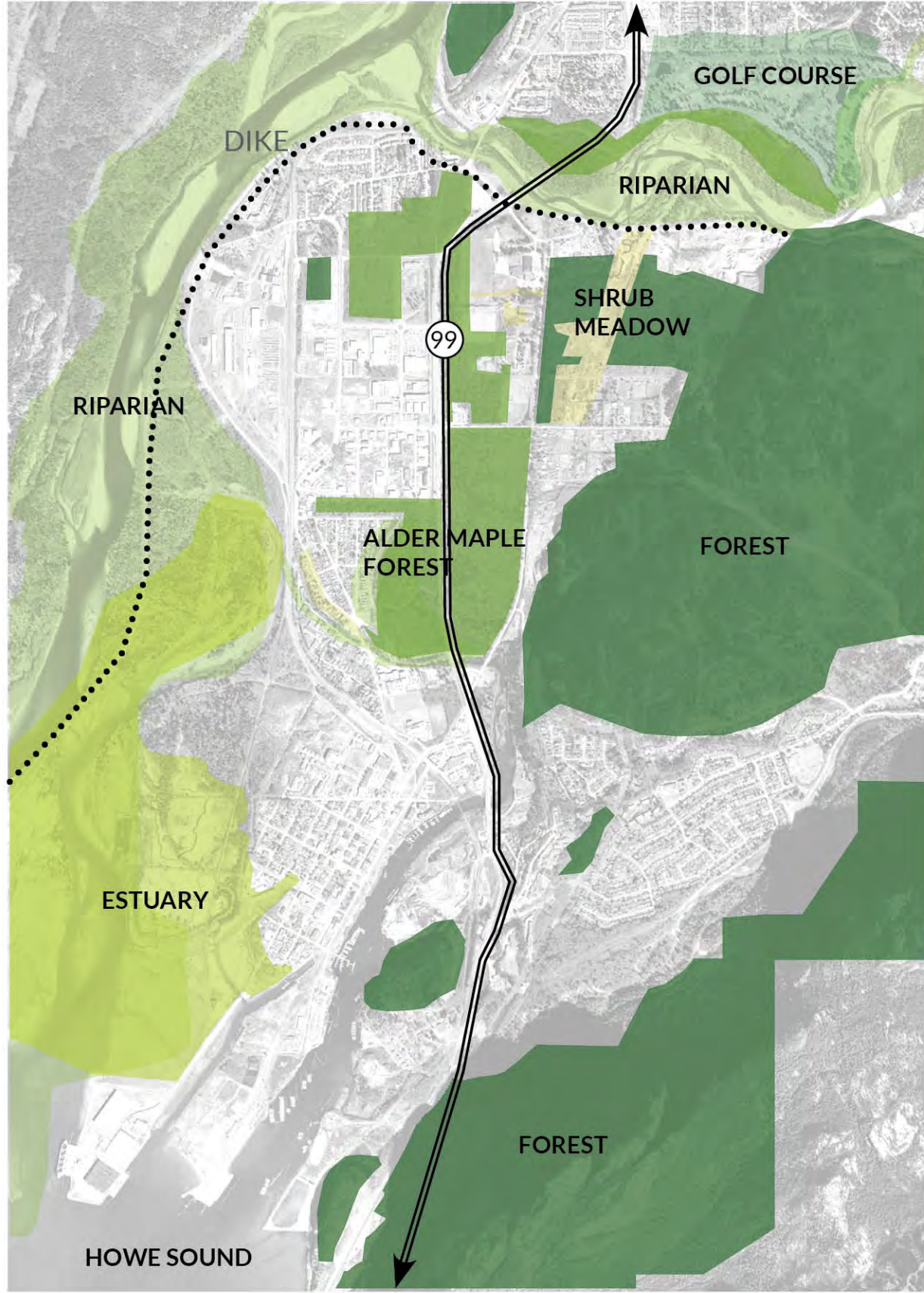
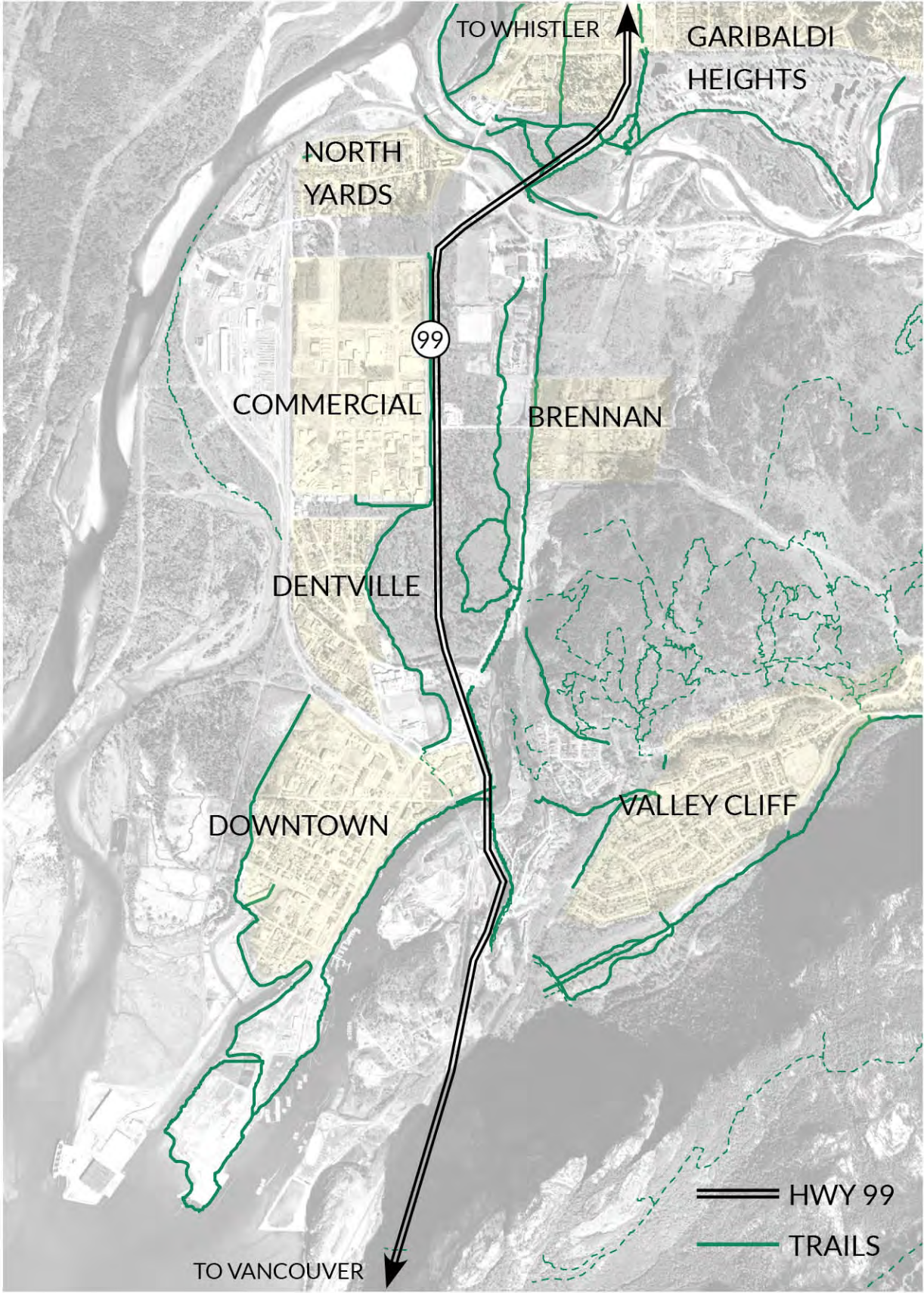
“There’s a lot of things happening where communities are doing a lot of work to attract festivals within their community.”

~ Dan McRae

Pique February 7, 2013 by John French



People + Habitat Connectivity



SOLVED THROUGH A GREENWAY IN SQUAMISH

Community Vision

“Our mission is to **protect and enhance** the livability, sustainability and quality of life for our community and to embrace and benefit from the opportunities before us”

- OCP Vision Statement

Neighbourhoods, Greenways & Downtown First Concept

Selected and endorsed by Council as the framework for accommodating growth in the District over the next 25 years



WHAT IS THE MAMQUAM GREENWAY?

Contiguous Parkway Connecting the Mamquam River to the Blind Channel

Riparian Zones Provide Lineal Corridors of Regional Importance for Flooding Hazards and Habitat Connectivity

Provides Squamish Residents with Access to Open Lands and Parks

Hosts Festivals & Events such as Squamish Live, Arcteryx 50 and Youth Triathlon



Great Rivers Greenway District, Missouri



East Calgary Greenway



Emerald Necklace, Boston

BENEFITS OF THE MAMQUAM GREENWAY

Create Value and Generate Economic Activity



Rise in Property Values



Tourism & Recreation Revenue

Improve Bicycle and Pedestrian Transportation



Safe, Efficient & Fun



Move Freely Along Trail Corridors

Protecting People and Property from Flood Damage



Protect & Restore Floodplains

Improving Health through Active Living



Access To Be Active Outdoors



Trails for Walking, Jogging, Hiking

Clean Water & Protected Wildlife



Link Habitat



Protect Streams, Rivers and Shores

Enhancing Cultural Awareness and Community Identity



Local Heritage



Natural Features

AND, IT'S **ALMOST THERE!**



DEVELOPED LANDS



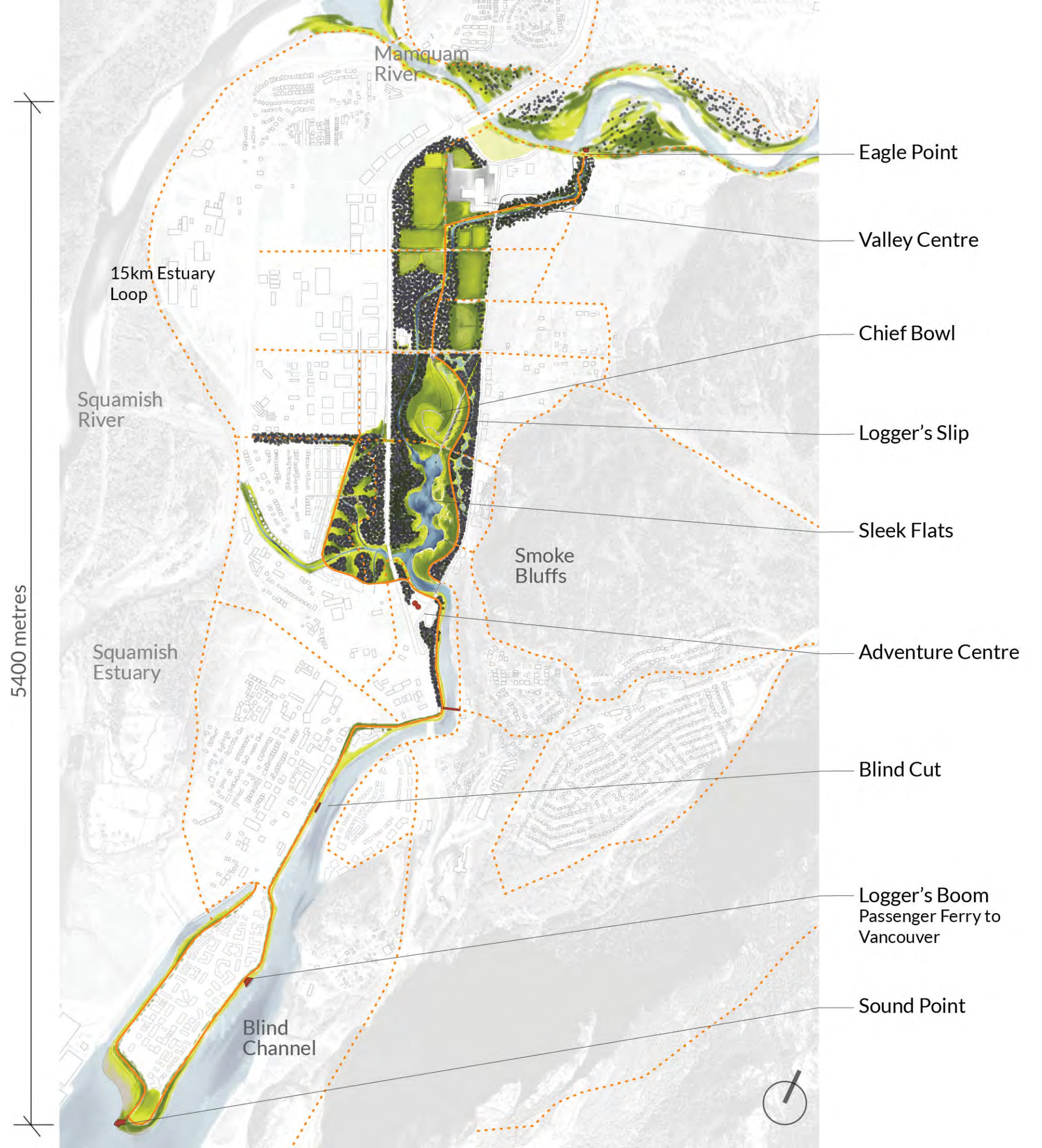
GREENWAY SITE



OPEN SPACE

SOLUTION ...

MAM GREEN QUAM WAY SQUAMISH, BC



MAMQUAM GREENWAY STRATEGIES

1

Absorb

- Runoff during storm events
- Impacts due to storm surge and sea level rise

2

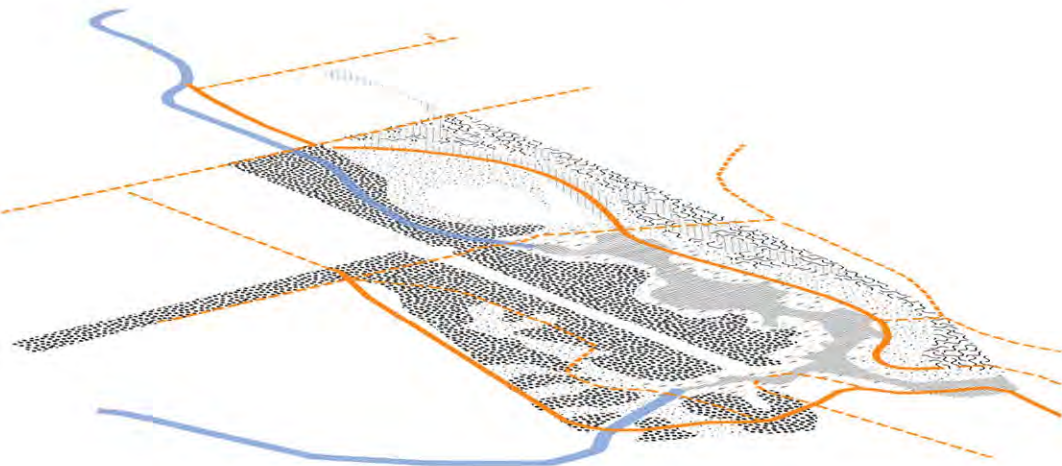
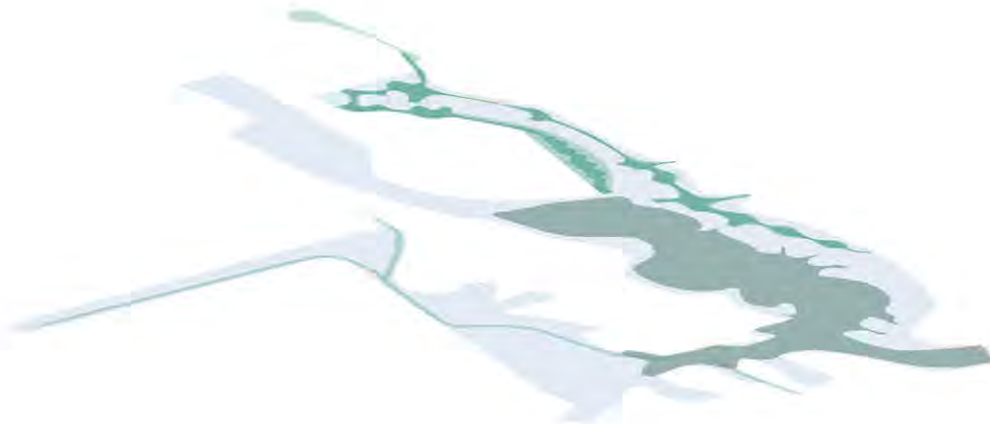
Generate

- Economic development through hosting events
- Tax revenue through increased property values
- Business through tourism & recreation

3

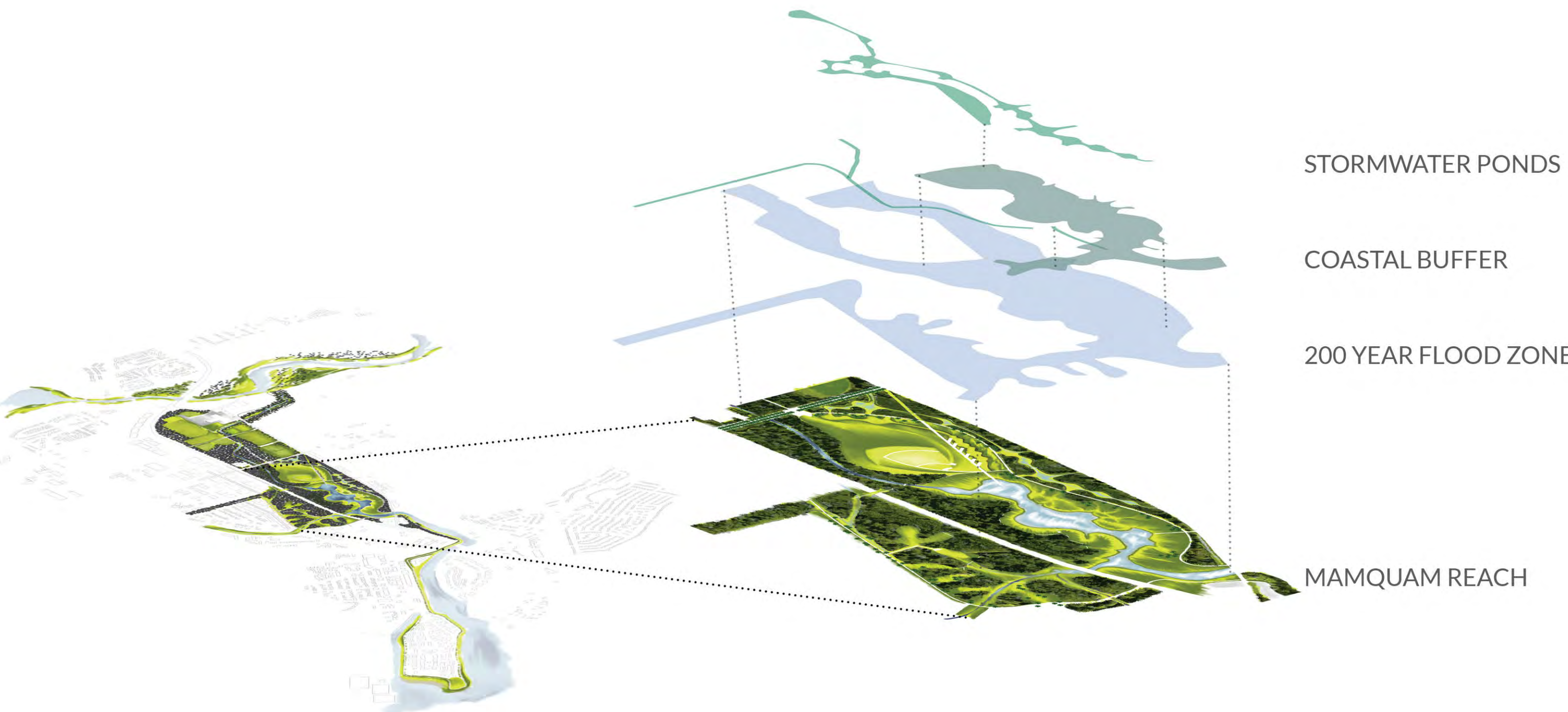
Connect

- Habitat by linking the Mamquam River to the Blind Channel & open forests to the Squamish Estuary
- People & the community through a contiguous parkway



1

ABSORB



STORMWATER PONDS

COASTAL BUFFER

200 YEAR FLOOD ZONE

MAMQUAM REACH

INTRODUCE HABITAT BIODIVERSITY



EXISTING MAPLE & ALDER FOREST



CONNECT LOGGER'S CREEK



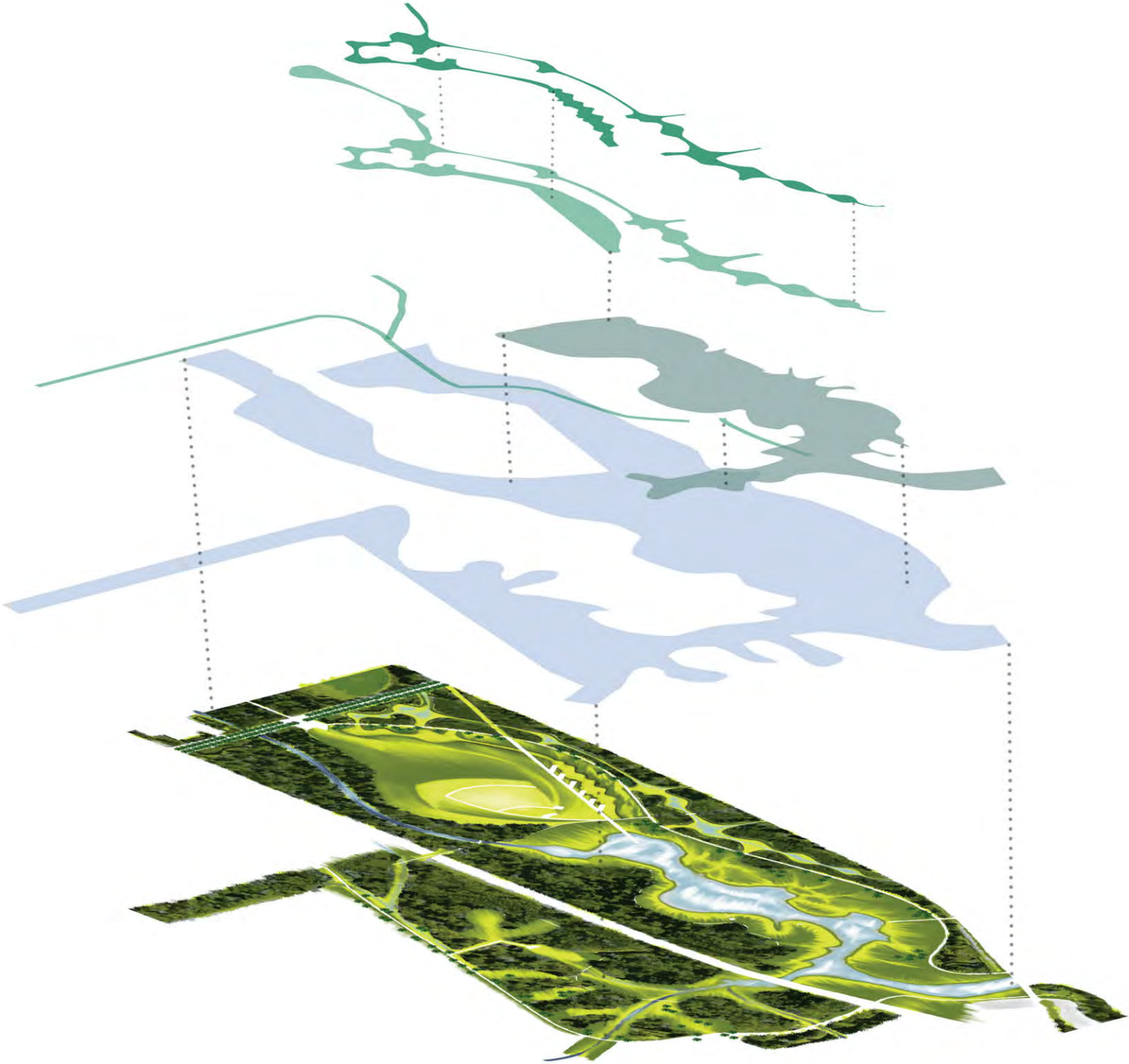
WETLAND & HABITAT ENHANCEMENT



MAMQUAM REACH



PROPOSED WATER SYSTEM



10 YEAR EVENT

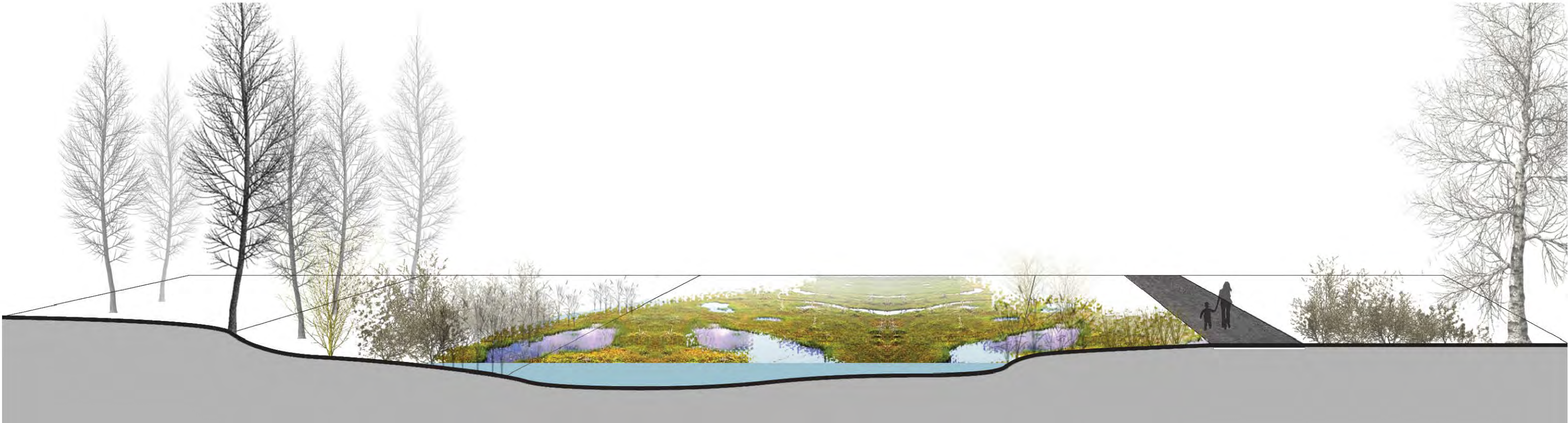
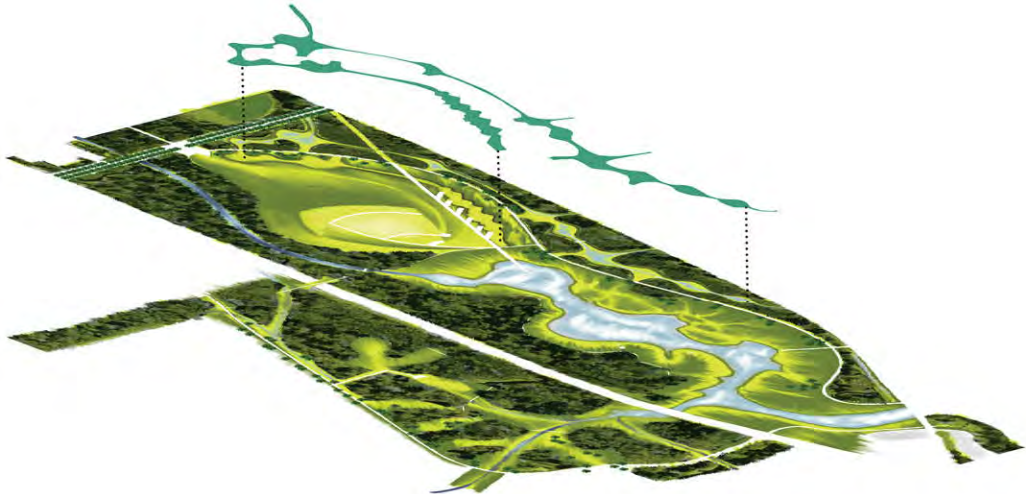
100 YEAR EVENT

COASTAL BUFFER

200 YEAR FLOOD EVENT

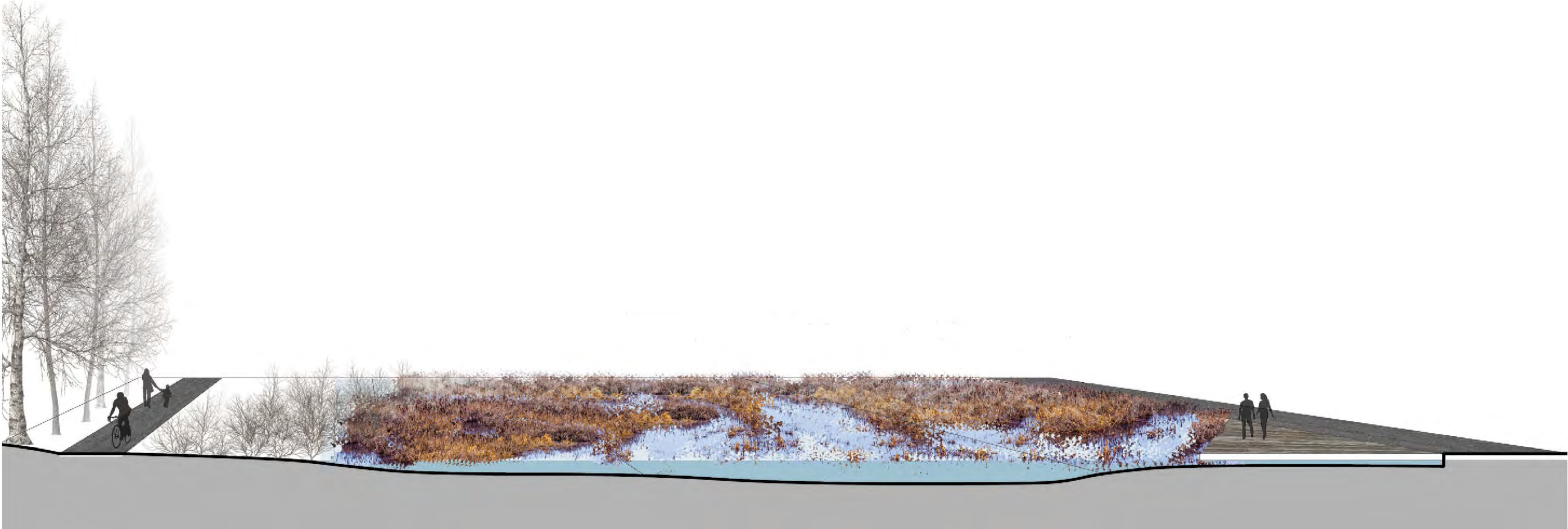
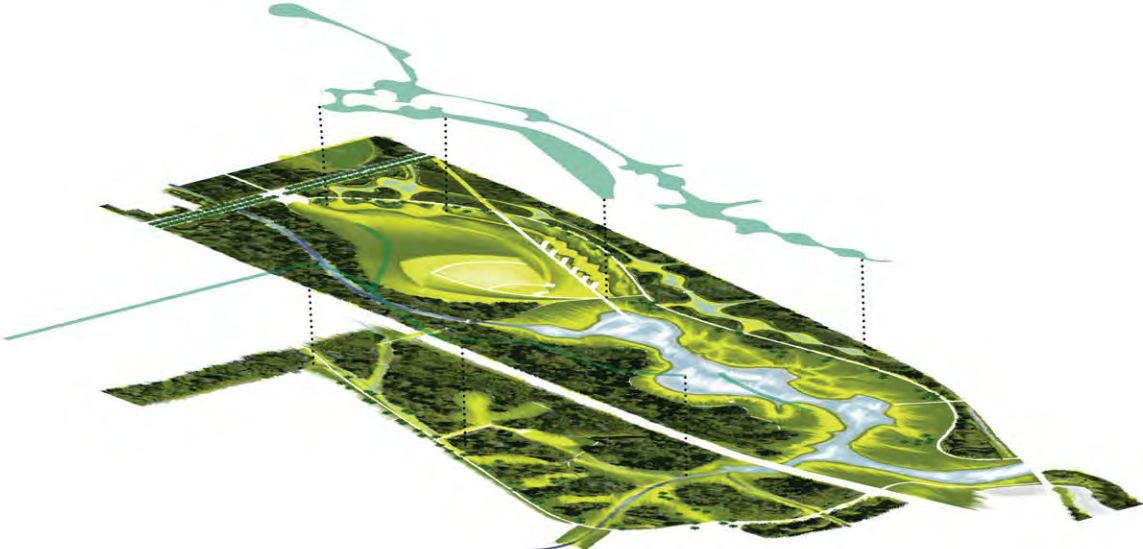
MAMQUAM REACH

10 YEAR FLOOD EVENT



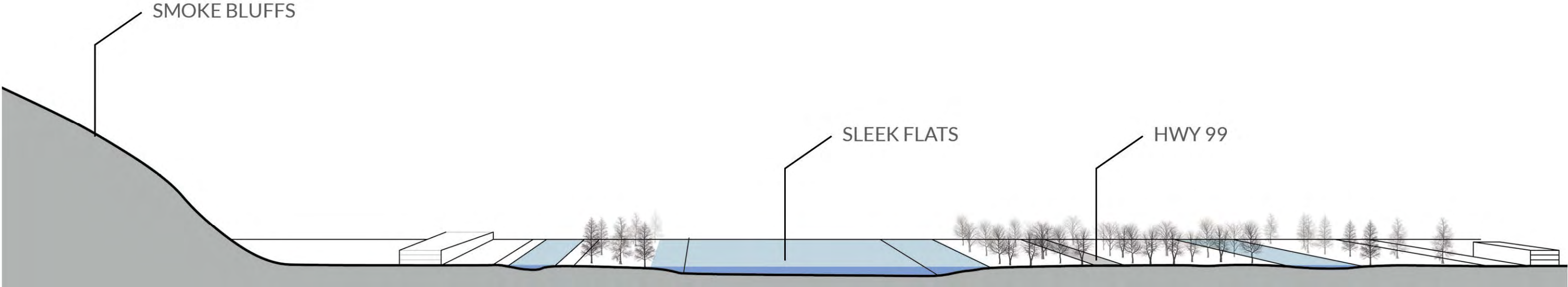
117mm in 24hr

100 YEAR FLOOD EVENT

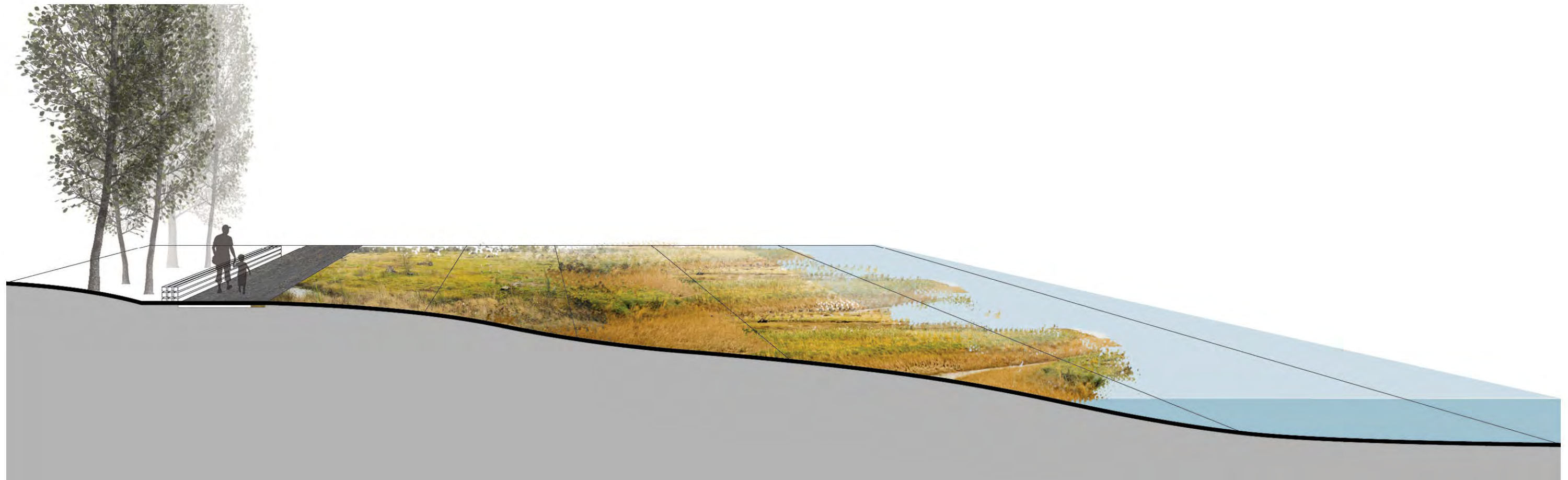
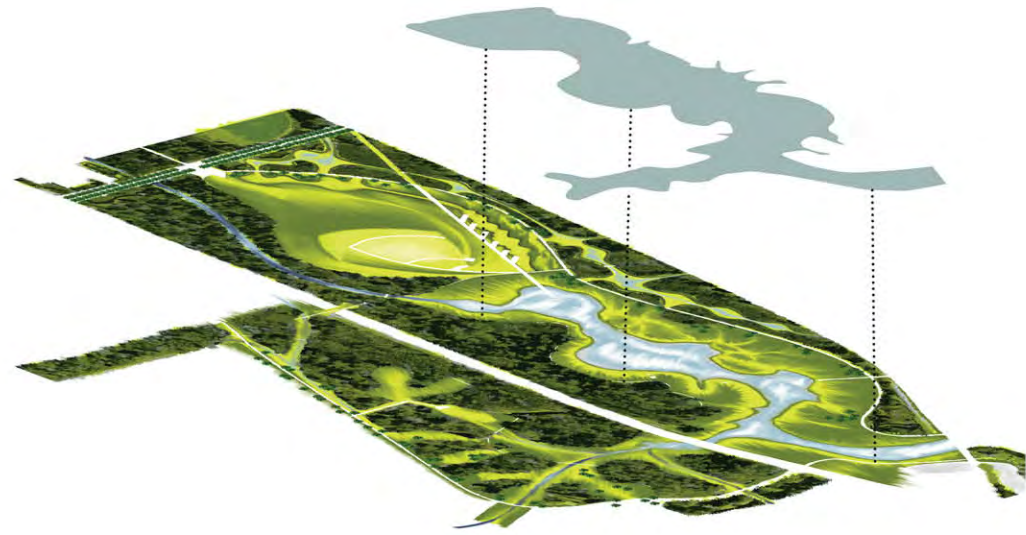


169mm in 24hr

200 YEAR FLOOD EVENT

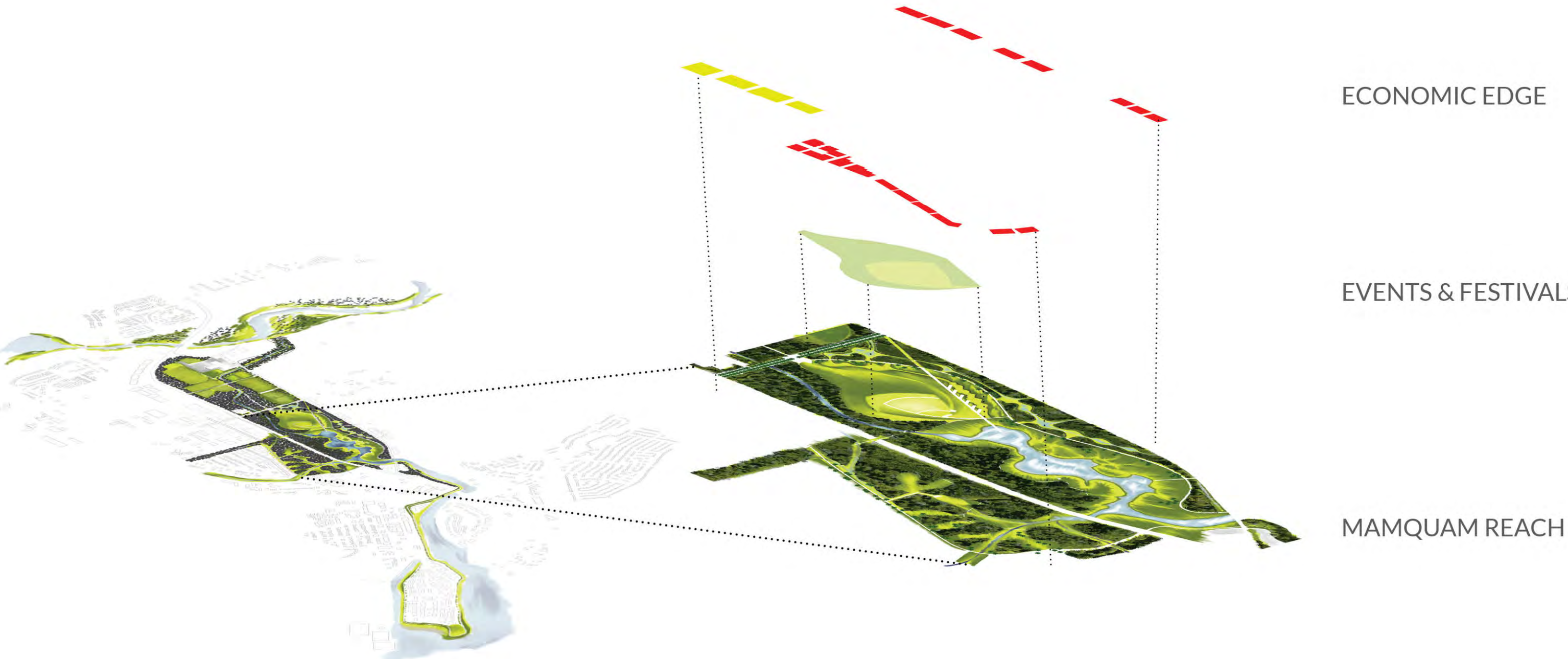


COASTAL BUFFER



2

GENERATE



ECONOMIC EDGE

EVENTS & FESTIVALS

MAMQUAM REACH

ECONOMIC EDGE



FESTIVALS & EVENTS

Squamish Live

August 8th to 10th

Currently takes place at Hendrickson Baseball Field

The market value of the pre-event media promotion for 2013 is approximately \$750,000 (Pique April 18, 2013)



AMPHITHEATRE STUDY



Red Rocks, Denver



Pritzker Pavillion, Chicago



The Gorge, Washington



Miller Theater, Houston



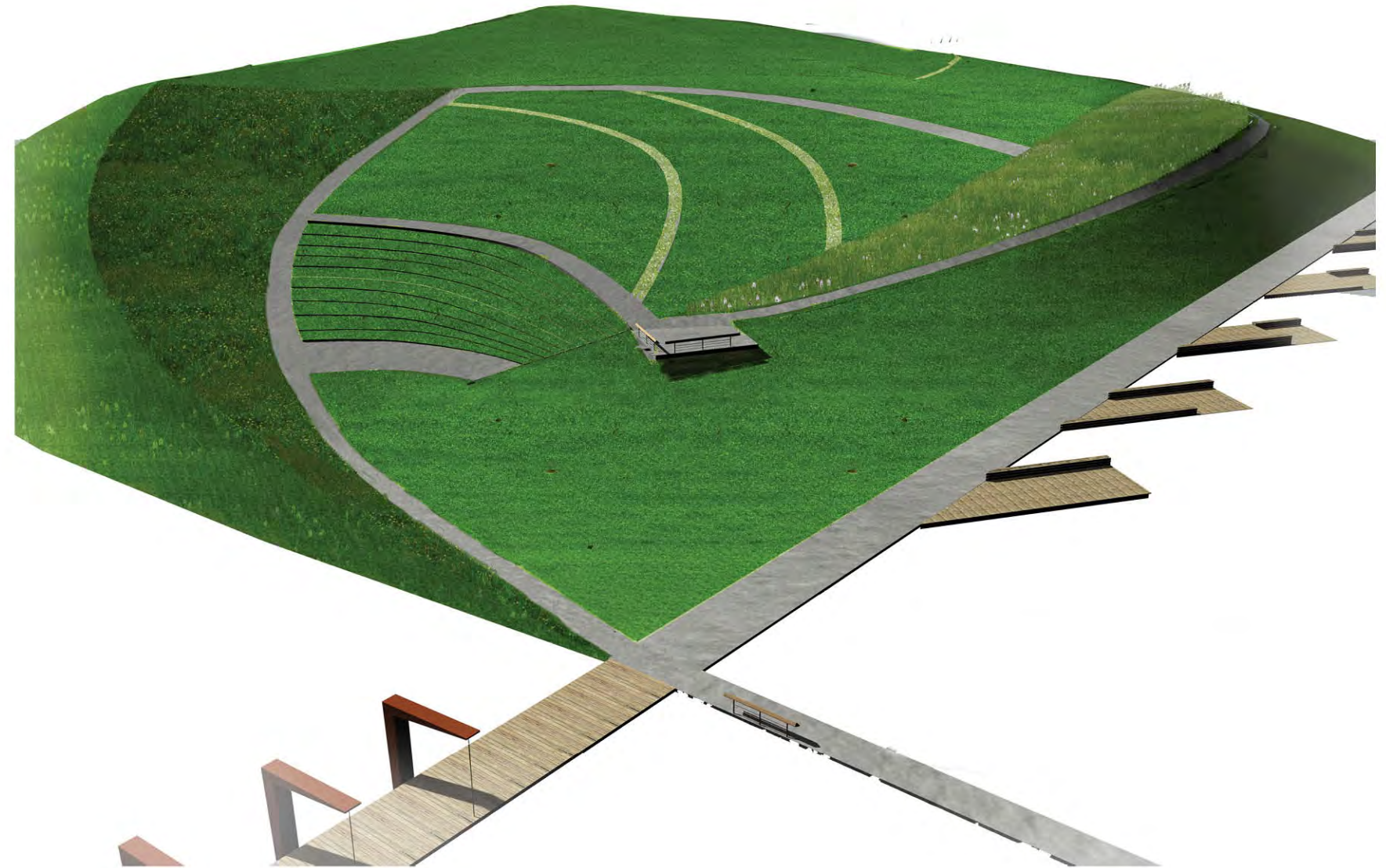
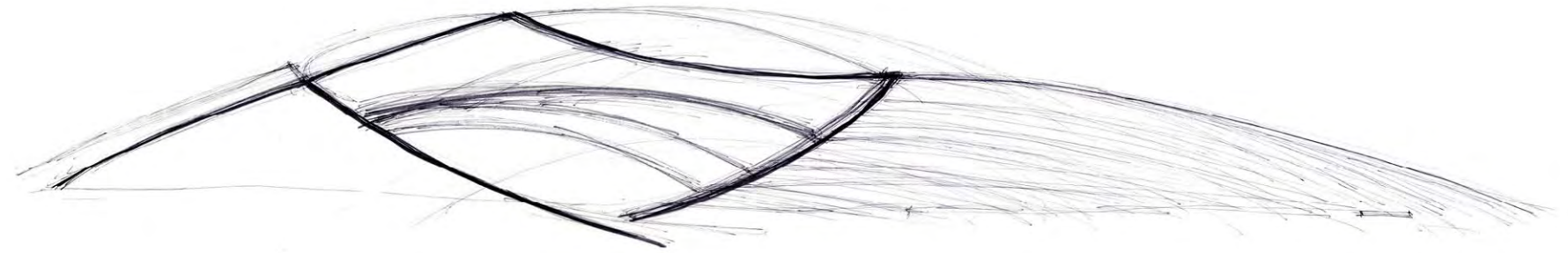
Deer Lake, Burnaby



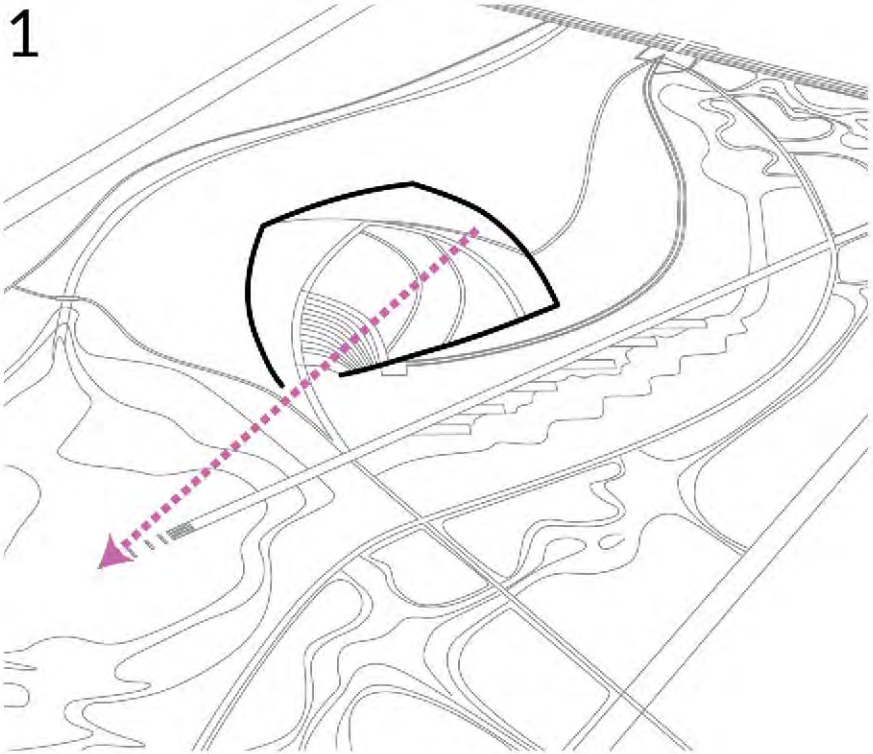
Malkin Bowl, Vancouver

CHIEF BOWL

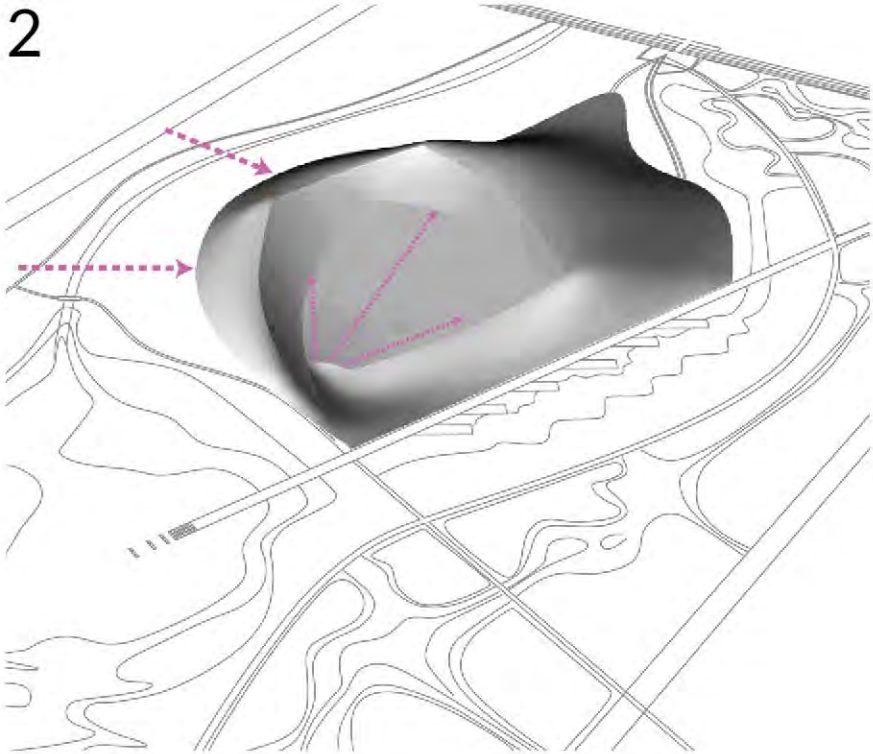
CAPACITY	12,000 People
SEATING	1,950 People +50 Wheelchair 2
LAWN	10,000m ² 10,000 People
STAGE	20m x 15m
EXTRA	Beer Gardens Food Vendors First Aid ATMs Washrooms Dressing Rooms Service Access Road Universal Design Principles Lighting Bike Parking Transit Stop



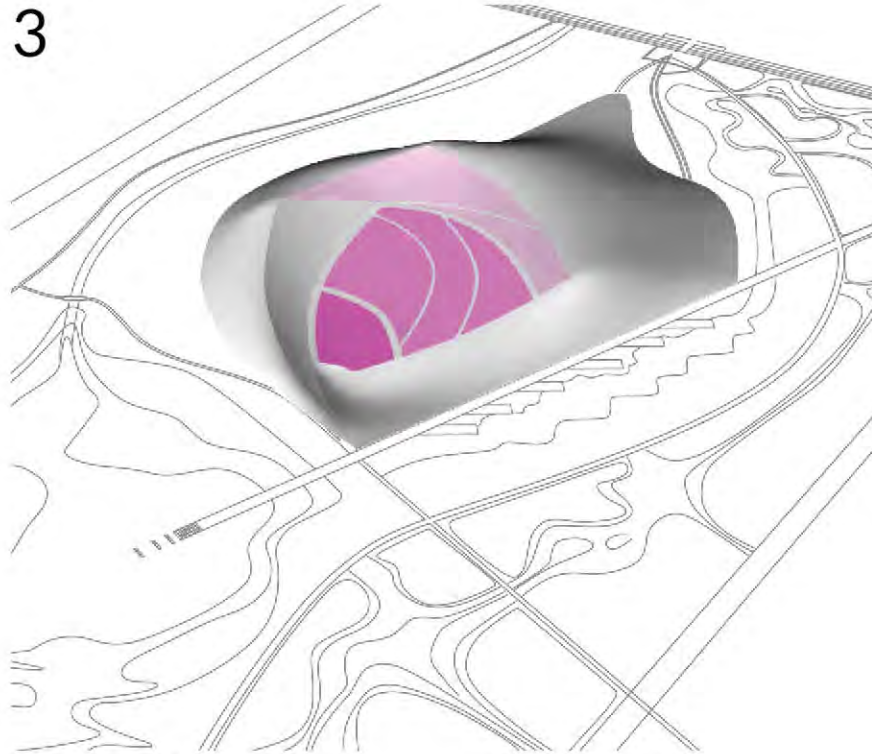
Chief Bowl Morphology



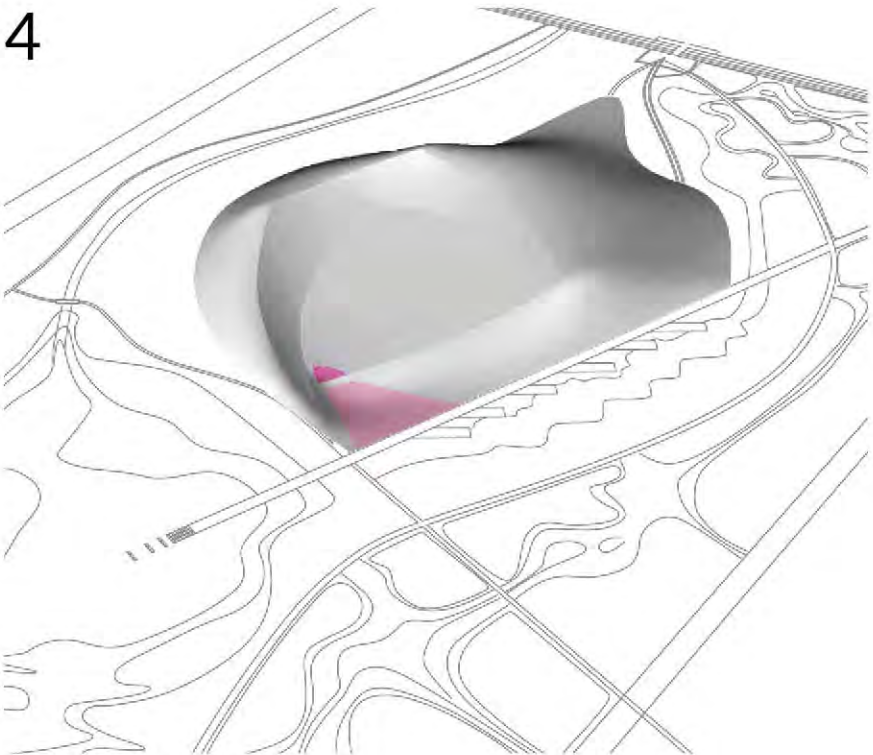
VIEW



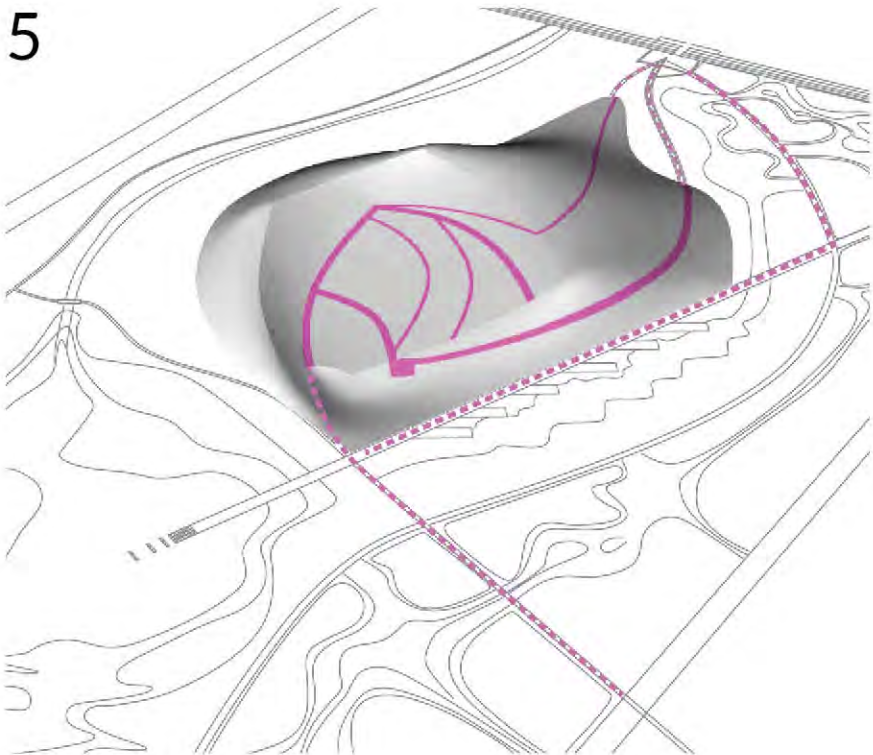
SOUND



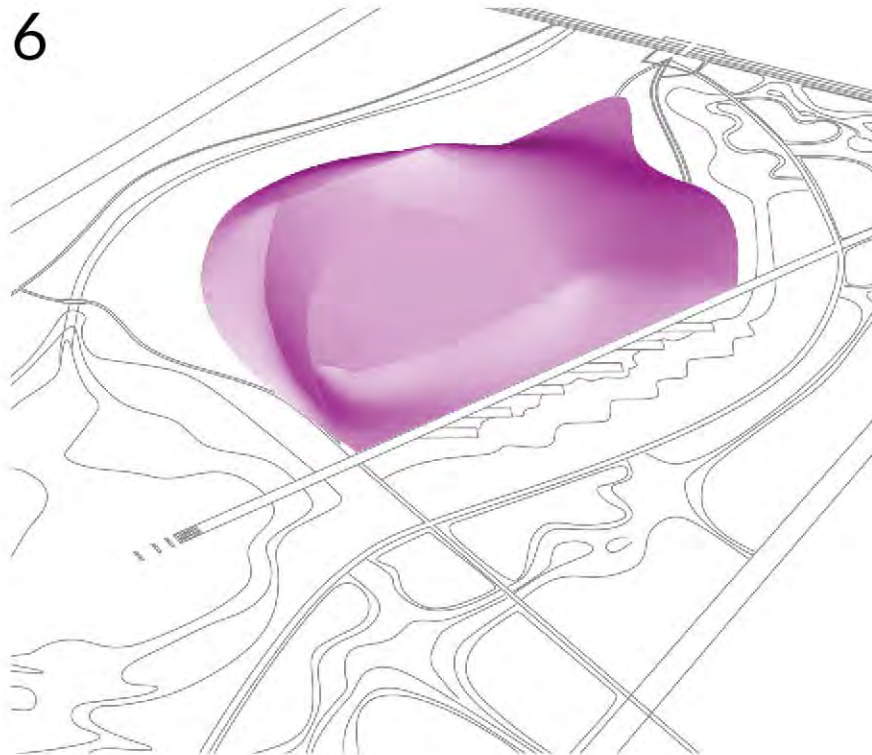
PROGRAM



STAGE + AMENITIES



CIRCULATION

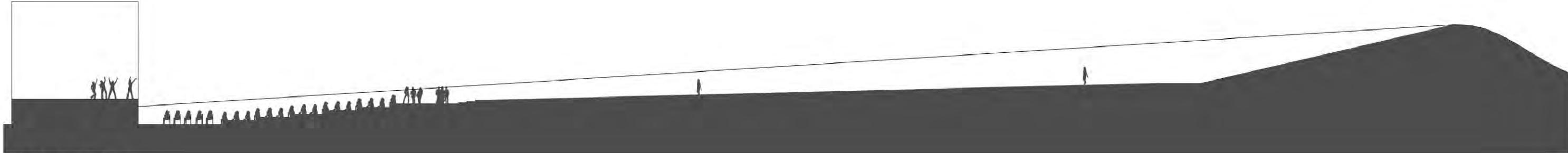


FORM

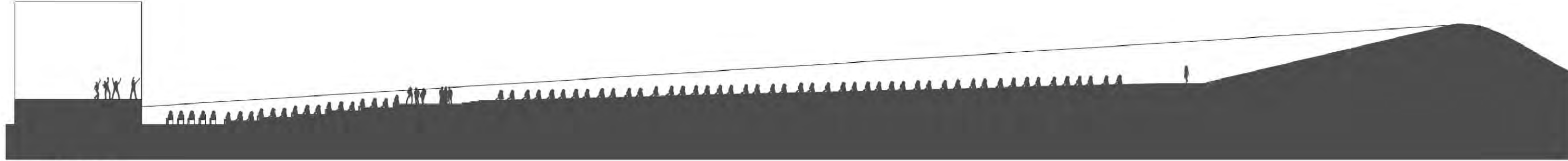
CHIEF BOWL DIAGRAMS



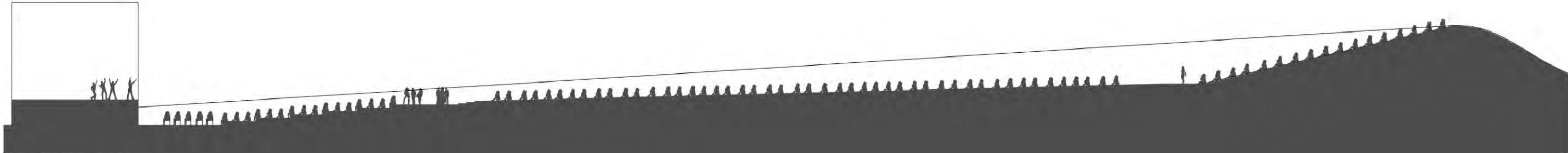
SOUND



2000 PEOPLE

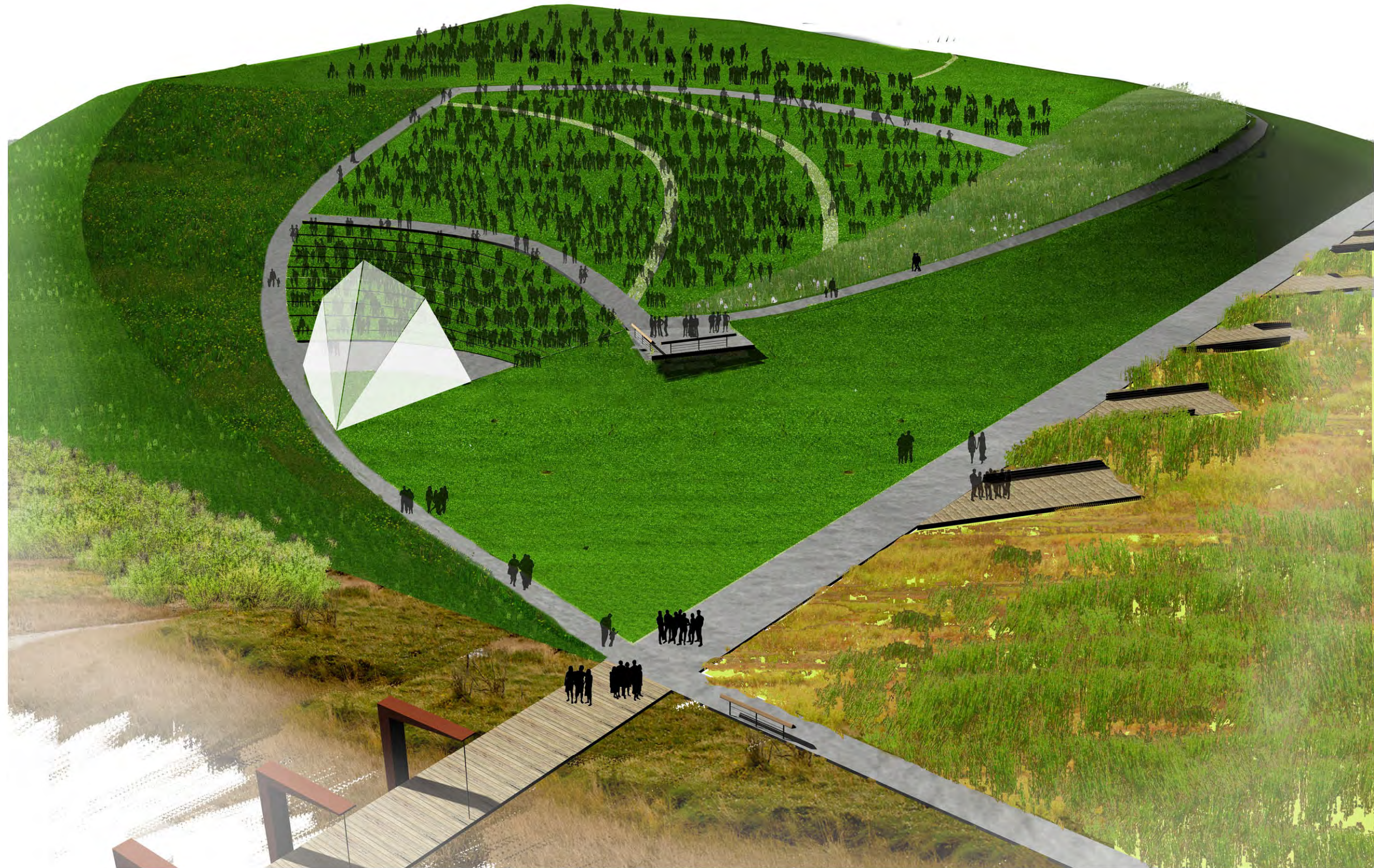


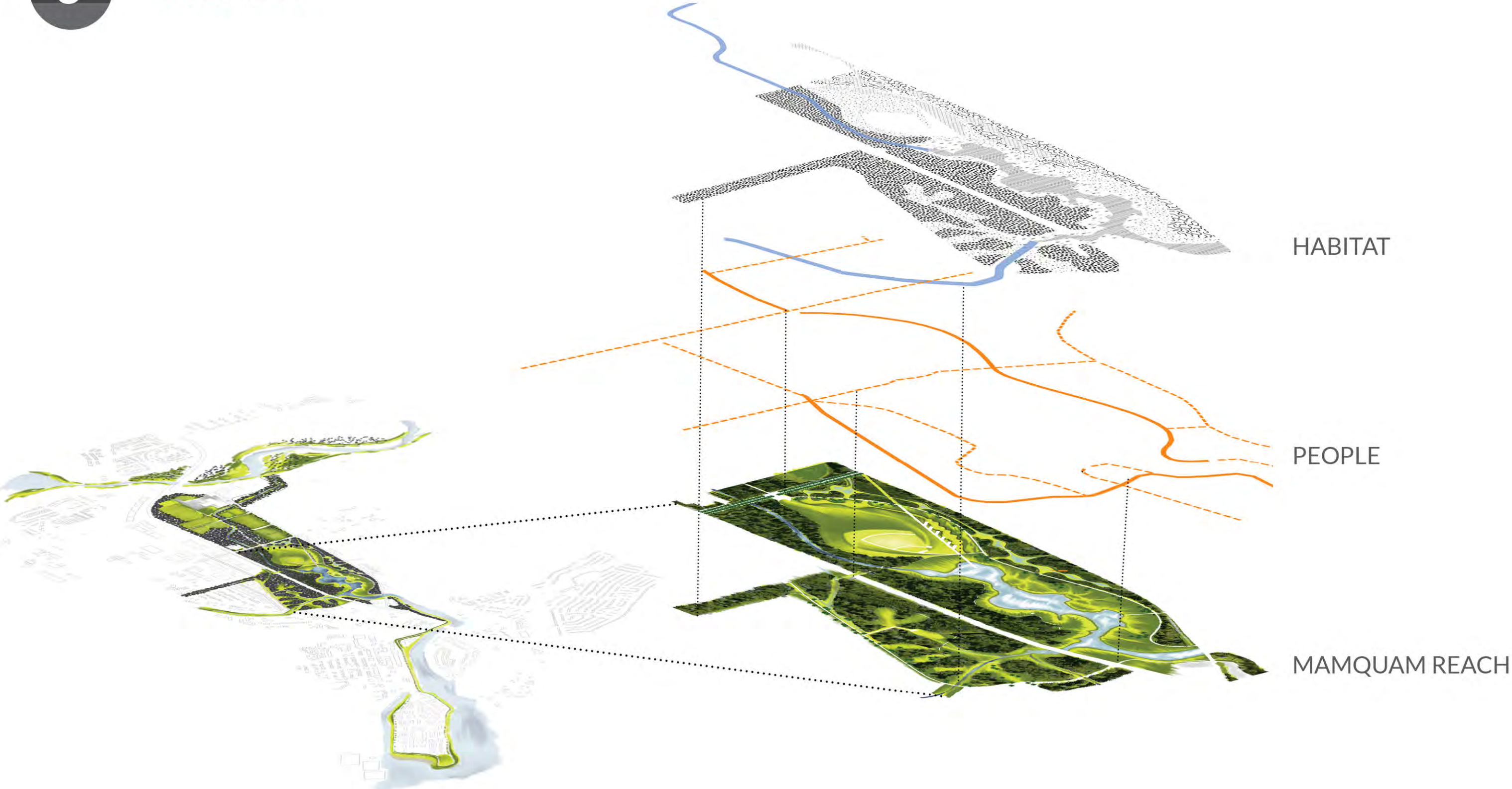
9000 PEOPLE



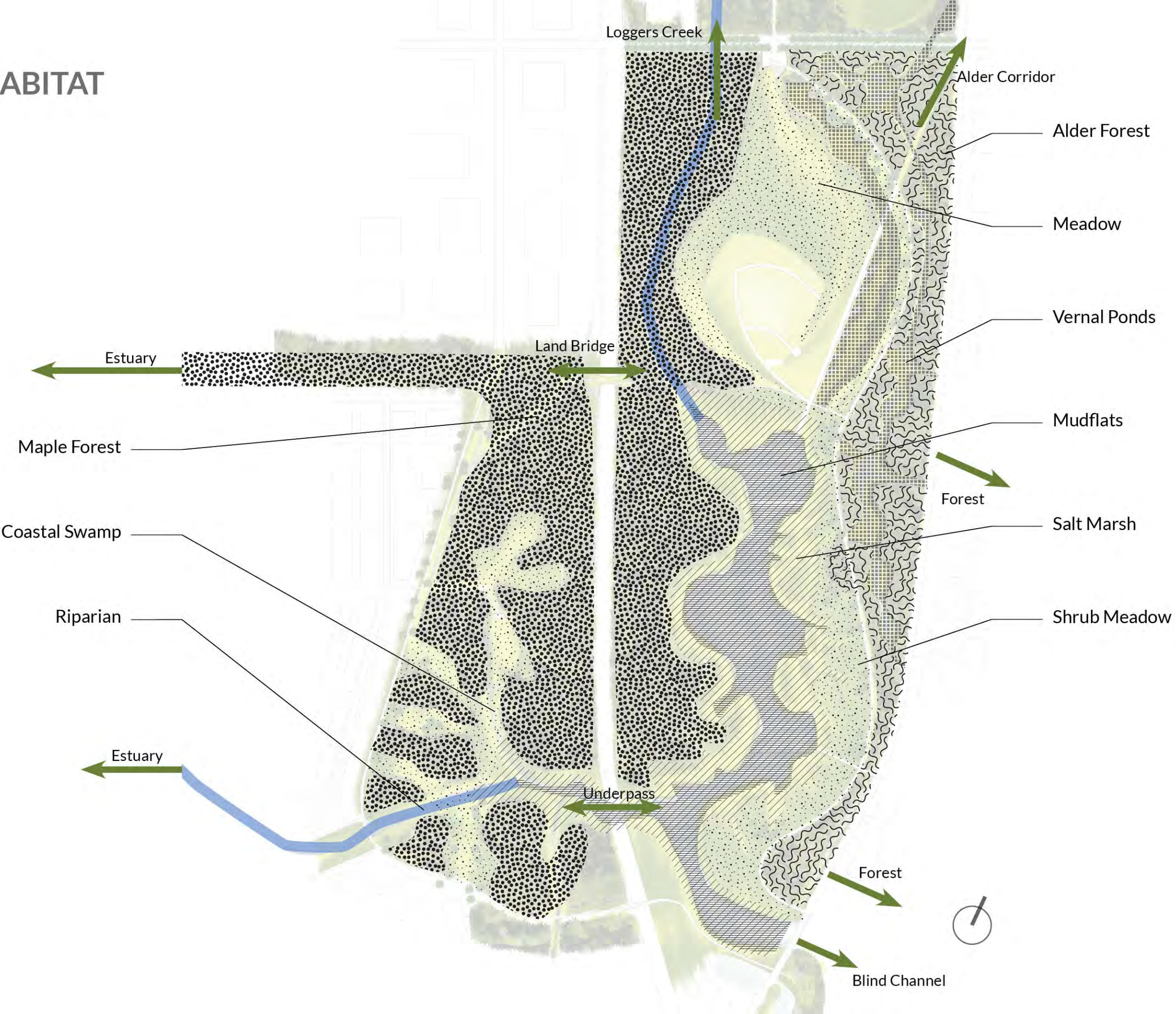
12,000 PEOPLE

Amphitheatre Program





CONNECT HABITAT



CONNECT PEOPLE



Commercial Centre

Finch's Pathway

Logger's Path

Valley Trail

The Slip

Stawamus Bridge

Bluffs Cut

Dentville

Bluffs Bridge

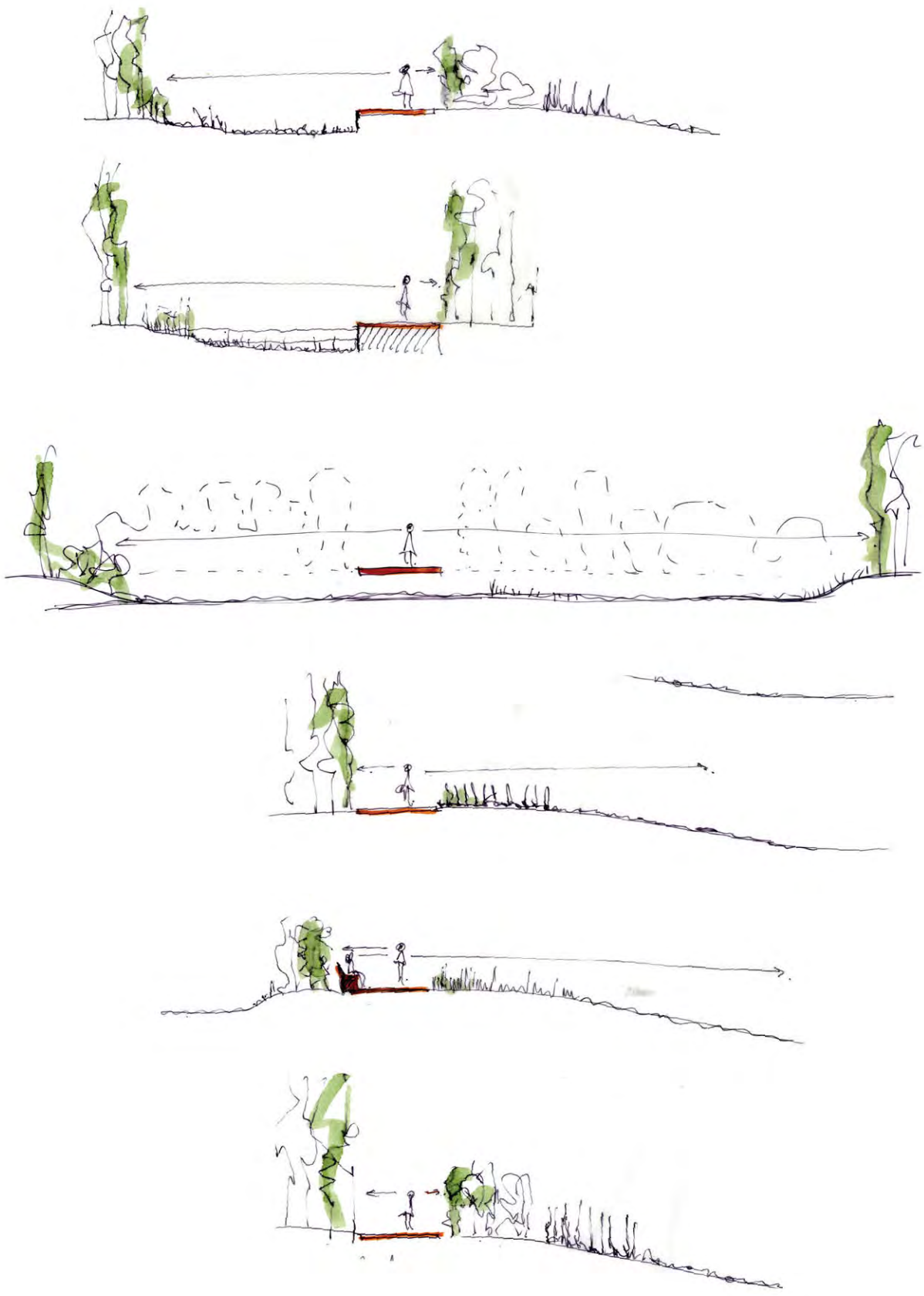
Smoke Bluffs Trails

To Downtown

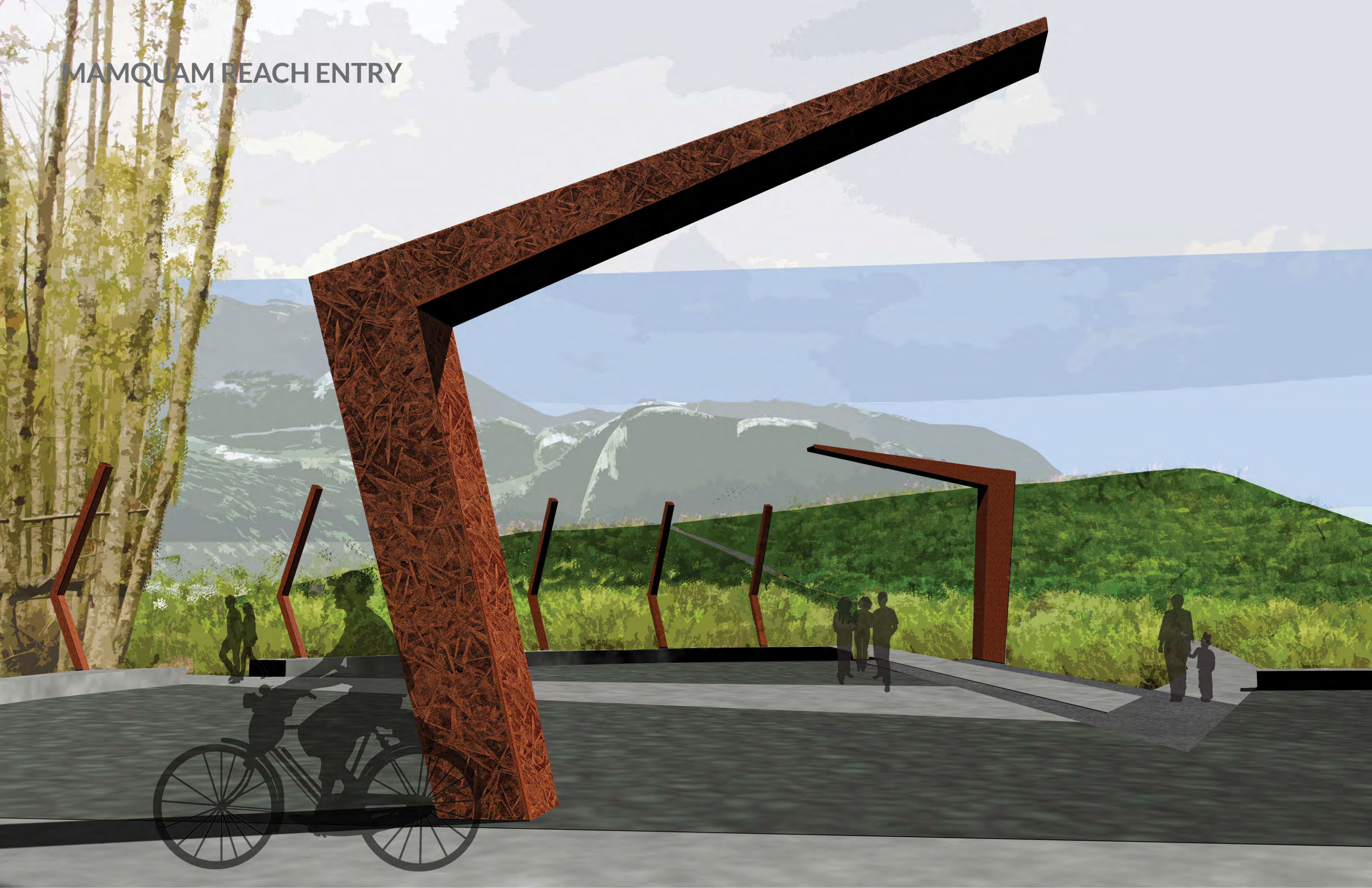
To Blind Channel

To Valley Cliff

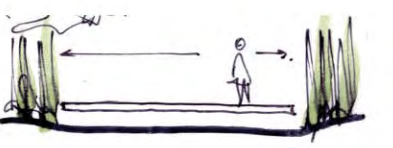
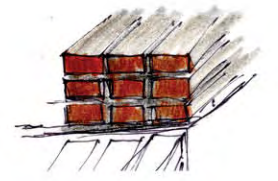
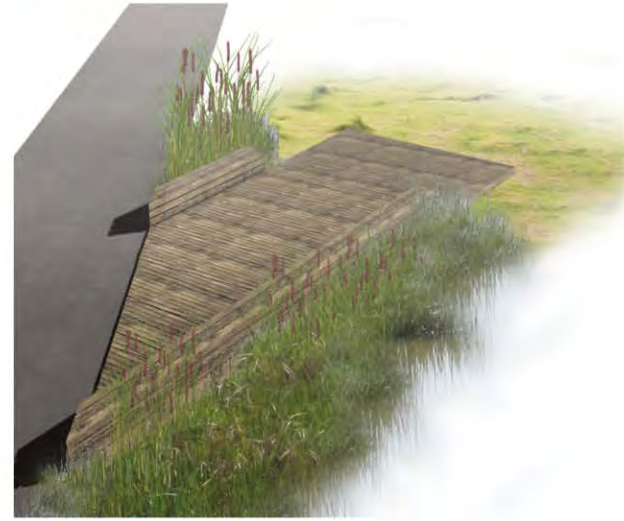
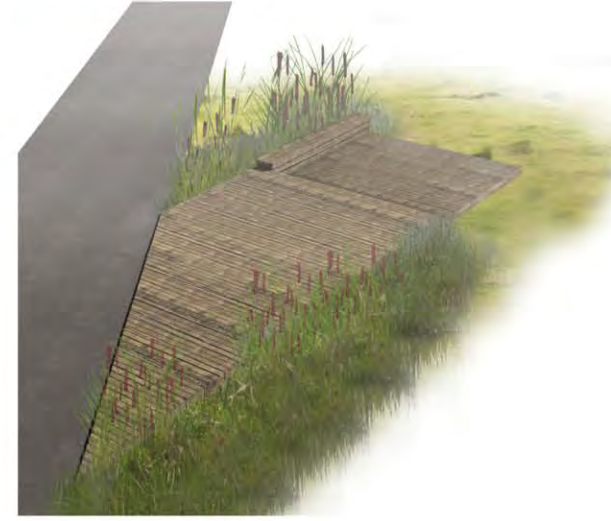
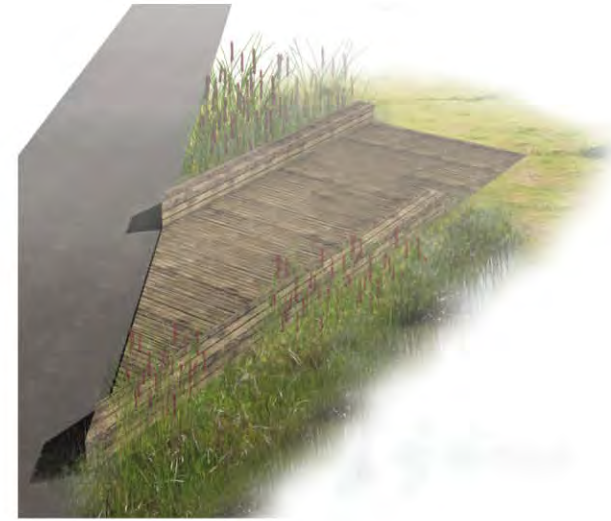
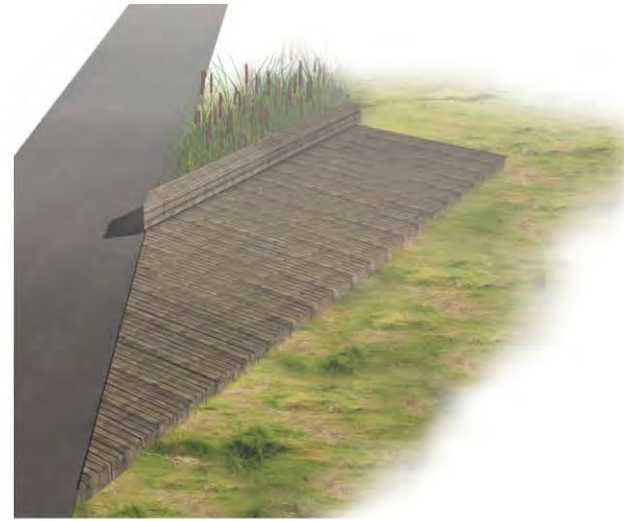
CONNECT PEOPLE



MAMQUAM REACH ENTRY



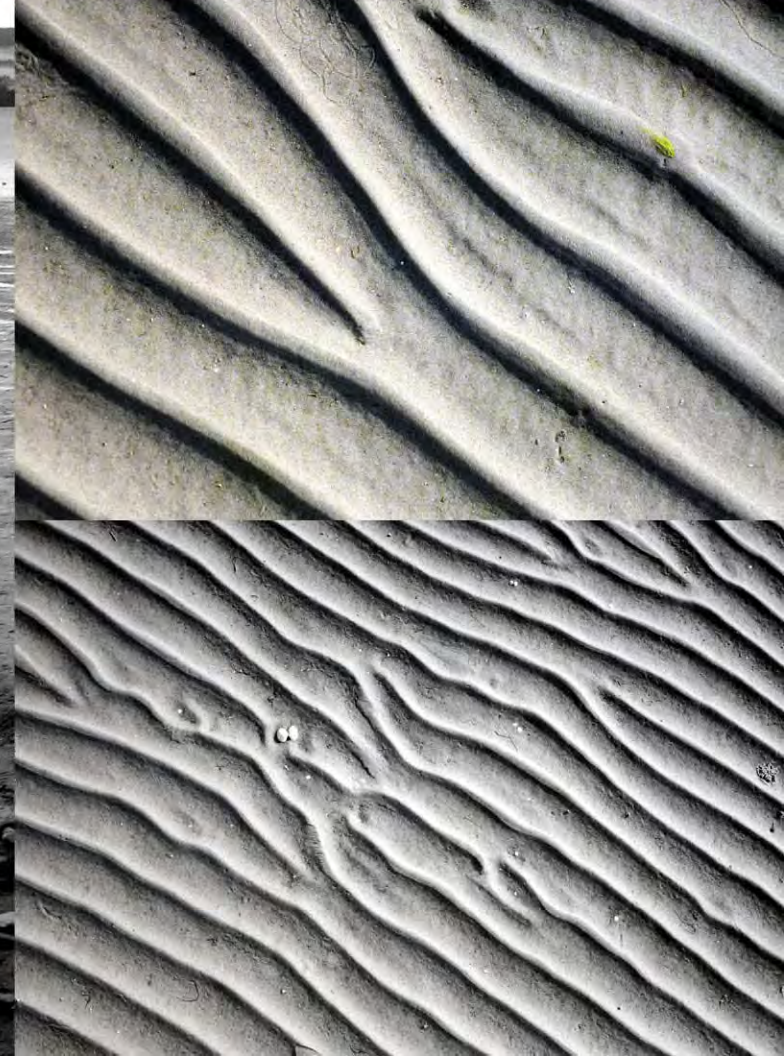
Boom Decks



SLIP END



SLEEK FLATS HIKING



VIEW FROM AMPHITHEATRE



AMPHITHEATRE VIEW





MAM GREEN QUAM WAY

SQUAMISH, BC

MAMQUAM REACH



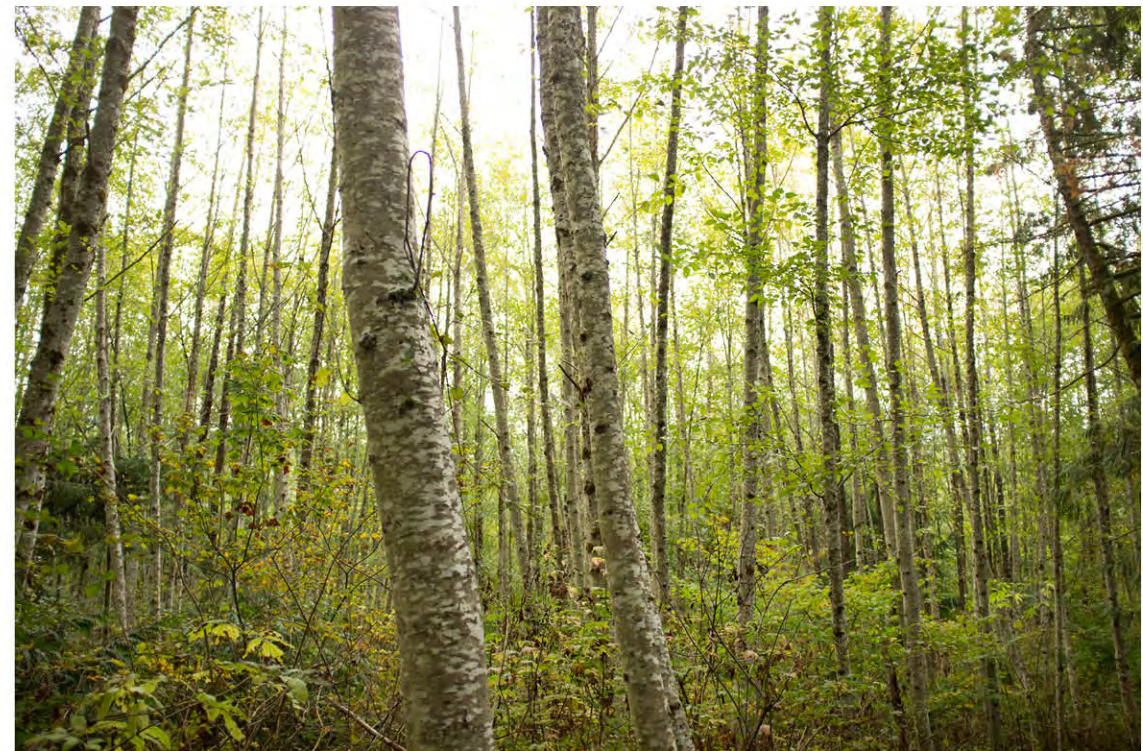
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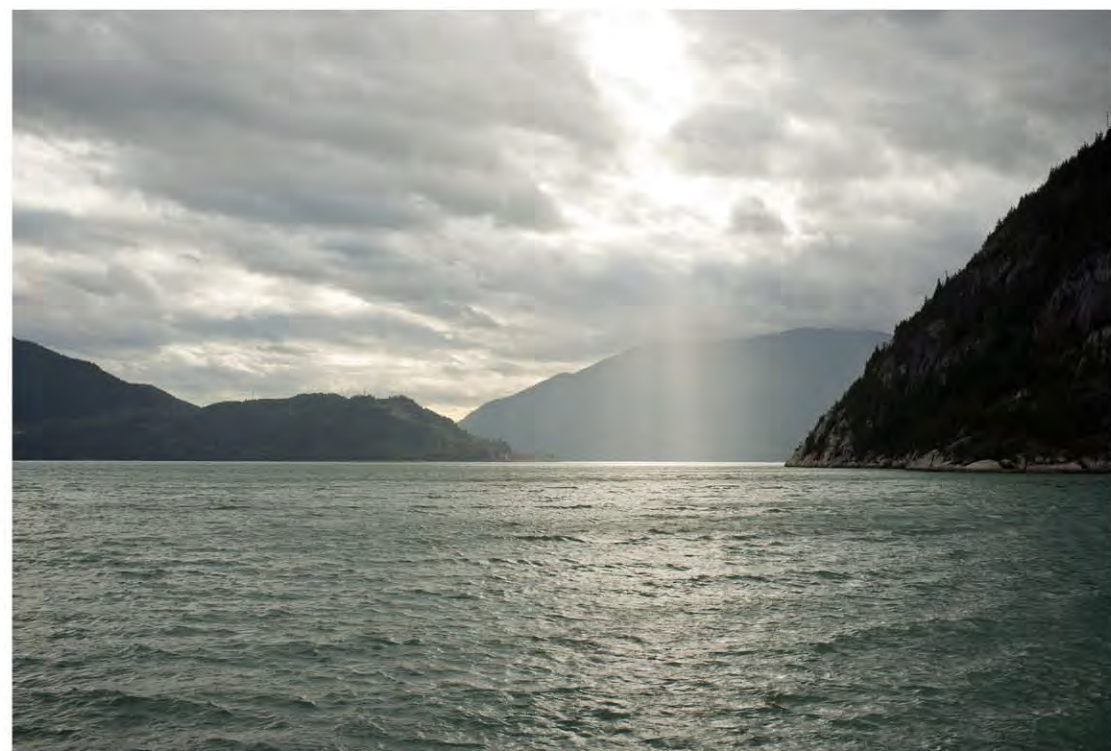
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RELATIONSHIP TO WATER



MOMENTS



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DISCONNECTIONS BY INFRASTRUCTURE