TOUCH THE WATER & NORTH SHORE PROMENADES

PRELIMINARY DESIGN REPORT

April 2022

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Edmonton

ISL

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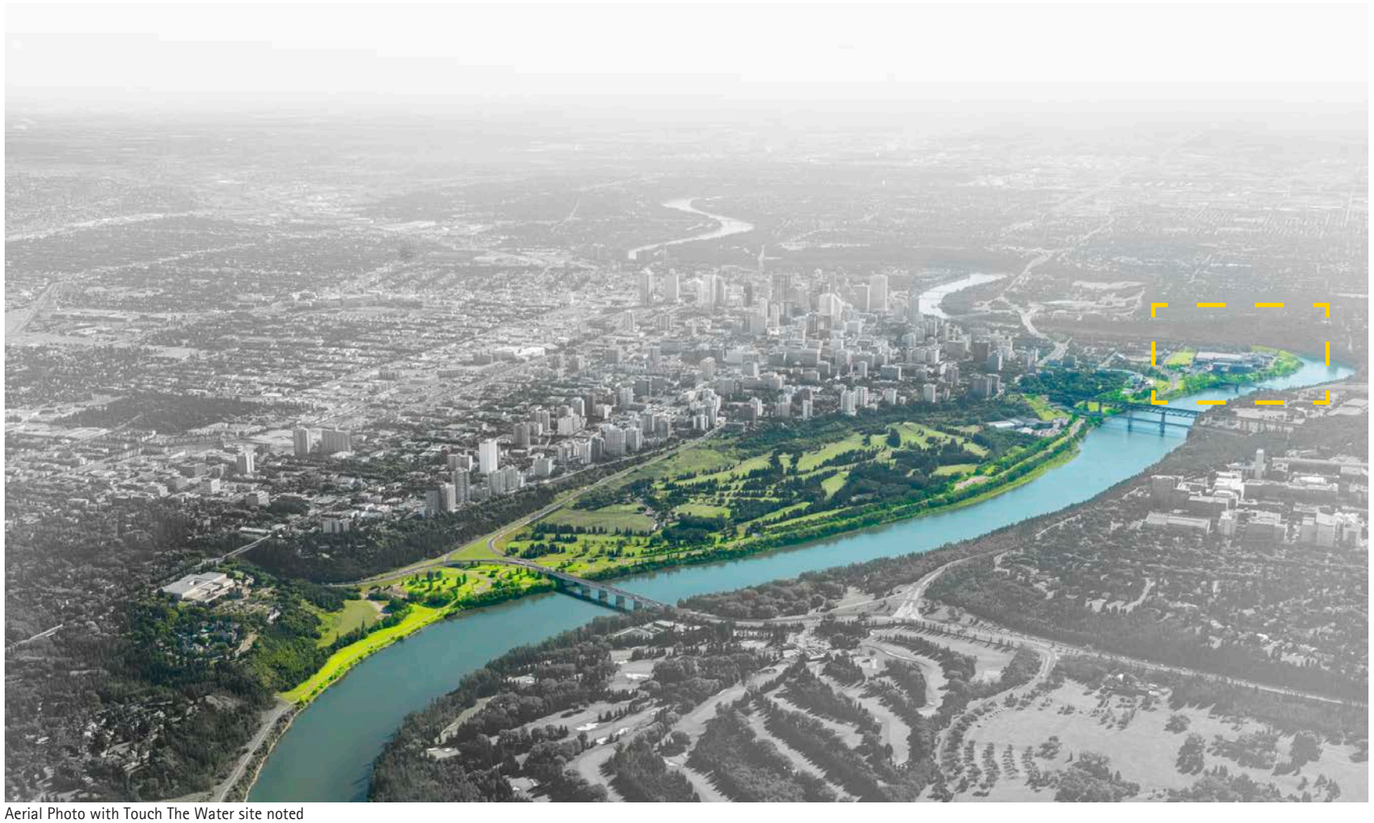
0.0 TABLE OF CONTENTS

1.0 EXECUTIVE SUMMARY

This report summarizes the current status and project background for the Touch the Water project. Located in central Edmonton along the north bank of the North Saskatchewan River, the project proposes a new riverfront public space. The project proposes to improve safe access to the River and through the central river valley, in response to increased use and associated conflicts. A design has been developed, which illustrates how the project could provide new connections to communities and to nature, celebrate a deep, layered Indigenous, industrial and natural history, and provide opportunities for riverfront gathering and recreation not found elsewhere in the region.

Detailed design and construction phases for the project are currently unfunded.



Aerial Photo with Touch The Water site noted

2.1 PROJECT INTRODUCTION
PROJECT TEAM

CITY OF EDMONTON & STAKEHOLDERS

PROJECT TEAM
Open Spaces Planning & Design
Open Spaces Infrastructure Delivery
Indigenous Relations
Communications & Engagement
River Valley Parks & Facilities
Urban Growth & Open Space

STEERING COMMITTEE
Open Spaces Planning & Design
Open Spaces Infrastructure Delivery
Engineering Services
River Valley & Horticulture
Civic Events & Festivals
Indigenous Relations
Urban Growth & Open Space
Urban Strategies
Communications & Engagement
Infrastructure Operations

DESIGN & TECHNICAL ADVISORS
Environmental Engineering
Geotechnical Engineering
River Valley Parks & Facilities
Urban Growth & Open Space
Facility Planning & Design
Urban Strategies

DESIGN STAKEHOLDERS
EPCOR
Transportation Planning & Design
Parks & Roads Services
Facility Engineering
Accessibility Advisory Committee

Refer to City's project stakeholder register

CITY CONTRACTED CONSULTANTS
Aubin Consulting - Indigenous Engagement

Stantec - Public Engagement

AECOM & Nichols Environmental - Environmental Risk Management & Assessment

TetraTech - Geotechnical

DUB ARCHITECTS MANAGING PRIME CONSULTANT

MICHAEL DUB, PRINCIPAL-IN-CHARGE
GENE DUB, ADVISING PRINCIPAL
CASS MILFORD, PROJECT COORDINATOR

+

STOSS DESIGN LANDSCAPE ARCHITECTURE FIRM

CHRIS REED, DESIGN DIRECTOR
AMY WHITESIDES, STUDIO DIRECTOR
DAVI PARENTE SCHOEN, PROJECT DESIGNER

+

ISL LOCAL LANDSCAPE ARCHITECTURE FIRM

KEVIN DIETERMAN,
SENIOR LANDSCAPE ARCHITECT
JAMES ALLEN, C.A. LEAD

SUBCONSULTANT TEAM

CIVIL
ISL ENGINEERING

DARIN HICKS, CIVIL LEAD
BARRY RAYNARD, WATER RESOURCES

STRUCTURAL - SITE

STRUCTURAL - SITE
ISL ENGINEERING

JAMES CHAPMAN, STRUCTURAL LEAD, BANK & RIVERBED
ROBERT COLWELL, STRUCTURAL ENGINEER

ENVIRONMENTAL
SPENCER ENVIRONMENTAL

LYNN MASLEN, SENIOR ENVIRONMENTAL SCIENTIST
ANDRA BISMANIS, PROJECT MANAGER

HYDROLOGY
NORTHWEST HYDRAULIC

EUGINE YAREMKO, PRINCIPAL
AGATA HALL, ENGINEER

ARCHEOLOGY
TURTLE ISLAND

GARETH SPICER, PRINCIPAL ARCHAEOLOGIST

BIOLOGIST
KINGFISHER AQUATICS

ERIK STEMO, SENIOR FISHERIES BIOLOGIST

COST
BTY

ALLEN REID, COST CONSULTANT

2.2 PROJECT INTRODUCTION
PROJECT DESCRIPTION

The North Saskatchewan River valley is a regional destination, and a place where people have been drawn to and gathered at since time immemorial. With this understanding, The City of Edmonton has advanced the development of the Touch the Water Promenade project, which re-imagines a prominent stretch of central riverfront along the north bank of the North Saskatchewan River as a new public outdoor space for many different types of people, abilities and activities.

Pedestrian and cyclist traffic along the existing shared use pathway along the project area has increased 100 per cent from 2019 to 2020. Through public engagement and site visits, the City has observed existing conflicts between users walking, cycling and rolling, and associated safety concerns that accompany the increased use of the area. Therefore, the project explores new ways to improve access and safety to and within the central river valley, and to provide new and unique opportunities and places for people to gather at the River, to learn about the multi-layered history and heritage of the area, to connect more people with nature, and to restore and maintain local ecological connections.

The Touch the Water Promenade project area is adjacent to the Rossdale neighbourhood, from 94 Avenue to the Walterdale Bridge.

This preliminary design will act as a blueprint for future development in the project area that reflects a shared vision for the central river valley, and will serve as a long term plan that could be implemented in phases over time.

2.3 PROJECT INTRODUCTION
PROJECT SCHEDULE

WE ARE HERE

STAGE I

CONCEPT DESIGN

During the Concept phase, the project team gathers program and site information to formulate a series of design options. A site analysis is a critical tool to not only assess how site characteristics can affect the design, but also in identifying what characteristics to should be preserved or intensified. The two projects encompass a sizable area adjacent to the river, and an in-depth analysis of both sites is fundamental prior to the advancement of concept options that includes the following characteristics:

- Historically and culturally significant areas
- Existing and proposed underground utilities
- Existing river hydraulic conditions and drainage patterns
- Geotechnical and environmental constraints

Design options will be evaluated and a preferred design approach will evolve out of discussions with the client group(s) as well as public and other engagement sessions.

CONCEPT DESIGN PHASE DEC, 2018 - JULY, 2021

FUNDING

- Touch the Water Promenade | FUNDED
- North Shore Promenade | FUNDED

STAGE II

PRELIMINARY DESIGN

The Preliminary Design phase is perhaps the most critical design phase in that it builds upon the high level ideas and solutions identified in the Concept Design phase for each project and transforms them into a coherent project design. The nodes, pathways and activities established in each project's concept plan are refined, materials are assigned and a design language is introduced. During this phase, characteristics such as topography and it's effect on surface drainage are explored and resolved.

Sub-consultants are expected to bring their designs to a level where spatial coordination of systems is reviewable and proper integration of services is planned for.

PRELIMINARY DESIGN JULY - MARCH, 2022

FUNDING

- Touch the Water Promenade | FUNDED
- North Shore Promenade | PENDING FUNDING

DETAILED DESIGN

This phase, which is dependent on securing funding for both projects, reflects a steady refinement of the concept developed for each project in the Preliminary Design Phase. Elements developed in earlier phases are now reviewed, confirmed, and definition is added. The design is translated into construction documentation and technical requirements. By this stage the design is fixed and the process moves to the fine detailed requirements that allow the project to function correctly, be built accurately and communicated effectively to contractors and trades bidding the project.

Details must be developed with an eye to adhering to the construction budget. Any potential impacts to budget need to be tracked and mitigated (either through revision of detail or exploring trade-offs with other program elements).

DETAILED DESIGN DURATION: 7 - 10 MONTHS

FUNDING

- Touch the Water Promenade | PENDING FUNDING
- North Shore Promenade | PENDING FUNDING

STAGE III

BUILD IMPLEMENTATION

This phase involves the tender, award, and construction of each project, either simultaneously or separately.

During construction, administration of the contract that focuses on facilitating three-way communication between the client, the prime consultant and the construction site team.

DURATION: EST. 24 MONTHS, TO BE CONFIRMED BASED ON SCOPE

FUNDING

- Touch the Water Promenade | PENDING FUNDING
- North Shore Promenade | PENDING FUNDING

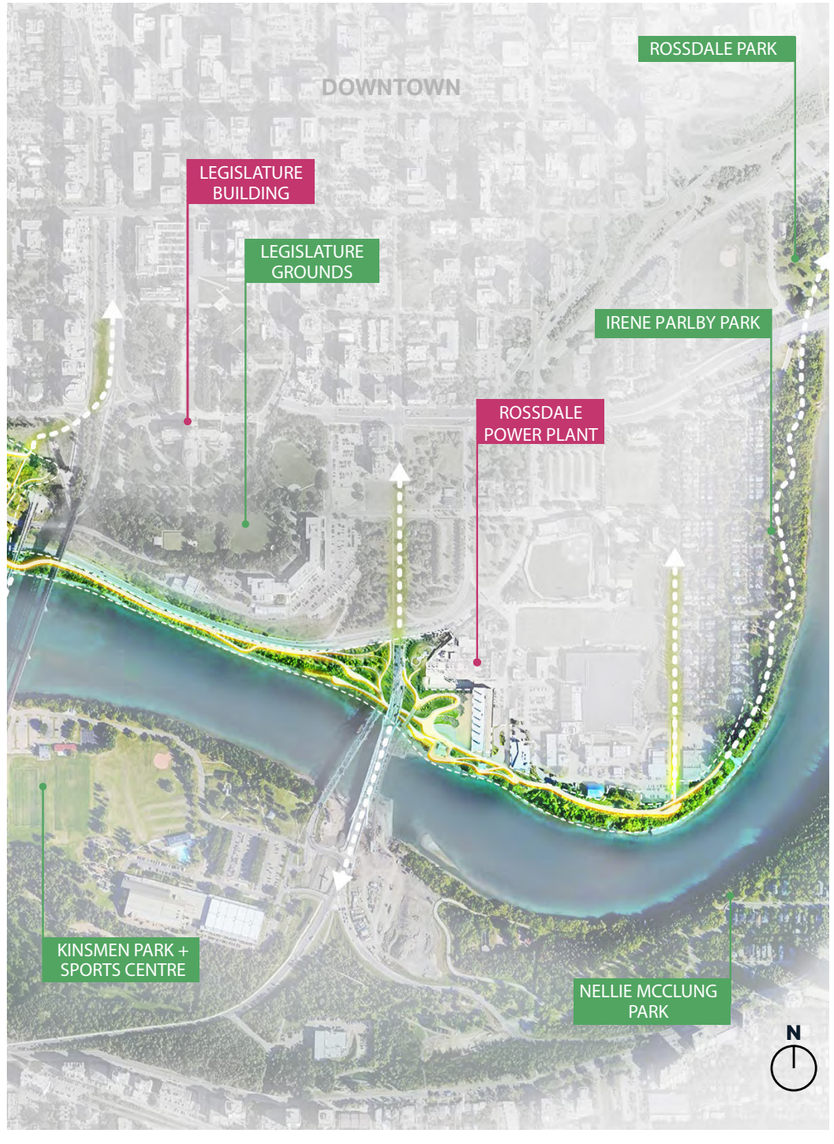
BUILD CLOSE OUT

Following construction completion and building / site occupancy, site reviews are preformed on an as-needed basis to ensure outstanding construction deficiencies, including any seasonal deficiencies, are properly addressed.

DURATION: 12 MONTHS

3.1 SITE ANALYSIS
LOCATION

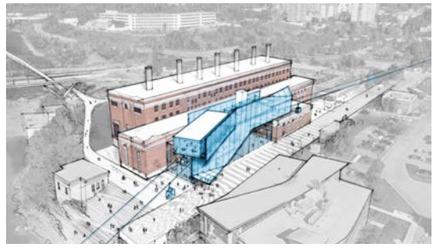
The Touch the Water Promenade site is located within Edmonton's central downtown river valley. Sweeping east to west along the north shore of the North Saskatchewan River Valley, the Touch the Water site begins at the east edge of the Rossdale neighbourhood at 94 Avenue NW and ends at the west edge of the Walterdale Bridge, The Touch the Water site will consider design elements to connect the existing historic Rossdale Generating Station and pump houses, the new Walterdale Bridge, the Rossdale neighbourhood through Fire Station 21 and surrounding pathways, and create a series of spaces that can be used for public gatherings or individual enjoyment of the river and river valley. As guided by the River Crossing Heritage Interpretive Plan, this project will link and reflect the rich Indigenous and settler history of the site with a dynamic urban future.



3.2 SITE ANALYSIS
EXISTING SITE CHARACTERISTICS

3.3 SITE ANALYSIS
ADJACENT PROJECT OVERVIEW

The Touch the Water Promenade is adjacent to the following projects:



Rossdale Power Plant Advanced Assessment and Priority Rehabilitation
The Rossdale Power Plant is a unique heritage resource with tremendous reuse opportunities to help activate the River Crossing area. The City is currently determining the current building condition and preparing a heritage conservation plan. This information will inform investments to avoid deterioration of the buildings and strategic improvements to allow for the staged re-use of the Power Plant.

EPCOR Rossdale Water Treatment Plant Flood Protection
This project works to protect the Rossdale Water Treatment Plant from the impacts of a one in 500 year flood. In the event of a major flood, the project will ensure EPCOR limits potential damage to the facility and can resume water treatment to the community as quickly as possible afterwards.

Prairie Sky Gondola
A private group of investors has proposed the construction of a gondola to link the River Crossing area with downtown and Old Strathcona. Such a system could provide a new way for people to visit the area without needing to drive or park in the area. The City is working with Prairie Sky Gondola to consider the proposal's viability and effectiveness.

River Crossing Implementation
In accordance with the River Crossing Business Plan, the City is beginning multiple projects to transform West Rossdale, including the concept design phase for a cultural interpretive park between Rossdale Road and 96 Avenue. It is intended to be a place for cultural celebration, connections and understanding, and where visitors can share stories and learn about the people and cultures connected to River Crossing. The interpretive park will be co-designed with Indigenous communities to ensure the park reflects their stories and is welcoming to all.

Mobility Network Roadway Redesign
Improving how people move through the River Crossing area and how they access the community is vital to supporting activation and redevelopment. To that end, the City is preparing a concept and preliminary design of the mobility networks in the area. The project aims to improve the road network to create streets for people while accommodating commuters who travel through the area to access downtown and other parts of the central city.

3.4 SITE ANALYSIS
TECHNICAL STUDIES

To date, the following technical studies have been completed:

- Hydrology and Hydrological Report
- Phase II Environmental Site Assessment
- Preliminary Geotechnical Assessment Report
- Risk Assessment and Risk Management Plan - Rossdale Area
- Environmental Overviews at Concept Phase
- Cultural Resource and Archaeology Summary
- Historic Resources Impact Assessment

Past technical studies have been captured in the Touch the Water and North Shore Promenade Concept Design Report.

An Environmental Impact Assessment and SLS have been completed to inform the development of the Preliminary Design.

4.1 HERITAGE CONTEXT
HERITAGE OVERVIEW

Touch the Water Promenade runs along the North Saskatchewan River at the heart of Edmonton. It is a place of historical and cultural significance to First Nation, Métis, and Indigenous peoples. This land has been a gathering place and traveling route for First Nations since time immemorial, and is home to a Metis river lot pattern. As the birthplace of both the city and the province, and the site of early community and economic activity, it is a place of historical significance to Edmontonians and Albertans.

Guided by the principles set forth in the River Crossing Heritage Interpretive Plan, this project seeks to help users understand why this place is important from multiple perspectives. Part of this heritage recognition includes the integration of the tangible built heritage, which includes the remnants of the site's previous life as an industrial centre. This includes the Rossdale Power Plant and Pump Houses, the High Level Bridge piers and Edmonton, Yukon, & Pacific railway alignment.

As important is a recognition of the cultural heritage of the site. A key cultural site is the Traditional Burial Grounds and Fort Edmonton Cemetery. It is critical to recognize and protect the cemetery as it is vital to understanding how people feel about the area. This project will try to convey the more intangible cultural heritage of expression of values, historical storytelling, and knowledge of nature. With input from our public and Indigenous engagement process, the design will continue to become more detailed and integrate ways to tell stories in the landscape and built environment about the River Crossing area.

The design will seek to create moments of contemplation and heritage interpretation, such as The Bend, at the boundary of the former Hudson's Bay Company Reserve and the subsequent River Lot land system. These moments should serve to make the complexities of land and territory clear and visible and to show the overlapping and evolving identities of this place.

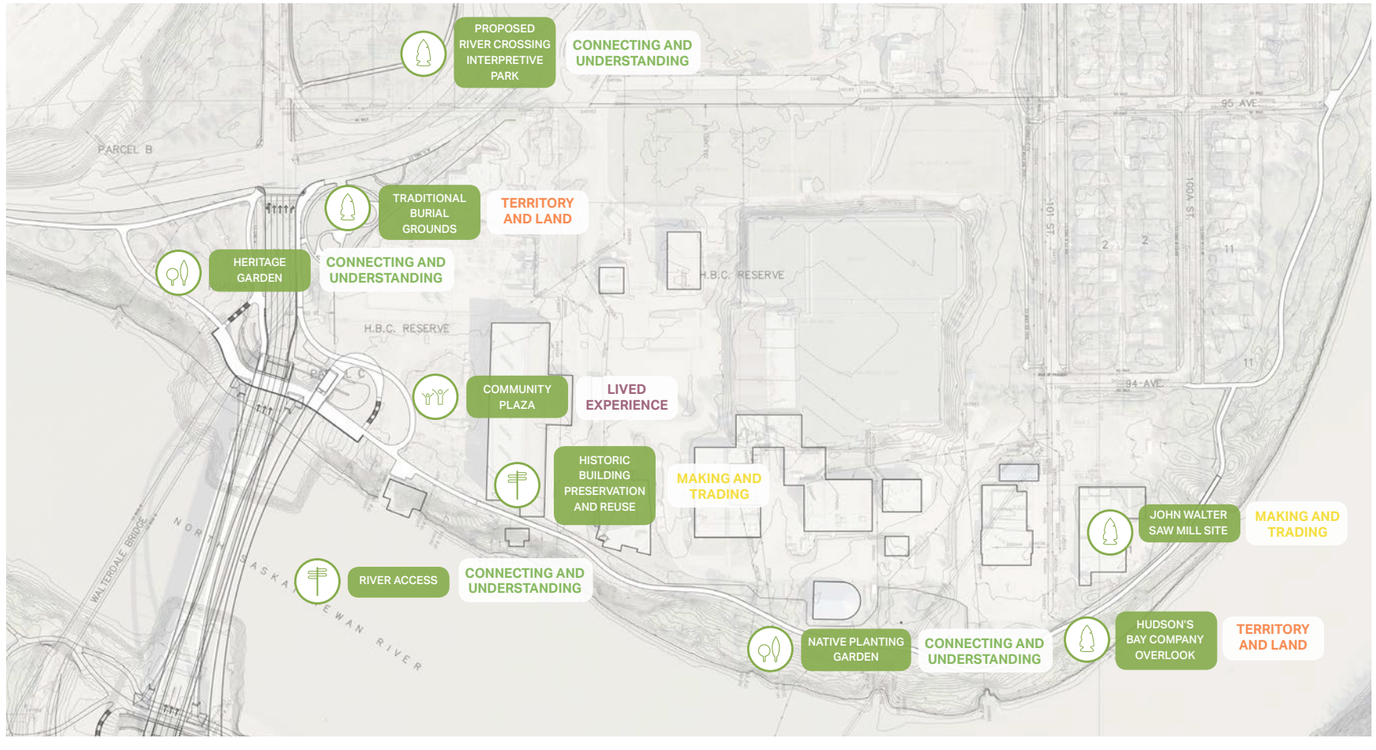
These heritage interpretive initiatives may also be taken up by the public art process.

PUBLIC ART

The project team has met with the Edmonton Arts Council (EAC) to discuss potential approaches for Public Art in this project. In light of the special place of the River Valley to First Nations and Indigenous communities, and feedback received during public and Indigenous consultation, a key topic of discussion was the opportunity for the Public Art process to integrate Indigenous voices and recognition of traditional use of the area by First Nations into the project. A recent example of this approach is the ᐃᓂᒪ (ÎNÎW) River Lot 11∞, Edmonton's Indigenous Art Park, located just across the river from Touch The Water Promenade.

The EAC has expressed value in a coordinated approach to the large site and adjacent projects. The recommendation is to engage an art curator(s) that will work with the EAC to develop a comprehensive plan for art integration, advise and facilitate artist selection processes, and assist in an integrated delivery process that would be appropriate for the site.

The public art call could suggest themes and histories, such as those identified in the Rossdale Heritage Interpretation Plan, but that the EAC does not explicitly request artists to address any particular content or topic. An art curator may advise on how to integrate these histories when bringing on artists. In subsequent phases of the project, the EAC will consider additional public strategies, including how an arts curator may be engaged.



5.1 POLICY AND REGULATION
ZONING ANALYSIS

The Touch the Water Promenade falls predominantly within two land use zones. These zones include the Metropolitan Recreation Zone (A) and the River Valley Activity Node Zone (AN). The Metropolitan Recreation Zone encompasses the water's edge and River Valley trail system east of the EPCOR Water Treatment Plant. The primary purpose of this zone is to protect the natural area and parkland along the river and ravines, while providing areas of active and passive recreational uses and environment protection in conformance with Plan Edmonton and the North Saskatchewan River Valley Area Redevelopment Plan. The River Valley Activity Node Zone exists within the Rossdale area between 101 Street and the Walterdale Bridge, as well as the area west of, and including, the Rossdale Power Plant. The zoning throughout the site will allow for commercial development within this area, for active and passive recreational uses, tourism uses, and environmental protection.

OVERLAYS & REGULATORY REQUIREMENTS

The City of Edmonton's North Saskatchewan River Valley Area Redevelopment Plan Bylaw 7188 requires the completion of an environmental assessment for public development projects or development on public land. Technical and feasibility studies were also required to ensure that the proposal is safe, maintainable and considers impact to the adjacent neighbourhoods and ecological system. As increased recreational development and commercial amenities will be a part of these projects, it is anticipated that areas may require reclassification from an Ecological Park to a Metropolitan Park, in accordance with BREATHE: Edmonton's Green Network Strategy.

The project site also falls within the North Saskatchewan River Valley and Ravine System Protection Overlay, as well as the Floodplain Protection Overlay and therefore must comply with the development regulations set forward in these overlays.

In addition to overlays, there are a number of policies which have guided the design of the preferred concept. Some of these policies include the Development Setbacks from River Valley/Ravine Crests (C-542) which governs setbacks from the river valley, Open Space Policy (C-594) which commits the City to collaborative planning in service of an integrated, sustainable, vibrant, multi-functional green network, and the Natural Areas Systems (C-531) which balances environmental, economic, and social considerations by conserving Edmonton's natural areas. Additionally, plans such as BREATHE, Edmonton's Green Network Strategy, Ribbon of Green, Complete Streets Policy, and City of Edmonton Design and Construction Standards have largely impacted the overall design of the preferred concept.

5.2 POLICY AND REGULATION
PROVINCIAL & FEDERAL REQUIREMENTS

PROVINCIAL APPROVALS

The bed and shore of the North Saskatchewan River are owned by the Government of Alberta under the Public Lands Act. Temporary work in, or permanent occupation of, the bed and shore of the river requires a provincial Public Lands Act disposition which ensures alignment of the proposed activity with provincial policies. The Government of Alberta owns all water in the province and regulates activities and development in waterbodies through the Water Act, requiring biophysical and hydrological assessments and review of impacts to water quality, fish and wildlife habitat, and river geomorphology and hydrology. The Alberta Environmental Protection and Enhancement Act requires a duty to report releases of substances into the environment that may cause an adverse effect, such as contamination in fill materials, sediment, construction machinery and equipment, and waste. A water quality assessment and protection plan have been developed. Site improvements in proximity of identified historic resources will need to be reviewed against applicable Provincial and Municipal historic designation guidelines and the Standards and Guidelines for the Conservation of Historic Places in Canada.

Environmental Protection and Enhancement Act

The purpose of the Environmental Protection and Enhancement Act (EPEA) is to ensure sustainable use of the environment through protection, enhancement and wise use of natural resources. This process helps predict potential environmental consequences of an activity and minimize any adverse impacts before they occur.

Public Lands Act

The Public Lands Act regulates various public land uses, the sale and purchase of land, and the declaration of water bodies as being owned by the Crown.

Water Act

Pursuant to Section 36 of the Water Act, activities that may impact water bodies and the aquatic environment require an approval unless otherwise authorized by the Water Act.

Wildlife Act

The Wildlife Act and Wildlife Regulation provide the regulatory provisions to protect and manage wildlife on all land in Alberta. The Minister responsible for Fish and Wildlife Management has the authority under the Wildlife Act to influence and control activities that may have direct adverse effects on the populations and habitat of wildlife species.

Historical Resources Act

The Historical Resources Act requires clearance for any development that may impact historical resources in Alberta. Historical resources include structures, archaeological sites, paleontological resources and other works of humans or nature that are of value.

FEDERAL APPROVALS

The federal Fisheries Act requires that projects avoid harm to fish and fish habitat. Potential impacts of development include direct loss of fish habitat or deterioration of fish habitat downstream of the beach due to changes in stream morphology, water quality, and hydrology. A habitat restoration or creation plan would need to be developed. The Navigation Protection Act is administered by Transport Canada, which regulates modifications to the river. This would require a notice to the Minister of Transport and may require an approval pursuant to the Act.

Canadian Environmental Assessment Act

The Canadian Environmental Assessment Act, 2012 project review process is required when a federal authority proposes a project, grants money to a project, grants an interest in land to a project, or exercises a regulatory duty in relation to the project.

Fisheries Act

The Fisheries Act is administered by Fisheries and Oceans Canada (DFO). It is aimed at the protection of fish and fish habitat from serious harm and applies to all projects that have a potential to cause serious harm to fish and fish habitat that are part of or support a commercial, recreational or Aboriginal fishery.

Navigation Protection Act

The Navigation Protection Act (NPA) provides protection of navigation on all public navigable waterways in Canada through the Navigation Protection Program. Regulatory approval is required in scheduled navigable waters where the works risk a substantial interference with navigability.

Migratory Birds Convention Act

The Migratory Birds Convention Act (MBCA) provides protection and preservation for migratory birds and migratory bird habitat through the Migratory Birds Regulations and Migratory Birds Sanctuary Regulations.

A comprehensive list of potential regulatory requirements are included in the Environmental Overview provided with the Concept Design Report.

6.1 PROJECT VISION & PRINCIPLES
VISION & PRINCIPLES

VISION - Instantly recognizable as Edmonton's premiere riverfront destination, this incredibly vibrant public space evokes a unique sense of place in Canada's northern-most major city. The Touch the Water Promenade celebrates the central river valley's multi-layered history and special significance to Indigenous Nations & Communities, restores its natural systems and resiliency and re-connects the central city to the river. By improving access into and within the river valley network, the Promenade provides diverse opportunities for riverfront gathering and recreation not found anywhere else in the region.

PRINCIPLES - Touch the Water Promenade project has been guided by BREATHE, the City of Edmonton's strategy for parks and open spaces planning and design. The main goal of BREATHE is to plan and sustain a healthy city by encouraging connection and integration of open space at the site, neighbourhood, city and regional levels. As a central riverfront public space, Touch the Water Promenade has incorporated the three themes from BREATHE into the concept design options design: Ecology, Wellness and Celebration.

Ecology Principles
1. To restore and enhance the central river valley as an ecological network and wildlife corridor within a wider, interconnected network.
2. To expand, enhance and diversify the urban forest, improve the river shoreline and restore natural ecosystems and habitats within the project area.
3. To connect communities to nature by promoting ecological stewardship through amenities which promote and educate on positive ecological practices, such as watershed quality and naturalization.

Wellness Principles
1. To provide varied and unique spaces that allow for a more diverse range of recreation and mobility activities, as well as spiritual wellness.
2. To encourage healthy and active living by further activating and improving the central river valley multi-use path network.
3. To provide more direct and accessible connections between the promenade, central river valley destinations like Victoria and Government House Parks, and city centre neighbourhoods.
4. To increase diversity of use, safety and appeal by providing options for users through active and passive pathway separation.

Celebration Principles
1. To promote community interaction through the development of vibrant, welcoming, accessible, inclusive and playful gathering spaces along the river's edge, in all seasons.
2. To respectfully commemorate the diverse Indigenous history, use, and contributions to the area, and provide gathering spaces to celebrate, teach and promote culture.
3. To strengthen Edmonton's identity by telling the story of this place's diverse cultural significance and rich, multi-layered history, as envisioned by the River Crossing Heritage Interpretive Plan.
4. To provide more inclusive access and connection to the river itself for social, cultural and recreational use as a water corridor and for restorative contemplation.

7.1 PRELIMINARY DESIGN
DESIGN INTENT SUMMARY

Through rigorous design charrettes and engagement, including both Indigenous and Public Engagement, a project vision, design principles, and concept design were developed. The vision, guiding principles, and concept design informed the development of the preliminary design which seeks to improve access, mobility and safety for all ages and abilities, while connecting residents and visitors with the river, nature, and each other through the central river valley.

The preliminary design incorporates the following features:

- To the west of the Walterdale Bridge, the design aims to re-naturalize the area, creating a variety of intimate gathering spaces, alongside a riverfront overlook.

- The design immediately east of the Walterdale Bridge seeks to create various flexible spaces including open space in the central plaza and next to the Power Plant. Differentiated through topography and varying planting strategies, the Rossdale Gateway design creates a variety of flexible spaces that can be used for active life and outdoor events which are adaptable to accommodate future uses of the Power Plant and the Pump Houses.

- The proposed waterfront infrastructure has been "right sized" to provide a swooping accessible riverfront walkway and scramble combining stone and bio-engineering to provide access down to the water.

- The preliminary design also include multi-use paths throughout the area and along the waterfront, seating and additional plantings of native grasses, a perennial garden, a rain garden and replanting along the river's edge.

- At the east boundary of the project, an accessible pathway from the Rossdale neighbourhood, through the Rossdale Fire Station 21 site has been provided. This location has been designed to host a prominent interpretive feature and riverfront overlook.

Special attention has been paid to the safety and universal accessibility of people traveling to and through the central river valley, and to the connection with the waterway itself. The preliminary design advances the improvement of access to and comfort within the promenade spaces, particularly among different modes and speeds of travel. The design responds to technical and cost parameters by connecting to, and building off of existing infrastructure wherever possible.

While maintaining priority elements that improve river access, safe mobility, and provide new spaces for gathering and play in the central river valley, the concept is also driven by ecological priorities. The preliminary design proposes maintaining or enhancing the existing ecological connections by reintroducing diverse, native plating and reducing the amount of hardscaping and hard infrastructure proposed in the earlier concept options. The ecological improvements include improved storm-water management, strategic replanting of the project area with tree and shrub species that are native to the region, enhancements to the wildlife corridor and improving Edmontonians' access to nature and the River itself through lookouts.

Providing more opportunities to celebrate the multi-layered Indigenous, industrial and natural heritage and culture of the project area have also been incorporated into the concept design. Access to the adjacent Rossdale Power Plant and Pump Houses is integrated into the design of the Touch the Water Promenade. The preliminary design envisions a multi-use public plaza space with a variety of different spaces for play, seating and gathering in order to support the future redevelopment and reuse of these historic landmarks. An interpretive feature is also proposed at the overlook at the Bend. This interpretive feature will focus on the complex and multi-layered history of the land. This space was shaped by the historic boundary of the Hudson's Bay Company lands and river lots, which are an important part of Metis culture and history. The east property line of the Hudson's Bay Company Lands and start of the historic river lot pattern is defined by the new path connecting to 101 Street.

7.2 PRELIMINARY DESIGN
LIGHTING DESIGN

The Touch the Water Promenade project offers significant opportunities for signature lighting interventions to foster placemaking and transform the area into a year-round night-time destination. The following descriptive information aims to communicate both the purpose and effect of the lighting design to provide as full an understanding of our vision as possible.

ILLUMINATION:
The primary site lighting shall be provided from multiple aimable flood luminaires mounted on either 20-foot or 30-foot-tall poles. Aiming the luminaires in different directions the design is able to illuminate long lengths of the pathway and large areas of the plaza from fewer pole locations.

Along the pathways the luminaires shall provide pools of warm white (3000K CCT) light in an even rhythm that ensures safe and secure usage at all times.

At the Rossdale Power Plant plaza the pole height rises to 30 feet in order to accommodate large luminaires and provide a higher aiming angle to cast light broadly across the pathways, deck, and lounging lawn. The poles are intentionally positioned around the plaza's north and east perimeter to ensure the south west view of the Walterdale Bridge, river valley, and sunsets are unimpeded.

The larger plaza pole luminaires not only provide warm white (3000K CCT) illumination to match the pathways, but also have dynamic colour changing (RGBW) and gobo pattern luminaires; these will be variably focused on the power plant's west façade and new deck space to enhance the uniqueness of the site for cultural and community expression.

Along the base of the power plant's west façade is proposed a light well covered by a grate. This proposal ensures pedestrian access right up to the building surface while maintaining daylight penetration to the power plant's lower levels. Dynamic colour changing (RGBW) flood lights will be mounted down in the light well to graze broad swaths of colour up the power plant's façade, providing another layer of unique expressive illumination.

Completing the plaza lighting are foot lights inset into the sides of seating benches and the steps of the deck. These luminaires cast very warm (2700K CT) light across the pathway and stairs to provide safe illumination as well as an aesthetic layer to enrich the visual experience.

As one approaches the river edge the project proposes unique pedestrian experiences using boardwalks that over-looking the banks. Along these boardwalks is a hand-railing system within which small "puck" luminaires will be recessed on the underside, spaced approximately 1200mm (4 feet) apart. These hand-railing integrated lights cast a very warm (2700K CCT) light across the boardwalk surface which then reflects upwards to reveal the forms and features of people and objects. As the lights are mounted at hand-railing level they do not produce glare; maintaining unimpeded views of the river valley and bridge.

Along the path of an overlook boardwalk is Pump House #2 through which our project proposes the overlook run. This intervention is a dramatic design experience that lighting can enhance. By recessing in-grade wall-washing up-lights in the boardwalk deck cool white (4000K CCT) illumination will cast up the interior wall and reflect off the ceiling. In combination with the very warm white light from the hand-railing luminaires a visual tension is created ensuring a memorable location.

The East end of the project proposes a new textured privacy wall with inset metal artwork. To bring this feature out at night discreet cool white (4000K CCT) linear luminaires will be mounted along the bottom of the wall to graze light upwards revealing texture through shadow and highlight. The same discreet luminaire will also be mounted along the top and bottom of the metal artwork but utilize a very warm white (2700K CCT) light to enhance its presence in juxtaposition to the adjacent wall illumination.

CONTROLS:
The general pathway, plaza, hand-railing, and East feature wall luminaires will turn on and off through a combination of astronomic clock and photocell to ensure lighting is present when needed. Luminaires shall be connected into dimming groups to ensure proper commissioning of brightness levels can be set and adjusted as needed in the future.

The dynamic lighting colour changing, and gobo projecting luminaires mounted on the tall plaza poles and in the power plant light well will turn on and off through a combination of astronomic clock and photocell. Additionally, these lights will be connected to a DMX network enabling the programming of limitless unique lighting scenes and transitions.

All controls products can be mounted in a weatherproof and conditioned panel – location to be determined through design – or inside the power plant itself depending on client preference.

7.2 PRELIMINARY DESIGN
LIGHTING DESIGN

DARK SKY & WILDLIFE:
The majority of the proposed luminaires are aimed downwards to the ground and do not shine light directly upwards into the sky, thus not contributing to urban light pollution. Further, the intended products all possess specific optical control options which will be selected through the design process to ensure the project does not spill adverse amounts of light where it is not wanted (e.g. – onto the river).

The proposed dynamic colour changing, and gobo pattern luminaires will be aimed upwards onto the power plant façade. However, almost all their light will be contained to the façade itself, minimizing the amount of direct light spilling into the sky. Similarly, the East feature wall lights are aimed upwards, with the wall itself capturing the bulk of illumination.

The proposed in-grade lights at Pump House #2 will not contribute to light pollution as the illumination is contained by the wall and ceiling of the boardwalk through portal.

LONGEVITY & DURABILITY:
All proposed luminaires are of LED technology and therefore possess long rated life spans of at least 50,000 hours (> 11 years operation at a 12 hour per day average).

The pathway luminaires list a life span approaching 120,000 hours (> 25 years operation at a 12 hour per day average).

The hand-railing integrated puck luminaires list a life span approaching 200,000 hours (> 40 years operation at a 12 hour per day average).

All luminaires have been tested to at least -20C operation with real-world experience showing they operate at much lower temperatures. Both the pole mounted pathway and hand-railing integrated luminaires have been tested to operate at -40C.

All luminaires are built and rated for exterior environments with a minimal Ingress Protection (IP) rating of IP65; the pole mounted pathway luminaires carry an IP67 certification.

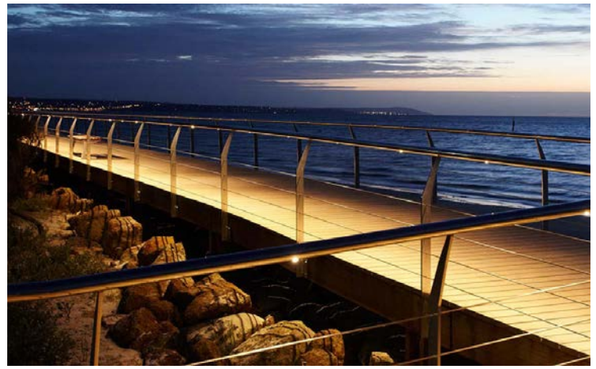
The hand-railing integrated luminaires carry an impact resistance rating of IK10 ensuring they cannot be easily damaged through abusive behavior.

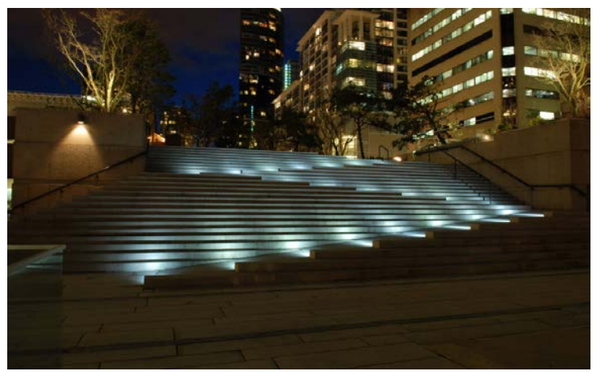
MAINTENANCE:
Both the pole mounted and hand-railing integrated luminaires can be individually removed as needed for repair or replacement. Specific tools are required for this process to ensure random individuals cannot simply steal luminaires from site.

The dynamic colour changing flood luminaires mounted in the power plant's window well have an optional "defrosting" lens accessory to ensure snow and ice do not build up on the product preventing it from effectively operating. This accessory is separately controllable from the light itself and could be connected to a temperature sensor to automatically engage when conditions warrant.

For most projects of this size, we recommend the client purchase some spare luminaires as part of the project scope to be kept in storage. This ensures that when a luminaire fails the replacement is readily at hand with minimal downtime. After replacement the warranty claim process can take place without concern that a site is under illuminated.

Refer to Preliminary Design Technical Drawing Package for lighting plan and further details.





7.3 PRELIMINARY DESIGN MATERIALS

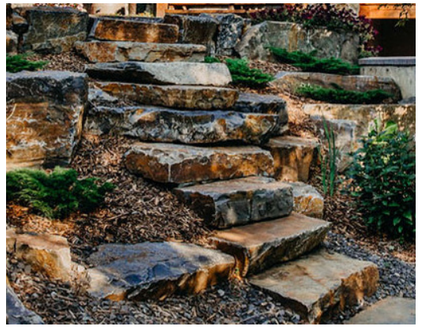
NATURAL STONE PAVERS

Surface materials such as natural stone pavers (granite or other) will form the central gathering area, creating a mixing zone that spans across the plaza and promenade.

C.I.P. CONCRETE PAVING

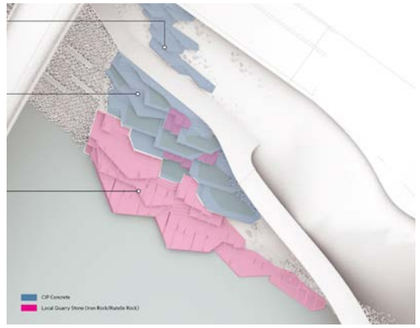
ASPHALT

GRANULAR WALKWAY



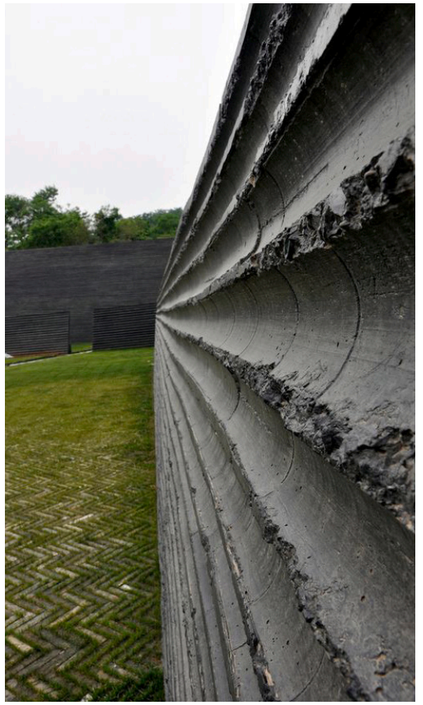
BROWN RUNDLE ROCK AT SCRAMBLE

C.I.P. CONCRETE PAVERS AT SCRAMBLE



SCRAMBLE MATERIAL STRATEGY

MOYIE RUST / IRON ROCK SEATING AT WALTERDALE LANDING



C.I.P. FLUTED CONCRETE WALL

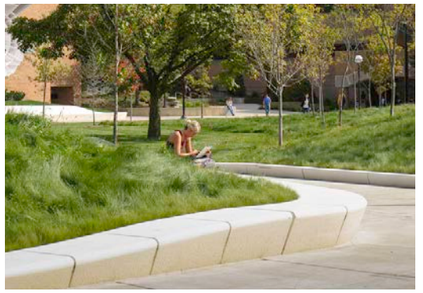
KEBONY ELEVATED STRUCTURES

A thermally-treated timber decking surface is proposed for the Deck along the Power Plant, the riverfront pathways and overlooks, and along portions of the promenade. This variation of materials also assists users differentiate between the faster and slower of the promenade. In some instances the thermally-treated wood decking materials will spill out into pomade spaces at landings in order to provide a seamless transition between elevated walkways and promenade.

GALVANIZED HANDRAILS WITH MESH INFILL

Railings and balustrades are galvanized steel, to match the galvanized superstructure underneath the elevated walkways. While shiny at first, galvanized steel will oxidize and weather to a quieter, matte finish that will feel at home amongst the other natural or rough finishes. Stainless steel wire mesh infill between the galvanized balustrade posts is proposed to maximize transparency, while addressing maintenance and damaged concerns related to a glass balustrade.

High-quality and durable benches will be added along the promenade to provide a moment of pause to take in the views and bridge experience. Thermally-treated wood seating is proposed to assist in the creation of an attractive placemaking moment at these lookouts.

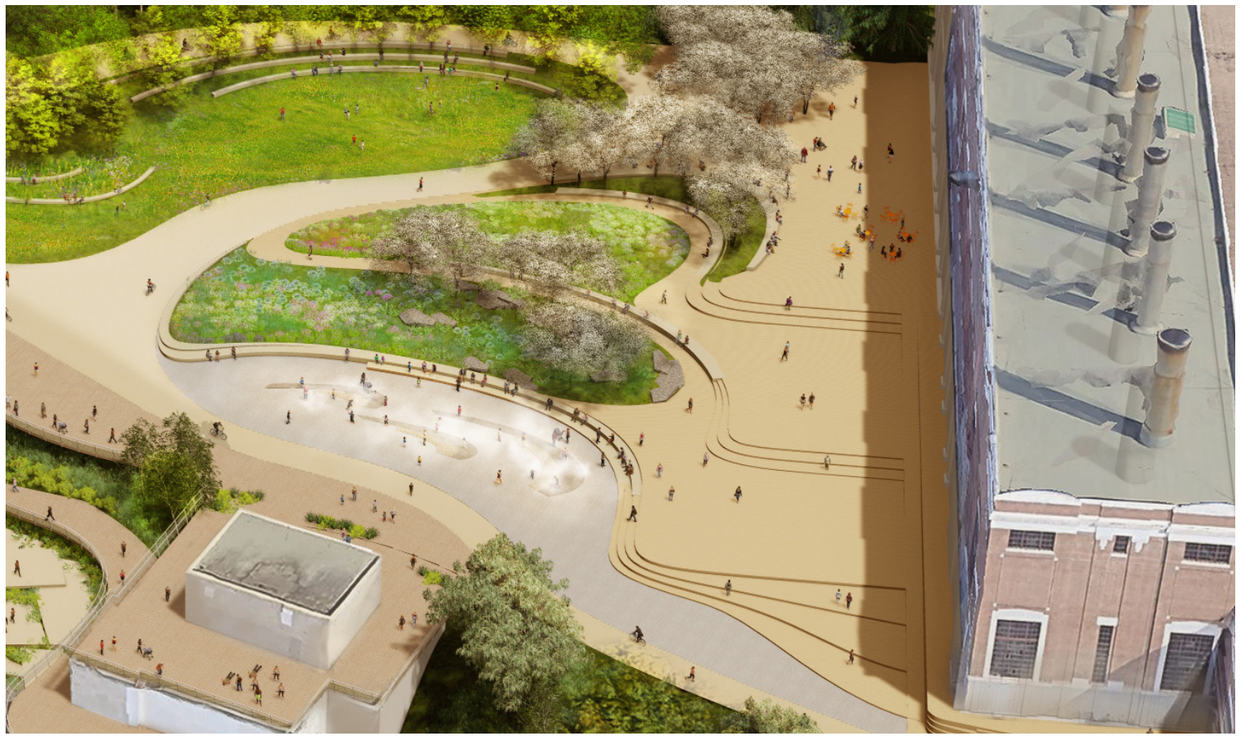


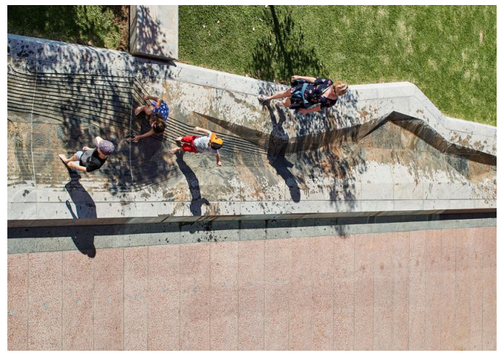
C.I.P. CONCRETE BENCHES

7.3 PRELIMINARY DESIGN
MATERIALS - FUTURE WATER FEATURE

The plaza at Rossdale Gateway has been designed to accommodate a future water feature, should this be desired.

This page illustrates a potential water feature configuration, alongside a number of precedent images. The future water feature presents an opportunity for heritage storytelling through an interpretive element similar to the water feature in Domino Park, NYC (bottom right), Utilizing elements of fog / steam woud create a unique visual quality to the site, while connecting to the industrial roots of the site and the historic Rossdale Power Plant.





7.4 PRELIMINARY DESIGN
UNIVERSAL DESIGN MEASURES IN DESIGN

The Preliminary Design takes into consideration the following City of Edmonton policies and best practices:

- Universal Design (Barrier Free)
- City of Edmonton Access Design Guide
- Crime Prevention Through Environmental Design (CPTED)
- Child Friendly
- Senior Friendly
- Applicable sections of Smart Choices (Walkable City, Transit Orientated Design,
- Urban Design etc.)
- City of Edmonton Sustainable Building Policy C532
- City Council Infrastructure Strategy
- Edmonton Design Committee Principles of Urban Design
- City of Edmonton Corporate Security
- City of Edmonton Facility Maintenance Services

The project will be designed to the following:

- Alberta Building Code 2019
- National Energy Code of Canada for Buildings 2011
- 12800 Edmonton Zoning Bylaw
- City of Edmonton Facility Design & Construction Consultant Manual Vol. 2
- EPCOR Customer Connection Guide
- Canadian Electrical Code

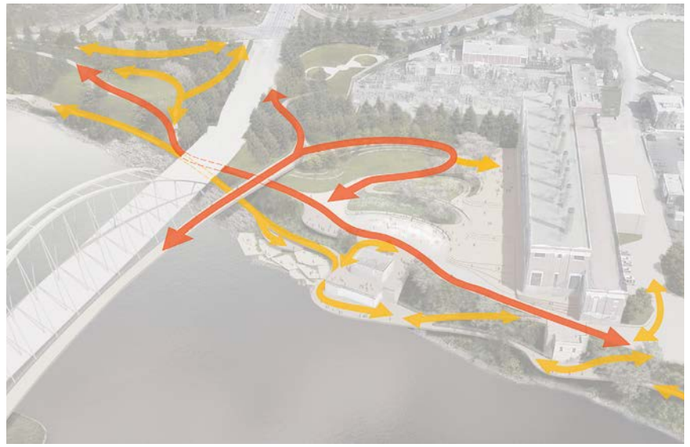
The Touch the Water Preliminary Design has aimed to provide universal access across the site, including partial universal access at the scramble. All surfaces and pathways have been designed with the City of Edmonton Access Design Guide in mind; as such, pathways have been designed to a maximum of a 5% slope to provide barrier-free access. The riverfront pathway bridging between pump house 1 and 2 exceeds a 5% slope but remains in conformance with the Alberta Building Code universal design standards for Trails.

Handrails have been designed to be low-profile with a mesh insert to lessen obstruction of views for youths and users in wheelchairs.

The City of Edmonton has adopted a Gender-Based Analysis Plus (GBA+) process to improve inclusion and equitable outcomes for projects and services. As an open and inclusive public amenity, it is assumed that a very diverse range of types of identities will make use of Touch the Water Promenade. Although not selected as a GBA+ pilot project, the principles and intent of GBA+ have been applied to the concept design of the Touch the Water and North Shore Promenades project. Design features will also be developed in tandem with the City of Edmonton's Access Design Guide. Incorporating diverse perspectives from varied lived experiences and intersectional identities, through both the project team and engagement, has been integral to project planning and design.

Generally, the relevant input received focused on improving accessibility both to the water and to the river valley overall for many different abilities and types of people (e.g. people with strollers and young children, persons with disabilities, Elders), ensuring safety is prioritized, and creating culturally respectful and welcoming, comfortable spaces.
Relevant design considerations that will contribute towards this process include:

- Flexible and welcoming seating and rest areas frequently integrated into the site per Universal Design and City of Edmonton Access Design Guide recommendations.
- Additional pathways and widened walkways, to provide enhanced separation between disparate speeds of travel and ability for both safety and usability in line with Smart Choices - Walkable City, CPTED, and EDC Principles of Urban Design.
- Additional connections to the park systems for users, including enhanced barrier-free parking and vehicle drop-off lay-bys, and barrier-free connections to surrounding spaces and neighborhoods per City Council Infrastructure Strategy recommendations, BREATHE Principles of Connection, Smart Choices - Walkable City, and CPTED principles of connection and visability.
- Crime Prevention through Environmental Design (CPTED) principles to maintain sightlines and remove hazards associated with hidden spaces.
- Well-lit paths that extend the safe use of the spaces into darker hours.
- Multi-use spaces including the knoll, deck, barrier-free outlooks, intimatly spaced green spaces, lawn, and plaza offer various ways to experience and program the Touch the Water site for patrons of all ages and abilities. The wide range of scales and experiences of these spaces have been designed with the EDC Principles of Urban design, CoE Facility Maintenance Services, CoE Corporate Security, Universal Design, Child Friendly, Senior Friendly Smart Choices - Urban Design recommendations and requirements.
- Re-naturalized landscape areas throughout the project consider the CoE Sustainable Building Policy, CPTED design principles, CoE Facility Maintenance Services requirements, and sustainable best practices.



ACCESSIBLE PATHWAYS IN ROSSDALE GATEWAY

7.5 PRELIMINARY DESIGN
ALIGNMENT WITH ADJACENT PROJECTS

COORDINATION WITH ADJACENT PROJECTS

Touch the Water Promenade within the Rossdale Area has been coordinating with adjacent projects. These projects have shared interest in the some components of the site and have the potential to reinforce each other project's respective goals. In some cases where goals are not aligned, effort has been made to find design solutions that balance differing priorities. This process of coordination, exploration, collaboration will continue into the remainder of the Preliminary Design phase and Detailed Design.

ROSSDALE POWER PLANT

Guiding the exterior, public realm improvements around the Power Plant, the project area for Touch the Water abuts the exterior faces of the historic Boiler Hall, Turbine Hall, and Pump Houses. These historic buildings are being studied as part of a separate City of Edmonton project (RPP AAPR) that is exploring heritage rehabilitation, building code improvements, temporary use facilitation and eventual large scale adaptive reuse scenarios for the facilities. This study outlines Immediate Term and Long Term scenarios for space use.

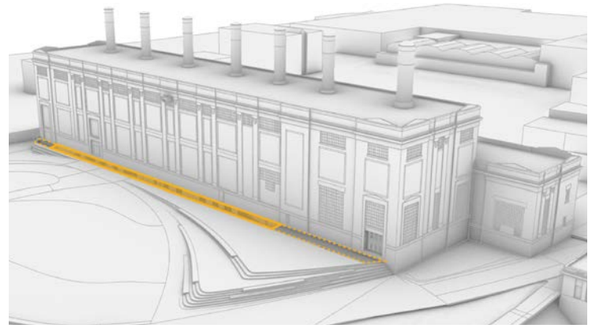
Touch the Water and the RPP AAPR share an opportunity for tremendous synergy and a combined vision for the site as a unique public destination and amenity, inside and outside. While many of the opportunities for these two projects are obvious and aligned, there has been discussion about how to best balance different goals and different implementation timelines, with a focus on two locations:

BOILER HALL INTERFACE / PHASING

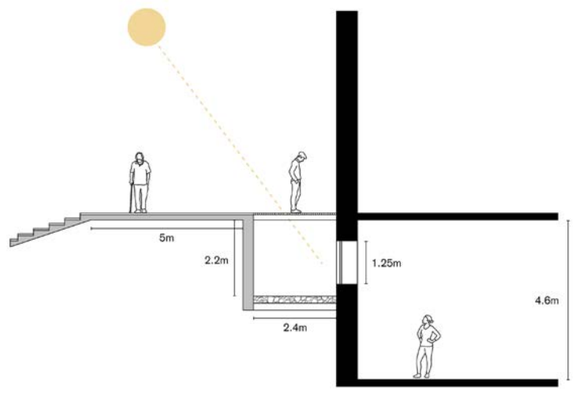
The grading strategy for the central public space at Rossdale Gateway is based on a concept of a diverse collection of spaces that negotiate the elevation changes the site presents. Site grading will stitch together the elevation of the existing multi-use trail coming off the Walterdale Bridge Passerelle, the elevation of existing elevation of grade at top of bank where the promenade will traverse the site, and the existing sloping pathways that run under Walterdale Bridge. An improved alignment of these sloping pathways series a series of appropriately-scaled exterior spaces with considered relationships to one another. These slopes and terracing spaces are organized around the central idea of creating unobstructed visual connections down towards the surface of the river between Pump House 2 and the Walterdale Bridge.

This grading approach lifts the grade of the public realm along the west face of the Boiler Hall to be flush with the interior ground floor of the Boiler Hall. This strong interior/exterior alignment will allow for seamless movement between landscape and building in the future, and facilitate robust programmatic connection between the main floor of the Boiler Hall and Touch the Water's built topography.

Though this connection was identified by the RPP AAPR project, it also requests a substantial connection to the Boilers Hall's lower level along this west face, for public access and natural light. Historic windows (currently blocked over) to this lower level were identified, and there is a desire to maintain the future possibility to excavate the grade several meters down to the elevation of the lower level, so the topography privileges the lower level connection over the ground level connection provided. This would create a continuous depression in the landscape that would allow for larger openings to be cut that would provide uninterrupted access and natural light to the lower level.



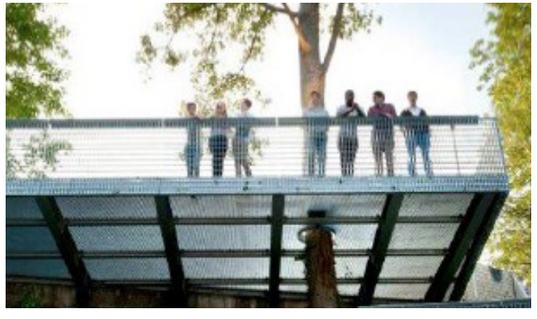
ACTIVE LIGHTWELL LOCATION



While the Touch the Water team understands the intent and benefit such a design decision would have for the Boiler Hall lower level, the scale of this proposed accommodation is at odds with the design strategy and design process on Touch the Water to date. This depressed area introduces disadvantages and limitations to the exterior spaces, and the priority for this to be a safe and inviting space that will serve users on a day-to-day basis. However, this design for Touch the Water has adapted based on this feedback, by incorporating a provision the historic lower level windows to be reinstalled and provide natural light, and by creating opportunities for lower level access (by means of a future exterior stair/plaza) at the prominent and active south end of the Boiler Hall. These approaches will respect the "light touch" principle noted by the RPP AAPR project for these important heritage structures.

We anticipate that discussion and collaboration will continue as the Touch the Water design process advances, to balance respective project goals and find shared positive outcomes.

It is very likely that Touch the Water will be implemented before these longer term adaptive reuse scenarios are pursued (noted as a potentially 20+ years timeframe). The design for Touch the Water also gives consideration to the performance and quality of this River Valley Park over that duration.



7.5 PRELIMINARY DESIGN
ALIGNMENT WITH ADJACENT PROJECTS

PUMP HOUSES INTERFACE / PHASING

The walkways proposed by Touch the Water along the waterfront visually and physically engage the two decommissioned Pump Houses located on the riverbank. The preferred Concept Design for this area included a continuous public rooftop over Pump House 2, and elevated walkways wrapping around the south sides of both pump houses, creating unique opportunities for trail users to get over and closer to the waterway.

The Preliminary design has been changed in response to feedback received that the lower walkway feature created a visual barrier of the pump house from the river, and compromised an important visual connection of the pump house to the river. The elevated pathway around Pump House 1, a provincially designated heritage resource, was eliminated from the design to maintain these unobstructed sightlines. At Pump House 2, several options for pathway alignments were explored, with various degrees of structural integration between the pump house and the public walkway. The preferred design option is the most integrated, with a walkway that runs through the pump house itself, transforming the interior space into exterior covered space. This unique experience will expose the inner historical workings of the impressive public infrastructure to a wide range of users, while providing barrier-free access to the lower level of the pump house. Similar to the other design ideas proposed during Concept Design, this revision aligns new structures where existing infrastructure already exists, creating a rich juxtaposition of spaces. This design opens opportunities for creative sights, sound and heritage interpretation installations that will respect and celebrate the original function and form of Pump House 2. The strong connection between the public walkways and interior space will open up exciting opportunities for adaptive reuse.

The timeline for the adaptive reuse of Pump House 2 is unknown, however RPP AAPR project notes this as an Immediate Term priority that can proceed independent of the Power Plant. We anticipate that there will be coordination between Touch the Water and the Pump House 2 project, to accommodate future use in the building and identify optimal details for the integrated pathway. There are three potential scenarios for how the implementation of these coordinated projects are phased:

1. Simultaneous implementation

This scenario presents the greatest opportunity for an integrated design and close coordination. With ideal timing, public access to the walkway would align with potential occupancy of the renovated pump house facility.

2. Touch the Water proceeds first

This scenario remains feasible with two alternative approaches. Either:

-Phase 1 (Waterfront) could begin in advance, with Pump House improvements occurring during Phase 2 (Rossdale Gateway), so both projects could share similar construction site access points), or

- Phase 2 is completed and opened, with Pump House improvements occurring at an undetermined time later. The subsequent construction access for the Pump House project could be managed from the east side of the Power Plant. The promenade would be used for site access and the central lawn of Phase 2 could be used as temporary site laydown for the Pump house project.

In this scenario, Touch the Water could take responsibility for the selective demolition of the pump house structure. A temporary wall would be constructed between the path and the remaining interior space of the lower level of the Pump House. Power for lighting will be supplied via the elevated walkway, independent of the Pump House power.

3. Pump House proceeds first

This scenario presents challenges for access and servicing that may make it not feasible. Touch the Water is currently tasked with coordinating the underground utility connections that will connect the pump house to the roadway service points, which would be required for future use of the Pump House. In addition, Touch the Water construction Phases 1 and 2 anticipate closing this area to public access.

7.6 PRELIMINARY DESIGN
PHASING & CONSTRUCTION METHODOLOGY

PHASING

The Concept Design for Touch The Water Promenade included a wider site area and two areas of study - the North Shore Area running from Groat Creek at Government House Park to 105 Street, and the Rossdale Area running from 105 Street to 94 Avenue.

The Rossdale Area is smaller in comparison, and was originally conceptualized to function cohesively when implemented together in a single phase (except for some flexibility around the "Walterdale Landing" zone) in order to provide a cohesive outcome. While this was the design assumption during the Concept Design stage, the project recognizes the potential benefits for phasing within the Rossdale Area as well and has analyzed how this smaller area could have a phased delivery.

While the following phasing plan incorporates these considerations, there are factors that could affect the order or timeline for completion, including:
-Council Support
-Available Funding for Implementation
-Alignment with Other Initiatives and Partnerships

Shown below is the recommended segmentation of the site to support a phased implementation approach. Each area has its own factors and constraints to consider. When considered together, these factors provide a rationale for how the various areas should be sequenced.

PHASE 1 ROSSDALE WATERFRONT

Generally this area is defined as the enhanced promenade that runs along the edge of the bank, and the access features between the promenade and the river. This also includes the bank disruption, bank stabilization and planting (primarily consisting of restoration of native planting along pathways and the bank) along this riverfront area.

The linear riverfront area is recommended as the first phase of the project. Firstly, it allows for the primary intended use - an enhanced multi-use, linear park experience along the river's edge - to be put in place in advance of subsequent phases. Secondly, it limits the duration of disruption of use and a contiguous park experience by the public and wildlife. Thirdly, it finds efficiency in consolidated construction work that is similar in nature limited by access constraints. And lastly, it consolidates applications with environmental regulators associated with riverfront disturbance.

This phase of implementation is the most complex and introduces environmental considerations and risks to manage. The nature of the bank will require a carefully considered logistics plan during construction. Disturbance will be caused by the proposed support structures for the riverfront features that require manipulation of the existing bank, as well as the temporary "means and methods" that the contractor will put in place and construct these supports. The existing bank slope will require temporary access routes for foundation piling equipment, which includes temporary bank reinforcement. Edge disturbance will be most significant between the Walterdale Bridge and Pump House 1, where the proposed access improvements are in closest proximity to the waterway. This area is characterized by significant historical disturbance and poor-quality fill during former industrial use, and is currently in poor ecological condition. The bank between the new Walterdale Bridge and Pump House 2 was recently disturbed for construction and armored with rip-rap as part of the bridge replacement project. The bank between the Pump House 1 and Pump House 2 has been historically disturbed and is fairly steep. These areas will require bank grading and stabilization through traditional engineering (to support structures for access) and bio-engineering (to support better performing bank naturalization) methods.

For multiple reasons, it is recommended that the entire noted length of riverfront is constructed together. From a regulatory approvals perspective, construction projects with impact to the riverfront will require coordination with and approvals from Provincial and Federal environmental regulators, and identified environmental risk mitigation measures to be in place. Consistent measures along the riverbank will offer a consistent and clearer area and duration of disruption and mitigation.

Site access is a strong determinant for the phasing approach. For this linear area of riverfront construction and restoration it is assumed that access by heavy machinery will only be available from Rossdale Road, along the north or east side of the Power Plant. Due to space constraints, construction of the riverfront area will require closure of the existing multi-use path connections through this area. Users will be detoured along Rossdale Road / 96 Ave, as during the recent construction of the Walterdale Bridge replacement, unless further closures are required by the concurrent implementation of the adjacent Rossdale Mobility Network roadway design.

If the implementation of the adjacent EPCOR Flood Mitigation project occurs concurrently with this Touch the Water phase, then there is potential opportunity for additional shared access through EPCOR water treatment plant site. Given the unknown implementation timing and duration for that project, reliance on this access through property not owned by the City of Edmonton has risk. While there is also room for potential access through Fire Rescue Service (FRS) property, there would be significant operational challenges and concerns. Even without regular construction access at this location, selective access times

7.6 PRELIMINARY DESIGN
PHASING & CONSTRUCTION METHODOLOGY

for the proposed public access improvements between Touch the Water Promenade and 101 Street (along the apron of Fire Station 21) will need to be very closely coordinated with FRS, to avoid any risk to station operation and response.

Given the linear nature of the site and proposed design, there is a consistency of approach and design features along the length of the riverbank treatment and proposed Promenade. This consistency of design approach and detailing means there would also be consistency of construction methodology. Similar construction methods, equipment, and sub-trade scopes and material procurement consideration will apply to the length of the waterfront area. Consequently there is cost and schedule efficiency gained by consolidating the length of the waterfront improvements from Walterdale Bridge to 101 Street.

From an overall timeline perspective, there could be benefits to synchronized implementation of the Waterfront Area and the adjacent EPCOR Flood Mitigation project, such as public perception and enjoyment of "completeness" after construction concludes. However the design does not require the projects to proceed concurrently. Further design coordination meetings with EPCOR and Detailed Design documents will allow the construction of these respective projects to proceed independent of one-another.

PHASE 2 ROSSDALE GATEWAY
Generally this area is defined as the collection of park spaces. This area has a function identity as a signature destination space for gathering, with a strong visual relationship (and ultimately physical access connection) to the Rossdale Power Plant.

It is assumed that this area will be used as lay-down areas during Phase 1, so it would follow waterfront improvements. While the single point of access for this area will have challenges, the construction staging will generally be straightforward, with a central site turnaround compound located in the central lawn of the proposed design to allow regrading and construction of site structures around it. The construction phasing in this area would ideally allow continuous use of the pedestrian path that runs along the east side of the Walterdale Bridge, which would require a stage of detour trail users from the bridge north to River Valley Road, and a stage to detour trail users from the bridge south to the completed waterfront.

While this is a smaller area than Phase 1, it will have a high level of quality, with durable finishes and detail-driven design features meant to encourage users to stay and linger. Its role as a marquee public space in the area, and its function as a destination gathering space that complements the movement along the waterfront promenade, makes it an integral piece of the overall attraction and success of the Rossdale Area. As such it is recommended that this phase be implemented as is possible once Phase 1 is complete, and ideally as a single coordinated construction contract.

PHASE 3 WALTERDALE LANDING
Generally this area is defined as the triangular zone west of the Walterdale Bridge and south of River Valley Road. Although separated from the rest of the site by Walterdale bridge and 105 Street, this zone was chosen for inclusion in the Rossdale Area in order to offer a diverse but complimentary range of spaces to the vision for the Rossdale Area. This area allows Touch the Water to help fulfill its goal of re-naturalization unused ornamental areas with native vegetation, while providing longer continuation of the improved, widened promenade. Whereas Phase 2 provides open spaces for larger gatherings and flexible use, this area offers smaller-scale spaces embedded in the planted areas. While these functions are somewhat independent of Phase 1 and 2, they unite the larger contiguous open area east of River Valley Road into a unified but diverse vision. This phase also includes the westward continuation of the improved promenade, which would extend the proposed separation of pathways into a seamless linear experience in keeping with the project's inception. For these reasons it is recommended that this phase is implemented together with the other phases, however due its location there is clear flexibility around the delayed phasing of this area to suit available funding.

Due to its separation from Phase 2 by 105 Street, this area would have its own lay-down area and access, allowing it to be treated as a separate Phase. A smaller-scale lay-down space would be located over the future promenade would allow pedestrian movement along River Valley Road to be managed. This lay-down area could be supported by ancillary lay-down space north of River Valley Road, if available for use.

CONSTRUCTIONS LOGISTICS PLAN
The means and methods employed in construction and the overall duration of construction phases (including associated public access closures) will require the input of a qualified contractor or construction manager, however likely construction logistics/staging scenarios have been considered. Both archaeological oversight and Indigenous site monitoring is intended for phases of construction such as site excavation and grading. The following summary describes the working assumptions for the implementation phase.

ACCESS, LAY-DOWN, AND SITE PREPARATION
Primary access for construction will require access from Rossdale Road to the service road running east of the EPCOR electrical substation. There are 2 potential locations for a main lay-down area and the site trailer compound. Option 1 is in the largely flat area between the Power Plant and the Walterdale Bridge (Rossdale Gateway). Option 2 is in the existing gravel parking lot east of the Power Plant. Alternatively, should the timing of the project allow it, the construction site offices could make use of the Power Plant itself. If the Option 1 site (Rossdale Gateway) is the preferred location, then phasing would require that this portion of the project is completed later in the construction timeline. Whereas Option 2 would allow

7.6 PRELIMINARY DESIGN
PHASING & CONSTRUCTION METHODOLOGY

the construction of Rossdale to take place when it best suits the construction schedule. Early works will include the installation of a construction access road (cut/fill where in alignment with proposed promenade, or with wood traffic mats where temporary) through Rossdale along the top-of-bank, between 105 Street and 101 Street. A north-south access route will be required either though the Rossdale Gateway site or through the existing gravel parking lot east of the Power Plant. Ideally both accesses could be used, with a loop of access around the power plant. Secure site fencing with clear and considered through-route for park users will be a critical piece to ensuring site safety.

WATERFRONT SUBSTRUCTURE & SUPERSTRUCTURE
The construction staging will generally be straightforward, with the initial work being the site clearing, selective tree removal as needed for early works, locating utilities and installation of support for excavation. This will be followed by the partial demolition of conflicting site features and the start of excavation.

The following stage of construction will be the most complex stage - the installation of substructure along the existing bank. Substructural work at the river's edge includes base abutments and pier foundations for the elevated walkways, as well as the foundations for the Scramble. Site preparation for the substructure will include local clearing of the bankside with limited removals to create a drilling rig path in the same alignment as the elevated walkways. Bank regrading for equipment access and caisson and ground anchor installation would follow. Bank modification and excavation at the toe of the bank near the waterline may require temporary instream armouring, as well as instream measures to mitigate environmental impacts. Selective removal of existing rip-rap used for bank armouring will be required for substructure construction. Foundation units, abutments and the scramble would then be installed and then abutments backfilled.

Following these substructure elements the waterfront superstructure elements will be installed. The decking and balustrades would be installed after the primary support is in place. It is anticipated that the superstructure would be erected by crane using mobile cranes situated above the top of the bank. Platforms would be required for the cranes, with two cranes potentially being used to avoid the need to erect a temporary support under the superstructure segments. The lay-down area for the superstructure work will be north of Pump House 2. This area will be used to assemble the sections of superstructure into longer components for craning.

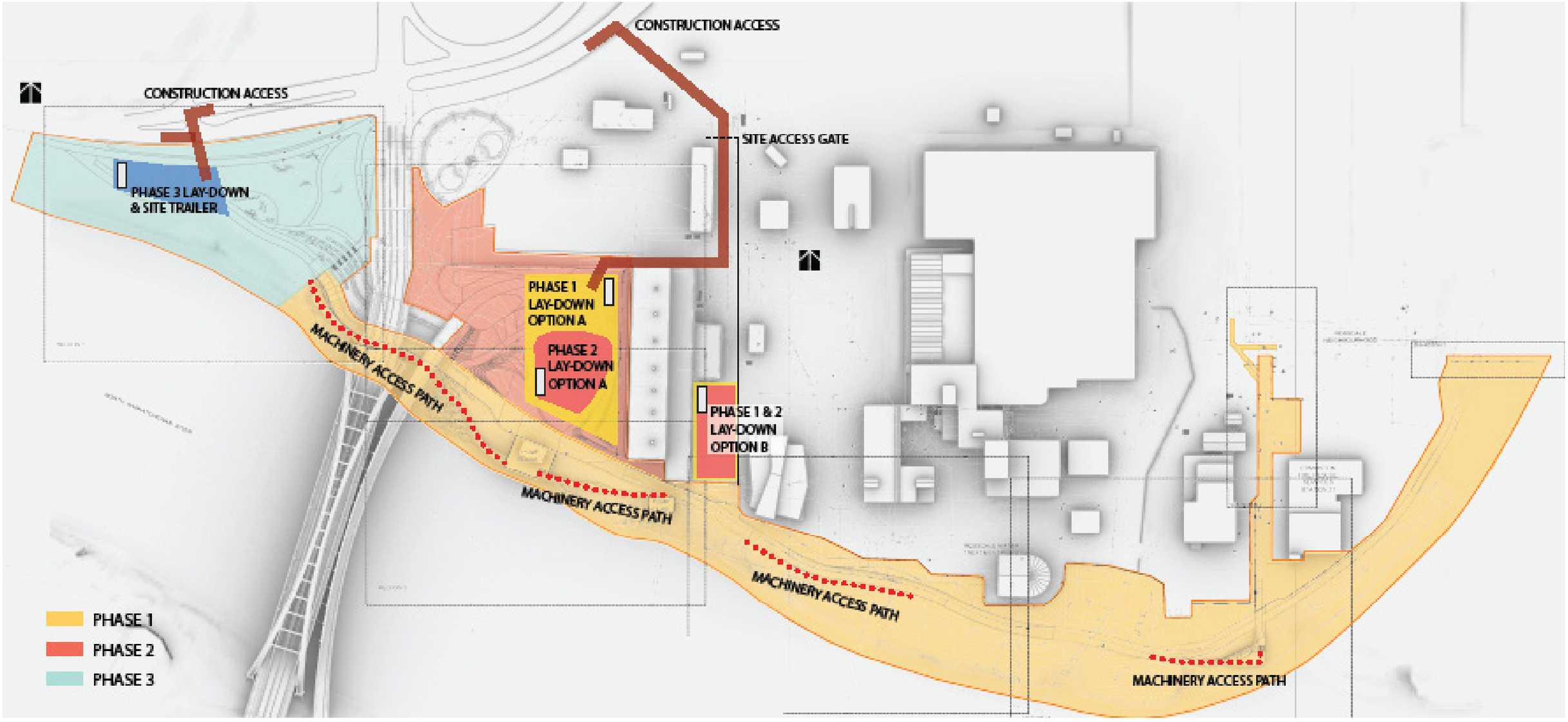
UPLAND IMPROVEMENTS
Features along the river bank would be followed by the "upland" improvements, including the Rossdale Gateway, Walterdale Landing, improvements north of the promenade, and access through Fire Station 21. These areas are more straightforward and there is flexibility with how these spaces are sequenced.

PROTECTION, RELOCATION, OR AVOIDANCE OF EXISTING UTILITIES
Depending on the structures to be used in this area, the effect on shallow utilities can be negligible – i.e., protected during construction. However, there may be a need to relocate utilities depending on final designs. Further coordination with EPCOR will be required during the Detailed Design stage.

There are a number of active and abandoned utilities lines and outfalls that may require locating. The current design avoids major known utilities, however there is a notable underground power line that traverses the river on the east side of Walterdale Bridge, under the area of the proposed Scramble. Based on inconclusive site investigation done to locate this line during the construction of the Walterdale Bridge, we anticipate that excavations in this vicinity will use daylighting during the excavation process to ensure the required clearances are maintained. Based on existing conditions that are discovered, we can anticipate that foundations serving the Scramble in this vicinity may require adjustment to ensure the caissons are clear of active lines.

There are multiple sewer outfall lines traversing the site. These facilities will have to be located/marked, protected, and left undisturbed. It is expected that these existing facilities vary in age, depth of bury, size and materials. Wherever possible, these facilities should remain untouched as the project is constructed. This is subject to review and coordination with the utility owner during Detailed Design.

7.6 PRELIMINARY DESIGN
PHASING & CONSTRUCTION METHODOLOGY



8.1 DESIGN METHODOLOGY
DESIGN DECISIONS & EVOLUTION OF DESIGN

The preliminary design builds on the preferred design concept, revisions based on engagement feedback, and new ideas generated during the preliminary design phase. The development of the preliminary design aims to:

- Balance retaining the 'natural' and 'wild' character of the river with improved access to provide opportunities to better experience the river.
- Reduce the amount of proposed hardscaping along the river, and minimize impacts to existing vegetation and habitat corridors.
- Improve access to and within the river valley, for different types of people with different abilities, with a focus on universal accessibility.
- Provide more opportunities to celebrate the Indigenous, industrial and natural heritage and culture of the project area.
- Improve safety in the project area, which was shared as a major concern for people traveling at different speeds and modes through the river valley, as well as along the water's edge.

The following pages illustrate the guiding feedback and design decisions made through the preliminary design process.

EVOLUTION WALTERDALE LANDING

INPUT THROUGH DESIGN PROCESS

- Enhanced variety of intimately sized spaces throughout the area.

- Emphasis placed on retention of existing high quality vegetation and re-naturalization of the landscape with native trees and shrubs.

- Retaining the healthy existing vegetation along the river's edge and enhance the river's edge by replanting and restoring that area.

- Removal of kayak tie-up in favor of a naturalized landscape. Removing the kayak tie-up solidifies the scramble in the Rossdale Gateway area as the primary location to touch the water.

- Creation of various intimately sizes spaces for gathering and ceremony.

- A new accessible path to a small overlook close to the water's edge.

- An overlook that uses existing grade to provide view to the river and seating.

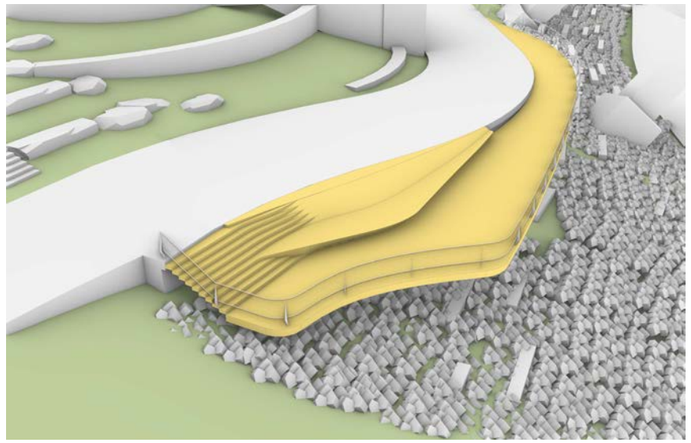
- Lighter touch approach taken to the river's edge.

CONCEPT DESIGN

PRELIMINARY DESIGN

EVOLUTION WALTERDALE LANDING

EMPHASIS GIVEN TO RE-NATURALIZATION OF WALTERDALE LANDING WHILE CREATING A VARIETY OF INTIMATE GATHERING SPACES



7m PATH ADJACENT AMPHITHEATRE SEATING

TREED PATHWAY AND BERM ADJACENT RIVER VALLEY ROAD

SECONDARY PATH WITH INTIMATELY SCALED SEATING AREA

AMPHITHEATRE SEATING AMONG LANDSCAPING

SCALE STUDIES OF GATHERING SPACES

EVOLUTION ROSSDALE GATEWAY

INPUT THROUGH DESIGN PROCESS

- Reorganization of spaces to promote views and connection between the riverfront and the plaza, knoll, and deck.

- Deck adjacent to the Rossdale Power Plant, plaza, and open lawn right-sized to create flexible spaces that could be adapted to various kinds of activation / programming.

- Introduction of a central L.I.D. stormwater feature.

- Introduction of a variety of fixed seating including terraced seating on the knoll, along the plaza, and throughout the deck.

- A varied planting strategy was introduced to create a variety of spaces and atmospheres throughout.

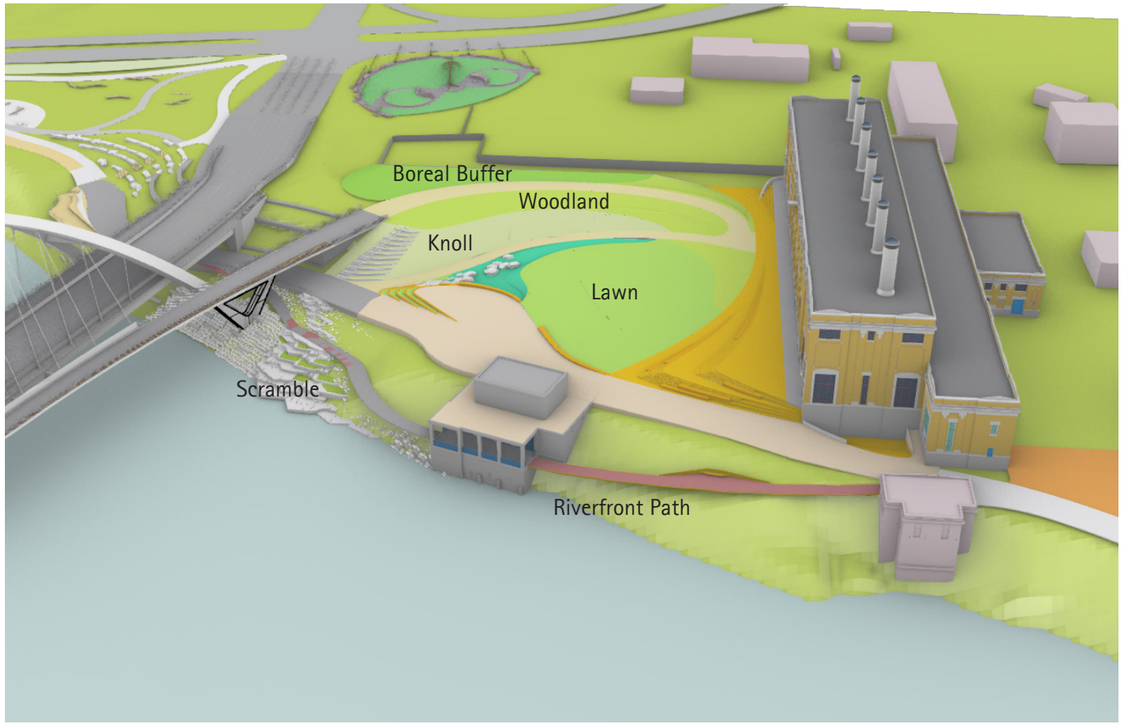
- Vehicular access was provided along the north side of the Rossdale Power Plant.

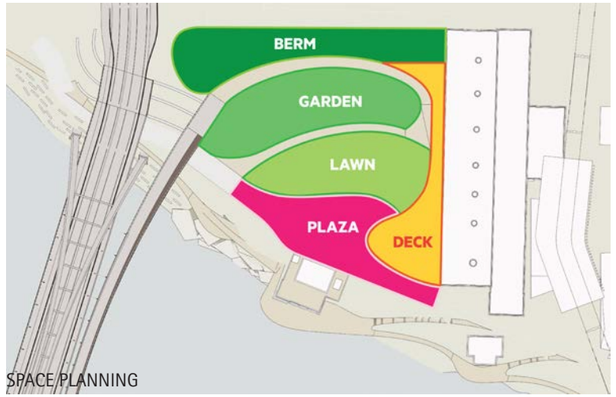
- Light-wells added along the deck and Rossdale Power Plant interface to promote visual and light access to the lower level of the building.

- River Bank stabilization through more naturalized means to improve the river's edges and add erosion controls.

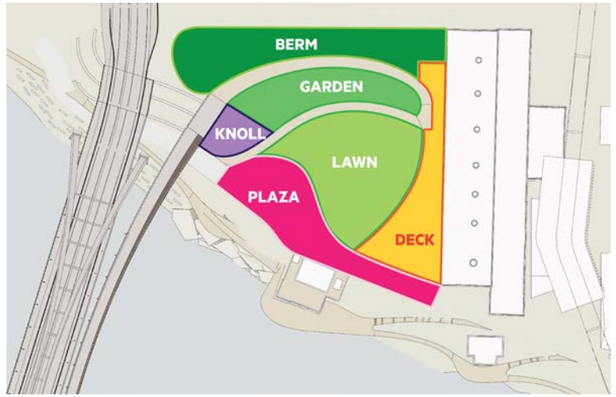
CONCEPT DESIGN

PRELIMINARY DESIGN

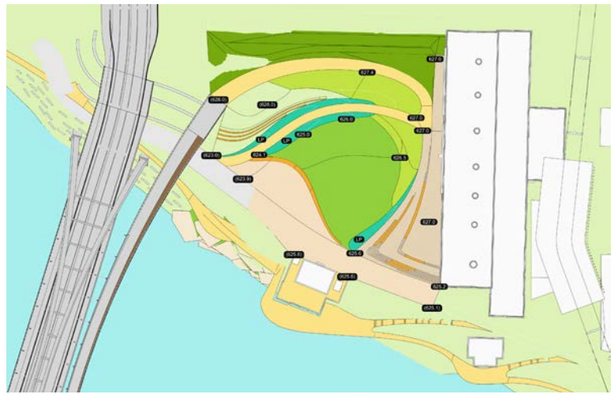


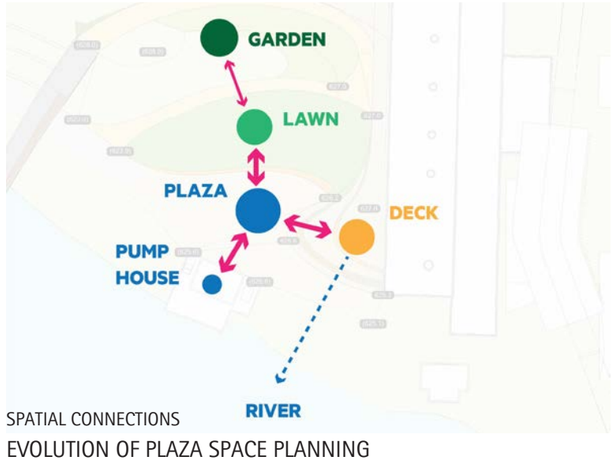


SPACE/PLANNING

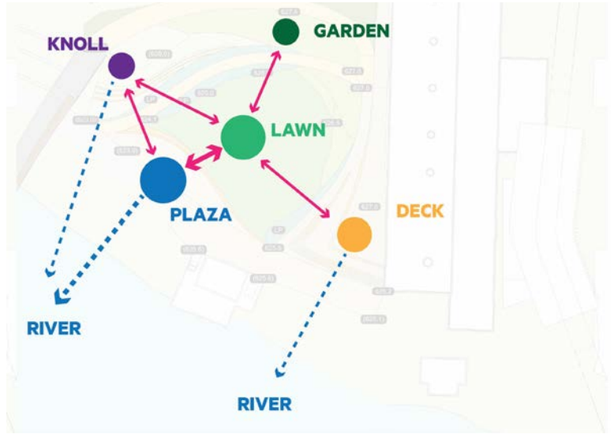


TOPOGRAPHY

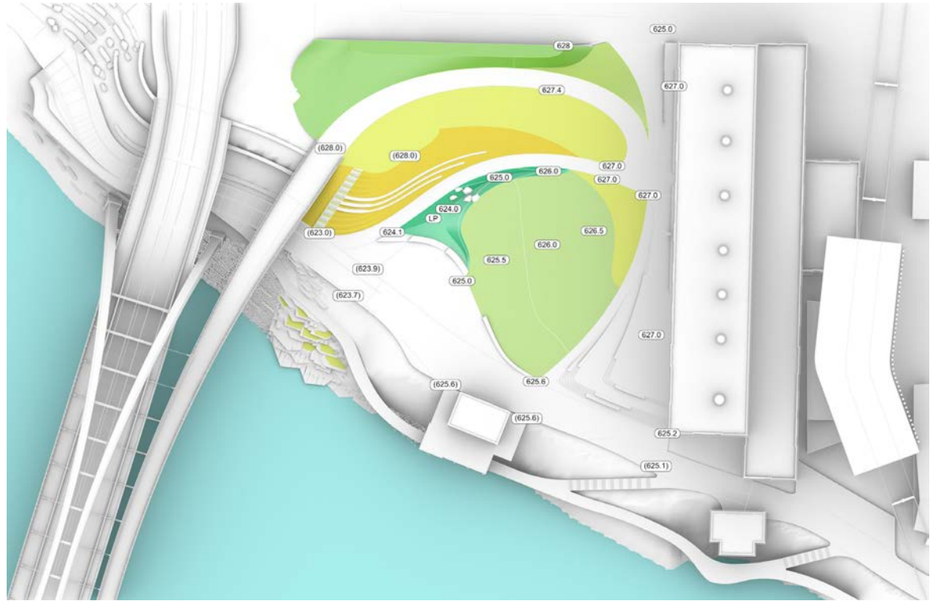


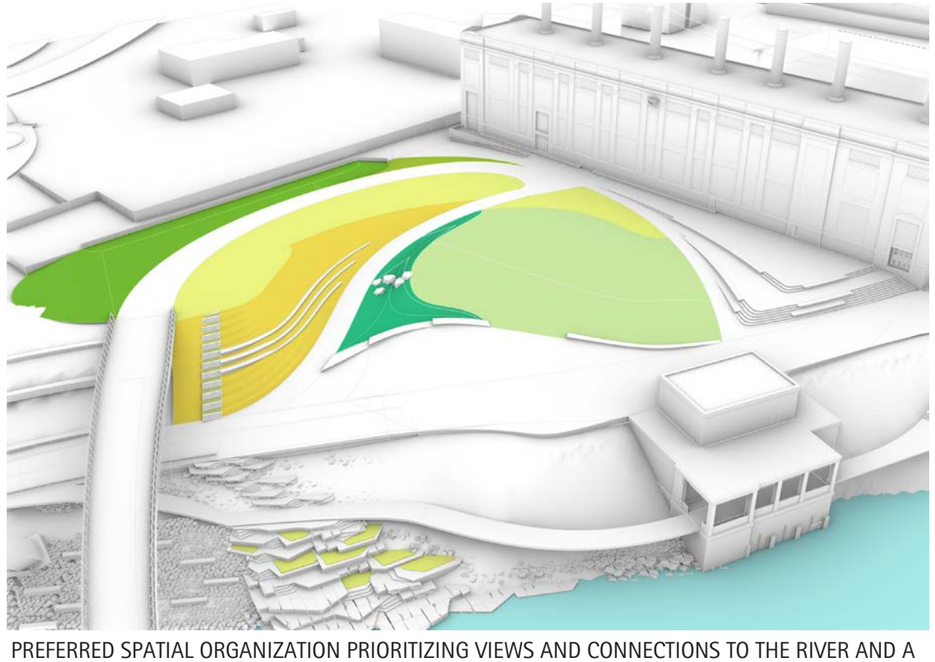


SPATIAL CONNECTIONS

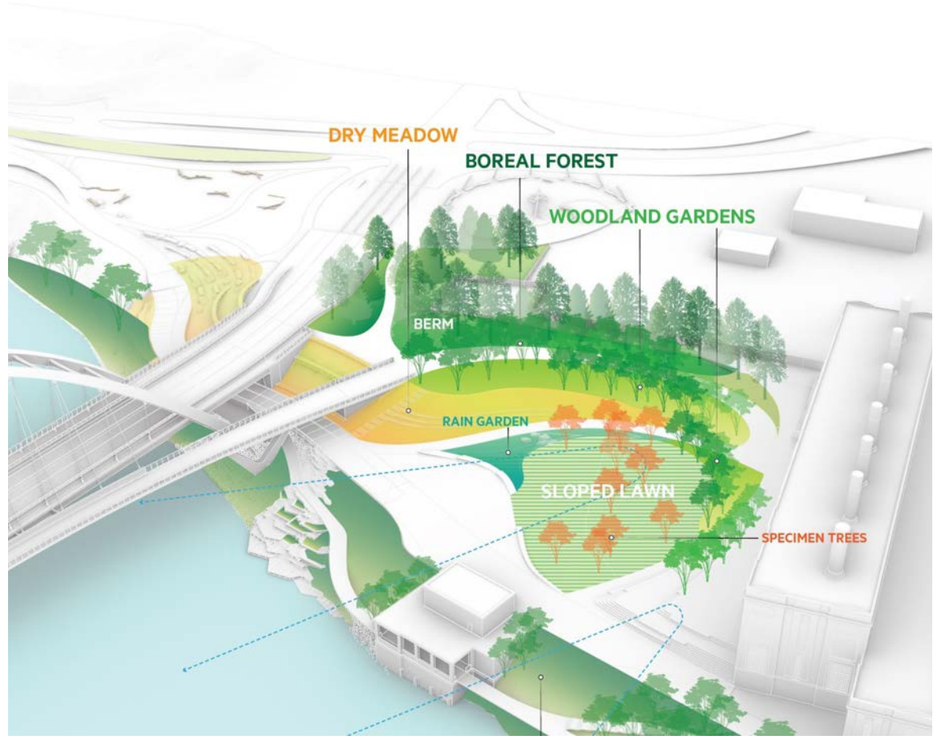


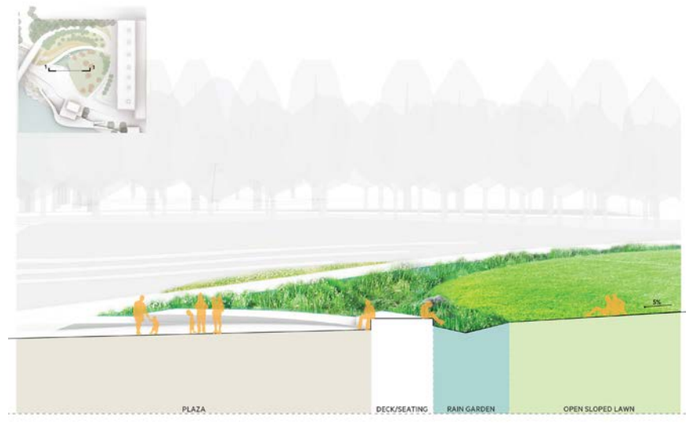
EVOLUTION OF PLAZA SPACE PLANNING





PREFERRED SPATIAL ORGANIZATION PRIORITIZING VIEWS AND CONNECTIONS TO THE RIVER AND A VARIETY OF SPATIAL EXPERIENCES





PLANTING STRATEGY STUDIES

EVOLUTION ROSSDALE WATERFRONT

INPUT THROUGH DESIGN PROCESS

- Scramble right-sized to balance getting down to water with minimal disturbance.

- Bio-engineering designed into the scramble to enhance the wildlife corridor.

- At-grade access to pump house 2 provided to allow for accessible access to building and to promote viewing, heritage recognition, and gathering.

- Simplification of riverfront accessible pathway.

- Exploration of various methods to integrate riverfront accessible pathway with pump house 2. Option 3 where the pathway passes through the pump house was preferred and carried forward.

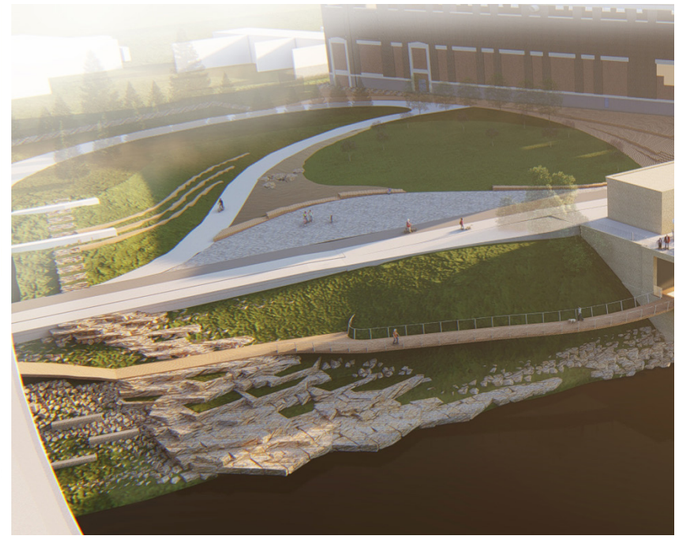
CONCEPT DESIGN

PRELIMINARY DESIGN

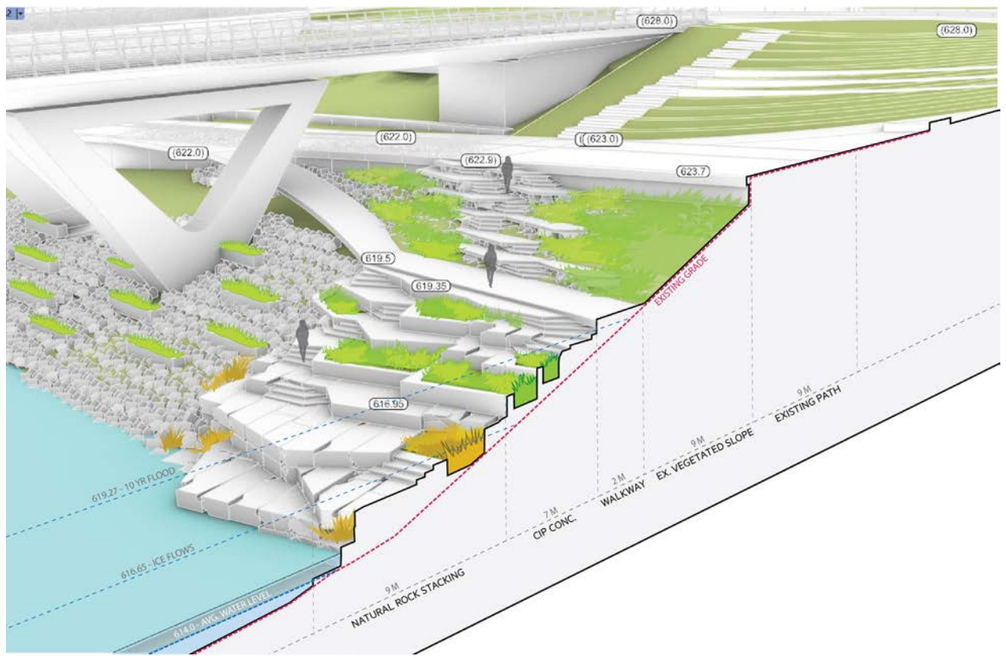
SIMPLIFICATION OF SCRAMBLE & INTEGRATION OF BIO-ENGINEERING

SCRAMBLE AT CONCEPT DESIGN PHASE

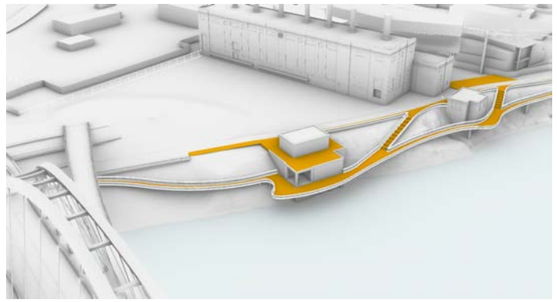
SIMPLIFICATION OF DESIGN AND INTRODUCTION OF BIO-ENGINEERING



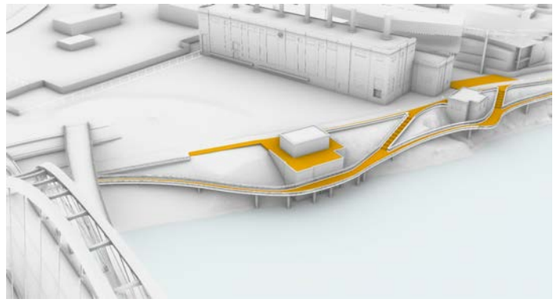
VIEW FROM RIVER



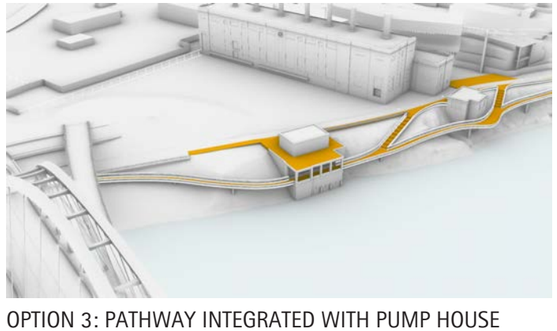
OPTIONS FOR PUMP HOUSE INTEGRATION WITH ACCESSIBLE RIVERFRONT PATHWAY



OPTION 1: STRUCTURALLY SUPPORTED BY PUMP HOUSE



OPTION 2: STRUCTURALLY INDEPENDENT



OPTION 3: PATHWAY INTEGRATED WITH PUMP HOUSE

PREFERRED OPTION

EVOLUTION PROMENADES

INPUT THROUGH DESIGN PROCESS

- Promenade enhanced and subdivided into 4 meters of shared-use pathways and 3 meters of promenade for slower moving users marked with different material treatments.

- At-Grade and Elevated Structure promenades explored. At-Grade promenades were preferred.

- Combined and Split-path configurations explored. Combined promenade configuration preferred.

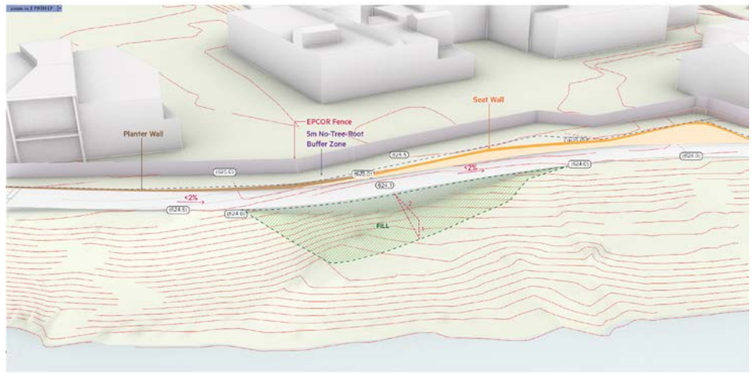
- Promenade along EPCOR Water treatment plant reconfigured to provided additional space between fence and promenade to allow for enhanced planting and visual screening.

CONCEPT DESIGN

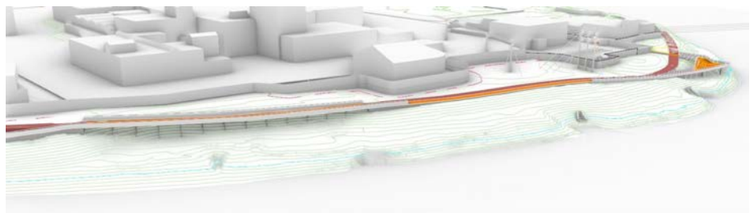
PRELIMINARY DESIGN

EVOLUTION PROMENADES

EXPLORATION OF AN AT-GRADE PROMENADE

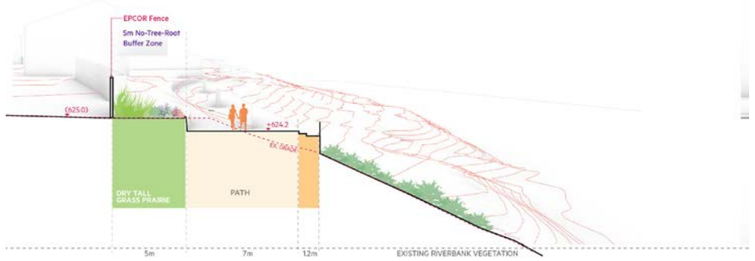


EXPLORATION OF AN ELEVATED PROMENADE



EVOLUTION PROMENADES

SECTIONAL STUDY OF AT-GRADE PROMENADE



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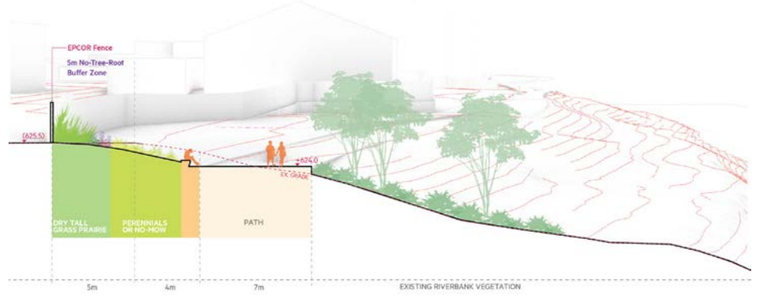

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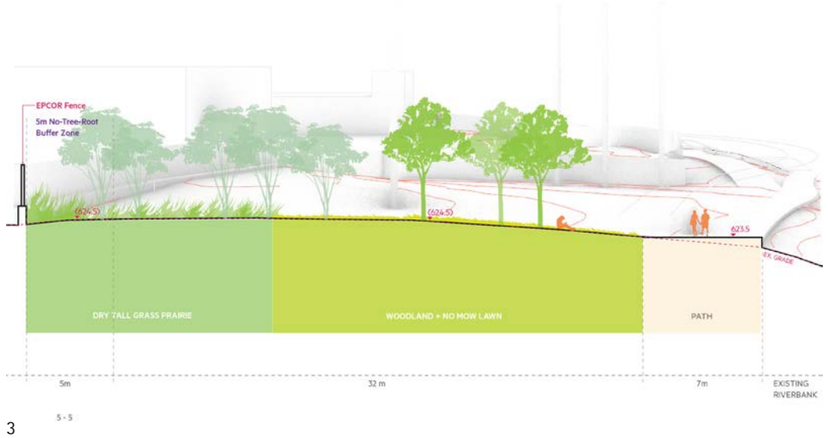

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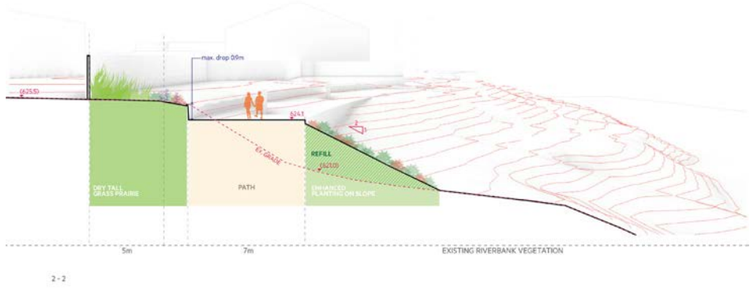

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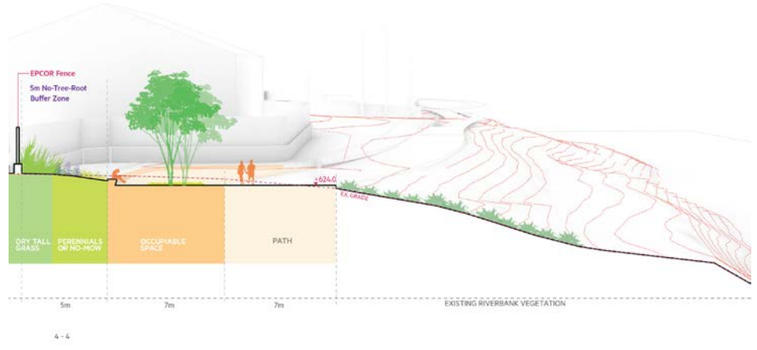

5

FURTHER REFINEMENT OF AN AT-GRADE PROMENADE WITH CONSIDERATION GIVEN TO PLANTING, VIEWS, AND INFORMAL GATHERING SPACES

EVOLUTION OVERLOOK AT THE BEND

INPUT THROUGH DESIGN PROCESS

- Overlook reduced in size to reduce impact on the river's edge.

- Enhanced seating configurations designed and right sized for location.

- Enhanced shared-use access created through Fire Station 21 site.

- Interpretive element incorporated along east property line of the Hudson's Bay Company Lands and start of the historic river lot pattern. This is defined by the new path connecting to 101 Street.

CONCEPT DESIGN

PRELIMINARY DESIGN

"RIGHT-SIZING" OF OUTLOOK

INTEGRATION OF HISTORICAL INTERPRETIVE LANDMARK ADJACENT FIRE STATION 21 AND MULTI-USE PATH

ENHANCED PROJECT SITE ACCESS THROUGH FIRE STATION 21 SITE