

09 IMPLEMENTATION

9.1 PARK MANAGEMENT GUIDELINES

OVERVIEW

The success of new developments at Queen Elizabeth Park will depend on effective park management that supports the intent of the Queen Elizabeth Park Master Plan. These guidelines aim to support and reinforce existing City of Edmonton policies and plans, including the following:

- Urban Forest Management Plan (2012)
- Urban Parks Management Plan (2006-2016)
- Natural Connections - City of Edmonton Integrated Natural Areas Conservation Plan (2007)
- Biodiversity Action Plan (2009)

The management guidelines are organized into recommendations for immediate maintenance (Table 9-1), standard park element maintenance (Table 9-2), park elements that are unique to Queen Elizabeth Park (Table 9-3), and recommendations for natural areas management.

PUBLIC FEEDBACK ON MAINTENANCE

Several comments related to park maintenance were received during public consultation sessions for the development of the master plan. Table 9-1 summarizes these concerns.

TABLE 9-1: IMMEDIATE MAINTENANCE REQUIREMENTS

Park element	Maintenance needs	Department responsible
Garbage and recycling collection	<ul style="list-style-type: none"> • Remove garbage from around stairways and along river path • Provide additional garbage cans 	Servicing: River Valley Parks & Trails, Community & Recreation Facilities Repair/Replacement of Garbage Receptacles: SW District, Neighbourhood Parks & Community Recreation
Forest management	<ul style="list-style-type: none"> • Prune vegetation at lookouts to restore views • Prune vegetation along paths and stairways to increase sight lines • Naturalize some grassed areas to reduce maintenance demands • Manage and regenerate the forested areas over the long-term 	Forestry
Park patrol / safety	<ul style="list-style-type: none"> • Increase park patrols to discourage people from camping in forest • Improve sense of safety around washrooms and along trails (e.g. park patrol, sight lines, and/or lighting) 	Patrol: Community Standards, Peace Officer Section
Drinking fountains	<ul style="list-style-type: none"> • Maintain adequate water pressure at drinking fountains 	Inspection: River Valley Parks & Trails, Community & Recreation Facilities Repair/Replacement: Project Management and Maintenance Services
Stairways	<ul style="list-style-type: none"> • Remove / cover up graffiti on stairways • Maintain stairways in good condition; replace boards that are rotting or that have been vandalized 	Inspection: River Valley Parks & Trails, Community & Recreation Facilities Repair/Replacement: Project Management and Maintenance Services

STANDARD PARK ELEMENTS

TABLE 9-2: PROPOSED MAINTENANCE REQUIREMENTS: STANDARD PARK ELEMENTS

Park element	Quantity	Maintenance Requirements	Recommended servicing schedule	Department/Branch Responsible
Washrooms	2 washroom buildings Existing: 7 toilets, 4 urinals, 6 sinks, total size 97 sq.m Proposed: 5 toilets, 2 urinals, 6 sinks	New and existing washrooms to be maintained to city standards on a year-round basis. It is anticipated that the new washroom building will be highly used in winter due to the proximity of the tobogganing hill, and thus may require a higher standard of service.	Summer/winter: Serviced 2x /day, plus if needed	Inspection/Servicing/Repairs: Project Management and Maintenance Services
Lookout Platforms and stairways	9 lookout areas/ platforms 3 stairways (2 existing + 1 expanded) into park from Saskatchewan Drive 1 new stairway proposed to connect lower park to riverbank	Inspections of lookout and stairway structures. Damaged boards and incidents of vandalism fixed promptly. Litter under staircases to be removed.	Lookouts and stairways inspected weekly for damage / vandalism. Repaired as soon as possible. Litter under staircases to be removed daily.	Inspection: River Valley Parks & Trails Inspection/Servicing/Repair/Replacement: SW District, Neighbourhood Parks & Community Recreation
View Corridors at Lookouts and along stairways	9 lookout areas/ platforms 3 stairways (2 existing + 1 expanded) into park from Saskatchewan Drive 1 new stairway proposed to connect lower park to riverbank	Prune Vegetation at designated lookout points along Saskatchewan Drive and at new lookouts along the riverbank. Schedule for regular vegetation pruning along staircases to ensure safe sightlines maintained.	Vegetation inspected annually and pruned as necessary.	Forestry Contracts & Policy, Neighbourhood Parks & Community Recreation
Picnic sites	17 existing picnic sites with stoves 5 new picnic sites (plus replacement of existing) for a total of 22 picnic sites	Maintenance and servicing required year-round. BBQs cleaned of ash and garbage receptacles emptied as required.	Summer: Sites inspected daily. Empty ashes and garbage receptacles as required. Daily inspection for vandalism. Portable tables replaced immediately. Damaged fixed tables replaced as soon as possible.	Inspection/Servicing/Repair* River Valley Parks & Trails, Community & Recreation Facilities *Repair/Replacement of Fixed Tables/BBQ: SW District, Neighbourhood Parks & Community Recreation
Garbage and recycling collection	Approx 20 existing garbage bins Approx 20 new garbage bins	Bins for garbage (and recycling) should be maintained and emptied regularly in accordance with standard City of Edmonton procedures.	Summer: Checked daily and emptied as needed Winter: High use areas checked daily and emptied as needed.	Servicing: River Valley Parks & Trails, Community & Recreation Facilities *Repair/Replacement of Garbage Receptacles: SW District, Neighbourhood Parks & Community Recreation
Drinking fountains	2 existing drinking fountains 2 new drinking fountains	Drinking water fountains should be maintained to City of Edmonton standards, and inspected on a regular basis to ensure adequate water pressure is maintained.	Inspected daily/weekly as part of general site servicing. Repair as required.	Inspection:River Valley Parks & Trails, Community & Recreation Facilities Repair/Replacement: BTM
Blufones	3 new Blufones	Blufones should be inspected and tested regularly to ensure proper operation.	Inspected monthly and adjusted / repaired as required (?)	Inspection:Community Standards, Community and Recreation Facilities Repair/Replacement: Project Management & Maintenance Services

Park element	Quantity	Maintenance Requirements	Recommended servicing schedule	Department/Branch Responsible
Trails/Roads/ Parking Areas - Asphalt	12,650 sq m of asphalt road/parking 8,330 sq m of asphalt trail	Maintenance of asphalt trails/roads/parking areas should be undertaken to City of Edmonton parks standards. Instances of erosion should be fixed to ensure user safety. (See single track trails maintenance needs below)	Inspection of trails biannually and prompt repair of major cracks, heaves, depressions, and washed out areas. Asphalt repair as needed.	Project Request Submitted by River Valley
Trails - Granular	3,377 sq m of gravel trail	Maintenance of granular trails should be undertaken to City of Edmonton parks standards. Instances of erosion should be fixed to ensure user safety. (See single track trails maintenance needs below)	Inspection of trails biannually and prompt repair of major cracks, heaves, depressions, and washed out areas.	River Valley Parks & Trails
Snow removal	~ 2000 lin m of existing trails / shared roads + 2 existing stairways to be cleared in winter ~ 850 lin m of new trails + 1 new stairway to be cleared in winter See Figure #-# Winter Activities for an indication of which trails are to be kept clear of snow.	A network of trails, stairways, and shared roads and parking areas are to be kept clear in winter for running, walking, cycling and other year-round activities.	Cleared as per City standards. Immediately after snowfall or within 48 hours.	Servicing: River Valley Parks & Trails, Community & Recreation Facilities
Turf management	~37,850 sq m of turf areas ~15,000 sq m of groomed turf areas ~10,000 sq m of rough turf areas	Turf in picnic areas / Art Parks, River Valley Programming area, and the flexible open field are intended to be groomed turf areas.	Groomed turf areas - service level A1- 18 cuts/season or approximately 1 cut per week from May - Sept Rough turf areas - service level C - 5 cuts per season or approximately 1 cut per month June - Sept	Servicing/Repairs: SW District, Neighbourhood Parks & Community Recreation
Tree/Forest management	~131,700 sq m of forest	Trees inspected for hazards and pruned as needed.	Trees inspected annually for hazards and pruned as needed.	Forestry Contracts & Policy, Neighbourhood Parks & Community Recreation
Utilities		Regular inspection and maintenance of servicing connection points will be required for the following areas: - Shelter at old pool site (upper park) – water, electricity, wifi - Lower park Amenity Node - electricity, gas, water sewer Events area (lower park) - electricity - Art Park areas (upper and lower park) – electricity	Inspected daily as part of site servicing. Repairs done promptly	Inspection: River Valley Parks & Trails, Community & Recreation Facilities *Repair/Replacement of Structures: Project Management & Maintenance Services

SPECIALTY PARK ELEMENTS

TABLE 9-3: PROPOSED MAINTENANCE REQUIREMENTS: PARK ELEMENTS UNIQUE TO QUEEN ELIZABETH PARK

Park element	Applicable area / quantities	Maintenance requirements	Recommended servicing schedule	Department/ Branch Responsible	Implementation requirements
Shelter at old Queen Elizabeth Pool site	1 - 24' x 36' shelter (actual size to be determined during detailed design)	A new shelter at the old Queen Elizabeth Pool site is intended to be built with a high standard of design and material selection to minimize maintenance demands.	Inspected for damage / vandalism quarterly Repairs done promptly	Inspection: River Valley Parks & Trails, Community & Recreation Facilities *Repair/ Replacement: Project Management & Maintenance Services	Specific maintenance requirements to be developed based on detailed design.
Interpretive signage	Quantity of each type of sign to be determined during detailed design	Queen Elizabeth Park will have a number of new interpretive and wayfinding signs which are intended to be well-built using durable materials. Signage should be periodically inspected and any incidents of damage or vandalism should be fixed.	Inspected for damage / vandalism quarterly Repairs done promptly	Inspection/Repair/ Replacement: River Valley Parks & Trails, Community & Recreation Facilities	Specific maintenance requirements to be developed based on detailed design.
Composting toilet	1 composting toilet	Detailed maintenance guidelines will need to be developed once the specific product is selected for installation.	Serviced daily	Servicing: River Valley Parks & Trails, Community & Recreation Facilities Repair/ Replacement: Project Management & Maintenance Services	Specific maintenance requirements will need to be developed based on detailed design and product selection, which should be done in collaboration with staff from John Jantzen Nature Centre. Opportunity to integrate educational component (River Valley Programming) with daily maintenance program.
River Valley Program- ming Area	1000 sq. m	Turf maintenance, fence maintenance, storage shed maintenance, equipment maintenance		Inspection: Outdoor Pursuits, Community & Recreation Facilities Servicing/Repairs: SW District, Neighbourhood Parks & Community Recreation	
River access	Area of stone slab steps to be determined during detailed design.	A new river access point is intended to be provided downstream of the new Walterdale Bridge. This feature will consist of large stone slab steps that are embedded within the rip rap slope.	Inspected as part of daily site servicing. Removal of debris build-up after periods of high water levels	River Valley Parks & Trails, Community & Recreation Facilities	
Toboggan hill	Approx 100m of temporary fencing and straw bales.	Lower Park slope from overpass will be designed to accommodate a toboggan hill during the winter months. This will require the set-up and take-down of temporary fencing and straw bales.	Set-up / take-down at beginning / end of appropriate snow conditions. Inspected daily during winter.	River Valley Parks & Trails, Community & Recreation Facilities	

Park element	Applicable area / quantities	Maintenance requirements	Recommended servicing schedule	Department/ Branch Responsible	Implementation requirements
Fire pit	1 fire pit	A fire pit (gas or wood-burning, to be determined during detailed design) will be located near the base of the new tobogganing hill to enhance the comfort of park users.	Inspected daily during winter and before and after each use in the summer.	Project Management and Maintenance Services Labour Staff	Specific maintenance requirements to be documented based on product selection.
Art Park	Number/ extent of art pieces to be determined in conjunction with applicable parties (e.g. Edmonton Arts Council).	The intent of the Art Park is to create a unique and high quality destination within the river valley. Summer: Turf in the Art Park will require regular and careful mowing, and trimming will be required around the concrete art bases. Winter: Multi-use (asphalt) trails to be cleared.	Inspected for damage / vandalism as part of daily site visits Repairs done promptly See above for turf management and trails	River Valley Parks & Trails, Community & Recreation Facilities Repairs/ Maintenance: As specified in Maintenance Agreement	Maintenance guidelines require development of an agreement between the City and applicable parties (e.g. Edmonton Arts Council). Impacts to operating costs may need to be considered during the commissioning of art pieces for Queen Elizabeth Park.
Transitory Art Area	lower park, open areas	To be determined based on transitory art on an as-needed basis	To be determined based on transitory art on an as-needed basis	Temporary installations will be managed through the EAC. A permit will be required and all responsibility will be with the EAC.	To be determined based on the requirements of the specific art program being implemented.
Bike Skills Park with single track trails	Bike skills area ~ 5000 sq m Single track trails: ~600 m long (to be determined during detailed design) Flow trail: ~400 m long	The intent is for the Bike Skills Park and single track trails to be designed to high standards and built with durable materials to minimize maintenance demands. The Bike Skills Park and single track trails will need to be maintained throughout the summer, potentially all year.	Inspected for damage, litter, and vandalism daily during summer months (~May to October) and bi-weekly during winter months (~November to April) Repairs done promptly	River Valley Parks & Trails, Community & Recreation Facilities Repairs/ Maintenance: To be determined. Dependent on expertise required.	Specific maintenance requirements to be developed based on detailed design of bike skills features and material selection. Bike skills maintenance plan to be developed and implemented in collaboration with partner organizations (e.g. bike clubs)
Play area	Play area approx 1000 sq m	The intent of the play area is to incorporate a greater variety of materials and play elements to stimulate a greater diversity of play experiences in the park. Some of these features may be unique to Queen Elizabeth Park, and will require site-specific maintenance guidelines to be developed during detailed design of the play area.	Summer: Inspected for damage/ vandalism every 11 days. Winter: Inspected for damage/vandalism every 21 days Repairs done promptly	SW District, Neighbourhood Parks & Community Recreation	Specific maintenance requirements to be developed based on detailed design.

Note: Park Inventory & Assessment carried out every four years by Park & Facility Development, Community Strategies & Development

NATURAL AREAS MANAGEMENT

As a valuable natural area in the heart of the city, Queen Elizabeth Park's forest cover must be carefully managed to protect public safety, maintain well-loved views through the river valley, and conserve its important ecological functions. The public highly values the ecology and natural character of the park, and strongly supports the goal of protecting and enhancing the ecological integrity of Queen Elizabeth Park through forest management.

High level ecosystem and vegetation management guidelines have been developed based on available site information and relevant City of Edmonton policies. Detailed park design and further guideline development should be preceded by a biophysical inventory and assessment (included in the environmental report for each phase of implementation) and the Constraints Mapping for the park, and should be done in conjunction with Urban Forestry and other applicable departments.

FOREST HEALTH ASSESSMENT

Building on the City of Edmonton's current practice of undertaking annual tree health assessments (whereby trees are inspected and pruned for structure, tree health, public safety and utility clearance), the City may consider expanding the scope of this assessment to identify natural forest stands whose ecological health could be enhanced. Such interventions are typically necessary to protect forest health in areas where natural processes and disturbance cycles have been altered (e.g. flooding, fire, wildlife-related plant dispersal, forest succession). Strategies for forest health enhancement may include selective removal of excessive deadfall in areas where it may be impeding seedling recruitment, infill planting of native species (also see below), and management to support representative species diversity and forest age class structure.

WILDLIFE HABITAT ENHANCEMENT

Managing the natural forest stand for ecological health will contribute to enhancing the forest's value for a variety of wildlife species. In addition, maintaining snags, some deadfall, and enhancing the small wetland area in the east end of the park will all contribute to supporting river valley wildlife. If the support of target wildlife species is desired (e.g. species at risk), additional species-specific habitat enhancements should be explored.

CLOSURE OF SELECTED AREAS TO ALLOW FOREST REGENERATION

In selected areas of the park some access restrictions may be required to reduce ecological impacts and to allow natural

forest regeneration. Restrictions may consist of temporary or permanent barriers to exclude public access during certain times of year or during certain weather conditions (e.g. after periods of rain when trail surfaces are more sensitive to damage). This may be applicable in areas with unauthorized single track trails and in some sections of informal riverbank access. For example, the unauthorized development of a single track trail in the upper riverbank area of the east end of the park has resulted in a loss of forest cover and large areas of exposed soil. Additional areas to be protected will need to be identified during detailed park design.

INVASIVE SPECIES MANAGEMENT

Resources should be made available for City staff and/or volunteer stewardship groups to inventory invasive species of concern in Queen Elizabeth Park and to develop plans to remove these species.

INFILL PLANTING WITH NATIVE SPECIES

New planting of native species should be done in priority areas for ecological enhancement in Queen Elizabeth Park; target species and locations for new plantings should be determined in consultation with the City's Urban Forestry group. Suggested areas for infill planting include:

- Area between new multi-use trail (from 106 Street entrance) and O'Keefe site
- Area west of pump house
- Areas where invasive plants are removed
- Riparian areas along the riverbank where there is exposed soil due to human disturbance. New growing medium and riparian planting should be incorporated into sections of riverbank armoured with riprap.
- Upper riverbank slopes in the east end of the park where unsanctioned trail development has led to a loss of forest cover and large areas of exposed soil (done in conjunction with other erosion control methods)
- Areas adjacent to single track trails
- Areas designated to be naturalized during future planting design development
- Additional areas of degraded forest health as identified by Urban Forestry

PEST AND DISEASE MANAGEMENT

Urban Forestry should continue to proactively monitor natural stands in Queen Elizabeth Park for plant pests and disease to minimize the potential loss of trees.

MANAGING USE

The introduction of a new mountain Bike Skills Park with designated single-track trails in the river valley presents new considerations for managing park use. In order to ensure that these elements are able to withstand long-term use they will need to be designed, maintained, and managed in conjunction with a professional bike skills designer, mountain biking associations, other single-track trail user groups (e.g. trail runners) and landscape architects, park planners and ecological planners.

The design of the skills elements and single-track trails should be done in a way that is highly durable and resistant to erosion and regular wear and tear, and design guidelines should be developed to ensure that new features are built to the same standards.

A system should be developed (e.g. signage, online updates) to monitor the Bike Skills Park and single-track trails. Areas should be temporarily closed as required when conditions match defined conditions (e.g. muddy, eroding) to protect users, soils, and vegetation.

Strategies should be also explored to minimize conflicts between different single track trail user groups, such as the use of etiquette signage and the development of a “yield hierarchy” (e.g. defining which users should yield to others).

In general, managing use in Queen Elizabeth Park should be based on the City’s standard approaches to enforcing park bylaws (e.g. Parkland Bylaw 2202, Animal Control Bylaw 13145) and guidelines (e.g. event guidelines).

9.2 DEVELOPMENT PHASING AND CAPITAL COSTS

OVERALL IMPLEMENTATION STRATEGY

Queen Elizabeth Park is divided into five phases. In order to implement the plan over ten years, more than one phase may need to be developed within each budget cycle.

The phasing of Queen Elizabeth Park takes into account existing amenities, infrastructure shortfalls, Walterdale Bridge construction, lay down areas, timing, and potential opportunities to coordinate construction efforts with other departments. The following outlines the overall implementation strategy/ high-level sequence of work for the park's development.

Phases 1 and 2 prioritize improvements in the upper park as the Walterdale Bridge construction project is transforming significant areas within the lower park, and is using the lower park for staging in 2013 through 2016. Both of these phases include elements that will require coordination with the bridge contractor (i.e. Phase 1: intersection improvements, Phase 2: steps down to river and/or upgraded stairs to the bridge). It is important to note that the upgrades to the Aboriginal Art Park area cannot proceed without securing the commissioned art pieces as this work needs to be done simultaneously.

The sequence of Phase 3 elements requires the Queen Elizabeth Park compound uses (River Valley Programming, boat storage and District Park Operations storage) to be relocated prior to development of the Bike Skills Park. Additionally, the design of the Bike Skills Park is to be coordinated with the demolition/remediation of the decommissioned wastewater treatment plant.

Acquiring large quantities of clean fill material for the proposed mound (toboggan hill) should be initiated as early as possible in order to support the completion of Phase 4 elements economically.

There are opportunities for certain elements in each phase to be deleted if necessitated by budgetary constraints. Those will be identified later in this section. If full budget funding is not available to complete each phase, then modifications to the scope may be required to ensure priorities are attained.



FIGURE 9.1: IMPLEMENTATION PHASING OVERVIEW

BUDGET

PHASE ①

Upper park connectivity and pool commemoration

TOTAL PHASE 1 \$ 2,013,624

PHASE ②

Aboriginal Art Park (Area A), parking lot / bus loop, shelter, new or upgraded trail connections, river access and Saskatchewan Drive lookouts

SUBTOTAL PHASE 2 \$ 4,351,061

Additional elements with potential co-funding:

Saskatchewan Drive trail widening \$ 629,011

Upgrade stairs to bridge (wood to concrete) \$ 1,471,026

Art pieces (EAC) \$ 500,000

SUBTOTAL POTENTIAL CO-FUNDED ELEMENTS \$ 2,600,036

TOTAL PHASE 2 \$ 6,951,097

PHASE ③

Relocation of Compound uses, Bike Skills Park and new trails in the lower park

SUBTOTAL PHASE 3 \$ 2,900,086

Additional elements with potential co-funding:

WWTP Demolition (including pre-testing) \$ 2,772,000

TOTAL PHASE 3 \$ 5,672,086

PHASE ④

Toboggan hill, lower park open field area, pedestrian overpass, trail connections and lookouts

TOTAL PHASE 4 \$ 5,702,036

PHASE ⑤

Lower park upgrades (amenity building, play area, parking, park entries, flow trail), Local Art Park (Area B) and Fort Hill Road improvements

SUBTOTAL PHASE 5 \$ 4,007,971

Additional elements with potential co-funding:

Art pieces (EAC) \$ 500,000

TOTAL PHASE 5 \$ 4,507,971

GRAND TOTAL (INCLUDING POTENTIAL CO-FUNDED ELEMENTS) \$ 24,846,813

ALL ESTIMATES ARE BASED ON 2013 COSTS

The proposed implementation phasing illustrated in Figure 9.1 and the capital costs are as follows:

Budget summaries for each phase are provided on the following pages and a detailed cost breakdown showing the items within each phase are included in 9.4 Cost Estimate.

All estimates are based on 2013 costs. Costs will be refined at the detailed design stage. To provide some flexibility for refinements, the overview for each phase includes priorities as well as options for scope reductions to be considered in the event of cost overruns or budget restrictions.

PROJECT OPPORTUNITIES

Several opportunities for cooperation with other departments at the City of Edmonton and/or external entities are important to initiate early in the implementation process in order to leverage projects, either underway or anticipated in the future, for the benefit of Queen Elizabeth Park.

Opportunities identified for the master plan implementation include:

- Work with the Transportation Department to upgrade the intersection. To be completed by the bridge contractor while they are already mobilized and Queen Elizabeth Park Road is closed (underway).
- Discussions with the Transportation Department while the Walterdale Bridge project is ongoing to coordinate approvals for the steps down to the river.
- Work with Transportation Department to ensure budget is allocated for trail widening along Saskatchewan Drive so that this improvement can be coordinated with development of lookouts along Saskatchewan Drive.
- Work with developers to acquire excess fill as it becomes available to construct the mound for the toboggan hill and overpass landing. The best-case scenario will be to have the fill brought to site while the Walterdale Bridge work is underway to ensure that the areas is graded, leveled and seeded to coincide with the reopening of the lower park.
- The art pieces for the Aboriginal Art Park and Local Art Park may be funded solely through the Edmonton Arts Council. There is also a potential for some capital funding for the art pieces or for phased development.
- Early discussions with the Drainage Department to ensure that budget is allocated for demolition of the wastewater treatment plant in the 2019-2022 budget cycle and also to confirm that demolition can occur in concert with design of the Bike Skills Park.

PHASE 1

INTENT

The intent of this phase is to improve accessibility into the park from Saskatchewan Drive and to improve connectivity between the upper and lower parks, priorities as expressed by the public. These upgrades will provide a strong foundation to support the park uses proposed in subsequent phases.

Commemoration of the old pool site will add an enjoyable park element and 'finish' this area of the park. Landscape improvements in the immediate area will transform this under-utilized area into usable passive space and add more native vegetation to the edge of the existing forest.

PHASE 1 ELEMENTS

- 1.1 **Improved Intersection at Queen Elizabeth Park Road** including curb realignment, wheelchair ramps, and realigned crosswalks at the main entry. To be completed by the Walterdale Bridge contractor.
- 1.2 **Park Entry Improvements.** Install a park name sign and plantings at the main entry.
- 1.3 **Redesign Trail Alignments** west of the old pool site and connecting to the intersection on Queen Elizabeth Park Road. The existing westernmost gravel parking areas will be removed (gravel surface to be used as fill and wheel stops relocated to the upper park parking lot) for the installation of new trail alignments, planting and lawn.
- 1.4 **Minor Parking Area Upgrades** includes light regrading and wheel stops (relocated from the existing parking areas to the west) to help define the existing parking area.
- 1.5 **106 Street Entry and Trail.** A paved multi-use trail between the former Queen Elizabeth Pool site and Saskatchewan Drive east of 106 Street, including retaining walls with safety rails, planting, site furnishings and signage. A new entry node at the east end of the Laurence Decore Lookout platform. Reconfiguration of the platform to integrate it with the entry node.
- 1.6 **Upper Park Open Area / Commemorative Wall.** Landscape improvements including a commemorative wall with interpretive signage, regrading to create two lawn terraces, the relocation of recently-planted trees and the addition of new site furnishings.

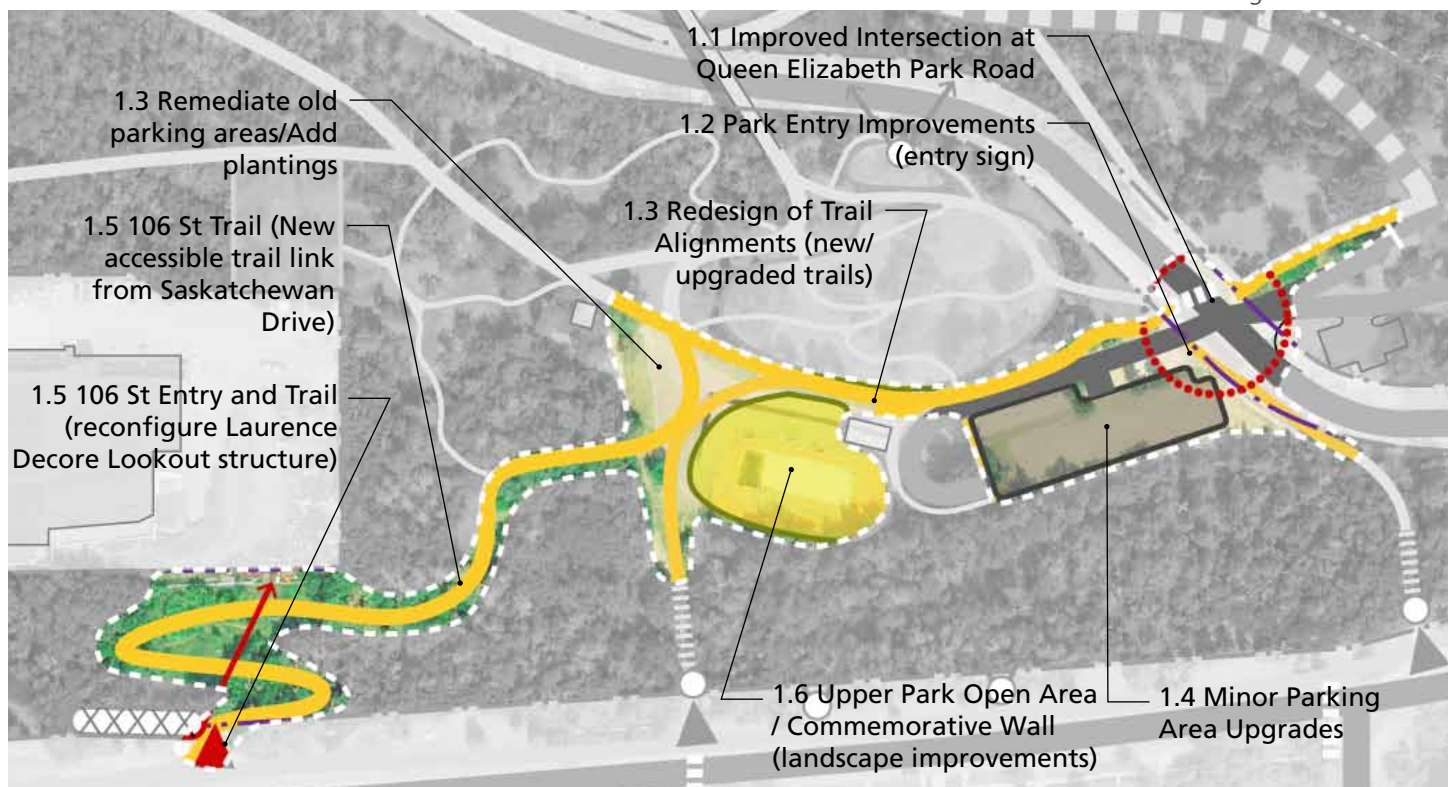


FIGURE 9.2: PHASE 1 ELEMENTS

BUDGET

Studies / Prerequisites:

- Structural Engineering for retaining walls (outstanding)	\$	35,000
- Legal lot changes (underway)	\$	5,000
Studies / Prerequisites Subtotal¹	\$	42,400

Construction Elements:

1.2 Park Entry Improvements	\$	35,000
1.3 Redesign of Trail Alignments, removals (old west gravel parking lot), new planting	\$	149,195
1.4 Minor Parking Area Upgrades, upper park	\$	7,500
1.5 106 Street Entry and Trail	\$	743,855
1.6 Upper Park Open Area / Commemorative Wall	\$	135,880
Construction Subtotal	\$	1,071,430
Design/Project Management/Admin Fees ²	\$	401,222
1% for Public Art ³	\$	10,714
Contingency – 25% ⁴	\$	267,858

Other work included in this Phase:

1.1 Improved Intersection at Queen Elizabeth Park Road ⁵	\$	220,000
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GRAND TOTAL PHASE 1 \$ 2,013,624

ALL ESTIMATES ARE BASED ON 2013 COSTS

¹ This subtotal only represents outstanding studies and prerequisites. Several studies and prerequisites have already been undertaken. See complete list and costs in 9.4 Cost Estimate. Includes 6% project management allocation.

² Includes Design Fees 10%, Project Management 6%, General Conditions 10%, Construction Survey 1.5%, Plant Establishment 5%, As-builts 0.4%, (all based on Construction Subtotal), plus 3.7% Disbursements (based on total of all above, excluding Design Fees)

³ Based on Construction Subtotal

⁴ Contingency is 25% of Construction Subtotal. The 25% contingency is based on the level of design.

⁵ Based on quote as provided by Transportation. Includes all design, project management, plant establishment and 25% Contingency.

PHASE 1 IMPLEMENTATION STRATEGY

All of the elements in Phase 1 are identified as high priorities for Queen Elizabeth Park, make the most of the budget already allocated and begin to establish infrastructure that will support future phases.

The combination of elements in Phase 1 are identified as priorities to pursue in the near term given:

- timing of the Walterdale Bridge construction,
- providing significant improvements to accessibility, connectivity and safety, and;
- implementing a landscape treatment to address the void that resulted from the removal of the old pool.

Efficiencies have been found by including the Queen Elizabeth Park Road intersection improvements that will be carried out by the Walterdale Bridge contractor within the first phase of implementation.

Discussions are to take place with Transportation immediately to coordinate funding for upgrades to the trail adjacent to Saskatchewan Drive so that this work can coincide with the new 106 Street entry/trail and/or to ensure budget is allocated for this work to be carried out during the 2014-2018 budget cycle.

Approximately 1600 m³ of fill may be required for the 106 Street trail. Additionally, acquiring large quantities of clean fill material for the proposed mound (toboggan hill) is required for completion of Phase 4. In order to obtain fill economically, Community Services should enter into discussions as soon as possible in order to secure excavated fill material from proposed developments, a number of which are planned for downtown. Imported fill to be clean and, where it is being used for the mound, it is also to be grade, level, seeded.

Clearly communicate the design intent with Operations staff to determine the required maintenance - e.g. if mown, if left natural, short-term maintenance vs long-term maintenance needs (e.g. more maintenance in short-term to help assist new plant establishment).

STUDIES / PREREQUISITES

- Phase 1 Environmental Site Assessment (paid through Space2place contract)
- Environmental Screening Report (paid through Space2place contract)
- Ecological Constraints Mapping - to be completed once for the entire park. Project sponsor: Office of Biodiversity.
- Soil Testing of fill material at Old Queen Elizabeth Pool Site (completed, interdepartmental costs paid)
- Geotechnical report for the stability and soils of the slope between O'Keefe and Saskatchewan Drive. (completed June 2013, paid)
- Topographic Survey (completed January 2013, paid)
- Structural engineering for the retaining structures along the new trail
- Legal lot changes/consolidation (to be completed once for the entire park)
- Historical Resources Act Clearance (obtained May 2013)
- Development Permit
- Tree assessment prior to formalizing trail alignment

SCOPE REDUCTION OPTIONS

The scope will be constrained by the net budget. It is anticipated that the scope of work for this phase will be refined during the detailed design and tender stages.

If necessary, additional scope reduction may be achieved by exploring one or more of the following options:

- Defer the commemorative wall and interpretive signage at the old Queen Elizabeth Pool site and provide a grade, level, seeded slope in place of the proposed wall. This will establish the terraced lawn areas and allow the wall to be installed at a later date.
- Defer some improvements (e.g. picnic sites) at the old Queen Elizabeth Pool site
- Defer the park entry signage
- Install a less expensive, aesthetically attractive retaining wall system for the 106 Street trail
- Value engineer the concrete stairs (as an upgrade to the wood stairs by the bridge) with a less expensive, but similarly well-designed set of stairs that achieves the design intent

PHASE 2

INTENT

The intent of Phase 2 is to add significant amenity value by formalizing the parking area and creating a finished park area in the upper park so as to compliment the new signature Walterdale Bridge and avoid the staging area for bridge construction.

PHASE 2 ELEMENTS

- 2.1 **Aboriginal Art Park and Picnic Area (excluding art pieces)** including an accessible trail, a lookout with seating and eight picnic facilities. Includes servicing for lighting of art, concrete pads for permanent pieces, secondary gravel paths and signage for art identification.
- 2.2 **Upper Park Parking Area Paving and New Bus Loop**/drop-off area (with space for 2 buses).
- 2.3 **Upper Park Shade Shelter** including a high-quality paved floor extending to the multi-use trails and drop-off area and bike racks. Utility servicing includes water for a hose bib, a barrier-free drinking fountain, event electrical servicing (which may be on a pay-as-you-go type system) and potentially a Wi-Fi hot-spot.
- 2.4 **Bury Existing Aerial Utilities** at the parking area and former pool site and remove the poles.
- 2.5 **Upgraded and New Lookouts along Saskatchewan**

Drive, including both refurbished and new platforms as well as at-grade seating areas with views. Selective tree clearing and pruning park entry stairs and to create or restore viewpoints.

- 2.6 **Upper Park Trails North of O'Keefe**. New connections between Fort Hill Road and the upper park node.
- 2.7 **River Access** via stone stairs built into the riprap bank. Includes a gravel path connection along the riverbank, seating, erosion control (willow wands) in the riprap and native planting.

ELEMENTS WITH POTENTIAL CO-FUNDING

- 2.8 **Widen Trail and Boardwalk adjacent to Saskatchewan Drive** between 109 Street and 90 Avenue to the shared-use path standard (3m). Funded by Transportation Department or through a potential cost sharing with Transportation Department.
- 2.9 **Upgrade Proposed Stairs to Bridge** to concrete instead of wood.
- 2.10 **Art Pieces**: The design, fabrication, supply and installation of 6-8 commissioned art pieces for the Aboriginal Art Park, potentially funded through 'pooled' percent for art funding (Edmonton Arts Council) or through the capital budget.

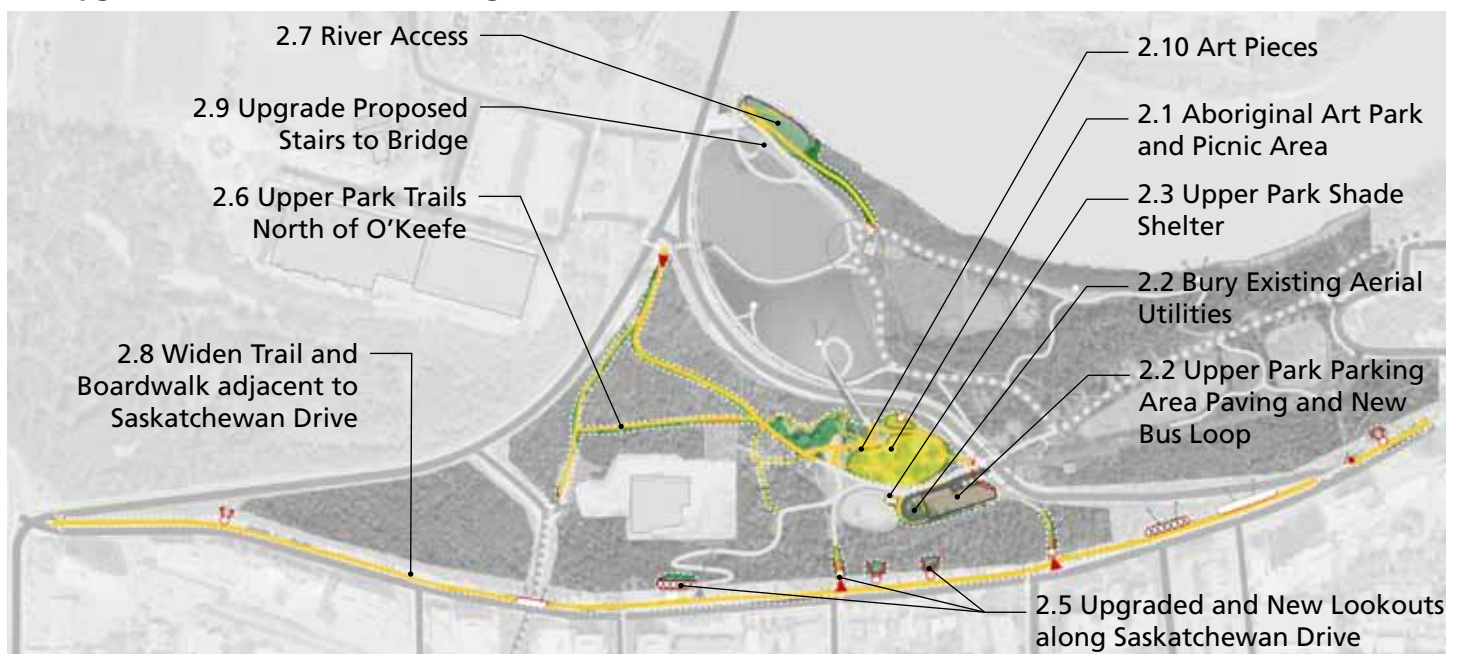


FIGURE 9.3: PHASE 2 ELEMENTS

BUDGET

Studies / Prerequisites

- Approvals for steps down to the river	\$ 28,000
- Environmental Report ¹	\$ 35,000
- Historical Resources Clearance	\$ 1,500
- Parking Impact Assessment (if required, for the whole park)	\$ 30,000
- Utility Locates	\$ 10,000
- Topographic Survey (1% of construction)	\$ 25,679
- Geotechnical Report for surface drainage (if required)	\$ 15,000
- Aboriginal Art Visioning Session (\$15,000 paid through City of Edmonton operating budget)	\$ paid
Studies / Prerequisites Subtotal²	\$ 153,890

Construction Elements:

2.1 Aboriginal Art Park and Picnic Area (excluding art pieces)	\$ 263,620
2.2 Upper Park Parking Area Paving and New Bus Loop	\$ 959,895
2.3 Upper Park Shade Shelter	\$ 247,000
2.4 Bury Existing Aerial Utilities	\$ 110,000
2.5 Upgraded and New Lookouts along Saskatchewan Drive	\$ 307,000
2.6 Upper Park Trails North of O'Keefe	\$ 87,310
2.7 River access, ecological enhancements, lookouts	\$ 593,080
Construction Elements Subtotal	\$ 2,567,905
Design/Project Management/Admin Fees ³	\$ 961,611
1% for Public Art ⁴	\$ 25,679
Contingency – 25% ⁵	\$ 641,976

SUBTOTAL PHASE 2 \$ 4,351,061

Phase 2 Elements with Potential Co-Funding

2.8 Widen Trail and Boardwalk adjacent to Saskatchewan Drive (potential for cost sharing with Transportation) ^{6,7}	\$ 629,011
2.9 Upgrade Proposed Stairs to Bridge (quote provided by Transportation) ⁸	\$ 1,471,026
2.10 Art pieces (6-8)	\$ 500,000
SUBTOTAL PHASE 2 Elements with Potential Co-Funding	\$ 2,600,036

GRAND TOTAL PHASE 2 \$ 6,951,097

ALL ESTIMATES ARE BASED ON 2013 COSTS

¹ Level of environmental review to be determined at preliminary design stage. Assumes one review document per Development Permit area.

² Includes additional 6% for project management.

³ Includes Design Fees 10%, Project Management 6%, General Conditions 10%, Construction Survey 1.5%, Plant Establishment 5%, As-builts 0.4%, (all based on Construction Subtotal), plus 3.7% Disbursements (based on total of all above, excluding Design Fees)

⁴ Based on Construction Subtotal

⁵ Contingency is 25% of Construction Subtotal. The 25% contingency is based on the level of design.

⁶ Cost estimate is for trail widening only and does not include cost to address ponding at Saskatchewan Drive and 105th Street.

⁷ Includes Design/Project Management/Admin Fees³, 1% for Public Art⁴, and Contingency⁵

PHASE 2 IMPLEMENTATION STRATEGY

The priority of Phase 2 is the development of several key programming spaces to animate the upper park and to add significant amenity value that will compliment the new signature Walterdale Bridge. To avoid the staging area for bridge construction, most of the work in Phase 2 will take place in the upper park.

Prior to completing improvements to the existing parking area, a Parking Impact Assessment, if required, should be done for the entire park.

The burying of overhead utility wires and removal of utility poles should be completed in conjunction with parking lot upgrades and other improvements in the upper park.

Restore existing lookouts and create several new lookouts in multiple locations along Saskatchewan Drive (Laurence Decore Lookout) to complement the new Walterdale Bridge. Widening of the existing trail along Saskatchewan Drive is recommended as demand on this narrow corridor will increase with park development. Community Services and Sustainable Transportation should work together to coordinate widening of the shared use path.

In the lower park, the priority is to work with the Walterdale Bridge team as early as possible to coordinate the installation of stone stairs into the riprap bank being installed near the end of the bridge construction project. Additionally, the potential for upgrading the wood stairs to concrete at the south-east end of the bridge should also be investigated early in the process.

As most of Dantzer's Hill is anticipated to be used as fill for the bridge approach, the construction of a toboggan hill will require import of a significant volume of fill material. Opportunities should be sought to source fill material from construction projects that may be underway nearby, as a means of obtaining fill economically. It may be necessary to accept delivery of fill material over an extended period of time depending on availability in order to minimize disruption of other park uses. Imported fill to be clean and, where it is being used for the mound, it is also to be grade, level, seeded. The mound/toboggan hill is required prior to constructing the overpass and trail connection in Phase 4.

Art pieces for the Aboriginal Art Park are to be funded and maintained through a partnership opportunity with Edmonton Arts Council (EAC). Community Services will work with EAC prior to the Vision Session to determine the support infrastructure requirements to be provided by the City. EAC will maintain public art pieces through an existing agreement. If upper park parking lot proceeds before Art

Park then the project manager should consider pulling power to the Art Park site when shelter/bus loop is constructed.

Clearly communicate the design intent with Operations staff to determine the required maintenance - e.g. if mown, if left natural, short-term maintenance vs long-term maintenance needs (e.g. more maintenance in short-term to help assist new plant establishment).

STUDIES / PREREQUISITES

- Environmental Report (type to be determined depending on budget/scope)
- Phase 2 soil testing in the vicinity of Dantzer's Hill and the south end of Walterdale Bridge, if required. Walterdale Bridge project requires soil monitoring and clean up.
- Determine sources of clean fill material suitable for creating the proposed mound.
- Historical Resources Act Clearance
- Development Permit
- Aboriginal Art Park Visioning Session (scheduled to commence September 2013)
- Funding source(s) for the art pieces to be determined
- Artist selection and procurement. Community Services will work with EAC to determine the support infrastructure requirements to be provided by the City. EAC will maintain public art pieces through an existing agreement. If upper park parking area proceeds before the Art Park then Project Manager should consider pulling power to Art Park site when bus loop is constructed.
- The master plan includes a preliminary parking assessment, However, discussions with Sustainable Development are required to determine whether a full Parking Impact Assessment is also required and, if so, whether one can address the entire park area.
- Steps down to river/stair upgrade - Should funding be secured for these elements in the 2014-2018 budget cycle, discussions with Transportation Services will be required as soon as possible so that work can be coordinated with bridge contractor.
- Tree assessment prior to formalizing trail alignments
- Utility locates
- Topographic Survey
- Geotechnical Report for surface drainage (if required)

SCOPE REDUCTION OPTIONS

It is anticipated that the scope of work for this phase will be refined during the detailed design and tender stages.

If necessary, additional scope reduction may be achieved by exploring one or more of the following options:

- Defer new upper park path north of O'Keefe (or upgrades to the existing paths north of O'Keefe).
- Defer the development of some of the lookouts along the trail adjacent to Saskatchewan Drive. Specifically, the redevelopment of the viewpoint/future park entry east of the hairpin can be deferred until Phase 5 when the existing stairway is relocated and extended.
- Defer items with potential for cost sharing (e.g. Saskatchewan Drive trail widening, bridge stair upgrades).
- Refine design of concrete stairs to the Walterdale Bridge to be more economical.

PHASE 3

INTENT

The intent of Phase 3 is to animate the lower park with the introduction of a highly sought after integrated Bike Skills Park in the lower park.

PHASE 3 ELEMENTS

- 3.1 **Bike Skills Park** requires repurposing of the wastewater treatment plant to construct a Bike Skills Park in its place and develop a network of sanctioned single-track trails in the forest slopes between the picnic area and the Bike Skills Park. The park may include a boardwalk/path to a central viewing area, signage and a water source.
- 3.2 **River Valley Programming Area**, including aesthetic perimeter fencing, programming elements (archery, low ropes, bouldering wall) a storage building, shelter, picnic tables and paths.
- 3.3 **Composting Toilet** Barrier-free composting toilet between River Valley Programming and the Public Art Park
- 3.4 **Ethnobotanical Trail** and signage includes constructing a gravel path and stairs as required between the service road the riverbank trail east of the pump house. Works also include some clearing, drainage infrastructure, infill

planting interpretive signage and trail markers. Signage developed during the master plan phase will be finalized and used for this purpose.

- 3.5 **Trails and Lookouts in the Lower East Park** including rebuilding the trail along the east riverbank (east of the service road), creating two at-grade lookouts in existing clearings near the bank and constructing a new north-south trail and stair connection between the picnic area/play area and the riverbank trail, complete with signage and seating. Enhance vegetated riverbank with infill planting.
- 3.6 **Closure of a single-track trail** in the east end of the lower park includes erosion control measures (i.e. erosion control fabric, willow stakes) new growing medium and planting and fencing or other barrier to prevent entry while restoration is underway.

ELEMENTS WITH POTENTIAL CO-FUNDING

- 3.7 **Wastewater Treatment Plant Demolition** There may be a potential for cost sharing with the Drainage Department.



FIGURE 9.4: PHASE 3 ELEMENTS

BUDGET

Studies / Prerequisites

- Environmental Report ¹ (EIA and SLS required for Bike Skills Park)	\$ 40,000
- Phase 1 ESA Update (if required)	\$ 8,000
- Historical Resources Clearance	\$ 1,500
- Historical Resources Impact Assessment (if required)	\$ 13,200
- Re-do studies for WWTP removal/remediation for Bike Skills Park	\$ 76,000
- Consult and design for Bike Skills Park	\$ 35,000
- Construction standards and management plan for Bike Skills Park and single-track trails	\$ 10,000
- Remediation work (if necessary)	\$ 50,000
- Topographic Survey (1% of construction)	\$ 16,123
Studies / Prerequisites Subtotal²	\$ 264,812

Construction Elements:

3.1 Bike Skills Park (including single-track trails) ³	\$ 607,500
3.2 River Valley Programming Area ³	\$ 273,923
3.3 Composting toilet	\$ 200,000
3.4 Ethnobotanical trail (and signage)	\$ 188,875
3.5 Trails and Lookouts in the Lower East Park	\$ 271,830
3.6 Closure of a single-track trail	\$ 70,180
Construction Elements Subtotal	\$ 1,612,308

Design/Project Management/Admin Fees ⁴	\$ 603,766
1% for Public Art ⁵	\$ 16,123
Contingency – 25% ⁶	\$ 403,077

SUB TOTAL PHASE 3 \$ 2,900,086

Phase 3 Elements with Potential Co-Funding

3.7 Wastewater Treatment Plan Demolition ⁷	\$ 2,772,000
TOTAL PHASE 3 Elements with Potential Co-Funding	\$ 2,772,000

GRAND TOTAL PHASE 3 \$ 5,672,086

ALL ESTIMATES ARE BASED ON 2013 COSTS

¹ Level of environmental review to be determined at preliminary design stage. Assumes one review document per Development Permit area.

² Includes additional 6% for project management.

³ Excludes remediation costs (if required)

⁴ Includes Design Fees 10%, Project Management 6%, General Conditions 10%, Construction Survey 1.5%, Plant Establishment 5%, As-builts 0.4%, (all based on Construction Subtotal), plus 3.7% Disbursements (based on total of all above, excluding Design Fees)

⁵ Based on Construction Subtotal.

⁶ Contingency is 25% of Construction Subtotal. The 25% contingency is based on the level of design.

⁷ Estimate prepared Aug. 2012. Includes pre-testing. Potential for cost sharing with Drainage Department.

PHASE 3 IMPLEMENTATION STRATEGY

Demolition of the decommissioned wastewater treatment plant (WWTP) to be coordinated with the design of the Bike Skills Park.

The creation of the Bike Skills Park will require a number of different processes to be thoughtfully sequenced and coordinated with each other, including:

- Interdepartmental involvement and funding negotiations,
- Undertaking additional studies tailored to the specific nature of the proposed Bike Skills Park,
- Relocation of several existing groups who utilize the existing compound space,
- Managing a public engagement process for the design, development, maintenance and stewardship of a facility that is the first of its kind in Edmonton,
- Coordinating the extent of removal of the WWTP required with the design for the Bike Skills Park, and;
- Development of design, construction and management standards for a pilot project river valley Bike Skills Park.

In order to prepare the WWTP and compound for repurposing, all existing compound uses, including boating group storage, District Operations Storage, and River Valley Programming must be relocated. Only River Valley Programming will be relocated within the park, with a permanent location allocated in the upper park.

It is important that River Valley Programming and the Compost Toilet be completed together as proximity to the toilet is important for safety, surveillance and learning opportunities. The barrier-free composting toilet supports the River Valley Programming uses as well as general park users. If the Composting Toilet is deferred, then portable toilets will be required for River Valley Programming.

Repurposing the WWTP into an area for public use will require environmental studies to be initiated early in this phase. There are many unknowns, including the scope of demolition/removal and remediation that will be required to make the site conditions safe for the proposed use.

Early discussion with the Drainage Department is required to ensure budget is allocated for demolition (opportunity for co-funding) and that demolition is coordinated with the design of the Bike Skills Park in order to retain portions of the WWTP as 'ruins' that are integrated with the skills area.

Development of the Bike Skills Park will require two part process (1) consultation and design (2) detailed design and construction.

The design of Bike Skills Park will be developed in collaboration between an expert Bike Skills Park designer, the biking community, and relevant City Departments. Ideally, consultation with the biking community will take place in early summer when bikers are active and to accommodate site visits as necessary. Work with bike community to explore partnerships for maintenance, education and stewardship. Specialized maintenance requirements will need to be determined. A maintenance schedule, budget and operations plan will need to be developed. A review of current design standards may also be necessitated.

As the development of standards for sanctioned single track trails in the river valley is a pilot project for Edmonton, the ecological conditions should be well understood in order to balance ecological protection with recreational use for the single-track/flow trails.

The original demolition quote was prepared with a number of outstanding unknowns and needs to be revisited. It is anticipated that this work will require

- A Phase 2 ESA (to test areas east and southwest of WWTP),
- Updates to the Hazardous Materials Report including an assessment of all unknowns (i.e. all digestion, settling tanks, etc.), and;
- Updates to demolition quote based on the new scope.

The proposed trails and stairs in the north east part of the lower park will be necessary in order to provide access to the single track trails and to open the area to park users for passive surveillance, etc.

Developing the ethnobotanical trail at this stage is important as it provides some access to the single track trails and will be disruptive if is installed after the single track trails are established. The closure of the treacherous single track trail in the north east is important to keep riders on the sanctioned trails for safety and also to support the rehabilitation of the north east slopes and vegetation.

Continue obtaining fill from development projects for Phase 4, as per Phase 1.

Involve Operations staff in the design of the Bike Skills Park and in the development of construction and maintenance standards for the skills area and single track trails.

STUDIES / PREREQUISITES

- Requirements for the WWTP include:
 - WWTP repurposing assumes buildings are mostly demolished and foundation structures are left in place.
 - Phase 2 Environmental Site Assessment to address adjacent areas to the east (storage compound, including the boat storage garage) and to the southwest (refuse site) if required for boardwalk/viewing platform, as per Phase 1 ESA by KCB.
 - Re-do and expand Hazardous Materials Assessment Report for WWTP based on new proposed use.
 - Re-do Quote for WWTP demolition based on proposed use.
- Relocate all existing compound uses, including boating group storage, District Operations Storage, and River Valley Programming. Relocate River Valley Programming to new permanent location in the upper park.
- Bike Skills Park will require an Environmental Impact Assessment and Site Location Study (to be confirmed depending on scope)
- Phase 1 ESA Update (if required)
- Historical Resources Act Clearance
- Historical Resources Impact Assessment (if required for HRA Clearance)
- Investigate development of different standards/different approach to managing single track trails.
- Tree assessment prior to formalizing trail alignment
- Topographic Survey

SCOPE REDUCTION OPTIONS

It is anticipated that the scope of work for this phase will be refined during the detailed design and tender stages.

If necessary, additional scope reduction may be achieved by exploring one or more of the following options:

- Defer the construction of some bike skills elements (i.e. boardwalk/lookout)
- Defer the permanent composting toilet and providing a portable toilet for River Valley Programming in the near term

PHASE 4

INTENT

The intent of Phase 4 is to connect the upper and lower parks with a pedestrian overpass, develop a mound/toboggan hill, and to improve the open field and create trails and lookouts in the lower park.

PHASE 4 ELEMENTS

- 4.1 **Toboggan Hill and Open Field Area** Includes creating an earth-mound and a flat open area in the lower park complete with lawn, gravel paths, site furnishings, electrical servicing for events and electrical servicing for potentially lighting the toboggan hill, and development of two minor park entry nodes and directional signage.
- 4.2 **Pedestrian Overpass, Trail Connections, Lookouts** includes a multi-use (4m wide) bridge from the Art Park in the upper park to the top of the mound in the lower park. New multi-use trails connect the overpass landing at the top of the mound with the trail network in the lower park. Also included are two at-grade lookouts with custom seating walls integrated with the mound, approximately ten benches, signage and restoration of areas disturbed during construction.

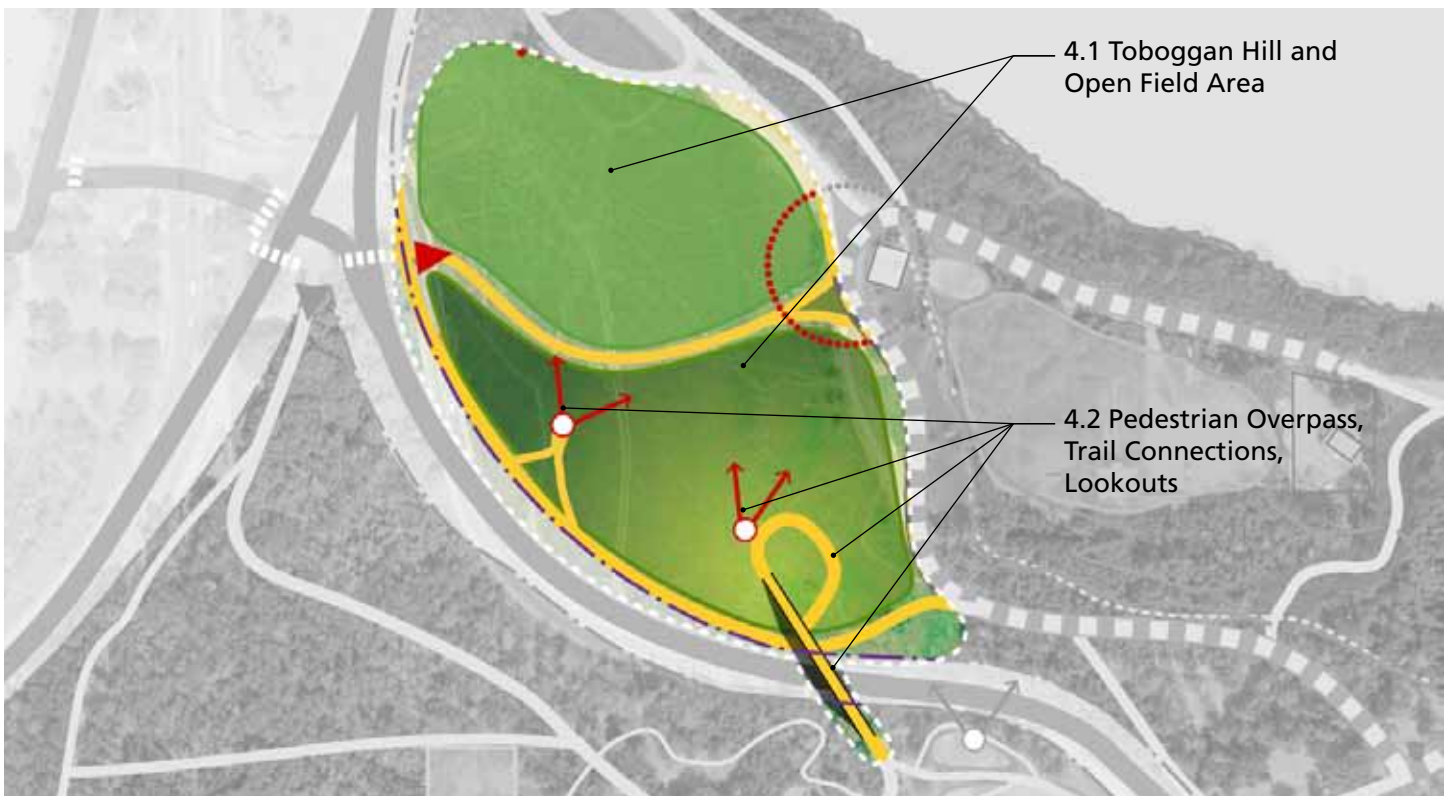


FIGURE 9.5: PHASE 4 ELEMENTS

BUDGET

Studies / Prerequisites

- Environmental Report ¹	\$ 35,000
- Phase 1 ESA Update (if required)	\$ 8,000
- Historical Resources Clearance	\$ 1,500
- Phase 2 ESA soil testing (if required)	\$ 10,000
- Topographic Survey (1% of construction)	\$ 33,259
- Geotechnical report for overpass	\$ 50,000
Studies / Prerequisites Subtotal²	\$ 146,024

Construction Elements:

4.1 Toboggan Hill and Open Field Area ³	\$ 556,440
4.2 Pedestrian Overpass, Trail Connections, Lookouts	\$ 2,769,410
Construction Elements Subtotal	\$ 3,325,850

Design/Project Management/Admin Fees ⁴	\$ 1,245,411
Extra Design Fees for overpass only ⁵	\$ 120,000
1% for Public Art ⁶	\$ 33,259
Contingency – 25% ⁷	\$ 831,463

GRAND TOTAL PHASE 4 \$ 5,702,036

ALL ESTIMATES ARE BASED ON 2013 COSTS

¹ Level of environmental review to be determined at preliminary design stage. Assumes one review document per Development Permit area.

² Includes additional 6% for project management.

³ Excludes supply of fill for mound and remediation costs. Includes grading and seeding of toboggan hill and open field area.

⁴ Includes Design Fees 10%, Project Management 6%, General Conditions 10%, Construction Survey 1.5%, Plant Establishment 5%, As-builts 0.4%, (all based on Construction Subtotal), plus 3.7% Disbursements (based on total of all above, excluding Design Fees)

⁵ There is an extra 5% for Design Fees added to the pedestrian overpass (providing for 15% in total) to allow for structural engineering. The extra 5% for Design Fees are based on the overpass construction subtotal only.

⁶ Based on Construction Subtotal.

⁷ Contingency is 25% of Construction Subtotal. The 25% contingency is based on the level of design.

PHASE 4 IMPLEMENTATION STRATEGY

The fill material for the toboggan hill (mound) must be in place first to create a landing/abutment for the north end of the overpass and to provide the grades required to permit the development of the on-grade lookouts and the multi-use trails.

Geotechnical and structural engineering will be required during the detailed design of the pedestrian overpass.

The development of the multi-use trails is required to link the overpass with the trail network in the upper park, the service road, the Walterdale Bridge and the pedestrian connections to Kinsmen Park/Sports Centre.

Engage in discussions and coordinate with Park Operations, Civic Events, and Edmonton Arts Council regarding management and maintenance for the areas in this Phase.

Clearly communicate the design intent with Operations staff to determine the required maintenance - e.g. if mown, if left natural, short-term maintenance vs long-term maintenance needs (e.g. more maintenance in short-term to help assist new plant establishment).

STUDIES / PREREQUISITES

- Environmental Report (type to be determined depending on budget/scope)
- Phase 1 ESA Update (if required)
- Historical Resources Act Clearance
- Review the recommendations in the Phase 1 ESA in conjunction with the ECO Plan, to be prepared by the Waltherdale Bridge contractor post-construction to ensure the laydown area (in the vicinity of Dantzer's Hill) is left in a condition that is safe and appropriate for park use. Consultation with Alberta Environment and Sustainable Resource Development may be required to implement a risk-management approach for any residual PAH concentrations.
- Tree assessment prior to formalizing trail alignment.
- Topographic Survey

SCOPE REDUCTION OPTIONS

The scope of work for this phase will be refined during the detailed design and tender stages.

If necessary, additional scope reduction may be achieved by exploring one or more of the following options:

- Defer the construction of the lookouts on the mound

PHASE 5

INTENT

The items in Phase 5 generally consist of upgrades to existing facilities that will improve access, functionality, safety and aesthetics. Phase 5 also includes development of any amenity building in the lower park.

PHASE 5 ELEMENTS

5.1 Lower Park Amenity Node. Includes a year-round amenity building (architecturally designed and well-integrated with the site) with public washrooms, a warm-up area with views of the park, vending machine, custodial storage, and potential office/storage for Bike Skills Park. The node also includes a fire pit, interpretive elements, signage, site furnishings, bike racks, a Blufone, paving, planting, and all servicing required.

5.2 Parking Lot, Parking along East-West Access Road, Wetland Enhancement. Includes (re)paving the access road, reconfiguration of the parking area east of the main entry to provide 8 stalls and creating additional angle parking spaces along the east-west park road. Enhancement of the wetland at the east park entry includes removal of invasive plants, potential enlargement, adding native plants, and improving drainage under the road to fix seasonal overflow/washout across the access road. Also included are improvements to the existing washroom building (as per 2009 report) plus aesthetic improvements, upgraded paths for accessibility, bike racks and signage.

5.3 South-East Park Entrance Stairs and Flow Trail.

Includes extending the stairway east of the hairpin to the lower park road near the play area, signage and a minor Park Entry Node. Also included is the potential development/formalization of a flow trail on the upper slope of the lower park (between Saskatchewan Drive east of the hairpin and the existing washroom building).

5.4 Play Area Enhancements. Includes replacement of existing play equipment with nature-based and creative play elements, accessible paths, signage and bike racks. Potential for equipment for seniors, if appropriate.

5.5 East Art Park and Picnic Area. Includes approximately 8 picnic sites and site furnishings (picnic tables on concrete pads, stoves, waste bins, benches, bike racks), signage, and a minor entry node from 91 Avenue. The Art Park includes servicing for lighting of art, concrete pads for permanent pieces, gravel paths and signage for the art. Funding for local art pieces is to be determined by Edmonton Arts Council.

5.6 Fort Hill Road Multi-use Connection. A north-south multi-use connection at the west end of the park that serves as a pedestrian entry point from the Strathcona neighbourhood. Includes new pavement and drainage along Fort Hill Road as well as signage, a minor park entry node, and safety and aesthetic improvements around the O'Keefe entry area (planting and improved fencing).



FIGURE 9.6: PHASE 5 ELEMENTS

5.7 Upgrade Trail North of Park Entry: Replace the existing 'goat path' with a 2.4m wide gravel trail.

5.8 Art Pieces: The design, fabrication, supply and installation of 6-8 commissioned art pieces for the Local Art Park, potentially funded through 'pooled' percent for art funding (Edmonton Arts Council) or through the capital budget.

BUDGET

Studies / Prerequisites

- Environmental Report ¹	\$ 35,000
- Phase 1 ESA Update (if required)	\$ 8,000
- Phase 2 ESA for existing washroom building, proposed amenity building and surrounding area	\$ 17,000
- Historical Resources Clearance	\$ 1,500
- Historical Resources Impact Assessment (if required for excavation for amenity building)	\$ 13,200
- Topographic Survey (1% of construction)	\$ 23,689
- Geotechnical Report for surface drainage	\$ 15,000
- Phase 2 Local Art Visioning Session ² (if required)	\$ 15,000

Studies / Prerequisites Subtotal³ \$ 136,092

Construction Elements:

5.1 Lower Park Amenity Node	\$ 667,400
5.2 Parking Lot, Parking Along East-West Access Road, Wetland Enhancement	\$ 704,300
5.3 South-East Park Entrance Stairs and Flow Trail	\$ 224,600
5.4 Play Area Enhancements	\$ 338,125
5.5 Local Art Park and Picnic Area	\$ 215,100
5.6 Fort Hill Road Multi-use Connection	\$ 211,560
5.7 Upgrade Trail North of Park Entry	\$ 7,800

Construction Elements Subtotal \$ 2,368,885

Design/Project Management/Admin Fees⁴ \$ 887,083

1% for Public Art⁵ \$ 23,689

Contingency – 25%⁶ \$ 592,221

Phase 5 Elements with Potential Co-Funding

5.8 Art pieces (6-8)	\$ 500,000
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SUBTOTAL PHASE 5 Elements with Potential Co-Funding \$ 500,000

GRAND TOTAL PHASE 5 \$ 4,507,971

ALL ESTIMATES ARE BASED ON 2013 COSTS

¹ Level of environmental review to be determined at preliminary design stage. Assumes one review document per Development Permit area.

² Paid through City of Edmonton operating budget.

³ Includes additional 6% for project management.

⁴ Includes Design Fees 10%, Project Management 6%, General Conditions 10%, Construction Survey 1.5%, Plant Establishment 5%, As-builts 0.4%, (all based on Construction Subtotal), plus 3.7% Disbursements (based on total of all above, excluding Design Fees)

⁵ Based on Construction Subtotal

⁶ Contingency is 25% of Construction Subtotal. The 25% contingency is based on the level of design.

PHASE 5 IMPLEMENTATION STRATEGY

The items in Phase 5 are of a lower priority than the items in earlier phases. However, any of the items in Phase 5 can be initiated in combination with earlier phases as resources are available.

For example:

- The lower park amenity node may be able to be developed as early as Phase 3, provided that Walterdale Bridge construction and the associated new service road/multi-use trail is also complete.
- The parking lot upgrades, wetland enhancement and/or upgrades to the existing washroom building may occur at any time.
- The south-east park entrance stairs may be developed at any time.
- The flow trail on the upper slope of the lower park may be implemented as part of the development of single track trails associated with the Bike Skills Park in Phase 3.
- Play area enhancements may be completed at any time.
- Redevelopment of picnic areas, trails and parking upgrades in the lower park should be done in conjunction with development of the Local Art Park to ensure that they are properly integrated.

A screening-level risk assessment to determine the concentrations of Boron and PAHs and a high-level comparison of their effect on ecological receptors should be conducted for potential planting areas around the amenity node in order to determine the extent of mitigation required and/or to select tolerant plants accordingly.

Clearly communicate the design intent with Operations staff to determine the required maintenance - e.g. if mown, if left natural, short-term maintenance vs long-term maintenance needs (e.g. more maintenance in short-term to help assist new plant establishment).

STUDIES / PREREQUISITES

- Environmental Report (type to be determined depending on budget/scope)
- Phase 1 ESA update (if required)
- Phase 2 Local Art Visioning Session (if required)
- Design of trail standards for single track trails/bike facilities in the river valley (as completed in Phase 3)
- Tree assessment prior to formalizing trail alignment
- Topographic Survey
- Geotechnical Report for surface drainage (if required)
- Historical Resources Impact Assessment for the Amenity Building (if required) including an excavation by archaeologists
- Historical Resources Act Clearance
- Historical Resources Impact Assessment (if required for HRA Clearance)
- Phase 2 ESA for existing washroom building and proposed amenity building with a risk assessment (screening level) for potential risk of boron and PAHs to ecological receptors of amenity node area where planting may occur (as per Phase 1 ESA by KCB)
- Development Permit

SCOPE REDUCTION OPTIONS

It is anticipated that the scope of work for this phase will be refined during the detailed design and tender stages.

If necessary, additional scope reduction may be achieved by exploring the following option:

- Divide scope of work into two or three separate phases. Prioritization can be assessed in the future. Determining factors may include: availability of funding for the Art Park and/or development of amenities (public washrooms) in adjacent developments, etc.

9.3 ESTIMATED OPERATING COSTS

OPERATING IMPACTS

The estimated operating impacts of capital for future phases of the master plan implementation are calculated at a nominal 3% of the construction subtotal for each phase. Building maintenance for the proposed amenity building is calculated at an additional 2% of the construction subtotal for the amenity building.

The budget and scope of development for future phases will ultimately be dependent on funding made available in future budget cycles and are yet to be determined.

The steps down to the river is the only element with potential co-funding that is included in the operating impacts to capital for Community Services. Operating costs for the upgraded stairs to the bridge and the widened trail along Saskatchewan Drive are to be funded by Transportation. Operating costs for public art pieces are to be funded by Edmonton Arts Council.

	Construction Subtotal	Rate	Operating Budget
Phase 1 Construction Elements	\$ 1,071,430	3%	\$ 32,143
Phase 2 Construction Elements ¹	\$ 2,567,905	3%	\$ 77,037
Phase 3 Construction Elements ²	\$ 1,612,308	3%	\$ 48,369
Phase 4 Construction Elements	\$ 3,325,850	3%	\$ 99,776
Phase 5 Construction Elements ³	\$ 2,368,885	3%	\$ 71,067
Phase 5 Amenity Building only ⁴	\$ 262,500	2%	\$ 5,250
Total all Phases			\$ 333,642

ALL ESTIMATES ARE BASED ON 2013 COSTS

¹ Excludes the elements with potential co-funding. The widened trail along Saskatchewan Drive and upgraded stairs to bridge are to be maintained by Transportation. The art pieces are to be maintained by EAC.

² There is no operating cost associated with the demolition of the waste-water treatment plant.

³ Excludes Art pieces. Art pieces are to be maintained by EAC.

⁴ The costs for maintaining the building totals 5% of its construction budget (3% of the Construction Elements for cleaning, etc. and 2% for repairs)

9.4 COST ESTIMATE

Legend:

Upper park works

Lower park works

#	Item	Components Included	Units	Qty	Unit \$	Cost
PHASE 1		Upper park connectivity and pool commemoration				
0	PREREQUISITES/STUDIES	Phase 1 Environmental Site Assessment (whole park)			\$15,440	contracted
		Environmental Screening Report			\$25,495	contracted
		Ecological Constraints Mapping (whole park)			\$21,726	contracted
		Soil Test - QE Pool Site			\$3,600	paid
		Geotechnical Report - for new trail			\$27,000	paid
		Topographic Survey			\$10,000	paid
		Historical Resources Act Clearance			\$1,500	paid
		Structural Engineering for retaining walls	allow		\$35,000	\$35,000
		Subdivision / consolidation of legal lots	allow		\$5,000	\$5,000
PROJECT MANAGEMENT		@ 6%				\$2,400
	SUB TOTAL					\$42,400
1.1	IMPROVED INTERSECTION AT Q.E. PARK ROAD	<i>Roadwork: removals, grading, base course, top course, pavement markings, curbs, lighting, contingency, engineering; PM fees; disbursements</i>	allow		\$201,835	\$201,835
PROJECT MANAGEMENT		@ 6% (on subtotal)			\$12,110	\$12,110
PLANT ESTABLISHMENT		@ 3% (on subtotal)			\$6,055	\$6,055
	SUB TOTAL					\$220,000
1.2	PARK ENTRY IMPROVEMENTS	Entry sign, and planting bed	allow		\$35,000	\$35,000
	SUB TOTAL					\$35,000
					<i>*Plus fees, taxes and contingency</i>	
1.3	REDESIGN OF TRAIL ALIGNMENTS	New sections of multi-use trail west of intersection (300 lin. m)				
		- Removals	sq m	900	\$5	\$4,500
		- Grading	sq m	900	\$10	\$9,000
		- Multi-use trail (incl. base course)	sq m	900	\$60	\$54,000
		- Painted trail centre line	lin m	320	\$10	\$3,200
		- Safety signage (warning path users about road crossing)	allow		\$4,000	\$4,000
		New section of concrete sidewalk on east side of parking lot (connecting to 104 St stairs)	sq m	75	\$125	\$9,375
		Removals (gravel road, section of asphalt trail, gravel parking northwest of old pool site)	sq m	1122	\$10	\$11,215
		Hydroseeded lawn + growing medium (removals areas / areas of disturbance)	sq m	683	\$20	\$13,660
		Planting + growing medium (removals areas / areas of disturbance)	sq m	643	\$55	\$35,365
		Hydroseeded lawn + growing medium in place of existing gravel road (portion of future drop off)	sq m	244	\$20	\$4,880
	SUB TOTAL					\$149,195
					<i>*Plus fees, taxes and contingency</i>	

#	Item	Components Included	Units	Qty	Unit \$	Cost
1.4	MINOR PARKING AREA UPGRADES	Concrete wheel stops (cost to move existing wheel stops to parking area from nearby areas)	allow		\$2,500	\$2,500
		Light regrading to smooth gravel, fill ruts / potholes	allow		\$5,000	\$5,000
	SUB TOTAL					\$7,500
				<i>*Plus fees, taxes and contingency</i>		
1.5	106 STREET ENTRY+TRAIL	Tree removal	allow		\$20,000	\$20,000
		Grubbing and clearing	sq m	2188	\$15	\$32,820
		Retaining wall design, construction and earthworks: - Structural Engineering (see studies above)				
		- Retaining walls (incl. survey, inspection, installation of H-Beam piles and timber)	sq m	250	\$1,200	\$300,000
		- Grading (ie. existing cut material)	allow		\$10,000	\$10,000
		- Supply, placement, compaction of fill	cu m	1600	\$65	\$104,000
		Multi-use path (asphalt, incl. base course; 3 m)	sq m	850	\$60	\$51,000
		Rest areas (asphalt landings) with bench	each	3	\$5,000	\$15,000
		Drainage (drain rock trench upslope of path)	cu m	66	\$120	\$7,920
		Low fence / barrier on downslope side (e.g. post + rail)	lin m	100	\$100	\$10,000
		Painted trail centre line	lin m	280	\$10	\$2,800
		Re-planting of disturbed area, including buffering around O'Keefe site	sq m	2,333	\$55	\$128,315
		Entry node improvements at Saskatchewan Dr. - partial removal and reconstruction of existing lookout platform, new paved surface, seating and entry sign	allow			\$40,000
		Signage - orientation node (at path junction)	item	1	\$22,000	\$22,000
	SUB TOTAL					\$743,855
				<i>*Plus fees, taxes and contingency</i>		
1.6	UPPER PARK OPEN AREA, COMMEMORATIVE WALL	Queen Elizabeth Pool commemoration (wall / signage)	allow			\$81,000
		Regrading around commemorative wall	sq m	1000	\$10	\$10,000
		Hydroseeding area around commemorative wall	sq m	1000	\$14	\$14,000
		Hydroseeded lawn/growing medium in area of disturbance around shelter	sq m	230	\$20	\$4,600
		Removals (some trails, lawn)	sq m	288	\$10	\$2,880
		Relocate recently planted trees	allow	5	\$500	\$2,500
		Picnic tables on concrete pads	each	3	\$3,000	\$9,000
		Benches	each	4	\$2,000	\$8,000
		Waste bins	each	2	\$1,200	\$2,400
		Bike racks	each	1	\$1,500	\$1,500
	SUB TOTAL					\$135,880
				<i>*Plus fees, taxes and contingency</i>		
PHASE 1 CONSTRUCTION SUBTOTAL		(excluding road work at intersection)				\$1,071,430
DESIGN FEES		@ 10% (on subtotal)				\$107,143
PROJECT MANAGEMENT		@ 6% (on subtotal)				\$64,286
GENERAL CONDITIONS		@ 10% (on subtotal)				\$107,143
CONSTRUCTION SURVEY		@ 1.5% (on subtotal)				\$16,071
AS-BUILTS		@ 0.4% (on subtotal)				\$4,286
PLANT ESTABLISHMENT		@ 5% (on subtotal)				\$53,572
DISBURSEMENTS		@ 3.7% (on total of above, less design fees)				\$48,721

#	Item	Components Included	Units	Qty	Unit \$	Cost
	PUBLIC ART	@ 1% (on subtotal)				\$10,714
	CONTINGENCY	@ 25% of construction subtotal				\$267,858
	ADD: PREREQUISITES/STUDIES					\$42,400
	ADD:IMPROVED INTERSECTION AT Q.E. PARK ROAD					\$220,000
	PHASE 1 TOTAL					\$2,013,624
	PHASE 2	Art park, parking lot / bus loop, shelter, new or upgraded trail connections, river access and Saskatchewan Drive lookouts				
0	PREREQUISITES/STUDIES	Approvals for steps down to the river	allow		\$28,000	\$28,000
		Environmental Report	allow		\$35,000	\$35,000
		Historical Resources Act Clearance	allow		\$1,500	\$1,500
		Parking Impact Assessment (if required, for whole park)	allow		\$30,000	\$30,000
		Utility locates	allow		\$10,000	\$10,000
		Topographic Survey (1% of construction, not including elements with potential co-funding)	allow		\$25,679	\$25,679
		Geotechnical Report for surface drainage (if required)	allow		\$15,000	\$15,000
		Aboriginal Art Visioning Session	allow		\$15,000	paid
	PROJECT MANAGEMENT	@ 6%				\$8,711
	SUB TOTAL					\$153,890
2.1	ABORIGINAL ART PARK AND PICNIC AREA (EXCLUDING ART PIECES)	Picnic facilities:				
		Picnic tables (on concrete pad)	each	8	\$3,000	\$24,000
		BBQ stoves	each	8	\$1,500	\$12,000
		Waste bins	each	4	\$1,200	\$4,800
		Benches	each	4	\$2,000	\$8,000
		Lookout area:				
		- Removals (selective clearing)	sq m	50	\$5	\$250
		- Grading	sq m	50	\$10	\$500
		- Gravel surfacing	sq m	50	\$20	\$1,000
		- Bench	each	1	\$2,000	\$2,000
		Blufone (emergency phone)	each		\$5,000	\$5,000
		Art park:				
		Phase 1 Aboriginal Art Visioning* (see studies above)				
		Phase 1 art commissions*	allow		\$500,000	NIC
		Electrical servicing for future lighting of art area**	allow		\$50,000	\$50,000
		Concrete base for artwork**	allow	6	\$10,000	\$60,000
		Signage	allow		\$20,000	\$20,000
		Paths:				
		New gravel paths in picnic / art area:	allow			
		- Removals (2m)	sq m	482	\$10	\$4,820
		- Secondary gravel path (1.5m)	sq m	362	\$25	\$9,038

#	Item	Components Included	Units	Qty	Unit \$	Cost
		New multi-use trails through picnic / art area (3m wide), including trail markings	allow			
		- Removals (3.5m)	sq m	606	\$5	\$3,028
		- Grading	sq m	606	\$10	\$6,055
		- Paved multi-use path (3m)	sq m	519	\$60	\$31,140
		- Painted trail centre line	lin m	173	\$10	\$1,730
		Removal of small gravel parking and sections of old gravel road, hydroseeding + growing medium in areas of disturbance	sq m	1013	\$20	\$20,260
	SUB TOTAL					\$263,620
					<i>*Plus fees, taxes and contingency</i>	
	NOTES:	* From Edmonton Arts Council Queen Elizabeth Public Art Park report, December 2012				
		** Basic electrical servicing and concrete base provided for artwork; additional power or support requirements to be part of artist's commission budget				
2.2	UPPER PARK PARKING AREA PAVING AND NEW BUS LOOP	Concrete Barrier Curb	allow	520	\$100	\$52,000
		Concrete Rollover Curb		95	\$100	\$9,500
		Concrete Paving	sq m	210	\$150	\$31,500
		Asphalt paving	sq m	2200	\$60	\$132,000
		Grading (for all parking areas)	sq m	6966	\$10	\$69,655
		- New asphalt paving (for all parking areas and road)	sq m	6966	\$80	\$557,240
		- Pavement markings (incl. markings for pedestrian route, line painting and curb painting)	allow		\$20,000	\$20,000
		Bollards	each	40	\$1,000	\$40,000
		Lighting for parking lot (incl. servicing)	allow		\$25,000	\$25,000
		Signage - information hub / orientation	allow		\$15,000	\$15,000
		Signage - parking regulation	allow		\$8,000	\$8,000
	SUB TOTAL					\$959,895
					<i>*Plus fees, taxes and contingency</i>	
2.3	UPPER PARK SHADE SHELTER	Custom shelter / focal point, including high end slab / floor	allow			\$150,000
		Concrete for high-quality paved plaza around and under shelter	sq m	200	\$45	\$9,000
		Grading for new shelter	sq m	390	\$10	\$3,900
		Hydroseeded lawn/growing medium in area of disturbance around shelter	sq m	230	\$20	\$4,600
		Water servicing connection for drinking fountain(s) and hose bib	allow		\$25,000	\$25,000
		Drinking fountain (pedestal-mounted, barrier-free)	item	1	\$2,000	\$2,000
		Hose bib	item	1	\$1,000	\$1,000
		Electrical servicing to shelter	allow		\$25,000	\$25,000
		Wireless Internet Hub (incl. servicing)	allow	1	\$25,000	\$25,000
		Bike racks	each	1	\$1,500	\$1,500
	SUB TOTAL					\$247,000
					<i>*Plus fees, taxes and contingency</i>	

#	Item	Components Included	Units	Qty	Unit \$	Cost
2.4	BURY EXISTING AERIAL UTILITIES	Bury existing aerial power lines (15 kV) in upper and lower park:				
		Install new conduit, conductors, junction boxes and associated equipment (incl. trenching, backfilling and restoring finished grade condition to match adjacent			\$100,000	\$100,000
		Removal of utility poles, fill hole and restoration of finished grade to match adjacent			\$10,000	\$10,000
	SUB TOTAL					\$110,000
					<i>*Plus fees, taxes and contingency</i>	
2.5	UPGRADED AND NEW LOOKOUTS ALONG SASKATCHEWAN DRIVE	108 St - reinstate viewpoint, site preparation, new hardscape, seating (relocate bench to west), planting	allow		\$35,000	\$35,000
		108 St - clearing to restore views	allow		\$4,000	\$4,000
		106 St - repair and painting of structure, refurbish interpretive panels, add planting	allow		\$35,000	\$35,000
		106 St - selective clearing to retain views intended when structure was initially installed	allow		\$4,000	\$4,000
		105 St stairs - widen approach at bottom, upgrade stairs, improve aesthetics at staircase entry	allow		\$10,000	\$10,000
		25m east of 105 St - 10m wide view, site preparation, new deck	allow		\$35,000	\$35,000
		25m east of 105 St - clearing for 10m wide view	allow		\$4,000	\$4,000
		125m east of 105 St - 10m wide view, new lookout with accessible seating, hardscaping and planting	allow		\$10,000	\$10,000
		125m east of 105 St - tree clearing on both sides of stairs for safety/security, retain conifers and healthy deciduous	allow		\$4,000	\$4,000
		104 St stairs - entry node at top with paved surface and seating, planting	allow		\$25,000	\$25,000
		104 St stairs - tree pruning and clearing on both sides of stairs for safety/security	allow		\$4,000	\$4,000
		Gateway Blvd - cantilevered viewpoint (40-50m wide)	allow		\$100,000	\$100,000
		Gateway Blvd - clearing to restore views from lookout to pole west of lookout structure, keep conifers and potentially some healthy deciduous to frame views	allow		\$4,000	\$4,000
		38m east of hairpin - paved surface and seating, planting, potential future park entry node	allow		\$25,000	\$25,000
		38m east of hairpin - selective removals, convert 3-4 trees to habitat trees	allow		\$4,000	\$4,000
		N side QE Park Rd at hairpin - remove trees that pose a falling hazard to cars and dead or declining trees	allow		\$4,000	\$4,000
	SUB TOTAL					\$307,000
					<i>Plus fees, taxes and contingency</i>	
2.6	UPPER PARK TRAILS NORTH OF O'KEEFE	New gravel path connection, north of O'Keefe site (2.4m):				
	New paths, upgraded paths, removal of old sections of road	- Removals (3.5m)	sq m	595	\$20	\$11,900
		- Gravel path (2.4m)	sq m	408	\$20	\$8,160
		Rebuilt multi-use trail connecting picnic area to Kinsmen Sports Centre (from 2.4m to 3m wide), including trail markings:				
		- Grading	sq m	735	\$10	\$7,350
		- Re-paved multi-use paths	sq m	630	\$60	\$37,800

#	Item	Components Included	Units	Qty	Unit \$	Cost
		- Painted trail centre line	lin m	210	\$10	\$2,100
		Signage - Trail marker	each	1	\$4,000	\$4,000
		Signage - Directional	each	1	\$14,000	\$14,000
		Signage - Park Crossover	each	1	\$2,000	\$2,000
	SUB TOTAL					\$87,310
					<i>*Plus fees, taxes and contingency</i>	
2.7	RIVER ACCESS, ECOLOGICAL ENHANCEMENTS, LOOKOUTS	River access, riprap bank with stone stairs to water's edge	allow			\$500,000
		Removals for widening trail along riverbank	sq m	160	\$15	\$2,400
		Gravel path along riverbank (2.4m wide)	sq m	384	\$20	\$7,680
		Seating (benches on concrete pads)	each	4	\$2,000	\$8,000
		Erosion control where needed - e.g. erosion control	sq m	1000	\$18	\$18,000
		Area (square meters) of planting	sq m	1000	\$55	\$55,000
		Signage - Park Crossover	each	1	\$2,000	\$2,000
	SUB TOTAL					\$593,080
					<i>*Plus fees, taxes and contingency</i>	
PHASE 2 CONSTRUCTION SUBTOTAL						\$2,567,905
	DESIGN FEES	@ 10% (on subtotal)				\$256,791
	PROJECT MANAGEMENT	@ 6% (on subtotal)				\$154,074
	GENERAL CONDITIONS	@ 10% (on subtotal)				\$256,791
	CONSTRUCTION SURVEY	@ 1.5% (on subtotal)				\$38,519
	AS-BUILTS	@ 0.4% (on subtotal)				\$10,272
	PLANT ESTABLISHMENT	@ 5% (on subtotal)				\$128,395
	DISBURSEMENTS	@ 3.7% (on total of above, less design fees)				\$116,770
	PUBLIC ART	@ 1% (on subtotal)				\$25,679
	CONTINGENCY	@ 25% of construction subtotal				\$641,976
	ADD: STUDIES					\$153,890
	PHASE 2 TOTAL					\$4,351,061
PHASE 2 ELEMENTS WITH POTENTIAL CO-FUNDING						
2.8	WIDEN TRAIL ADJACENT TO SASKATCHEWAN DRIVE	Removal of old asphalt path	lin m	1,012	\$15	\$15,180
		Multi-use trail along Saskatchewan Drive is rebuilt and widened*	lin m	1,012	\$170	\$172,040
		Painted trail centre line	lin m	1,012	\$10	\$10,120
		New, wider boardwalk west of hairpin (3m wide)	lin m	125	\$1,500	\$187,500
	SUB TOTAL					\$384,840
	DESIGN FEES	@ 10% (on subtotal)				\$38,484
	PROJECT MANAGEMENT	@ 6% (on subtotal)				\$23,090
	GENERAL CONDITIONS	@ 10% (on subtotal)				\$38,484
	CONSTRUCTION SURVEY	@ 1.5% (on subtotal)				\$5,773
	AS-BUILTS	@ 0.4% (on subtotal)				\$1,539
	PLANT ESTABLISHMENT	@ 5% (on subtotal)				\$19,242
	DISBURSEMENTS	@ 3.7% (on total of above, less design fees)				\$17,500
	PUBLIC ART	@ 1% (on subtotal)				\$3,848

#	Item	Components Included	Units	Qty	Unit \$	Cost
	CONTINGENCY	@ 25% of construction subtotal				\$96,210
	TOTAL					\$629,011
	NOTE:	* Cost estimate is for trail widening only and does not include cost to address ponding at Saskatchewan Drive and 105th Street.				
2.9	UPGRADE PROPOSED STAIRS TO BRIDGE	Provide concrete stairs instead of wood stairs to Walterdale Bridge	allow		\$900,000	\$900,000
	SUB TOTAL					\$900,000
	DESIGN FEES	@ 10% (on subtotal)				\$90,000
	PROJECT MANAGEMENT	@ 6% (on subtotal)				\$54,000
	GENERAL CONDITIONS	@ 10% (on subtotal)				\$90,000
	CONSTRUCTION SURVEY	@ 1.5% (on subtotal)				\$13,500
	AS-BUILTS	@ 0.4% (on subtotal)				\$3,600
	PLANT ESTABLISHMENT	@ 5% (on subtotal)				\$45,000
	DISBURSEMENTS	@ 3.7% (on total of above, less design fees)				\$40,926
	PUBLIC ART	@ 1% (on subtotal)				\$9,000
	CONTINGENCY	@ 25% of construction subtotal				\$225,000
	TOTAL					\$1,471,026
2.10	ART PIECES	Partnership opportunity with Edmonton Art Council	allow		\$500,000	\$500,000
	SUB TOTAL					\$500,000
PHASE 2 ELEMENTS WITH POTENTIAL CO-FUNDING TOTAL						\$2,600,036
PHASE 2 ELEMENTS GRAND TOTAL						\$6,951,097
PHASE 3		Relocation of River Valley Programming to upper park, bike skills and new trails in the Lower Park				
0	PREREQUISITES/STUDIES	Environmental Report (incl. Env. Impact Assessment and Site Location Study) for Bike Skills Park	allow		\$40,000	\$40,000
		Phase 1 ESA Update (if required)	allow		\$8,000	\$8,000
		Historical Resources Act Clearance	allow		\$1,500	\$1,500
		Historical Resources Impact Assessment (if required) includes: 1.5 days in the field directed by an archeologist, travel expenses, reporting, back-hoe	allow		\$13,200	\$13,200
		Study to determine the extent of WWTP removal/ remediation required for Bike Skills Park	allow		\$76,000	\$76,000
		- WWTP - Phase 2 to address adjacent areas to the east (storage compound, including the boat storage garage) and to the southwest (refuse site) as per Phase 1 ESA by KCB			\$40,000	\$40,000
		- WWTP - re-do and expand Hazardous Materials Assessment Report			\$25,000	\$25,000
		- WWTP - re-do Quote			\$7,000	\$7,000
		- WWTP - Project Management Fees			\$4,000	\$4,000
		Consultation and design for the bike skills area	allow		\$35,000	\$35,000
		Development of construction standards and management plan for bike skills area and single-track trails	allow		\$10,000	\$10,000
		Remediation work (if necessary)	allow		\$50,000	\$50,000
		Topographic Survey (1% of construction, not including elements with potential co-funding)	allow		\$16,123	\$16,123

#	Item	Components Included	Units	Qty	Unit \$	Cost
	PROJECT MANAGEMENT	@ 6%				\$14,989
	SUB TOTAL					\$264,812
3.1	BIKE SKILLS AREA (INCLUDING SINGLE- TRACK TRAILS)	Phase 2 soil testing / additional research for old wastewater treatment site, buildings, and pump station, if required (as per Phase 1 ESA by KCB) (see studies above)				
		Remediation costs, if required (not included)				NIC
		Consultation and design for the bike skills area (see studies above)				
		Allowance for bike skills area construction	allow		\$400,000	\$400,000
		Single track trail construction estimate	lin m	550	\$100	\$55,000
		Boardwalk / path to central viewing area	allow		\$80,000	\$80,000
		Seating (potentially customized)	allow		\$25,000	\$25,000
		Picnic tables on concrete pads	each	2	\$3,000	\$6,000
		Bike racks	each	1	\$1,500	\$1,500
		Development of construction standards and management plan for bike skills area and single-track trails (see studies above)				
		Signage - interpretation (wastewater treatment plant)	each	1	\$5,000	\$5,000
		Signage - trailmarker (5)	each	5	\$4,000	\$20,000
		Water servicing connection for hose bib	allow		\$15,000	\$15,000
	SUB TOTAL					\$607,500
	**NOTE	Estimate of wastewater treatment plant (WWTP) demolition costs from LCVM Consultants report (April 2012) was \$2.77m and assumed full removal, but did not include remediation, if required. The potential to reduce the cost of demolition by retaining some of the WWTP for integration with the Bike Skills Park will be explored during detailed design.			<i>*Plus fees, taxes and contingency</i>	
3.2	RIVER VALLEY PROGRAMMING	Remediation costs, if required (not included)				NIC
		Site preparation, surfacing, fencing and equipment	allow		\$50,000	\$50,000
		New program elements	allow			
		- Archery (poles for net)			\$5,000	\$5,000
		- Low ropes (8 elements or challenges)			\$50,000	\$50,000
		- Climbing/Bouldering Wall (with holds, crash mats, support structure, foundation, etc)			\$10,000	\$10,000
		- Storage building			\$75,000	\$75,000
		- Shelter (3m x 3m)			\$50,000	\$50,000
		- Waste bins	each	2	\$1,200	\$2,400
		- Picnic tables on concrete pads	each	4	\$3,000	\$12,000
		Secondary paths to RV programming area:				
		- Removals	sq m	822	\$5	\$4,110
		- Secondary gravel path (1.5m wide)	sq m	617	\$25	\$15,413
	SUB TOTAL					\$273,923
					<i>*Plus fees, taxes and contingency</i>	
3.3	COMPOSTING TOILET	Toilet	allow		\$75,000	\$75,000
		Site preparation, path, ramp, planting	allow		\$125,000	\$125,000
	SUB TOTAL					\$200,000

#	Item	Components Included	Units	Qty	Unit \$	Cost
					<i>*Plus fees, taxes and contingency</i>	
3.4	ETHNOBOTANICAL TRAIL (AND SIGNAGE)	Removals (tree clearing, removal of concrete pad)	sq m	875	\$15	\$13,125
		Grading	sq m	375	\$10	\$3,750
		Gravel path (upgraded to 2.4m)	sq m	300	\$20	\$6,000
		Drainage infrastructure (e.g. culvert under path)	allow		\$50,000	\$50,000
		Stairs (if required)	allow		\$75,000	\$75,000
		Infill planting (including new species for interp.)	each	50	\$200	\$10,000
		Signage - interpretation	each	10	\$1,500	\$15,000
		Signage - trail markers [or directional?]	each	2	\$8,000	\$16,000
	SUB TOTAL					\$188,875
					<i>*Plus fees, taxes and contingency</i>	
3.5	TRAILS AND LOOKOUTS IN THE LOWER EAST PARK	Rebuilt trail along east riverbank (east of service road):				
		Removals, grading	sq m	510	\$10	\$5,100
		Gravel path (2.4m)	sq m	408	\$20	\$8,160
		Signage - trail marker	each	1	\$4,000	\$4,000
		Riverbank lookouts (2):				
		Selected clearing / pruning (2 x 100sq m)	sq m	200	\$10	\$2,000
		Gravel surfacing (2 x 100sq m)	sq m	200	\$20	\$4,000
		Bench on concrete pad (1 per lookout)	each	2	\$2,000	\$4,000
		Signage - interpretive (ecology) (1 total)	each	1	\$5,000	\$5,000
		Trail/stairs connecting picnic area to riverbank:				
		Removals (tree clearing)	sq m	390	\$25	\$9,750
		Grading	sq m	390	\$10	\$3,900
		Gravel path (2.4m)	sq m	96	\$20	\$1,920
		Stairs + footings	allow		\$150,000	\$150,000
		Signage - interpretation	allow		\$5,000	\$5,000
		Signage - directional	allow		\$14,000	\$14,000
		Vegetated riverbank enhancement:				
		Growing medium and infill planting	sq m	1000	\$55	\$55,000
	SUB TOTAL					\$271,830
					<i>*Plus fees, taxes and contingency</i>	
3.6	CLOSURE OF A SINGLE-TRACK TRAIL	Erosion control measures - e.g. erosion control fabric, willow stakes	sq m	1010	\$18	\$18,180
	Closure / rehabilitation of single-track trails in east end of lower park	Growing medium and planting	sq m	400	\$55	\$22,000
		Fencing (e.g. post and rail) or other barrier	lin m	300	\$100	\$30,000
	SUB TOTAL					\$70,180
					<i>*Plus fees, taxes and contingency</i>	
PHASE 3 CONSTRUCTION SUBTOTAL						\$1,612,308
DESIGN FEES		@ 10% (on subtotal)				\$161,231
PROJECT MANAGEMENT		@ 6% (on subtotal)				\$96,738

#	Item	Components Included	Units	Qty	Unit \$	Cost
	GENERAL CONDITIONS	@ 10% (on subtotal)				\$161,231
	CONSTRUCTION SURVEY	@ 1.5% (on subtotal)				\$24,185
	AS-BUILTS	@ 0.4% (on subtotal)				\$6,449
	PLANT ESTABLISHMENT	@ 5% (on subtotal)				\$80,615
	DISBURSEMENTS	@ 3.7% (on total of above, less design fees)				\$73,316
	PUBLIC ART	@ 1% (on subtotal)				\$16,123
	CONTINGENCY	@ 25% of construction subtotal				\$403,077
	ADD: STUDIES					\$264,812
	PHASE 3 TOTAL					\$2,900,086
PHASE 3 ELEMENTS WITH POTENTIAL CO-FUNDING						
3.7	WASTEWATER TREATMENT PLANT DEMOLITION	Full demolition and removal of waste water treatment plant and backfilling to greenfield condition. Potential cost sharing with Drainage Dept. With full removal, delete the line item for repurposing (\$350,000).	allow		\$2,772,000	\$2,772,000
	SUB TOTAL					\$2,772,000
		<i>*Including fees and contingency (Budget Cost Plan, April 30, 2012)</i>				
	PHASE 3 ELEMENTS GRAND TOTAL					\$5,672,086
PHASE 4						
		Toboggan hill, open field area, pedestrian overpass, trail connections and lookouts				
0	PREREQUISITES/STUDIES	Environmental Report	allow		\$35,000	\$35,000
		Phase 1 ESA Update (if required)	allow		\$8,000	\$8,000
		Historical Resources Act Clearance	allow		\$1,500	\$1,500
		Phase 2 soil testing in vicinity of Dantzer's Hill and south end of Walterdale Bridge, if required (as per Phase 1 ESA by KCB)	allow		\$10,000	\$10,000
		Topographic Survey (1% of construction)	allow		\$33,259	\$33,259
		Geotechnical report for overpass	allow		\$50,000	\$50,000
	PROJECT MANAGEMENT	@ 6%				\$8,266
	SUB TOTAL					\$146,024
4.1	TOBOGGANING HILL AND OPEN FIELD AREA	Phase 2 soil testing in vicinity of Dantzer's Hill and south end of Walterdale Bridge, if required (see studies above)				
		Remediation costs, if required (not included)				NIC
		Fill for mound, graded - see note below***	cu m	50000		NIC
		Shaping of fill for mound, as required	allow		\$100,000	\$100,000
		Hydroseeded lawn + growing medium (hill only)	sq m	15000	\$20	\$300,000
		Electrical connections for future lighting of tobogganing hill	allow		\$50,000	\$50,000
		Seating (benches on concrete pads)	each	10	\$2,000	\$20,000
		Gravel path (fine crushed stone) at base of mound (2.4 m)	sq m	312	\$20	\$6,240
		Waste bin @ minor park entry node	each	1	\$1,200	\$1,200
		Minor park entry nodes (2)	each	2	\$15,000	\$30,000
		Signage - interpretive (First Nations archaeology)	each	1	\$6,000	\$6,000
		Signage - directional	each	1	\$14,000	\$14,000
		Signage - Park Crossover	each	1	\$4,000	\$4,000
		Servicing for event area, west side of field (#1)	allow		\$25,000	\$25,000

#	Item	Components Included	Units	Qty	Unit \$	Cost
	SUB TOTAL					\$556,440
				*Plus fees, taxes and contingency		
	NOTE:	*** The volume of fill for the mound will depend on the finished grades after Walterdale Bridge construction. It is assumed that a free source of fill material will be located from a concurrent excavation project (e.g. excavation for new arena, dry ponds, etc.)				
4.2	PEDESTRIAN OVERPASS, TRAIL CONNECTIONS, LOOKOUTS**	Overpass (4m wide x 60m long)	sq m	240	\$10,000	\$2,400,000
		Custom lookout areas	allow	2	\$100,000	\$200,000
		Multi-use trail (from overpass, along N side of QE Park Road to Kinsmen crosswalk; 3m)	sq m	1038	\$60	\$62,280
		Hydroseeded lawn + growing medium/top soil (area of disturbance)	sq m	2384	\$20	\$47,680
		Seating (benches on concrete pads)	each	10	\$2,000	\$20,000
		Signage - orientation	each	1	\$22,000	\$22,000
		Signage - directional	each	1	\$14,000	\$14,000
		Painted trail centre line	lin m	345	\$10	\$3,450
	SUB TOTAL					\$2,769,410
				*Plus fees, taxes and contingency		
	NOTE:	** It is assumed that fill for mound (abutment) is in place				
PHASE 4 CONSTRUCTION SUBTOTAL						\$3,325,850
	DESIGN FEES	@ 10% (on subtotal)				\$332,585
	EXTRA DESIGN FEES FOR OVERPASS ONLY	@ 5% (for design and structural engineering on subtotal of overpass only)				\$120,000
	PROJECT MANAGEMENT	@ 6% (on subtotal)				\$199,551
	GENERAL CONDITIONS	@ 10% (on subtotal)				\$332,585
	CONSTRUCTION SURVEY	@ 1.5% (on subtotal)				\$49,888
	AS-BUILTS	@ 0.4% (on subtotal)				\$13,303
	PLANT ESTABLISHMENT	@ 5% (on subtotal)				\$166,293
	DISBURSEMENTS	@ 3.7% (on total of above, less design fees)				\$151,236
	PUBLIC ART	@ 1% (on subtotal)				\$33,259
	CONTINGENCY	@ 25% of construction subtotal				\$831,463
	ADD: STUDIES					\$146,024
PHASE 4 TOTAL						\$5,702,036
0	PREREQUISITES/STUDIES	Environmental Report	allow		\$35,000	\$35,000
		Phase 1 ESA Update (if required)	allow		\$8,000	\$8,000
		Phase 2 ESA for existing washroom building and proposed amenity building with a risk assessment (screening level) for potential risk of boron and PAHs to ecological receptors of amenity node area where planting may occur (as per Phase 1 ESA by KCB)	allow		\$17,000	\$17,000
		Historical Resources Act Clearance	allow		\$1,500	\$1,500
		Historical Resources Impact Assessment (if required for amenity building) includes: 1.5 days in the field directed by an archeologist, travel expenses, reporting, back-hoe	allow		\$13,200	\$13,200
		Topographic Survey (1% of construction)	allow		\$23,689	\$23,689
		Geotechnical Report for surface drainage (if required)	allow		\$15,000	\$15,000

#	Item	Components Included	Units	Qty	Unit \$	Cost
		Phase 2 Local Art Visioning Session	allow		\$15,000	\$15,000
	PROJECT MANAGEMENT	@ 6%				\$7,703
	SUB TOTAL					\$136,092
5.1	LOWER PARK AMENITY NODE	Site furnishings:				
		- Blufone (emergency phone)	allow	1	\$1,500	\$1,500
		- Seating (custom)	allow	1	\$8,000	\$8,000
		- Waste bins	each	1	\$3,000	\$3,000
		- Bike racks	each	1	\$1,500	\$1,500
		Fire pit and seating	allow		\$25,000	\$25,000
		Grading	sq m	2000	\$10	\$20,000
		Planting beds - plants + growing medium	sq m	300	\$58	\$17,400
		Paving	sq m	750	\$150	\$112,500
		Signage - orientation	each	1	\$22,000	\$22,000
		Signage - directional	each	1	\$14,000	\$14,000
		Signage - building identification	each	1	\$5,000	\$5,000
		Amenities building - architecturally designed and well-integrated with the site (year-round facility including custodial storage, office/storage for bike skills, vending machine, warm-up area with view of the park, public washrooms)	sq m	75	\$3,500	\$262,500
		Servicing - 1 sanitary connection for washrooms	allow		\$25,000	\$25,000
		Servicing - 3 electrical connections (blufone, washroom building, event servicing near washroom building)	allow		\$75,000	\$75,000
		Servicing - 1 phone connection (blufone)	allow		\$25,000	\$25,000
		Servicing - 2 gas connections (outdoor fire pit, washroom boiler)	allow		\$50,000	\$50,000
	SUB TOTAL					\$667,400
					<i>*Plus fees, taxes and contingency</i>	
5.2	PARKING LOT, PARKING ALONG EAST-WEST ACCESS ROAD, WETLAND ENHANCEMENT	Parking / road:				
		East-west park road and parking areas - removals, site preparation, paving / repaving, wheel stops / curbs:				
		- Removals (removals of lawn for 4 new parking areas, each ~100 sq m in size)	sq m	400	\$5	\$2,000
		- Removals of old paving (existing parking and asphalt road)	sq m	3254	\$10	\$32,540
		Grading (for all parking areas)	sq m	3654	\$10	\$36,540
		- New asphalt paving (for all parking areas and road)	sq m	3654	\$80	\$292,320
		- Pavement markings	allow		\$20,000	\$20,000
		- Wheel stops - as curbing (estimates full replacement of existing)	lin m	990	\$111	\$110,000
		Hydroseeded lawn + growing medium (area returned to park)	sq m	125	\$20	\$2,500

#	Item	Components Included	Units	Qty	Unit \$	Cost
		Wetland enhancement / drainage under road (removing invasive plants, potential enlargement, adding native plants, improving drainage under road into culvert)	allow		\$75,000	\$75,000
		Washroom building upgrades:				
		- Interior / exterior improvements as per 2009 report	allow		\$40,000	\$40,000
		- Aesthetic improvements to washroom	allow		\$50,000	\$50,000
		- Improved paths around building for accessibility - grading, asphalt paths	sq m	120	\$70	\$8,400
		- Bike racks	allow		\$4,000	\$4,000
		- Signage - orientation (near washroom building)	each	1	\$22,000	\$22,000
		- Signage - building identification	each	1	\$5,000	\$5,000
		- Signage - Park Crossover	each	1	\$4,000	\$4,000
	SUB TOTAL					\$704,300
					<i>*Plus fees, taxes and contingency</i>	
5.3	SOUTH-EAST PARK ENTRANCE STAIRS AND FLOW TRAIL	Removals (tree clearing)	sq m	260	\$25	\$6,500
		Removals (old stairs)	sq m	125	\$20	\$2,500
		Grading	sq m	260	\$10	\$2,600
		Stairs + footings	allow		\$150,000	\$150,000
		Minor park entry node	allow	1	\$15,000	\$15,000
		Flow trail (mountain biking)	lin m	400	\$100	\$40,000
		Signage - trail marker	each	2	\$4,000	\$8,000
	SUB TOTAL					\$224,600
					<i>*Plus fees, taxes and contingency</i>	
5.4	PLAYGROUND ENHANCEMENTS	Playground enhancement allowance	allow		\$300,000	\$300,000
		Accessible asphalt paths to playground:				
		- Removals	sq m	225	\$5	\$1,125
		- Asphalt path (incl. base course)	sq m	225	\$60	\$13,500
		Signage - orientation	each	1	\$22,000	\$22,000
		Bike racks	each	1	\$1,500	\$1,500
	SUB TOTAL					\$338,125
					<i>*Plus fees, taxes and contingency</i>	
5.5	LOCAL ART PARK AND PICNIC AREA**	Picnic sites (8) and site furnishings:				
		- Picnic table on concrete pad	each	8	\$3,000	\$24,000
		- BBQ pits	each	8	\$1,500	\$12,000
		- Waste bins	each	3	\$1,200	\$3,600
		- Seating - e.g. bench on concrete pad	each	5	\$2,000	\$10,000
		- Bike racks	each	1	\$1,500	\$1,500
		Signage - directional (west end of picnic area @ service road junction)	each	1	\$14,000	\$14,000
		Minor park entry node (from 91 Ave)	allow	1	\$15,000	\$15,000

#	Item	Components Included	Units	Qty	Unit \$	Cost
		Art park:				
		Phase 2 Local Art Visioning** (see studies above)				
		Phase 2 Local Art Commissions**			\$500,000	NIC
		Servicing for future lighting of art area	allow		\$50,000	\$50,000
		Concrete pad for artwork	each	6	\$10,000	\$60,000
		Secondary gravel paths in art area (1.5m wide)	allow		\$10,000	\$10,000
		Signage - art identification	each	6	\$2,500	\$15,000
	SUB TOTAL					\$215,100
					<i>*Plus fees, taxes and contingency</i>	
	NOTES: *	Basic electrical servicing and concrete base provided for artwork; additional power or support requirements to be part of artist's commission budget. Art pieces not included in cost.				NIC
	**	From Edmonton Arts Council Queen Elizabeth Public Art Park report, December 2012 (funding source to be confirmed)				
5.6	FORT HILL ROAD MULTI-USE CONNECTION	Removals for road widening	sq m	608	\$15	\$9,120
	Multi-use access into park along Fort Hill Road Improved multi-use trail north to junction between Walterdale Hill Rd and Queen Elizabeth Park Road	Grading for south half	sq m	608	\$10	\$6,080
		Multi-use asphalt trail, south half (widened road for pedestrians and cyclists)	sq m	456	\$60	\$27,360
		Rebuilt/graded multi-use asphalt trail, north half**	sq m	560	\$10	\$5,600
		Re-paved multi-use asphalt trail, north half**	sq m	480	\$60	\$28,800
		Painted trail centre line	lin m	310	\$10	\$3,100
		Drainage (e.g. rock swale)	lin m	150	\$250	\$37,500
		Signage - Directional	each	1	\$14,000	\$14,000
		Minor park entry nodes (2) (minor park entry signage, selective clearing, gravel paving, waste bin)	allow	2	\$15,000	\$30,000
		Lighting	allow		\$25,000	\$25,000
		Safety / aesthetic improvements to O'Keefe entry area	allow		\$25,000	\$25,000
	SUB TOTAL					\$211,560
	**NOTE	Connects to new trail being built in conjunction with Walterdale Bridge work			<i>*Plus fees, taxes and contingency</i>	
5.7	UPGRADE TRAIL NORTH OF PARK ENTRY	Removals, grading	sq m	300	\$10	\$3,000
		Gravel path (2.4m)	sq m	240	\$20	\$4,800
	SUB TOTAL					\$7,800
	PHASE 5 SUBTOTAL					\$2,368,885
	DESIGN FEES	@ 10% (on subtotal)				\$236,889
	PROJECT MANAGEMENT	@ 6% (on subtotal)				\$142,133
	GENERAL CONDITIONS	@ 10% (on subtotal)				\$236,889
	CONSTRUCTION SURVEY	@ 1.5% (on subtotal)				\$35,533
	AS-BUILTS	@ 0.4% (on subtotal)				\$9,476
	PLANT ESTABLISHMENT	@ 5% (on subtotal)				\$118,444
	DISBURSEMENTS	@ 3.7% (on total of above, less design fees)				\$107,720
	PUBLIC ART	@ 1% (on subtotal)				\$23,689
	CONTINGENCY	@ 25% of construction subtotal				\$592,221
	ADD: STUDIES					\$136,092
	PHASE 5 TOTAL					\$4,007,971

EXCLUSIONS:

Land costs
Planning, administration and financing costs
Legal fees and expenses
Building permits and development cost charges
Temporary facilities
Removal of hazardous materials
Loose furnishings and equipment
Unforeseen ground conditions and associated extras
Off-site works
Phasing of the works and accelerated schedule
Decanting and moving
Project commissioning
Erratic market conditions, such as lack of bidders
Proprietary specifications
Cost escalation beyond the current year
Taxes
Signage estimates exclude drawings, permits, engineering, product design, concrete footings, mobilizations/
demobilizations, asphalt markings

Note: Opinions of probable construction costs provided by the Landscape Architect are based on the designer's familiarity with the landscape construction industry and are provided only to assist the Client's budget planning; such opinions shall not be construed to provide a guarantee or warranty of the actual construction costs at the time construction bids are solicited or construction contracts negotiated.

FURTHER INFORMATION

Park & Facility Development

Community Services

12th Floor, CN Tower

10004 - 104 Avenue NW

P.O. Box 2359

Edmonton, Alberta

T5J 2R7

www.edmonton.ca

