FINAL DRAFT

Riverfront Development Public Amenities Master Plan

November 2009

City of Everett
Engineering and Public Services Department
and Parks and Recreation Department

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MacLeod Reckord PLLC

Riverfront Development
Public Amenities Master Plan

Prepared for

City of Everett
Engineering and Public Services Department
and Parks and Recreation Department

Prepared by

MacLeod Reckord PLLC

November 2009

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EXECUTIVE SUMMARY

Aerial view of the Riverfront site, looking west.

Executive Summary

The city of Everett Riverfront Development Public Amenities project integrates a composite of public and private developments on an expansive property along the west bank of the Snohomish River. Of the 217 acres that make up the Riverfront Development site, 119 acres are within the private development area, and 98 acres are within the public domain, accommodating trails, parks, and open space. Parkland and stormwater treatment facilities with trails to the south of the private development provide expanded opportunities for public use. The planned private developments address residential and commercial site uses, and two large public projects address transportation and infrastructure improvements. The Public Amenities Master Plan, the subject of this report, puts its design focus on the recreational opportunities of the open space on the Riverfront Development site, linking the private and public spaces as a coherent whole.

The Riverfront Development site includes buildable upland areas and extensive wetlands and wetland buffers, an existing city park as well as a planned new park, and a complex of streams and drainages that pass through the site and connect to the river. The Public Amenities Master Plan complements and expands upon the existing public amenities and makes ties to the amenities planned within the private development. Interpretive stations will celebrate the site's unique physical and ecological attributes and its historic role in the local lumber industry. As part of a city and region-wide network of recreation, education, and conservation opportunities, the new Riverfront Development public amenities will form a durable park legacy for future generations of the city of Everett.

An integrated development of commercial, residential, and public recreation land.

The Public Amenities Master Plan gives particular emphasis to active and passive site uses and increased Snohomish River views and access. A new 3-Acre Park at the north end of the site will accommodate active play by all ages, and will include a float for put-in watercraft. This will be a significant new Everett park with on-street and off-street parking, a multi-use building with restrooms, a broad, level lawn for small festivals, farmer's markets, or informal gatherings, a children's play area, picnicking facilities, and a river overlook. The built elements will have a distinctive appearance, with an architectural character referencing the site's railroad use. This design character will find expression throughout the site to lend a visual continuity and interrelationship among the many amenities of this expansive site.

The new 3-Acre Park is a portal to the larger Riverfront District and trail system.

The existing Lowell Riverfront Park at the south end of the site will see improvements to the parking area and related stormwater quality treatment facilities, stabilization and restoration of portions of the riverbank, restoration of the vegetated buffer along the shoreline, and connections to and improvements of the existing trails.

An expanded riverfront trail system will encompass a hierarchy of trails that will tie together the large Riverfront Development site and integrate its widely varied site uses. New trails and trail connections, with boardwalk segments in the wetland areas, will include accessible connections to public amenities and public-use features within the private developments. Significant public amenities will be provided by the private developer. The master plan proposes multiple connections to these gathering places, with stepped paths and accessible ramps that connect to the trail system below.

Existing and proposed trails integrate diverse site uses.

The Public Amenities Master Plan proposes and promotes the conservation, enhancement, and restoration of natural areas. These proposals are predicated on an understanding of the site's existing water regime: historic and contemporary stream flows, well-documented wetland and wetland buffer boundaries, the seasonally-varying flows of the Snohomish River, and the tidal fluctuation of the Snohomish River estuary all contribute to this understanding. Special emphasis has been given to the opportunities to enhance the site's existing natural hydrologic processes and to restore the site's degraded habitat. These improvements will enrich the public experience of the site and exemplify the processes addressed by interpretive elements.

The Public Amenities Master Plan proposes to redirect one of the site's most ecologically significant streams, Bigelow Creek, to an alignment consistent with its historic passage. The plan for redirecting the stream contributes to the overall enhancement of various wetlands, and supports a broader plan for accommodating environmental restoration or mitigation efforts for both the private and public developments. The benefits of this stream realignment project extend to incorporating water quality improvement facilities that will address pre-existing conditions in the upland watershed. In addition, surface flows currently channeled in railroad ditches will be routed into the site's most expansive central wetland as the new "Walton Creek". Walton Creek will provide water to the wetland and will be tidally influenced at its low-bank outflows on the Snohomish River.

Most of the Snohomish River edge will be retained much as it is today, with some portions stabilized to protect soft bank soils from erosion by the river. Stream outfalls on the river will be returned to natural, low-bank profiles, and improved with large woody debris installations designed to foster a robust and complex fish habitat. The riverfront currently has extensive installations of timber industry-era wood pilings, some of which will be removed as the public amenity improvements progress. Along some portions of the shoreline, the pilings will be left largely intact, with the understanding that their removal is likely to be more environmentally disruptive than leaving them in place would be.

Remnant pilings on the Snohomish River to remain undisturbed.

Wetland C's monoculture will be enhanced.

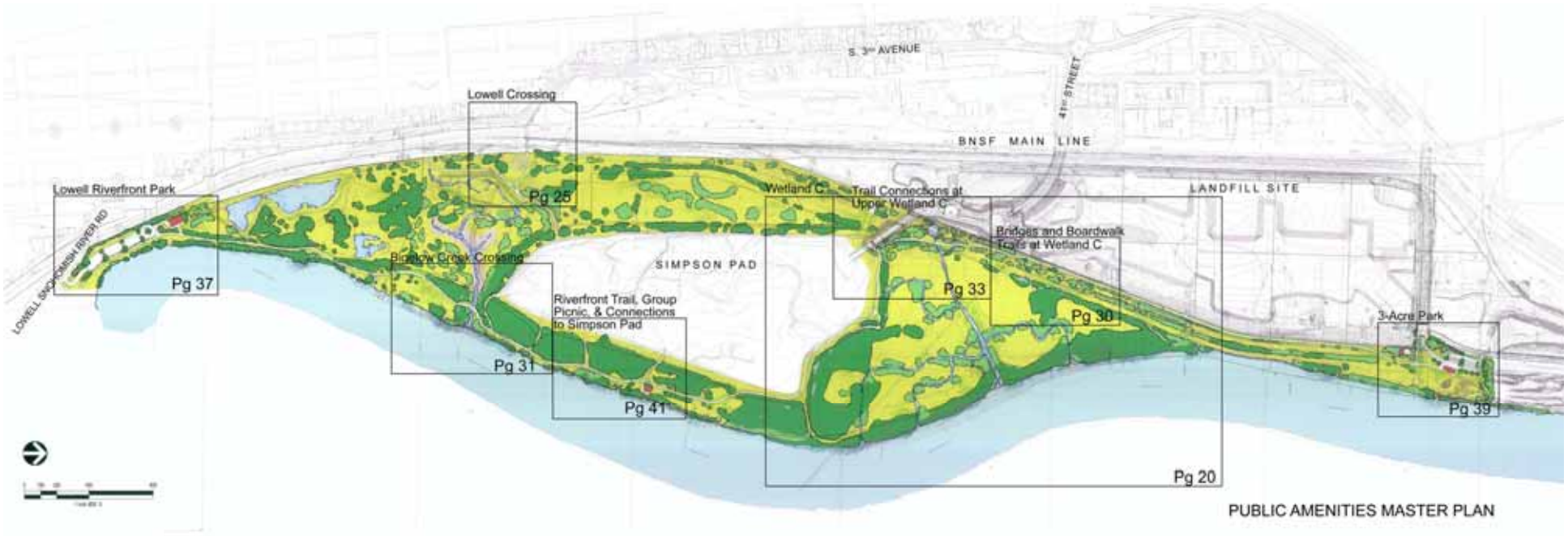
The wetland enhancements proposed include the removal of invasive non-native plants, the creation of upland hummocks (mounds or ridges of earth), and the extensive installation of diverse native plant species.

Among the trail proposals in the Public Amenities Master Plan is the routing of a broad regional trail, which will ultimately connect north and downtown Everett to communities to the southeast. The regional trail will trace the Riverfront Trail route along the Snohomish River shore with only minor departures from the existing alignment, before turning west at the north end of the Simpson Pad. Here the residential developer will, as required by the city, relocate and expand the existing trail along the north edge of the Simpson Pad development to a position at the outside margin of the wetland buffer setback. The regional trail will connect to the new 41st Street overcrossing and its westerly connection to downtown Everett with sidewalks and dedicated bike lanes.

Most of the existing site trails will be retained, surfaced, and extended to form a continuous trail network. The trail system will connect to the existing Washington State Department of Transportation (WSDOT) pond paths and pedestrian overpass, and will in time include an ADA-accessible overpass at what is now the location of the Lowell at-grade railroad crossing. The Public Amenities Master Plan proposes that the existing Riverfront Trail be realigned to accommodate a new Bigelow Creek outfall, with the trail positioned atop a long, curving trestle bridge spanning the creek below. Looped segments of boardwalk trail are proposed, one at the north end of the Simpson Pad and two segments on the east side of the Railroad Corridor Trail, to allow pedestrian access to the perimeter of the large central wetland, Wetland C.

The Railroad Corridor Trail follows the alignment of the old railroad tracks at the base of the Landfill slope, and provides a broad corridor to accommodate not only bicycle and pedestrian use, but also maintenance access for the Landfill site's leachate collection system and the Snohomish County Public Utility District (PUD) transmission tower.

The public amenities proposals include multiple cultural and natural interpretive elements. The hydrologic cycle, surrounding (and evolving) habitat areas, and salmonid life cycles offer many opportunities for interpretive education. The importance of the riverfront setting and the broader estuarine systems to early Native Americans provides opportunity for cultural interpretation. The European settlement history in the local timber industry, the role of the railroad, the Landfill and Tire Fire period offer additional interpretive possibilities, as does the extensive site engineering undertaken to address Landfill pollutants. An opportunity exists to develop a dedicated interpretive facility at Lowell Riverfront Park, in the south end of the site, which would serve as a portal to the Riverfront Trail and the various public amenities. Other, more narrowly focused interpretive elements will be located with picnic facilities and along the trails. Additional interpretive stations are proposed at the Bigelow Creek trestle bridge viewpoints, looking into the site and out over the river, and in the looped trails and boardwalks providing access to wetland viewpoints at the margins of the central wetland.


S. 3rd AVENUE
4th STREET
BNSF MAIN LINE
LANDFILL SITE
Lowell Crossing
Pg 25
Lowell Riverfront Park
LOWELL SNOHOMISH RIVER RD
Pg 37
Bigelow Creek Crossing
Pg 31
SIMPSON PAD
Riverfront Trail, Group Picnic, & Connections to Simpson Pad
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Wetland C
Trail Connections at Upper Wetland C
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Bridges and Boardwalk Trails at Wetland C
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3-Acre Park
Pg 39
PUBLIC AMENITIES MASTER PLAN

INTRODUCTION and BACKGROUND

Introduction and Background

The Riverfront Development Public Amenities Master Plan project has adopted a standard of excellence for every aspect of park planning and development. The Riverfront Development site is part of a city and region-wide network of recreation, education, and conservation opportunities that complements existing amenities while celebrating its own unique attributes and history. The Riverfront Development site will form a significant complex of public amenities for future generations of Everett citizens and visitors.

Public participation in the planning process has been an important component of the project. Institutional, civic, and individual stakeholders have provided valuable information throughout the planning effort. Their insights have been incorporated into the Public Amenities Master Plan in ways large and small. In addition, the plan is closely integrated with adjoining public projects and the neighboring private development to reflect the long-term goals of all parties.

The planning process explored a wide range of potential visitor experiences, recreation activities, and types of facilities well-suited to the Riverfront Development site, to the site's place in the park system, and to its importance to the community. Providing readily accessible recreation opportunities for all age groups and abilities is an important component of the public experience of the riverfront.

The plan proposes and promotes the conservation, enhancement, and restoration of natural areas. Particular emphasis has been given to the opportunities to enhance the site's existing natural processes and to restore degraded stream channels and habitat. The Public Amenities Master Plan seeks to foster continuing education and stewardship by demonstrating sustainable practices with stormwater management, minimal water and energy use, plantings of native and climate-adapted species, and the use of "green" products and techniques.

There are multiple recreational opportunities on the Riverfront site.

History

The Riverfront Development site is a 217-acre amalgamation of existing wetland, railroad, post-industrial, and former landfill properties on the banks of the Snohomish River. Lumber industry uses predominated from 1891 to 1972, after which the site was home to a refuse transfer station and an animal shelter. The Burlington Northern Santa Fe Railway has vacated the spur rail lines which bisected, north to south, the long riverside site.

The legacy of historic site uses includes areas of potentially contaminated subsoils, ditched wetlands, a post-industrial riverbank armored with pilings, and topographic features left from dewatering of river dredge spoils.

Archival image of timber industry use of the Snohomish.

A Lowell neighborhood sawmill.

The 1984 tire fire drew international attention.

Relic crane on the site of 3-Acre Park.

The Puget Sound Pulp and Paper Mill occupied a large upland area at what was in 1891 the riverfront of the town of Lowell. The lumber mill operation had several owners during the following years, and became part of the Simpson Logging Company in 1951. The use of the site for milling and other lumber activities included the incremental filling of the site with imported material to raise the Simpson Pad, as the area became known, out of the Snohomish River flood zone. Historic, natural water flows were disturbed in the process and diverted around the pad. Today the Simpson Pad is elevated above flood events, but is surrounded by water and wetlands on all sides.

The Landfill site north of the Simpson Pad will be privately developed as a mixed-use property. The area was used as a dump site from 1917 to 1974, after which a recycling center and storage facility was in place from 1977 to 1983. The Landfill site remains infamous for two Tire Fire events in 1983 and 1984, the latter of which burned for three months and received international press attention. Subsequent cleanup operations began in 1985 and continued to 1994. This portion of the Riverfront Development site now has a leachate collection system in place to isolate and remove polluted groundwater and avoid contamination of the river, as well as a methane collection system to remove accumulated gases. The city successfully negotiated a cleanup action plan with the Washington State Department of Ecology to allow development to occur on the site.

The longstanding use of the Riverfront Development site for railroad traffic has left a significant imprint. The elevated railroad beds stretch the length of the site, in long, straight lines and in sweeping arcs so large the curvatures are barely discernable from the ground. These linear raised railbeds created poorly drained ditches between the sets of tracks, drainage ditches now classified and protected as wetlands. The transformation of this post-industrial landscape to a more naturalistic, pre-existing condition will require compensatory mitigation in response to any disruption of these man-made wetlands.

The railroad beds of ballast rock reflect an earlier infrastructure investment that may now be prohibitively expensive to remove or regrade. Cost efficiencies encourage the reuse of the historic rail alignment and rock bedding, where feasible, for the construction of a riverside trail, hence the “Railroad Corridor Trail” proposed here. This segment of trail accentuates the distinctive railroad character of part of the Riverfront Development multimodal circulation system.

Ownership and Land Use of Project Areas

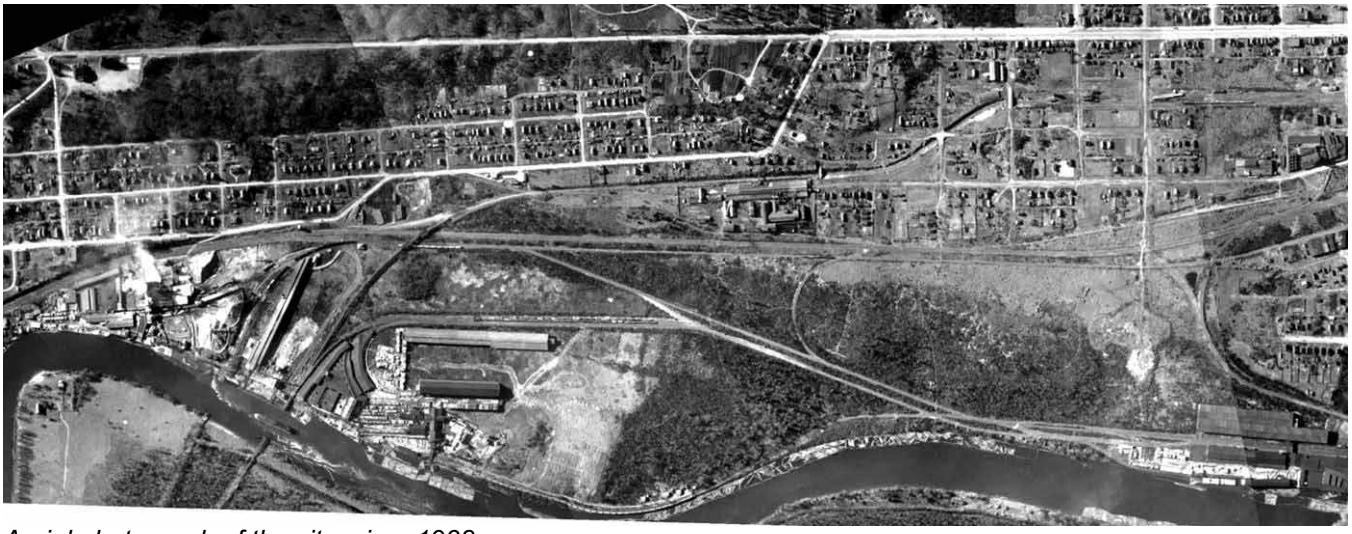
The city of Everett began in 1992 to purchase and assemble the several parcels that make up the Riverfront Development site. The riverfront area had, and has, multiple ownerships. The Burlington Northern Santa Fe Railway has vacated rail lines, but retains ownership of new and existing railroad rights-of-way as well as designated wetland mitigation sites. The Washington State Department of Transportation has ownership of the recently installed water quality and detention ponds, located just north of Lowell Riverfront Park, and Washington State Parks retains ownership of the Snohomish River shore.

The Washington State Department of Ecology, responding to concerns about potential post-industrial contaminants, designated two areas near the Simpson Pad as Restrictive Covenant areas. The larger of the two areas encompasses most of Wetland D, between the Simpson Pad and the railroad tracks to the west; the second is a small area just off the northwest corner of the pad, at the edge of Wetland C. These restrictions make any proposed excavation subject to a careful testing and review process, a qualifying procedure that effectively prohibits certain kinds of development within the Restrictive Covenant boundaries.

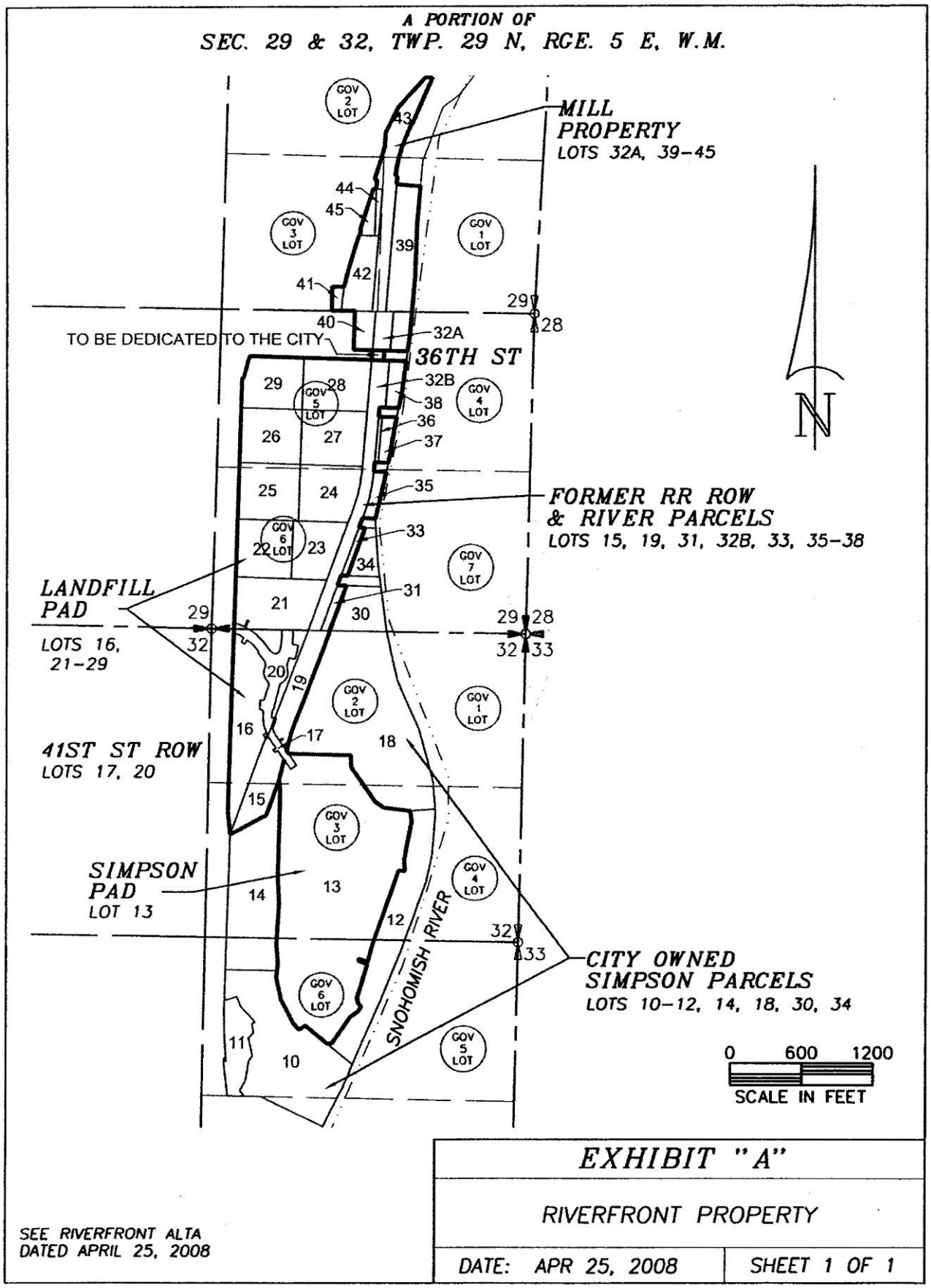
On the bank of the Snohomish River, southeast of the Simpson Pad, is another area which has inherent limitations. Archival aerial photographs show industrial structures in this area. The remnant foundations of these lumber mill and shipping facility buildings exist below grade, their full extent and exact locations unknown. Because construction activities in this area would be at risk of unanticipated costs and delays due to the subgrade obstacles, the Public Amenities Master Plan proposes to leave the area wholly undisturbed and fenced to restrict access by the public.

The site has significant economic and civic potential despite the constraints of multiple ownerships and regulatory restrictions. In 2004 the city advertised a competitive Request for Qualifications, and the next year awarded developer OliverMcMillan the contract to pursue design of a multi-acre mixed use project consistent with the municipality's urban waterfront development goals.

The private developer, in keeping with the city vision, has proposed a mixed-use development of up to 900,000 square feet of retail/office space and up to 200 residential units on the post-industrial, upland portions of the assembled site. The developer has deeded back to the city the extensive abutting wetland areas, along with easements for utilities, public streets, and river access. The private developer's purchase agreement with the city includes the provision of 1.5 acres of public space, along with integrated access to and from the public amenities elsewhere on the Riverfront Development site. See the larger image following for ownerships and easements on the Riverfront Development site.



Aerial photograph of the site, circa 1938.


A PORTION OF
SEC. 29 & 32, TWP. 29 N, RGE. 5 E, W.M.
MILL PROPERTY
LOTS 32A, 39-45
TO BE DEDICATED TO THE CITY
36TH ST
FORMER RR ROW & RIVER PARCELS
LOTS 15, 19, 31, 32B, 33, 35-38
LANDFILL PAD
LOTS 16, 21-29
41ST ST ROW
LOTS 17, 20
SIMPSON PAD
LOT 13
CITY OWNED SIMPSON PARCELS
LOTS 10-12, 14, 18, 30, 34
SNOHOMISH RIVER
N
0 600 1200
SCALE IN FEET
EXHIBIT "A"
RIVERFRONT PROPERTY
DATE: APR 25, 2008
SHEET 1 OF 1
SEE RIVERFRONT ALTA
DATED APRIL 25, 2008

Planning Context

Improvements to public shoreline access, recreational opportunities, and wildlife/fish habitat on the Riverfront Development site were consistently identified as primary components in the planning documents which have addressed this area to date. In the 1980s the area's long history of use by the timber industry came to a close, and after the tire fires of 1983 and 1984 on the Landfill site, the city of Everett initiated in the 1990s a period of property acquisition and cleanup.

Shoreline of vacated rail line looking north.

This first decade of the 21st century has seen a concerted effort by the city to plan for the future of the Riverfront Development site. The city initiated construction of a riverfront trail system, and began the planning effort with the private developer for future development of the sites.

In 2005 the city updated its Shoreline Master Program (SMP). The SMP created a vision and description for the development of the entire 217 acres. The SMP included specific protections for on-site wetlands and established shoreline designations for the Riverfront Development District that directed how and where various uses could be located on the site. Snohomish County, in partnership with the Water Resources Inventory Area 7, published the *Snohomish River Basin Salmon Conservation Plan*, which identified portions of the Riverfront Development site as "one of the few opportunities to create off-channel habitat" within the city limits for salmon restoration in the Snohomish River estuary. Also in 2005, the city developed a conceptual restoration plan in partnership with neighborhood leaders, business interests, the Tulalip Tribes, and environmental groups. The plan, *Snohomish Riverfront Properties at Bigelow Creek: Final Conceptual Enhancement Program*, by The Watershed Company, developed a vision for the type and scale of environmental enhancement and restoration as well as how public access and public amenities could be integrated with environmental elements.

This Public Amenities Master Plan represents an important step in the planning process for the Riverfront Development site, the first consolidation of the various site plans and projects. The plan presents an approach to project implementation that balances the physical characteristics of the site with fiscal limitations to achieve a vision of integrated site development.

41st Street overcrossing.

Multiple Projects

The private development works in concert with an interlinked group of projects that are managed by the city. One of these is the 41st Street overcrossing and roundabout that provides access to the private development. Stormwater and utility systems upgrades are included in this work. The city's second major project addresses improvements to the Landfill site's leachate

Utility corridor with leachate collection system parallels rail line.

collection system and associated utilities. The project includes installation of a below-grade sheetpile wall to isolate river water from the leachate collection system, which is located at the downslope limits of the Landfill.

The Public Amenities Master Plan project, the subject of this report, is the city's third major effort. The contiguous open spaces, pedestrian and bicycle trails, wetlands and wetland buffers, and riverside access are integrated by this project into a vital, comprehensive new urban district.

Site Analysis

The Public Amenities project planning began with a site analysis of existing conditions. Issues of site hydrology and habitat enhancement had been the subjects of previous conceptual studies, and members of the public were particularly interested in the site's potential for improved fish habitat. A thorough wetland delineation and topographic survey, an analysis of the riverbank conditions, a geotechnical investigation, and a storm drainage and utility assessment refined the basis for the planning effort. Specific information on this background data is referenced in the discussion on technical reports below, as well as in the Appendix.

Site analysis plan.

Technical Reports

Several technical reports became the background for the Public Amenities Master Plan. Chief among them is the private developer's Final Environmental Impact Statement (FEIS), published June 6, 2008, which addressed the whole of the Riverfront Development site. Among the most significant of the documents supporting the FEIS is the *Snohomish Riverfront Properties at Bigelow Creek: Final Conceptual Enhancement Program* prepared for the city of Everett by The Watershed Company, August, 2005. The *Shorelines Public Access Study* and other studies previously completed support and inform the Public Amenities Master Plan.

Subsequent site data collection included additional wetland mapping, geotechnical investigation and evaluation, drainage analysis, and thorough topographic surveys to provide checks on the assumptions and conclusions of the 2005 conceptual enhancement study. Lastly, an addendum to the FEIS, scheduled for completion in 2010, will address the features proposed in the Public Amenities Master Plan, and provide a summary of technical reports generated throughout the planning process.

THE MASTER PLAN

The Master Plan

Introduction

The Public Amenities Master Plan addresses multiple improvements to the public amenities of the Riverfront Development site. The planned improvements include programmatic elements determined by the city of Everett, and habitat improvements consistent with the intent of the 2005 conceptual enhancement study. The plan makes connections to the retail/mixed-use and future residential developments, and incorporates the utility upgrades associated with the city's transportation and utility improvement projects.

Program

The Riverfront Development Public Amenities project site program was largely defined by the city of Everett in the early stages of overall project development, and was an outgrowth of public and multiple agency negotiation. The planning team worked with the city to refine these programmatic elements during the course of the project, as more in-depth site analysis guided development opportunities and constraints. Refinements of the private development plans in other areas of the site also directed moderate changes to the program. The final program statement for the facility was developed after consultation with city staff, the Planning Commission, the Park Board, City Council Committee, and the general public. The planning team then completed a master plan that reflected the city's intent to optimize the public recreational as well as the environmental protection and enhancement opportunities offered by the Riverfront Development site. The final Public Amenities Master Plan program is provided in the Appendix.

Public Outreach

There is a long history of public involvement that predates the master planning effort, and the planning process has advanced with continuing public outreach. After an in-depth analysis of the site, city reviews, and the evolution of the private developer's planning concepts, a draft master plan was presented to the public in October, 2008. The draft plan was well received, and the planning team was authorized by city staff to move forward to refine and organize the many elements of the draft plan.

The Riverfront Water Regime

The Snohomish River

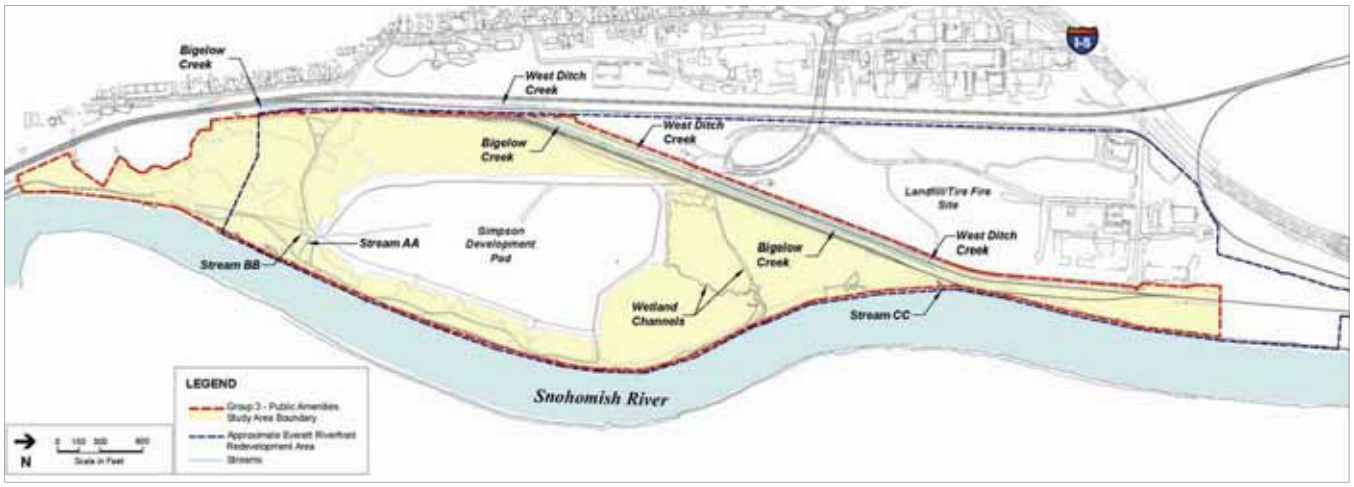
The planned public amenities are predicated on an understanding of the site's natural and altered drainages. Historic documentary and aerial photos show an assortment of abutting lumber and light-industrial uses along the river, with wood docks and pilings armoring the riverbank. Repeated lifts of fill material changed the natural topography, eliminating or altering natural wetlands. Natural drainage courses were channelized and surface water from off-site drainage basins was diverted and redirected to drainage ditches that paralleled on-site roads and railroad beds. Many road and railroad culvert installations redirected natural flows and impounded water. A combination of deferred maintenance of the man-made drainage systems, natural siltation, and beaver activity has further altered drainage patterns throughout the site. Reinforcement of the river's edge to stage lumber transport operations, house manufacturing activities, and store materials has dramatically changed the natural conditions along the riverbank.

A thorough documentation and mapping of present-day wetlands and streams was prepared as part of the site analysis preceding the Public Amenities Master Plan. Monitoring of existing stream flows, wetland hydrology, and tidally-influenced river water levels is ongoing, and contributes to our understanding of the site hydrology.

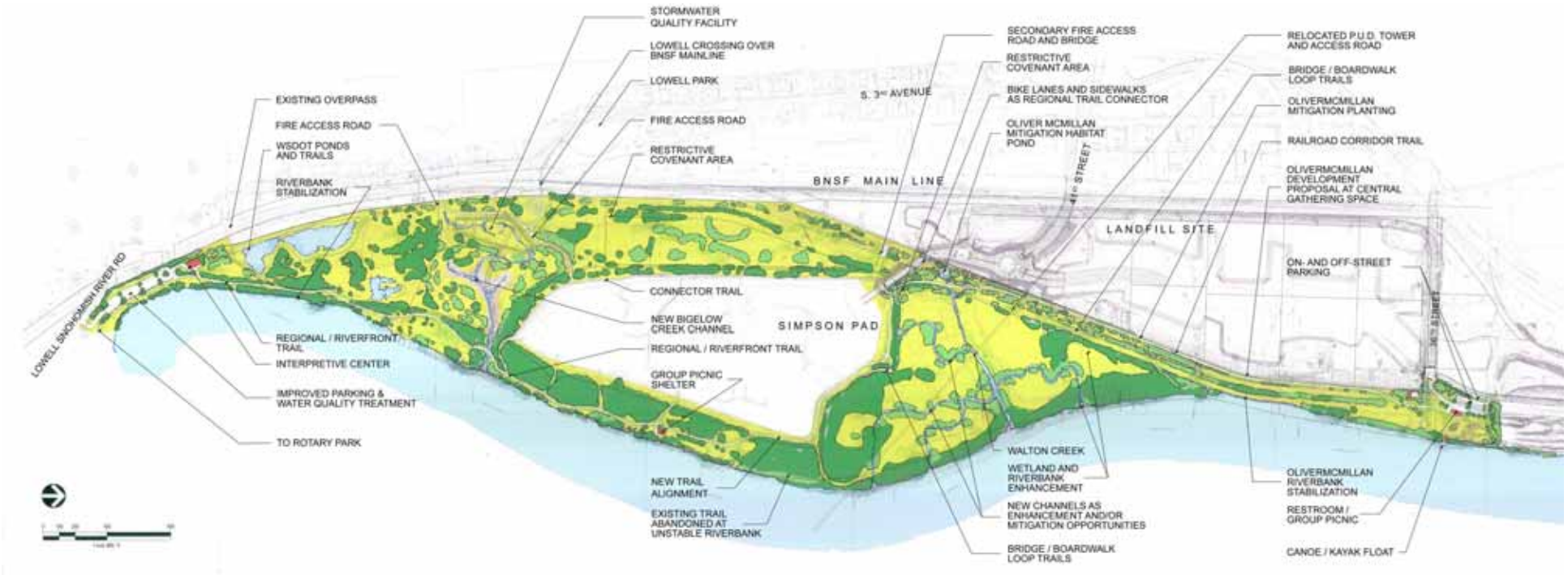
Overview of Stream and Wetland Systems

The Riverfront Development site contains two primary drainages that convey water from sub-basins within the Lowell neighborhood and other parts of the city to the west and south. The two primary sub-basins that discharge surface water to the site are the Bigelow Creek sub-basin and the West Ditch sub-basin. Both drainages flow northward along the active and the recently-vacated Burlington Northern Santa Fe Railway corridors, flow along the toe of the Landfill site, and combine before becoming tributary to the Snohomish River near the center of the private developer's site. The Bigelow Creek and West Ditch Creek sub-basins are 178 acres and 187 acres, respectively, and both sub-basins provide year-round surface water that supports both Bigelow Creek and the West Ditch Creek as perennial stream systems. Both systems support various salmonid and non-salmonid fish. In addition, the Riverfront Development site includes several other sub-basins that contribute flows to these two larger drainages, and several stream channels independently convey surface water flow from the larger wetland complexes to the Snohomish River.

Wetlands within the study area.



Streams within the study area.



PUBLIC AMENITIES MASTER PLAN

The Riverfront Development site includes more than 20 individual wetlands, which range from small isolated depressions formed on fill soils to larger riparian wetlands that predate site development. The wetlands are grouped into five associations or complexes:

- the North Wetland Complex includes wetlands east of the vacated railroad corridor and north of the proposed residential Simpson Pad development;
- the West Wetland Complex includes wetlands east of the vacated railroad corridor and active rail mainline, abutting the Simpson Pad;
- the South Wetland Complex includes wetlands south of the Simpson Pad, between the railroad main line and the river;
- the East Wetland Complex includes wetlands east of the Simpson Pad between the Simpson Pad and the river; and
- the railroad corridor wetlands, which include the highly-modified and channelized wetlands between the active mainline and the northern extent of the Eclipse Mill site. Many of the wetlands within the railroad corridor complex are associated with the current Bigelow Creek or West Ditch Creek drainages.

Bigelow Creek Drainage/South Wetland Complex

The master plan proposes returning Bigelow Creek to an alignment consistent with pre-development drainage patterns. Baseflow and stormflows in the stream will be diverted from the existing system of ditches abutting the BNSF mainline and will discharge to a newly-constructed channel that will bisect the South Wetland Complex. The alignment of the new channel will approximate the alignment of an existing gravel access road that connects the Simpson Pad to the BNSF right-of-way. Near the river the new channel will join two small existing drainages that convey flows to the river from portions of the South Wetland Complex. The existing drainages will be enhanced, and two existing culverts, one under the gravel access road and the other under the Riverfront Trail, will be removed. The new Bigelow Creek alignment will be a constructed as a low-gradient tidal channel due to the elevation at its culverted discharge underneath the BNSF mainline. Most of the length of the newly-constructed stream will be tidally influenced, and will provide the opportunity to restore tidal influence to the South Wetland Complex. Restoration of Bigelow Creek will require excavation within and adjacent to wetlands in the South Wetland Complex. Limited fill of adjacent wetlands will be required to hydrologically isolate the restored wetlands from the existing non-tidal wetlands in the WSDOT parcel to the south, and from Wetland D, which is largely overlaid by the Restrictive Covenant, located to the northwest. Wetland fill will be offset by wetland and stream creation within the restored and enhanced South Wetland Complex.

South Wetland Complex

South Wetland Complex road

Typical stream flow

Following the realignment of Bigelow Creek, stream baseflow and stormwater flows from the Bigelow sub-basin will no longer flow into the railroad ditch system and discharge to the Snohomish River adjacent to the Landfill site. This change will decrease the total stream length on the Riverfront Development site, but the restored tidal system will provide a significantly higher level of habitat function than does the current drainage system.

To enhance pedestrian and bicycle traffic through the site, the Public Amenities Master Plan proposes a long, curving trestle bridge over the new Bigelow Creek stream outfall, a signature feature of the Riverfront Development project's public open space. Refer to the discussion under 'Trails' which follows.

Included in the master plan is the construction of a regional surface water quality improvement facility for the Bigelow Creek basin; most of the Bigelow Creek basin was developed prior to the advent of modern stormwater best management practices. The city has been awarded a planning grant by the Washington State Department of Ecology to design a water treatment facility for the Bigelow Creek basin. The area of the Riverfront Development site north of the WSDOT treatment ponds (which address runoff from Interstate 5) is being evaluated as a candidate site for a proposed constructed wetland. Work on the surface water quality improvement project may occur before, during, or after the Bigelow Creek restoration work proposed by the Public Amenities Master Plan. Both actions are being coordinated by the city, and both projects will be designed to be independently constructed and operated.

West Ditch Drainage/North Wetland Complex

Similar to Bigelow Creek, the West Ditch Creek sub-basin historically flowed eastward to the Snohomish River through a large forested riparian wetland system composed of the current North Wetland Complex, the West Wetland Complex, and the Simpson Pad. Surface flows from this sub-basin were diverted north through Wetland C after the construction of the Walton Mill on the present-day Simpson Pad. Flows from the West Ditch Creek drainage currently flow north, down the vacant railroad corridor and past Wetland C, because of a blocked culvert under the easternmost railroad track.

The West Ditch Creek corridor south of the 41st Street secondary access bridge will be restored in conjunction with the wetland and habitat mitigation projects the BNSF Railway has proposed within its easements south of the new roadway. North of the access bridge and the 41st Street overcrossing, portions of the West Ditch Creek corridor will be restored as part of a mitigation project proposed by the private developer. Wetland and habitat mitigation will offset impacts from development and associated roadway improvements on the Ellipse Mill and Simpson Pad sites. Neither the mitigation proposed by Burlington Northern Santa Fe nor that by the private developer is part of the Public Amenities Master Plan, but these projects complement and are coordinated with the master plan effort to maximize the restoration potential of this corridor.

Downstream from the private developer's mitigation area, the master plan proposes to re-establish the historic connection between baseflow in the West Ditch Creek sub-basin and the central Wetland C, and enhance the existing tidal channel that bisects this expansive wetland. The master plan proposes that the drainage through Wetland C be named "Walton Creek", after the lumber mill that once operated on this site.

Proposed Bigelow Creek enhancements.

In addition to restoring Walton Creek through Wetland C, the Public Amenities Master Plan proposes to implement additional habitat enhancements in the wetland to restore tidal influence within portions of the wetland and to enhance long-disturbed areas of the wetland complex that exhibit low diversity and limited habitat opportunities. The enhancement work will include the removal of some of the larger beaver dams within the Wetland C complex and the excavation of several narrow, shallow channels throughout the wetland. (Ongoing maintenance will be required to keep beavers from re-establishing their dams.) These channels will connect to the Snohomish River at several locations, providing additional opportunities for increased tidal exchange within the wetland. Excavated materials will be used to build hummocks adjacent to the channels, and these hummocks will be vegetated with scrub-shrub or forested wetland plantings. Large woody debris will be installed along the channels to increase habitat quality.

The proposed Walton Creek in Wetland C

Upland plant species at the edge of Wetland D, in the Restrictive Covenant area.

West Wetland Complex

The West Wetland Complex is primarily cattail-dominated and reed canarygrass-dominated emergent wetland. There is extensive standing water within the wetland, particularly within the cattail areas. Areas of shrubs occur on small hummocks, and there are several remnant channels within the wetland. The West Wetland Complex is composed solely of Wetland D, which is generally encumbered by a Restrictive Covenant limiting substantive excavation or increasing flow velocities within its boundaries. Complete remediation of the area will not be feasible or cost-effective in the near term. This Public Amenities Master Plan therefore proposes to implement a program of wetland enhancements within the West Wetland Complex that largely avoids substantive

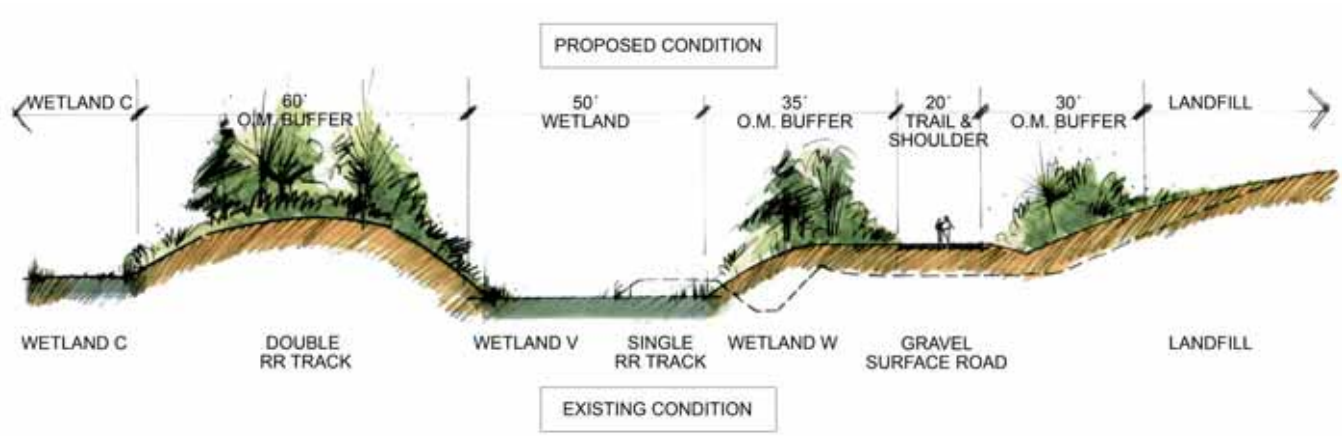
Railroad corridor wetlands.

excavation, and avoids excavation entirely within the Restrictive Covenant area. Enhancements will include the creation of wetland hummocks and upland islands using imported topsoil and/or organic soil amendments, areas which will be planted with scrub-shrub or forested wetland vegetation to increase complexity and habitat diversity within emergent wetland areas. These new West Wetland Complex hummocks will be augmented with surface-installed large woody debris and brush piles to provide added habitat value.

Railroad Corridor Wetlands

The restoration of the Bigelow Creek and Walton Creek drainages will divert much of the surface water inflow in the railroad corridor north of the Snohomish County Public Utility District transmission line crossing. Because these channelized wetlands have elevations lower than the high tide of the Snohomish River, the wetlands are anticipated to retain sufficient hydrology. Most of the existing ditched wetlands are proposed for filling to construct trails, access roads, and other amenities within the railroad corridor. The functions of the impacted wetlands will be replaced through the creation of new wetlands and the enhancement of remaining wetlands within the corridor. This area of the Riverfront Development site will also provide mitigation sites for impacts to other railroad corridor wetlands affected by other (both city and private developer) projects, including impacts to a small wetland area on the 3-Acre Park site and filling of the ditched wetlands along the proposed Eclipse Mill Road corridor. The majority of wetland creation and enhancement will occur north of the PUD transmission line crossing, east of the proposed multi-use Railroad Corridor Trail, and west of the developer's Wetland C buffer enhancement and off-channel habitat pond.

The private developer's buffer and wetland/habitat mitigation areas are planned as mitigation for its development-related impacts, and are not part of this Public Amenities Master Plan. This work will, however, be coordinated with the master plan efforts to maximize the restoration and enhancement opportunities within the corridor.



Cross-section through railroad corridor.

Old industrial pilings may be removed where riverbank stabilization strategies are used.

Some pilings to remain in place to provide stability and minimize wave action erosion.

Naturally occurring large woody debris is visible at low tide.

Snohomish Riverbank

The Public Amenities Master Plan proposes to retain the Snohomish riverbank, from Lowell Riverfront Park north through Wetland C, in much the condition it exists today, although some changes are anticipated. The private developer will remove approximately 50 pilings from the river as part of required mitigation efforts. The Public Amenities Master Plan proposes substantive modifications and excavations in the vicinity of the new Bigelow Creek outlet, at the mouth of Walton Creek, and where the new Wetland C channels will join the river. The remaining shoreline in this area will remain undisturbed and/or will be enhanced with supplemental planting: existing piles, bulkheads, and timber cribbing will typically remain in place, excepting three locations where riverbank failures, large- and small-scale slumps, now threaten trails and other facilities. These failures, noted on the site analysis plan, require stabilization of the bank in the Lowell Riverfront Park area, near the outfall of the WSDOT stormwater treatment facilities, and at the northeast corner of the Simpson Pad. At the last location, the preferred alternative to stabilization measures and their adverse impacts is the re-alignment of the trail inland, allowing the shoreline edge and adjacent wetlands to be re-vegetated and returned to a more natural, less maintenance-intensive, condition.

Two areas where the master plan proposes extensive shoreline modification are at the 3-Acre Park site and at Lowell Riverfront Park. The bank at the 3-Acre Park site is currently near-vertical and is armored by a combination of wood piles, cribbing, sheet metal, and riprap. Similarly, the shoreline condition at the Lowell Riverfront Park site has been degraded by a combination of failing bank armoring, human-induced erosion, and river hydraulics. The Public Amenities Master Plan proposes removal of the existing armoring along the shoreline at both park sites to the extent allowed by river hydraulics and the upstream and downstream bank conditions, and the restoration of a 50-foot riparian native plant zone along the water's edge. Pedestrian access at both parks will be allowed at controlled locations, but much of the shoreline at both park sites will be restored to native scrub-shrub and riparian forest conditions.

Although extensive shoreline modifications in most areas outside the two park sites are not included in the Public Amenities Master Plan, plan elements will be implemented so as not to preclude future shoreline enhancements. Such work could include the removal of some or all of the extensive system of piles, bulkheads, and cribbing, and other material that remains from earlier industrial uses, in those locations where removal would not adversely affect existing or proposed amenities. In some areas along the river the pilings continue to effectively armor the riverbank, protecting upland amenities; site disturbance caused by piling removal could lessen the current stability and create adverse ecological impact during the process of removal.

Other work that is not included in the Public Amenities Master Plan, but which could occur within a similar timeframe, is the construction work proposed by the private developer and the environmental mitigation planned for its development-related impacts. Additional bank stabilization by the developer may be required adjacent to the Landfill site, where the railroad corridor abuts the river and the bank is extensively armored with riprap. This area is identified as an area of major bank failure in the site analysis. These projects by the private developer are not part of the Public Amenities Master Plan, but this work will be coordinated with the master plan to maximize the restoration and minimize disruption to built facilities.

Other Wetland and Shoreline Preservation, Restoration, and Enhancement Areas

The Public Amenities Master Plan proposes the re-establishment of riparian scrub-shrub and forest cover through much of the 50-foot shoreline buffer, with points for pedestrian access retained at regular intervals. Shoreline buffer restoration will most likely be completed in conjunction with the installation of other plan elements, such as the construction of picnic facilities or trail improvements, but most of the shoreline buffer area is expected to be restored within the period of full plan implementation.

Example of a re-graded and planted bank.

Shoreline buffer enhancements will include new plantings of native species along the Riverfront Trail and a reduction of the extent of existing, maintenance-intensive lawn area. Existing irrigation system zones will be repurposed to establish native plantings, after which these zones can be abandoned. A significant quotient of Parks Department maintenance labor now directed to lawn care and shrub control pruning will be available for use elsewhere on the Riverfront Development site.

Fascines bound together are a bioengineered bank stabilization technique.

Extensive modification of the remaining wetlands on the site is not envisioned in the Public Amenities Master Plan. These remaining wetlands, primarily those wetlands in the East Wetland Complex and the South Wetland Complex beyond the extent of the proposed Bigelow Creek restoration, will be retained and preserved in their current condition. If it becomes necessary to re-align portions of the existing Riverfront Trail to avoid bank failures, additional wetland areas may be affected. In these instances, mitigation for localized impacts will be provided by wetland creation, enhancement, or rehabilitation near the areas of impact, consistent with local, state, and federal codes.

Riprap armors sections of the riverbank now.

Stormwater Treatment

Stormwater on the Riverfront Development site does not require detention due to the proximity of the Snohomish River, designated as a receiving body. The stormwater treatment proposed does meet the prescriptive requirements of the city at the two municipal park sites, with a passive water quality faclity at Lowell Riverfront Park that intercepts parking lot runoff, and an active collection and routing to the storm sewer system at the 3-Acre Park. Runoff from the trails between the two parks does not require and does not receive water quality treatment.

Off-site surface water from pre-existing conditions will receive water quality improvement in the Riverfront Development site in a constructed wetland planned for the South Wetland Complex. This project is currently in design, with grant monies provided by the Washington State Department of Ecology. Construction of the facility will be independently funded and scheduled, but will complement the public amenities work on Bigelow Creek, within Wetland D, and on the trail system in the immediate area.

Stormwater from the retail/mixed-use and residential developments is managed within those private development envelopes, with outfalls and connection points coordinated with downstream facilities in the Public Amenities Master Plan.

Remnant wood piles still armor much of the riverbank along the Riverfront Trail.

The Riverfront Development Circulation System

Pathways to and through the Riverfront Development site, like the drainage configurations, create an organizing principle through which the project site may be understood. Access to the Riverfront Development is provided through a number of pedestrian, bicycle, and vehicular connections. This section addresses the location and character of the off-site connections, the proposed access routes that provide fire and emergency access, and the trails, paths, and boardwalks that provide circulation internal to the site.

Connections

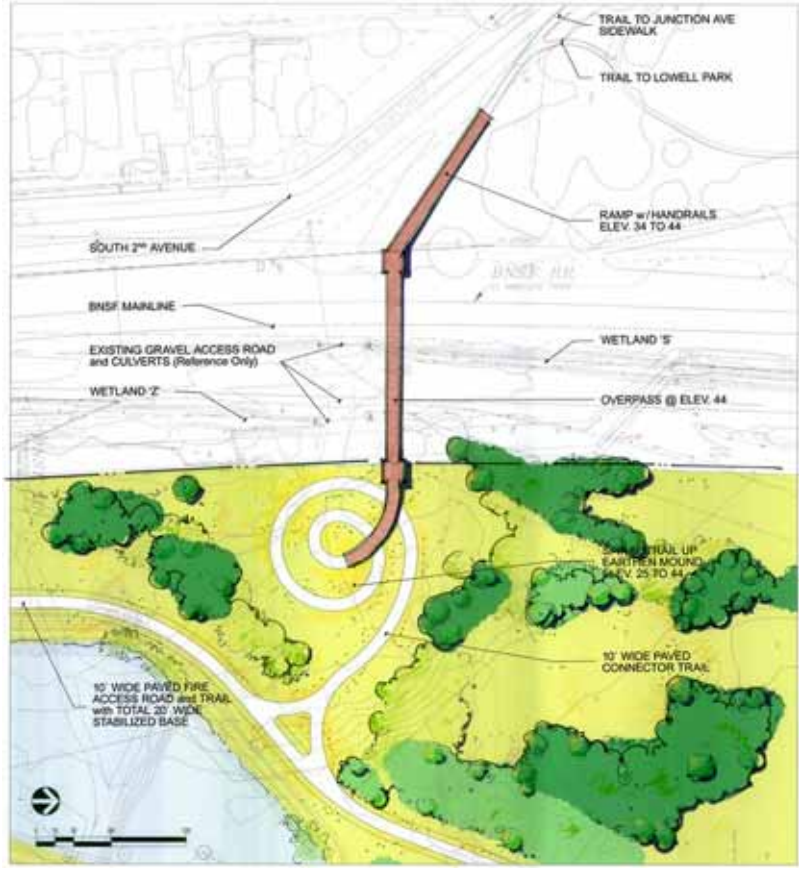
At the south end of the site, Lowell Riverfront Park has a street connection to the Lowell neighborhood via an at-grade crossing of the Burlington Northern Santa Fe Railway mainline. Because the narrow street lacks a sidewalk, pedestrian access is challenging. Future street improvements such as sidewalks and bike lanes on Lenora Street and Lowell-Snohomish River Road would improve multi-modal access. Public comment on this project has favored improving connections at this and other locations across the site.

North of Lowell Riverfront Park, a new “aqueduct” pedestrian bridge extends from Main Street across the BNSF tracks to property owned by the Washington State Department of Transportation. Several water quality and detention ponds have been constructed here, with gravel pedestrian paths encircling the ponds. The “aqueduct” crossing is so called because it carries channeled stormwater over the tracks, to a spillway on the other side. The stairs on the east end of the bridge do not provide a universally accessible route in the current configuration.

At the north end of the neighborhood, the informal at-grade Lowell crossing of the BNSF railroad tracks is proposed to be replaced by a safe and accessible above-grade overpass. Of the options considered

The Lowell at-grade railroad crossing

The WSDOT “aqueduct” overpass



Lowell Crossing

at the east end, a mound with a spiral path garners the most support and is most cost effective; an alternative is a spiral ramp, which occupies a small footprint, but is a structural solution with potentially higher construction cost. The west end configuration is planned as a ramp extending parallel to the current road alignment, ending at the sidewalk on the north side of South 2nd Avenue, with a secondary path curving north into Lowell Neighborhood Park.

The new 41st Street overcrossing will provide the Riverfront Development with its primary road access. A roundabout will direct vehicular traffic north to the retail development planned for the Landfill site and south to the Simpson Pad residential development. A major street in Everett, 41st Street crosses Interstate 5 and connects to the transit center and Central Business District. The ramped overcrossing has dedicated bike lanes and pedestrian sidewalks along its full length.

The existing 36th Street will provide the major north end connection to the site, where the current city street grid meets the sinuous retail "Main Street" proposed by the private developer. Planned improvements by the private developer for non-motorized traffic on the south side of 36th Street will include a sidewalk and bike lane, allowing for direct and safe connection to the city's 3-Acre Park.

Fire Access

Code requirements for fire and emergency vehicle access routes are significant constraints on the planning of the Riverfront Development site. A construction access road adjacent to and south of the 41st Street overcrossing will provide secondary fire and emergency vehicle access to the Simpson Pad. Fire safety code requires greater separation between access points than this location allows, necessitating a third fire access. The master plan places this tertiary access at Lowell Riverfront Park, where emergency vehicles, in the event of a catastrophic emergency, could use the BNSF Railway right-of-way for northbound passage to the Simpson Pad. As illustrated in the trail hierarchy plan, fire and emergency vehicles would exit the railroad property and turn east into the residential development on a new road, one built atop a berm that will separate wetland drainage basins. This segment of emergency vehicle roadbed can be included within a broad, reinforced multimodal trail, routinely used as a pedestrian and bicycle path, but available for fire trucks and emergency vehicles if needed.

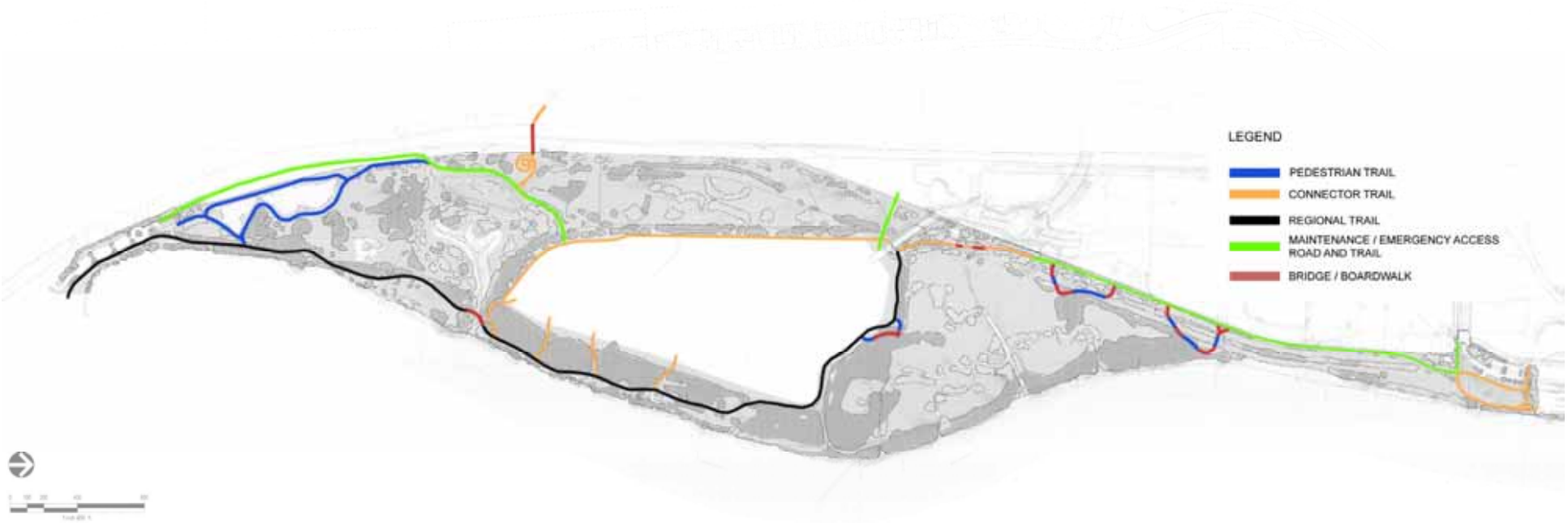
Trails

Multipurpose trails are an important part of the Public Amenities Master Plan. The Riverfront Development site will provide an extensive network of trails at the completion of the project, in furtherance of the city of Everett's intent to provide opportunities for recreation and increased Snohomish River views and access. This expanded access is also in support of the City Council's adopted Parks & Recreation Strategic Plan. Most of the current trail alignments will be retained and new trail segments, and new interconnections, will be added.

Example of a paved trail that can support fire and emergency vehicle access with a wider, stabilized shoulder.

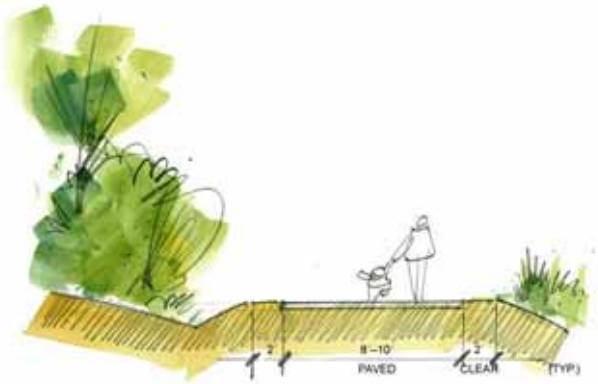
The Public Amenities Master Plan anticipates that the proposed trails will connect the larger site to the public amenities and public-use features within the private development. The complex of trails and public-use spaces will tie together the Riverfront Development site and will serve to integrate its widely varied site uses.

The master plan proposes a trail hierarchy of narrow to broad pathways. The narrowest trails, at 4 to 8 feet wide, are appropriate to walking and jogging, and will have soft surfacing and alignments which follow winding routes that may rise and fall with site grades. Trails 8 to 10 feet wide will be more durably surfaced, either with asphalt or with crushed rock, and may have potentially curvilinear



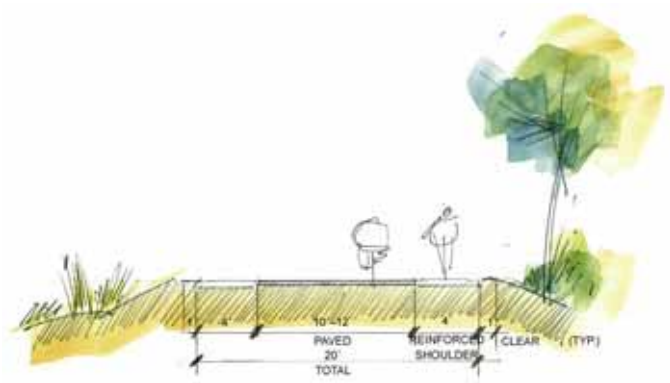
TRAIL HIERARCHY PLAN

PEDESTRIAN TRAIL

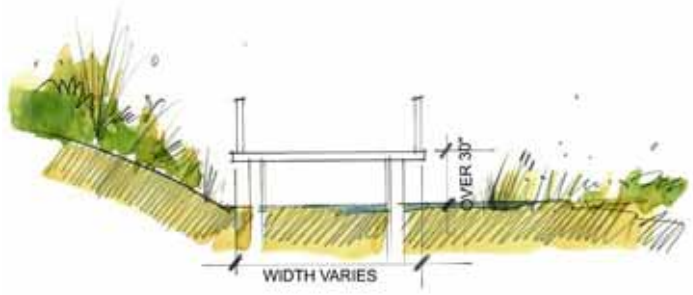


CONNECTOR TRAIL

REGIONAL TRAIL WITH WIDE SHOULDER



TRAIL WITH MAINTENANCE / EMERGENCY ACCESS



BRIDGE / BOARDWALK – ELEVATED

BOARDWALK

TRAIL CROSS-SECTIONS

Narrow, soft-surface trails.

Boardwalks span wetland areas.

alignments and limited elevation changes; these trails will be usable by pedestrians and casual cyclists. The broadest trails, such as the regional Riverfront Trail and the internal Railroad Corridor Trail, will be 12 feet wide, asphalt paved, with larger radius curves and gentle grades to accommodate the highest volume of multiple travel modes. To accommodate joggers, where space allows, one side of this broader trail may be graded and soft-surfaced for pedestrian use only. The soft-surface area provides a passage for pedestrians and joggers who prefer unpaved surfaces, and also serves as a refuge area for pedestrians when cyclists travel at higher speeds on the paved trail. Where occasional emergency and maintenance vehicle access is required, these wide, hard-surface trails may be supplemented with reinforced shoulders to provide a drivable span without an expanded width of pavement.

The plan proposes limited segments of boardwalk over wetland areas, as where spur loops are proposed to give pedestrians the experience of entering Wetland C at the perimeter of this largest site wetland. The trail connection between the Simpson Pad and the Railroad Corridor Trail, in the vicinity of the habitat pools, is likely to include boardwalk segments or short bridges that will span the water between lengths of upland trail.

The plan proposes to renovate the existing Riverfront Trail for the higher volume, multimodal use anticipated for a regional facility. The trail will pass from Lowell Riverfront Park through the Riverfront Development site along the west bank of the Snohomish River, and connect to downtown Everett on a dedicated bike lane with adjacent

Bridges and boardwalk trails at Wetland C.

sidewalk on the 41st Street overcrossing. The existing trail width of 10 feet will be widened to 12 feet of pavement, with 2- foot and 5-foot shoulders on either side. The alignment will follow the existing trail as closely as possible, minimizing impact to the adjacent wetlands and riverbank. Standard site distance, minimum curve radii, and maximum allowable gradients to meet regional trail guidelines will be accommodated in the final design.

A curving trestle bridge is proposed over the new Bigelow Creek outfall.

The proposed regional trail diverges from the current Riverfront Trail alignment in response to the position and grade changes of the new Bigelow Creek outfall. Here the trail will be positioned atop a long, curving trestle bridge spanning the stream, in a location west of the current trail. The Trestle Bridge will make reference to the railroad trestle engineering typical of historic site train use, and will provide unique scenic opportunities at each end for interpretation: an inward view of the re-channeled creek and wetlands, and an outward view of the Snohomish River.

Bigelow Creek Crossing

Across the Trestle Bridge, the regional trail will resume the alignment of the current Riverfront Trail as it makes its passage north along the river's edge and turns west to connect to the 41st Street overcrossing. South of the point where the Riverfront Trail makes its sharp westerly turn, an alternate alignment is proposed, shifting the trail to angle west, away from the river's edge, and then reconnect with the existing trail as it rounds the north end of the Simpson Pad. The riverbank at the trail's present location is undermined after high flow events in the river, requiring periodic trail maintenance and reconstruction. Relocation of the Riverfront Trail here will eliminate that frequent maintenance, and allow this segment of riverbank to be restored to a natural condition.

The existing Riverfront Trail will be widened and supplemented with soft-surface shoulders.

The existing trail abutting Wetland C will be moved upslope out of the wetland buffer.

Example of boardwalk segments that will allow pedestrians to be surrounded by wetlands.

An alternate or complementary alignment for the Riverfront Trail would route some regional trail users through the Simpson Pad on the as-yet unconfigured residential street grid. Although the riverfront setting is preferred for the designated route, as it establishes a safe and scenic facility separated from vehicular traffic and the potential conflicts with residential driveways and intersections, a Simpson Pad route could provide a viable alternative, and enhance connectivity of the private development with the public amenities.

The Simpson Pad is expected to be developed for residential use by an as-yet undetermined private party. The master plan trails proposals are predicated on a private developer agreement to replace an existing trail segment along the north edge of the Simpson Pad abutting Wetland C with a new trail to be aligned outside the wetland buffer boundary. It will also be incumbent upon the future developer, working with the city, to provide a linkage of the regional trail to the 41st Street overcrossing, to connect to the secondary emergency access bridge, and to provide the tertiary emergency vehicle access atop the wetland berm south of the Simpson Pad.

The Public Amenities Master Plan illustrates spur trail connections from the Riverfront Trail to the Simpson Pad, crossing the East Wetland Complex with bridges to integrate the residential complex with the trail system. The future residential developer will be required to provide some public parking and trail access along the east edge of the Simpson Pad street grid. The surrounding trails, parks, and wetland areas are significant amenities for the residential development, and these spur trail connections will need planning and design coordination to be fully successful.

Where the regional Riverfront Trail crosses the Trestle Bridge, the master plan proposes a branch trail along the south and west perimeter of the Simpson Pad. The southern leg of this perimeter trail will connect to the berm-top trail that provides tertiary fire access, and provide trail continuity from the WSDOT ponds east to the Riverfront Trail.

North of the fire access intersection, the Public Amenities Master Plan illustrates the continued use of an existing, well-used perimeter trail on the west edge of the Simpson Pad, abutting the West Wetland Complex. The master plan proposes that this gravel road be replaced with a new, hard surface trail 8 to10 feet wide, located at the outside of the wetland buffer setback, which will make important connections to the 41st Street overcrossing, the Riverfront Trail, and the Railroad Corridor Trail. Although public trails are an allowable wetland buffer land use, it will be a challenge to co-locate and coordinate this public amenity with the water quality treatment facilities that have been proposed for the buffer by the private developer.

TRAIL CONNECTIONS AT UPPER WETLAND "C"

The intersection of the regional Riverfront Trail with the Simpson Pad access road is an important node in the site's circulation system. It is the point of entry to the residential development, and also a critical change in the characteristic trail standard along the length of the regional trail: the shared-use, separated trail of the riverfront converts to on-street bicycle lanes and sidewalks. The Simpson Pad entry offers the opportunity to create a significant gateway, one that helps to define the Riverfront District and denotes the changes in land use and trail character. This circulation node should be a point at which all traffic slows and pedestrians and bicycles are given priority.

Boardwalk segments of the Riverfront Development trail system are proposed at the south and north ends of the Wetland C riverfront, as well as a connecting link of boardwalks or bridges over the central wetland (Wetland C), between the Simpson Pad entry and the Railroad Corridor Trail. The looped riverside boardwalks will offer wetland and river views as well as interpretive opportunities.

The Railroad Corridor Trail is shown as a long, largely straight segment of trail along the former BNSF right-of-way, between Wetland C and the Landfill site slope. It is recommended that grades up the slope to the private developer's retail district be made gentle enough and visually inviting, to enhance the physical connection between the public and private areas as well as provide universal accessibility.

The Railroad Corridor Trail will be developed to accommodate multimodal use like that of the regional trail, but will also provide for regular maintenance vehicle access. The leachate collection system for the landfill, the sheetpile wall for groundwater cutoff, site storm water and sewer collection facilities, and a relocated PUD transmission tower are all in this corridor. Construction of the Railroad Corridor Trail must thus accommodate the various weights, widths, and turning radii of service vehicles ranging in size from small pickup trucks to large utility vehicles.

Early conceptual plans for this corridor envisioned a more curvilinear trail alignment than the one shown here, with multiple bridge and boardwalk crossings of enhanced and created wetlands. The Public Amenities Master Plan proposal of two linked systems, the wide, linear paved trail and the narrow, curvilinear bridge-and-boardwalk trail segments, evolved in response to multiple factors: the timing and coordination of various private developer and city projects along the length of the Railroad Corridor; the need to provide short-term construction and long-term maintenance access; the configuration of multiple environmental mitigation and enhancement projects; and the need for cost-effective trail construction and maintenance.

Railroad Corridor Trail alignment looking north from 41st Street. Single tracks left, double tracks right.

The Public Amenities Master Plan anticipates that portions of the Riverfront Development trail network will be expanded and improved incrementally, synchronized with the schedule of private development and associated public demand, and constructed as public monies are available. With continuity of public access a city priority, the improvements proposed for the Riverfront Trail and the installation of the new Railroad Corridor Trail will precede other trail work. Enhancements to the major circulation routes, such as the wetland boardwalk loops proposed for the margins of Wetland C, will follow the Early Phase elements of trail system construction.

The master plan proposes to retain existing trails where feasible, and to improve, in most instances, the existing facilities to meet the expanded requirements of multimodal use. Trail repair and continuing maintenance will be needed. Trail surfacing includes asphalt pavement, crushed rock, boardwalk, and bridges. Several sections of existing paved trail will be widened, and new crushed rock or reinforced shoulders will adjoin the Riverfront and Railroad Corridor Trails. Repairs to root-heaved portions of the asphalt trails will be required, and drainage improvements will be made for those areas prone to standing water. All facilities are planned to be universally accessible, with surfacing and gradients that accommodate the full range of abilities. Soft-surface trails designed to accommodate wheelchairs will require regular maintenance and grooming to keep them accessible, and boardwalk sections may need seasonal grooming and cleaning or repair after flood events.

The existing gravel road west of the Simpson Pad can be adapted for trail use.

Parks and Public Open Space Amenities

The third organizing element of the Public Amenities Master Plan is the parks and public open space component of the Riverfront Development project. The master plan proposes significant improvements and expansions to Lowell Riverfront Park, creation of a new 3-Acre Park near the north end of the Riverfront Development site, and the construction of new picnic areas and interpretive viewpoints.

The city of Everett has a goal established by city ordinance of meeting the U.S. Green Building Council Leadership in Energy and Environmental Design (LEED®) designation for new public construction. Although the architectural features proposed by the master plan do not meet the building size threshold in the ordinance mandating LEED designation, the Public Amenities Master Plan proposals will incorporate cost-effective, green building practices and address life cycle and maintenance costs in all site amenities.

Lowell Riverfront Park

The proposed improvements to Lowell Riverfront Park may be accomplished in phases, as the program dictates or evolves in the future. The park serves as a southern anchor and staging area for the Riverfront District, and will include formalizing and surfacing the parking area and creating a water quality treatment facility to address site runoff. Portions of the riverbank will be stabilized to forestall erosion and withstand foot traffic, and other areas will be graded and planted with native plant species to bioengineer an erosion-resistant, naturalistic bank, one that will be protected with a fence and provided with informational or interpretive signs. The park may support development of a future interpretive center, or a multi-purpose building that can function as a classroom, meeting space, group picnic facility, or other amenity.

Lowell Riverfront Park improvements.

Open lawns allow flexible uses and unstructured play.

Shells, kayaks, and canoes can use the 3-Acre Park's floating dock, like the one shown here at Langus Riverfront Park.

Public/Private Intersections

Part of developer OliverMcMillan's retail development will include public amenities adjacent to the public trails. These spaces have been portrayed in the developer's schematic design documents as public open spaces, such as a square or green bordered by hospitality and service retailers, and an overlook of the river. The master plan proposes that these spaces make fully-accessible connections to the Railroad Corridor Trail below, letting the private and public amenities intersect and energize one another.

3-Acre Park

The public riverfront area at 36th Street is a location that demands close coordination between the public and private sectors. This is a location where the distinct public and private portions of the Riverfront Development should merge and meld, complementing and supporting each other functionally and aesthetically.

The 3-Acre Park is a new city of Everett facility that, like Lowell Riverfront Park at the south, will act as an entry and staging area for public use of the Riverfront Development. The city's program for the park includes on- and off-street parking, restrooms, a large and level multipurpose lawn area, picnic tables, and an unstructured children's play area. The lawn area and circulation system is designed to accommodate small festivals, farmer's market, and informal play or gatherings. A significant feature of the program is a floating dock on the Snohomish River, suitable for non-motorized, put-in craft, with an associated waterside view overlook nearby. The 3-Acre Park will be the nexus of the Railroad Corridor Trail, the park's looped internal trail, on-road bike lanes through the retail development, and a future shoreline trail extension that will be developed north and west of the park. Maintenance access to a new pump and lift station is provided at the south end of the park, sized to accommodate weekly maintenance vehicles and less frequent vactor truck use.

Some options for children's play area include grassy berms, railroad-themed art, and water.

36TH STREET
NEW PUMP STATION
12' WIDE PAVED TRAIL
SIGNAGE
ONE-WAY ENTRY
VISITOR/BOAT DROP-OFF
RESTROOM/ GROUP PICNIC BUILDING
10-STALL PARALLEL PARKING ON-STREET
UTILITY CORRIDOR UNDER PARKING LOT
36-STALL PARKING LOT
ONE-WAY EXIT
SIGNAGE
6' WIDE PAVED TRAIL
SCREEN PLANTING
PLAY AREA
OPEN LAWN
STABILIZED RIVERBANK
TRAIL CONNECTION TO NORTH
SNOHOMISH RIVER
VIEWPOINT/OVERLOOK AND FLOAT ACCESS
CANOE/KAYAK FLOAT

3-ACRE PARK

Riverfront Development Group Picnic and connections to Simpson Pad.

Picnic Areas

The Riverfront and Railroad Trails provide many opportunities for single-table and multiple-table picnicking areas along their lengths. Although universally accessible facilities will require vehicular access and parking, and thus locations associated with the parks at either end of the site, satellite picnic tables can be provided along the trails at the center of the site. These facilities can expand over time in response to future demand, as when the Simpson Pad residential development is fully occupied.

New group picnic facilities, similar in scale to the one above, are planned for the Riverfront site.

Individual picnic tables in lawn areas can be grouped or solitary.

Interpretation and identification of the trail may be done with bronze inlays.

Interpretive sign along a boardwalk.

Interpretive signs can be part of picnic shelter structures.

Interpretive Opportunities

In addition to the open space enhancements noted, the plan proposes interpretive viewpoints and stations in the parks at either end of the Riverfront Development site, at the Trestle Bridge overlooks, in the wetland access boardwalk loops, in the picnic areas, along the shoreline, and other points of interest.
The interpretive elements will address distinct site characters and components. The environmental interpretation will feature the extent of the watershed, wetland hydrologic functions, seasonal variations in river flows, the impacts of flooding, tidal effects, and geologic processes.

A second interpretive emphasis is habitat, addressing multilayered plant and animal communities, salmonid life cycles, and species succession.

The third element will address historic site uses ranging from known or typical use of the Snohomish River environment by Native Americans, to site use for lumber and pulp mills, subsequent landfill activities, and the Tire Fires of the 1980s. The role of the railroad on the site provides another historical thread, with cultural and environmental aspects as well as a significant ongoing presence. The proximity of the working BNSF railway and the proposed use of rail motifs in park buildings and trails strongly support the site's opportunities for railroad interpretation.

A fourth element will address the extensive site engineering, including the city's cleanup actions, explanations of the leachate system, methane collection network, site preloading, and challenges of building on site.

Paving patterns interpret the site's history at this park in Cambridge, Massachusetts.

IMPLEMENTATION

Implementation

Schedule and Phasing

The public amenities proposed in the master plan are expected to be constructed incrementally, to complement the private development activity and timed as agency reviews and permitting, multiple sources of funding, and abutting private and public project schedules allow. The projects, as previously described, are divided into Early Phase and Later Phase construction, establishing priority based on conditions as they are now known. Within each of the two phases, projects may be further divided and sequenced to best accommodate other projects or to take advantage of available funding. With completion and adoption of this document, final design documents may be prepared, with initial construction of some portion of the Early Phase projects occurring in 2010. Other target dates for construction are tied to milestones in the private development schedule. See the Project Areas Plan foldout following for general boundaries of project areas and responsible agencies.

Early Phase Projects

The initial phase of the Public Amenities Master Plan design and construction is likely to encompass the Bigelow Creek restoration, including the creation and enhancement of additional tidally influenced wetlands within the South Wetland Complex. This work will include the construction of a low berm to isolate the tidally-influenced areas from Wetland D, which is encumbered by the Restrictive Covenant, and from off-site portions of the South Wetland Complex in the WSDOT parcels. This work may also occur in conjunction with the construction of the surface water quality improvement facility. Early Phase work would also entail additional wetland creation or buffer enhancement as mitigation efforts. Although this work is a priority for the city, the construction of both the Bigelow Creek restoration and the constructed wetland surface water project are contingent on outside funding and, as such, are largely outside of city control.

The proposed re-alignment of the Riverfront Trail at the new Bigelow Creek outfall and the construction of the trail's Trestle Bridge are integral project elements that will maintain trail continuity and minimize future disruption. Because trail and bridge construction typically cannot be funded from the same grants available for water quality improvements or habitat enhancements, these portions of the planned work will require separate, supplemental funding.

The construction schedules of abutting projects may encourage the early phased construction of the proposed Railroad Corridor Trail. Improvements to the Landfill site's leachate collection system, the piped routing of offsite stormwater, and the removal of the Landfill site preload soils are three independent but linked efforts that will demand construction road access. The abandoned BNSF track bed at the base of the Landfill, supplemented by Landfill site preload soils, can provide a low-cost, stable bed for the construction road. Another independent project, the relocation of an existing PUD tower within the transmission line easement, can employ the same construction access, possibly at the same time as other construction work. After the utility upgrades and site grading are complete, the access road can provide the base for the pedestrian and bicycle route identified as the Railroad Corridor Trail. This route will continue to provide maintenance and emergency vehicle access along its length. The trail construction will likely be staged to complement the needs and pace of the private development, with the public investment paralleling the private investments.

To maintain continuity of public trail use, an important criterion set by the city, the scope of Railroad Corridor Trail work will include creating a trail linkage of boardwalk and bridge segments to connect to the Simpson Pad and the regional trail at the north end of the Simpson Pad site. The private developer's schedule for the relocation and widening of the north segment of the regional Riverfront Trail, replacing the existing paved trail, will factor into the precise alignment and timing of this Railroad Corridor Trail connection.

Additional links from the Railroad Corridor Trail up to the private developer's public amenity sites can be included in this first phase of work, if the developer's retail district sitework is near completion at the time of trail construction.

Additional Early Phase work could include most of the development proposed for the 3-Acre Park at the north end of the Riverfront Development site. The scope of this project would entail on-site and on-street public parking (the latter should be incorporated with the schedule for road construction), restrooms, a multi-program building, open play space, floating dock, and riverfront pavilion or overlook. The shoreline work demands riverbank stabilization, which can be concurrent with Early Phase park work if the permitting allows, or follow in a later stage. Internal walking paths and connections to the Railroad Corridor Trail would be included. The schedule for park development is likely to accommodate the schedule for adjacent road and utility construction.

The Early Phase of development may address the routing of Walton Creek from the new habitat pond, through Wetland C, to an outfall at the river. The enhancements will include channel excavation, riverbank regrading at the outfall, installation of large woody debris at the river, the creation of upland hillocks, and the planting of diverse native species. To limit environmental disturbance, installation of the proposed looped boardwalks (see plan) should take place while the other wetland construction is underway in Wetland C, however some boardwalk and trail construction may be staged to coordinate with the private developer's schedule for completing mitigation planting in this area.

The structure and components of Early Phase construction will be highly dependent upon funding opportunities, permitting schedules, and coordination efforts with the private developer.

Later Phase Projects

Additional improvements and realignments to the Riverfront Trail may be part of a later phase, along with the installation of multiple picnic sites along the river. Improvements to Lowell Riverfront Park will likely be included in later efforts, addressing expanded and improved parking, emergency vehicle access, and riverbank stabilization.

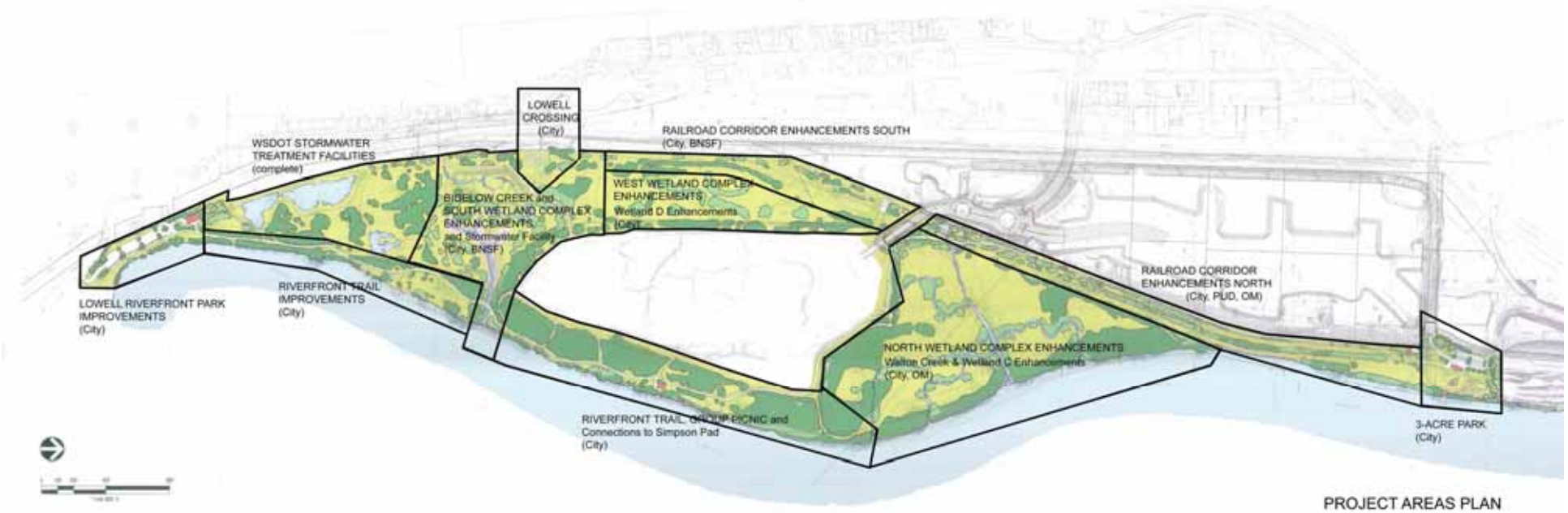
Similarly, the unstable bank conditions at Lowell Riverfront Park may be addressed in the Later Phase of work, depending upon the useful life of the existing armored riverbank.

Relocation of the north end of the Riverfront Trail (in response to the current riverbank erosion) may occur in later phases, but this is highly dependent on riverbank stability as well as coordination with private developer's schedule for reconstruction of the north end of the trail along the Simpson Pad. The re-contouring and replanting of the eroded riverbank are suitable elements to include in later phasing.

The proposed creation of new planted upland hummocks within the restrictive covenant area of Wetland D will help to improve habitat, a scope of work appropriate to later phases, as funding and permit schedule allow.

City wetland mitigation efforts that will extend riverside wetland areas (and any mitigation efforts undertaken by the city on behalf of the private developer) will be phased as permit conditions dictate.

Installation of an ADA-accessible Lowell Crossing over the railroad tracks and the construction of an interpretive center or multi-purpose building at Lowell Riverfront Park will likely be Later Phase projects as well.



PROJECT AREAS PLAN

Project Coordination Issues

The multiple public projects, private developer OliverMcMillan's retail and mixed-use projects, the PUD work, and the future Simpson Pad residential development will require significant coordination and cooperation to proceed efficiently.

Some elements of the public amenities project will be funded by agency and other government grants, with key parts that must be funded directly by the city. The schedule of grant applications will thus be as important as timely agency permitting, with the added challenge of coordinating public project bid and award processes with multi-phased city funding.

Physically, the public amenities project touches upon all work, public and private, that is planned for the Riverfront Development site. It will be a challenge to usher these several projects, designed and installed by multiple entities, through their sequential and concurrent construction phases.

Permitting

A permit matrix has been developed for the Public Amenities Master Plan. The matrix describes the type of permit, the agency responsible for reviewing the permit, the permit trigger, the amount of design detail required to submit the permit, estimated processing timelines, and other relevant issues. See the permit matrix in the Appendix.

The project elements that are expected to trigger the greatest number of permits and approvals from agencies other than the city are elements that affect or otherwise alter wetlands or drainages or which have impacts upon the navigable channel of the river. Most of the proposed master plan elements have such effects. The planned elements that will require the fewest environmental permits and approvals are modifications to the existing trail system that will not affect wetlands or cross streams.

Cost Estimates

The Public Amenities Master Plan includes estimates of probable construction costs based on the schematic designs portrayed. These costs are based on currently known unit prices and typical construction procedures. Contingency and taxes are as noted, but escalation figures have not been applied, pending unknown factors relating to phasing and scheduling.

The cost of maintenance and operations for the public amenities has not been included in these figures.

APPENDIX

LIST OF TECHNICAL REPORTS

Technical Reports

November 2009

The following documents were utilized in the generation of this report:

B. D. Collins. 2000. *Mid-19th century stream channels and wetlands interpreted from archival sources for three north Puget Sound estuaries*. Washington.

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City of Everett. 2008. *Everett Riverfront Redevelopment Project Final Environmental Impact Statement.* Everett, Washington.

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Pentec Environmental, Inc. 1994. *Wetland Delineation, City of Everett, Tire Fire Property, Snohomish County, Washington*. Washington.

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R. C. Hilldale. 2007. *Using bathymetric LiDAR and a 2-d hydraulic model to identify aquatic river habitat.* Denver, Colorado.

The Watershed Company. 2005. *Snohomish Riverfront Properties at Bigelow Creek: Final Conceptual Enhancement Program Prepared for the City of Everett*. Washington.

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Washington State Department of Ecology. 1995. *Snohomish River Estuary Dry Season TMDL Study – Phase I: Water Quality Model Calibration.* Olympia, Washington.

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Washington State Department of Ecology. 1999. *Snohomish River Estuary Total Maximum Daily Load, Submittal Report.* Olympia, Washington.

W. G. Hood. 2006. *Deepwater slough restoration monitoring: channel cross-section comparisons, 2000-2006*. Washington.

W. G. Hood. *Sweetgale, beaver, salmon and large woody debris in the Skagit River tidal marshes.* Washington.

PUBLIC AMENITIES
MASTER PLAN PROGRAM

Public Amenities Master Plan Program

November 2009

3-Acre Park

- public open green space w/ irrigated lawn area for festivals/events
- centrally located building with restrooms, picnic shelter, storage
- riverfront structure providing viewing, seating, with possible boat related storage
- benches
- picnic tables with pads
- sculpture/water garden/grassy berms as informal area for play
- 30-35 stall paved parking lot with drop-off and accessible stalls
- on-street shared parallel parking stalls
- paved plaza and pedestrian trails with connections to on-site trail system and off-site sidewalk system
- lighting, power and water drops in critical locations
- directional/informational signage
- interpretive signage
- accessible ramp and floating dock for open moorage of kayaks, canoes
- water quality improvement facilities (on-site or tied into street system)
- screen and ornamental planting

Lowell Riverfront Park

- 60-65 stall paved parking lot with drop-off, access to maintenance and fire/emergency-road, and accessible stalls
- north-end located building with restrooms, picnic shelter, storage, meeting room, possible interpretive center
- paved plaza/outdoor seating and gathering areas
- improved and widened regional trail along shoreline with connections to on-site trail system
- benches
- picnic tables with pads
- lighting, power and water drops in critical locations
- directional/informational signage
- interpretive signage
- stabilized riverbank with combination of accessible areas and (non-accessible) re-vegetated areas
- water quality improvement facilities
- screen and ornamental planting

Trails & Open Space

- paved regional trail along shoreline (multi-modal)
- paved and soft-surface local trails, with linkages to site developments, off-site trails and sidewalks, Everett central business district, & other pertinent destinations
- multi-modal connections in the vicinity of 36th Street & near Lowell Riverfront Park.
- waterfront overlook(s) & river access; pedestrian bridges & over-crossings
- interpretive viewpoints and signage
- riverbank stabilization and enhancement

Wetland and Shoreline Enhancement Areas

- integrated existing discontinuous wetland areas for improved function
- daylighting and rechanneling Bigelow Creek for habitat creation and enhancement
- improving creek outfall at river for improved function, habitat enhancement
- excavating multiple open water channels in wetland areas to improve habitat
- regrading for added complexity at riverbank, to improve habitat
- repairing riverbank slumps and slides
- removing pilings, industrial debris at river
- integrating post-development stormwater into wetland recharge areas

PERMIT MATRIX

Public Amenities Master Plan
Potential Permit Matrix

Potential Permit/ Approval	Lead Agency	Trigger	Design Detail Required	Estimated Processing Time	Comments
FEDERAL – CORPS OF ENGINEERS (USACE)					
Section 404 of the Clean Water Act Individual Permit	USACE	Placing a structure, excavating, or discharging material in **ALL** U.S. waters, including wetlands, streams, and the river. An individual permit is triggered, in general, when fill areas are greater than ½ acre. However, some work that is considered to be entirely mitigation does not have a maximum fill threshold. **The following Master Plan work could trigger this permit:** • **Bigelow Creek/South Wetland Complex** • **Walton Creek/North Wetland Complex** • **RR Corridor Trails and Wetland Mitigation** • **Riverbank Enhancements** • **3-Acre Park Construction** • **Trail Realignments to avoid bank instability areas that impact wetlands or drainages.** • **West Wetland Complex Enhancements.**	As contained w/in JARPA application.	9 to 18 months	Requires CZM, Section 401 permit, and 30 day public notice. Plans should specifically diagram activities w/in USACE jurisdiction.
Section 10 of the Rivers & Harbors Act	USACE	Placement of structures and discharging material in **NAVIGABLE** U.S. waters, including wetlands; i.e. boat docks, floats, buoys, etc. **The following Master Plan work could trigger this permit:** • **Float and piles at the 3-Acre Park.** • **Riverbank Enhancements**	As contained w/in JARPA application	4 months to a year, depending on project complexity. Often done concurrently with Section 404 permit	Requires CZM
FEDERAL – U.S. FISH & WILDLIFE SERVICE (USFWS) & NOAA FISHERIES SERVICE (NOAA FISHERIES)					
Section 7 of the Endangered Species Act Review	USFWS & NOAA Fisheries	Federal Nexus** and listed species. Application for a federal permit when a plant or animal species may be affected that are suspected to be, or actually are of threatened or endangered status. **Triggered by any federal permit or project elements that receive federal funding (see above)**	Requires specific construction detail and preparation of a Biological Evaluation (BE).	Up to one year.	** A Federal nexus exists where projects require work in federally controlled properties, work requiring federally issued permits (i.e. USACE Section 10 and 404), and/or projects that will use federal funding.
STATE – WASHINGTON STATE DEPT. OF FISH & WILDLIFE (WDFW)					

Potential Permit/ Approval	Lead Agency	Trigger	Design Detail Required	Estimated Processing Time	Comments
Hydraulic Permit Approval (HPA)	WDFW	Work that uses, diverts, obstructs, or changes the natural flow or bed of state waters. Activities include: bridges, piers, & docks; pile driving; channel change/realignment; pipeline crossing; culvert installation; dredging; gravel removal; pond construction; placement of outfall structures; log, log jam, or debris removal; installation/maintenance of (w/equipment) water diversions. **The following Master Plan work could trigger this permit:** • **Bigelow Creek/South Wetland Complex** • **Walton Creek/North Wetland Complex** • **RR Corridor Trails and Wetland Mitigation** • **Riverbank Enhancements** • **Float and piles at the 3-Acre Park.** • **Riverbank Enhancements** • **Trail Realignments that bridge or cross drainages.**	As contained w/in JARPA application. • General Project Plans • 100% plans for work within the Ordinary High Water Mark • 100% plans for the proper protection of fish	45 days after application and State Environmental Policy Act (SEPA) compliance are complete	
STATE – WASHINGTON STATE DEPT. OF NATURAL RESOURCES (DNR)					
Aquatic Lands Lease	DNR	Temporary, long-term, or permanent use or encumbrance of state-owned aquatic land. **The following Master Plan work could trigger this permit:** • **Float and piles at the 3-Acre Park.**	100% plans required for work below the Ordinary High Water Mark	Up to one year.	Evaluation requires additional property research. Based on current information it appears that some or all of this work could be located within submerged land owned by the State Parks or the City. If so, a DNR lease would not be required, but easements or construction permits from State Parks may be required
STATE – WASHINGTON STATE DEPT. OF ECOLOGY (ECOLOGY)					
Water Quality Certification Section 401 of the Clean Water Act	Ecology	Applying for a federal license or permit to conduct any activity that might result in a discharge of dredge or fill material into water or wetlands, or excavation in water or wetlands. Two types of projects: 1. Projects requiring a Federal permit to allow discharges of dredged or fill materials to ALL U.S. waters. 2. Projects (dams, power plants, & other facilities) requiring Federal Energy Regulatory Commission (FERC) licenses. **Triggered by Section 404 permit (see above)**	As contained w/in JARPA application.	Concurrent with Section 404	Issued after Section 404 permit.
Coastal Zone Management Act Consistency Determination (CZM)	Ecology	A CZM is triggered by one of three activities: • Activities undertaken by a federal agency • Activities requiring federal approval • Activities that use federal funding AND is either in the coastal zone or coastal resources are impacted. **Triggered by any federal permit (see above)**	As contained w/in JARPA application.	30 days	

Potential Permit/ Approval	Lead Agency	Trigger	Design Detail Required	Estimated Processing Time	Comments
National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges associated with construction activities	Ecology	Stormwater discharges from construction sites of one or more acres **Triggered by construction activities that require clearing and grading. The following Master Plan work could trigger this permit:** • **Bigelow Creek/South Wetland Complex** • **Walton Creek/North Wetland Complex** • **RR Corridor Trails and Wetland Mitigation** • **Riverbank Enhancements** • **3-Acre Park Construction** • **Trail Realignments to avoid bank instability areas that impact wetlands or drainages.** • **West Wetland Complex Enhancements.**	Construction details and Stormwater Pollution Prevention Plan	30 days	Requires formal published notice and preparation of a Stormwater Pollution Prevention Plan
WASHINGTON DEPARTMENT OF ARCHAEOLOGY AND HISTORIC PRESERVATION (DAHP) AND WASHINGTON STATE HISTORIC PRESERVATION OFFICE (SHPO)					
Archaeological Approval; Section 106 of the National Historic Preservation Act	Washington State Department of Community Development, DAHP	Ensure that proposed activities do not affect any development, known historic or culturally significant sites. Local cultural and historic evaluation also required. **Triggered by any federal permit (see above).**	Description and location of project – requires visit to OAHP to search records.	At least two weeks, usually done concurrent with the triggering federal permit or funding process.	** A Federal nexus exists where projects require work in federally controlled properties, work requiring federally issued permits (i.e. USACE Section 10 and 404), and/or projects that will use federal funding.
Executive Order 05-05	Washington State Office of Community Development, DAHP	State Funding for projects that lead to construction**. Ensure that proposed activities do not affect any development, known historic or culturally significant sites. Local cultural and historic evaluation also required. **Triggered by any state funding for projects that lead to construction.**	Description and location of project – requires visit to OAHP to search records.	At least 2 months.	Not required if Section 106 process is triggered. Requires notice by lead state agency.

Potential Permit/ Approval	Lead Agency	Trigger	Design Detail Required	Estimated Processing Time	Comments
LOCAL – CITY OF EVERETT					
SEPA EIS or Checklist	SEPA lead agency City of Everett	State or local "actions" such as issuing permits, or adopting plans. SEPA requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. **Triggered by any project action**	Typically MP level design. May require 30% design for critical elements	Environmental Checklist – 3 to 6 months EIS – 6 to 12 months	
Shoreline Substantial Development /Conditional Use Permit	City of Everett	Interfering with normal public use of water/shorelines of the state, or developing or conducting an activity valued at ≥ $5,000 on the water or shoreline area. **Triggered by any project action as all proposed work elements are within the shoreline zone.**	As contained in the JARPA application	2 to 4 months	May require notice and a pubic hearing.
Floodplain Development Permit	City of Everett	Fill or development with the 100 year floodplain or floodway. Some projects, such as restoration, may be exempt or qualify for expedited reviews. **Triggered by any project action as all proposed work elements are within the floodplain.**	As contained in the development applications	2 to 4 months	FEMA is currently reviewing local floodplain ordinances for consistency with a recent Biological Opinion and is developing prescriptive standards to address impacts to ESA regulated species resulting from development in the floodplain. Development within the floodplain should be reviewed for consistency with FEMA guidelines prior to submitting for a Floodplain Development Permit
Compliance with Critical Areas Standards	City of Everett	Project proposed near or within critical areas or their buffer. **Triggered by any project action as all proposed work elements are within designated critical areas or their buffers.** **All Master Plan elements are anticipated to Trigger this review**	Critical Areas Study	Varies	City regulates Critical Areas in the Shoreline Jurisdiction through a separate code section than Critical Areas outside of shoreline zone.
Construction Permits • Grading • Building • Foundation • Electrical • Etc.	City of Everett	Construction activities. **Triggered by any project action except landscape plantings if done within limits specified in individual permit conditions. Construction of the new restroom facilities would trigger more construction permits than other elements.**	Detailed design plans and excavation/fill volumes.	45 to 90 days	Permits can be sequenced.

COST ESTIMATES

Summary

The following estimated costs show a range from low to high, indicating variability in project phasing implementation, and the volatility of pricing for particular materials. For instance, the low range pricing doesn't include full build-out of structures in the park, or full implementation of all environmental enhancements as shown in the master plan.

Early Phase Projects	**Estimated Cost Range (in millions)**	
	Low	**High**
3-Acre Park	$2.6	$3.9
Railroad Corridor Enhancements	$2.6	$3.6
Bigelow Creek Enhancements including Water Quality Improvement Facility	$5.2	$10.7
Wetland C and Walton Creek	$1.7	$4.1
Subtotal	$12.1	$22.3
Later Phase Projects		
Riverfront Trail, Group Picnic, and Connections to Simpson Pad	$1.4	$4.1
Wetland D	$0.7	$0.9
Lowell Riverfront Park	$2.9	$4.3
Lowell Crossing	$2.8	$3.4
Subtotal	$7.8	$12.7
TOTAL ALL PROJECTS	**$19.9**	**$35.0 million**

3-Acre Park

Description of Potential Project Elements

Construct new city park including gated access; curbed public entry drive with vehicular drop offs and pedestrian walkways; pedestrian access to accommodate (daily use) pump maintenance road; reinforced grass surface road to accommodate (monthly use) vactor maintenance; an all-season building with restrooms, picnic area, and small storage/maintenance area; concrete entry plaza; curbed asphalt parking lot for 36 vehicles; asphalt perimeter trails; bollard or low area landscape lighting; informal children's play area; site furnishings; large open fairly level grass lawn; restoration, screening, and ornamental landscaping; boathouse/pavilion with ramped access to a floating dock; bioengineered riverbank stabilization. Assume water quality treatment facilities for parking area is provided by others off-site.

Estimated Area Costs	**Low**	**High**
Earthwork	$340,000.	$340,000.
Bank stabilization and enhancement	200,000.	200,000.
Utilities and lighting	20,000.	25,000.
Drainage	40,000.	40,000.
Structures	500,000.	1,200,000.
Play area and site furnishings	120,000.	120,000.
Pavement and curbs	225,000.	225,000.
Soil preparation, irrigation and planting	125,000.	125,000.
Subtotal	1,570,000.	2,275,000.
10% Mobilization	157,000.	227,500.
20% Contingency	314,000.	500,500.
Subtotal	2,041,000.	3,003,000.
9.2% Sales tax	187,800.	276,300.
20% Engineering and Construction Admin.	408,200.	600,000.
TOTAL	**$2,637,000.**	**$3,879,900.**

Railroad Corridor Enhancements

Description of Potential Project Elements

Upgrade and reconstruct existing gravel maintenance road to asphalt paved trail capable of supporting maintenance and emergency vehicles; alignment connects Simpson Pad at 41st Street to 3-Acre Park at 36th Street, including connections to 41st overpass; short bridge and boardwalk segments at upper end of Wetland C; reinforced grass surface PUD access road; site furnishings (benches and interpretive viewpoints) along trail; restore disturbed wetland & wetland buffer areas. Assume outfall to River and planting on the Landfill slope is under developer's scope of work for mitigation.

Estimated Area Costs	**Low**	**High**
Earthwork	$400,000.	$466,000.
Wetland creation and enhancement	700,000.	1,208,000.
Utilities and lighting	0.	0.
Drainage	80,000.	91,000.
Structures	80,000.	90,000.
Site furnishings and signage	125,000.	140,000.
Pavement	93,000.	93,000.
Soil preparation and planting	52,000.	52,000.
Subtotal	1,530,000.	2,140,000.
10% Mobilization	153,000.	214,000.
20% Contingency	306,000.	428,000.
Subtotal	1,989,000.	2,782,000.
9.2% Sales tax	183,000.	256,000.
20% Engineering and Construction Admin.	397,800.	556,400.
TOTAL	**$2,569,800.**	**$3,594,400.**

Bigelow Creek Enhancements
including Water Quality Improvement Facility

Description of Potential Project Elements

Construct water quality improvement facility as constructed wetland (per design report); excavate new stream alignment through South Wetland Complex, from stormwater facility to Snohomish River outfall; excavate portions of adjacent wetland to enhance function and increase tidal exchange potential; construct dikes supporting trail to Simpson Pad and abutting WSDOT property; armor outfall from flood & storm event erosion; construct curved Trestle Bridge to span new outfall, capable of supporting light maintenance vehicles; provide interpretive signage/stations on and off bridge; minimal site furnishings; realign portion of Riverfront Trail at bridge approach; provide new south Simpson/west Simpson perimeter trail from Riverfront Trail, with connector to Simpson Pad interior; restore disturbed landscape with native plantings.

Estimated Area Costs	**Low**	**High**
Earthwork	$1,100,000.	$2,760,000.
Bank stabilization/enhan., wetland creation/enhan.	750,000.	1,733,000.
Utilities and lighting	0.	0.
Drainage	21,000.	21,000.
Structures	450,000.	750,000.
Site furnishings and signage	100,000.	100,000.
Pavement	0.	262,000.
Soil preparation and planting	145,000.	213,500.
Water Quality Improvement Facility	545,000.	545,000.
Subtotal	3,111,000.	6,384,500.
10% Mobilization	311,100.	638,500.
20% Contingency	622,200.	1,276,900.
Subtotal	4,044,300.	8,299,900.
9.2% Sales tax	372,100.	763,600.
20% Engineering and Construction Admin. (excludes design of Water Quality Improvement Facility)	754,400.	1,605,500.
TOTAL	**$5,170,800.**	**$10,669,000.**

Wetland C and Walton Creek

Description of Potential Project Elements

Excavate new Walton Creek stream alignment from "Y" connection at private developer's habitat pond to Snohomish River outfall; excavate side channels throughout portions of Wetland C; provide up to three additional channel outfalls on Snohomish River re-grading to provide a naturalistic low-bank condition and install large woody debris; create hummocks throughout portions of Wetland C and plant with diverse upland species; provide reinforced grass surface access road for PUD tower maintenance; provide looped wetland access trails w/ boardwalk and bridge segments as shown (cost shown in High category); provide interpretive stations and signage.

Estimated Area Costs	**Low**	**High**
Earthwork	$225,000.	$427,300.
Bank stabilization/enhance. and creek enhance.	525,000.	1,008,000.
Utilities and lighting	0.	0.
Drainage	0.	0.
Structures	95,000.	700,000.
Site furnishings and signage	125,000.	250,000.
Pavement	50,000.	50,000.
Soil preparation and planting	0.	0.
Subtotal	1,020,000.	2,435,300.
10% Mobilization	102,000.	243,500.
20% Contingency	204,000.	487,000.
Subtotal	1,326,000.	3,165,800.
9.2% Sales tax	122,000.	291,300.
20% Engineering and Construction Admin.	265,200.	633,200.
TOTAL	**$1,713,200.**	**$4,090,300.**

Riverfront Trail, Group Picnic, and Connections to Simpson Pad

Description of Potential Project Elements

Reconstruct and widen existing Riverfront Trail, including expanded or separate soft surface pedestrian path; structured major bank repair/stabilization near WSDOT pond outfall (High estimate); construct new trail connectors from Riverfront Trail to Simpson Pad (including boardwalk segment and accessible trail with reinforced grass surface shoulders); realign portion of Riverfront Trail to avoid slump at shore, joining developer's north Simpson Pad trail; restore disturbed trail area with native plantings; provide Group Picnic open shelter with water, power, interpretive signage/station; concrete plaza/patio and tables at shelter; reinforced grass surface accessible parking space; individual picnic tables and accessible tables along trail; partial reduction of lawn area with restoration to native/shoreline plantings.

Estimated Area Costs	**Low**	**High**
Earthwork	$200,000.	$265,000.
Bank stabilization and shoreline planting enhan.	300,000.	1,453,000.
Utilities and lighting	10,000.	10,000.
Drainage	15,000.	15,000.
Structures	50,000.	350,000.
Site furnishings and signage	75,000.	150,000.
Pavement	140,000.	155,000.
Soil preparation and planting	25,000.	25,000.
Subtotal	815,000.	2,423,000.
10% Mobilization	81,500.	242,300.
20% Contingency	163,000.	533,100.
Subtotal	1,059,500.	3,198,400.
9.2% Sales tax	97,500.	294,300.
20% Engineering and Construction Admin.	211,900.	639,700.
TOTAL	**$1,368,900.**	**$4,132,400.**

Wetland D Improvements

Description of Potential Project Elements

Remove invasive plant species; supplement lowland areas with hummocks of import site soil; plant with upland native plant species to provide greater diversity and improved function of wetland.

Estimated Area Costs	Low	High
Earthwork	$ 85,000.	$108,000.
Wetland enhancement	330,000.	416,000.
Utilities and lighting	0.	0.
Drainage	5,000.	5,000.
Structures	0.	0.
Site furnishings and signage	5,000.	5,000.
Pavement	0.	0.
Soil preparation and planting	0.	0.
Subtotal	425,000.	534,000.
10% Mobilization	42,500.	53,400.
20% Contingency	85,000.	117,500.
Subtotal	552,500.	704,900.
9.2% Sales tax	50,800.	64,900.
20% Engineering and Construction Admin.	110,500.	141,000.
TOTAL	**$713,800.**	**$910,800.**

Lowell Riverfront Park

Description of Potential Project Elements

Improve existing entry providing new entry gate; upgrade gravel parking to asphalt and reconfigure for turnaround/drop-off; provide concrete sidewalk connections to street; construct water quality improvement swales; new multipurpose building with restrooms, storage, and/or meeting/classroom space; concrete plazas and patios; interpretive signage/station; bollard or low area landscape lighting; stabilize riverbank for restricted public access; bioengineer bank stabilization as appropriate; reconstruct and widen existing asphalt trail; restoration of portions of shoreline to native/shoreline plantings.

Estimated Area Costs	**Low**	**High**
Earthwork	$175,000.	$175,000.
Bank stabilization and enhancement	545,000.	545,000.
Utilities and lighting	30,000.	30,000.
Drainage	56,500.	56,500.
Structures	500,000.	1,200,000.
Site furnishings and signage	75,000.	150,000.
Pavement and curbs	200,000.	256,700.
Soil preparation, irrigation and planting	125,000.	125,000.
Subtotal	1,706,500.	2,538,200.
10% Mobilization	170,600.	253,800.
20% Contingency	341,300.	507,600.
Subtotal	2,218,400.	3,299,600.
9.2% Sales tax	204,000.	303,500.
20% Engineering and Construction Admin.	443,700.	659,900.
TOTAL	**$2,866,100.**	**$4,263,000.**

Lowell Crossing

Description of Potential Project Elements

Provide universally accessible overpass structure over BNSF mainline railroad tracks; west side ramp meets existing grade; east side earth mound and spiral trail connects to fire access road/trail; new trail on BNSF R.O.W. provides connection between Lowell Riverfront Park and fire road/trail to Simpson Pad; restore disturbed areas w/ native plantings. Cost of improvements does not include reconstruction of BNSF mitigation efforts that may have been placed prior to construction, or negotiated exchange of mitigation easement area.

Estimated Area Costs	**Low**	**High**
Earthwork	$100,000.	$152,000.
Bank stabilization and enhancement	0.	0.
Utilities and lighting	0.	0.
Drainage	0.	0.
Structures	1,200,000.	1,500,000.
Site furnishings and signage	100,000.	100,000.
Pavement and curbs	245,200.	245,200.
Soil preparation and planting	20,000.	20,000.
Subtotal	1,665,200.	2,017,200.
10% Mobilization	166,500.	201,700.
20% Contingency	333,000.	443,800.
Subtotal	2,164,700.	2,662,700.
9.2% Sales tax	199,100.	245,000.
20% Engineering and Construction Admin.	432,900.	532,500.
TOTAL	**$2,796,700.**	**$3,440,200.**