



**City of Bellevue
Development Services Department
Land Use Staff Report**

Proposal Name: Mercer Slough/112th Ave Restoration

Proposal Address: 1402 112th Ave SE

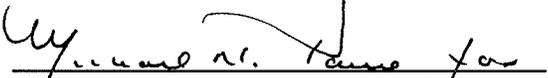
Proposal Description: Application for a combined Shoreline Substantial Development Permit and Critical Areas Land Use Permit for the removal of approximately 73,625 square feet of Himalayan blackberry, restoration of approximately 62,875 square feet of that area with a diversity of native plant species and the installation of a soft-surface trail, timber-frame pedestrian bridge, and stairway. All trail, bridge and stairway construction is proposed to occur outside of the of the ordinary high water mark of the Mercer Slough and adjacent Type F and Type N stream.

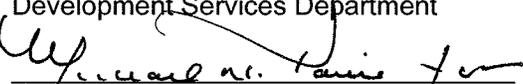
File Number: 08-136695-WG

Applicant: Geoff Bradley, City of Bellevue Parks and Community Services Department

Decisions Included: Shoreline Substantial Development Permit
Critical Areas Land Use Permit
(Process II. LUC 20.30R & 20.30P)

Planner: Kevin LeClair , Planner

**State Environmental Policy Act
Threshold Determination:** Determination of Non-Significance

Carol V. Helland, Environmental Coordinator
Development Services Department

Director's Decision: Approval with Conditions
Michael A. Brennan, Director
Development Services Department

Carol V. Helland, Land Use Director

Application Date: December 19, 2008
Notice of Application Publication Date: January 15, 2009
Decision Publication Date: June 4, 2009
Project/SEPA Appeal Deadline: June 18, 2009

For information on how to appeal a proposal, visit Development Services Center at City Hall or call (425) 452-6800. Comments on State Environmental Policy Act (SEPA) Determinations can be made with or without appealing the proposal within the noted comment period for a SEPA Determination. Appeal of the Decision must be received in the City's Clerk's Office by 5 PM on the date noted for appeal of the decision.



DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
 ENVIRONMENTAL COORDINATOR
 450 100th Ave NE., P.O. BOX 90012
 BELLEVUE, WA 98009-9012

DETERMINATION OF NON-SIGNIFICANCE

PROPONENT: Geoff Bradley, Bellevue Parks and Community Services Department

LOCATION OF PROPOSAL: The project is located along the southeast side of 112th Ave SE at the between SE 15th Street and the intersect of Bellevue Way SE. The southeast edge of the project area is the ordinary high water mark of the Mercer Slough itself.

NAME & DESCRIPTION OF PROPOSAL:

Application for a combined Shoreline Substantial Development Permit and Critical Areas Land Use Permit for the removal of approximately 73,625 square feet of Himalayan blackberry, restoration of approximately 62,875 square feet of that area with a diversity of native plant species and the installation of a soft-surface trail, timber-frame pedestrian bridge, and stairway. All trail, bridge and stairway construction is proposed to occur outside of the of the ordinary high water mark of the Mercer Slough and adjacent Type F and Type N stream.

FILE NUMBER: 08-136695-WG

The Environmental Coordinator of the City of Bellevue has determined that this proposal does not have a probable significant adverse impact upon the environment. An Environmental Impact Statement (EIS) is not required under RCW 43.21C.030(2)(C). This decision was made after the Bellevue Environmental Coordinator reviewed the completed environmental checklist and information filed with the Land Use Division of the Department of Planning & Community Development. This information is available to the public on request.

- There is no comment period for this DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's office by 5:00 p.m. on _____.
- This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS. There is a 14-day appeal period. Only persons who submitted written comments before the DNS was issued may appeal the decision. A written appeal must be filed in the City Clerk's Office by 5 p.m. on June 21, 2009.
- This DNS is issued under WAC 197-11-340(2) and is subject to a 14-day comment period from the date below. Comments must be submitted by 5 p.m. on _____. This DNS is also subject to appeal. A written appeal must be filed in the City Clerk's Office by 5 p.m. on _____.

This DNS may be withdrawn at any time if the proposal is modified so that it is likely to have significant adverse environmental impacts; if there is significant new information indicating, or on, a proposals probable significant adverse environmental impacts (unless a non-exempt license has been issued if the proposal is a private project); or if the DNS was procured by misrepresentation or lack of material disclosure.

Geoff Bradley
 Environmental Coordinator

6/4/2009
 Date

OTHERS TO RECEIVE THIS DOCUMENT:
 State Department of Fish and Wildlife
 State Department of Ecology,
 Army Corps of Engineers
 Attorney General
 Muckleshoot Indian Tribe



City of Bellevue
 Development Services Department
 P.O. Box 90012, Bellevue, WA 98009-9012
 (425) 452-6800 Fax (425) 452-5225

**Shoreline Management Act of 1971
 Permit for Shoreline Management Substantial
 Development
 Conditional Use and/or Variance**

Application No. 08-136695-WG

Date Received 12/19/2008

Approved / Date 06/04/2009
 Denied / Date _____

Type of Action:

- Substantial Development Permit
- Conditional Use Permit
- Variance Permit

Pursuant to Chapter 90.58 RCW, a permit is hereby granted to: Geoff Bradley, City of Bellevue, Parks and Community Services Department

To undertake the following development:

A combined shoreline substantial development permit and critical areas land use permit the removal of approximately 73,625 square feet of Himalayan blackberry, restoration of approximately 62,875 square feet of that area with a diversity of native plant species and the installation of a soft-surface trail, timber-frame pedestrian bridge, and stairway. All trail, bridge and stairway construction is proposed to occur outside of the of the ordinary high water mark of the Mercer Slough and adjacent Type F and Type N stream.

Upon the following property: On the south side of 112th Ave SE between SE 15th Street and Bellevue Way SE, Bellevue WA, adjacent to the Mercer Slough.

adjacent to the Mercer Slough on Lake Washington
 and/or its associated wetlands. The project will be located adjacent to Shorelines of Statewide Significance (RCW 90.58.030). The project will be located within a Shoreline Overlay District
 designation. The following master program provisions are applicable to this development:

- Land Use Code(LUC) Section 20.25E.080(B)General Regulations Applicable to all Land Use Districts & Activities
- LUC Section 20.30R Shoreline Substantial Development Permit
- Bellevue Comprehensive Plan, Shoreline Management Program Element, Policy SH-1

Development pursuant to this permit shall be undertaken in accordance with the following terms and conditions:

Conditions of Approval:

The following conditions are imposed under the Bellevue City Code or SEPA authority referenced:

1. Restoration for Areas of Temporary Disturbance: A restoration plan for all areas of temporary disturbance is required to be submitted for review and approval by the City of Bellevue prior to the issuance of the Building Clearing and Grading Permit. The plan shall include the documentation of existing site conditions and shall identify the restoration measures to return the site to it's existing conditions per LUC 20.25H.220.H.

Authority: Land Use Code 20.25H.220.H
 Reviewer: Kevin LeClair, Land Use Division

2. Restoration for Areas of New Permanent Disturbance: A restoration plan for all areas of permanent new disturbance is required to be submitted for review and approval by the City of Bellevue prior to issuance of the Clearing and Grading Permit. The plan shall document the total area of permanent disturbance and area of new critical area buffer to satisfy a replacement ratio of one to one.

Authority: Land Use Code 20.25H.220
Reviewer: Kevin LeClair, Land Use Division

3. Rainy Season restrictions: Due to the proximity to INSERT TYPE OF CRITICAL AREA, no clearing and grading activity may occur during the rainy season, which is defined as November 1 through April 30 without written authorization of the Department of Planning and Community Development. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures, representing the best available technology must be implemented prior to beginning or resuming site work.

Authority: Bellevue City Code 23.76.093.A,
Reviewer: Savina Uzunow, Development Service Department

4. Pesticides, Insecticides, and Fertilizers: The applicant must submit as part of the required Clearing and Grading Permit information regarding the use of pesticides, insecticides, and fertilizers in accordance with the City of Bellevue's "Environmental Best Management Practices".

Authority: Land Use Code 20.25H.220.H
Reviewer: Kevin LeClair, Land Use Division

5. Noise Control: The proposal will be subject to normal construction hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Upon written request to PCD, work hours may be extended to 10 pm if the criteria for extension of work hours as stated in BCC 9.18 can be met.

Authority: Bellevue City Code 9.18
Reviewer: Kevin LeClair, Land Use Division

This permit is granted pursuant to the Shoreline Management Act of 1971 and nothing in this permit shall excuse the applicant from compliance with any other federal, state or local statutes, ordinances or regulations applicable to this project, but not inconsistent with the Shoreline Management Act (Chapter 90.58 RCW).

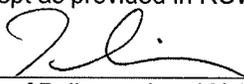
This permit may be rescinded pursuant to RCW 90.58.140(8) in the event the permittee fails to comply with the terms and conditions hereof.

Construction pursuant to this permit, or substantial progress toward construction, must be undertaken within two years of the date of final approval. This permit shall expire five years from the date of local approval.

Construction pursuant to this permit will not begin or is not authorized until twenty-one (21) days from the date of filing, as defined in RCW 90.58.140(6) and WAC 173-27-130, or until all review proceedings initiated within twenty-one (21) days from the date of such filing have terminated; except as provided in RCW 90.58.140(5) (A) (B) (C).

June 4, 2009

Date


City of Bellevue, Land Use Division

CC: Attorney General, Department of Ecology, Northwest Region
Dept. of Fish and Wildlife, Attn: Alisa Bieber, 3190 160th Avenue SE, Bellevue, WA 98008-5452
Dept. of Ecology, Attn: Dave Radabaugh, 3190 160th Avenue SE, Bellevue, WA 98008-5452

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Attachments

1. Wetland And Stream Delineation Study (Watershed Company, January 29, 2008)
2. SEPA Environmental Checklist
3. Site Plan (Watershed Company, Revised April, 6, 2009)

I. Proposal Description

The proposal is for a combined Shoreline Substantial Development Permit and Critical Areas Land Use Permit for the removal of approximately 73,625 square feet of Himalayan blackberry, restoration of approximately 62,875 square feet of that area with a diversity of native plant species and the installation of a soft-surface trail and a timber-frame pedestrian bridge, and stairway. All trail, bridge and stairway construction is proposed to occur outside of the of the ordinary high water mark of the Mercer Slough and adjacent Type F and Type N stream.

The project area is within the 200 feet shoreline overlay jurisdiction due to its proximity to the Mercer Slough. It falls within the critical area buffer of the shoreline, as well as the critical area buffer of a Type F and a Type N tributary stream to the Mercer Slough. The habitat improvement project is within the boundaries of wetlands associated with the periphery of the Mercer Slough.

The proposed project includes two activities considered “allowed uses” by Land Use Code (LUC) 20.25H.055. The activities include a habitat improvement project and a new public park/non-motorized trail facility. The critical areas overlay section (LUC 20.25H) specifies that if a proposal involves disturbance to a critical area buffer the proposal is subject to both the review of the underlying permit as well as the review and issuance of critical areas land use permit LUC 20.30P. The proposal also includes work within the shoreline jurisdiction that is requires a shoreline substantial development permit per LUC 20.25E.040.

II. Site Description, Zoning, Land Use and Critical Areas

A. Site Description

The project is located along the southeast side of 112th Ave SE at the between SE 15th Street and the intersect of Bellevue Way SE. The southeast edge of the project area is the ordinary high water mark of the Mercer Slough itself. See figure 1 below.

The project area is characterized primarily as a mowed lawn, roadside area. At the edge of the narrow lawn area, the vegetation transitions sharply into a 73,625 square foot monoculture of Himalayan blackberry. At the furthest southern extent of the project area, the vegetation community becomes more forested the overstory consisting of black cottonwood and alder trees, with a few, scattered bigleaf maples.

The understory is typical urban wetland fringe vegetation dominated by blackberry, ivy and knotweed.

At the north end of the project area the topography is a moderate 5-10% slope going from the roadside down to the Mercer Slough. At the south end the topography is considerably steeper with a 40% road-embankment behind the sidewalk that drops 6-8 feet down to a level area.

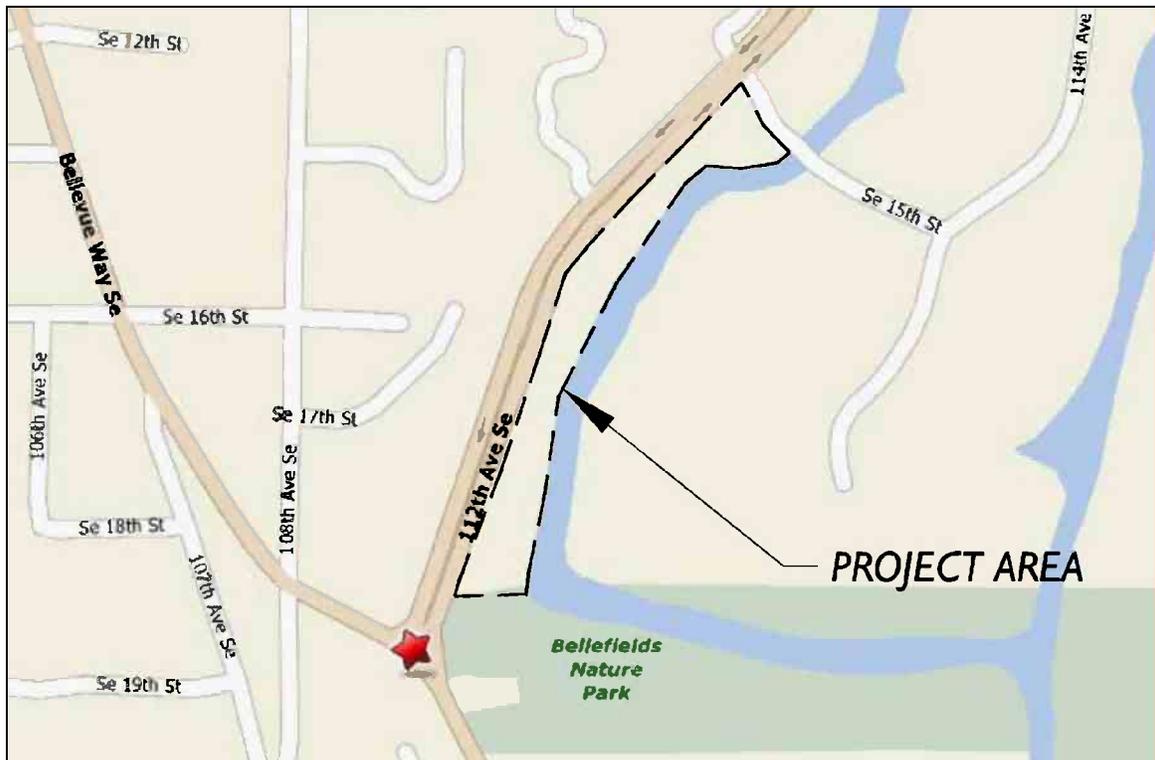


Figure: 1 Vicinity Map

B. Zoning

The project area spans two properties with two zoning designations. The majority of the project is located on a piece of private property with a Office zoning designation. The south end of the project is on public property owned and managed by the Bellevue Parks and Community Services Department. The public property is zoned R-1.

As stated above, the project area is located with both the shoreline overlay district and the critical areas overlay district.

C. Land Use Context

The project areas is located on a narrow strip of land between the roadway and the Mercer Slough. The location of the project has been identified by the city as a “gateway” location. 112th Ave SE serves as a alternative access to the south end of downtown Bellevue as well as one of two entry points into the Bellefields Office Park . 112th Ave SE is a four-lane roadway separated by a twenty foot wide median planted with native evergreens and an ornamental evergreen understory.

D. Critical Areas Functions and Values

i. Streams and Riparian Areas

A healthy aquatic environment relies on processes sustained by dynamic interaction between the stream and the adjacent vegetated riparian area. Riparian vegetation provides a buffer to help mitigate the impacts of urbanization. Riparian areas support healthy stream conditions. Riparian vegetation, particularly forested riparian areas, affect water temperature by providing shade to reduce solar exposure and regulate high ambient air temperatures, slowing or preventing increases in water temperature.

Sparsely vegetated or vegetated buffers with non-native species may not perform the needed functions of stream buffers. In cases where the buffer is not well vegetated, it is necessary to either increase the buffer width or restore the buffer to a more-native condition. Until the newly planted buffer is established the near term goals for buffer functions may not be attained.

ii. Wetlands

Wetlands provide important functions and values for both the human and biological environment—these functions include flood control, water quality improvement, and nutrient production. These “functions and values” to both the environment and the citizens of Bellevue depend on their size and location within a basin, as well as their diversity and quality.

iii. Shorelines

Shorelines provide a wide variety of functions related to aquatic and riparian habitat, flood control and water quality, economic resources, and recreation, among others. Each function is a product of physical, chemical, and biological processes at work within the overall landscape. In lakes, these processes take place within an integrated system of coupled aquatic and riparian habitats. Hence, it is important to have an ecosystem approach which incorporates an understanding of shoreline functions and values. The proposal presented herein emphasizes this ecosystem approach that considers both ecological functions, as well as the needs of an urban population for recreational access to shoreline areas.

III. Consistency with Land Use Code Requirements

A. Zoning District Dimensional Requirements:

The site is located in both office (O) and residential (R-1) zoning districts. Because no development of structures, except for the non-motorized trail bridge, are proposed, the general dimensional standards for each zoning district are not applicable.

B. Critical Areas Requirements LUC 20.25H:

i. Performance Standards for Specific Uses or Development LUC Section 20.25H.055

The project proposed both habitat improvement and a expanded public park/ non-motorized trail that is classified as a new or expanded public park. As uses that are specified in LUC 20.25H.055, performance standards are prescribed for the use and the critical area. The performance standards include:

Specified Use	Shoreline Performance Standards	Wetland Performance Standards	Stream Performance Standards
Habitat Improvement	20.25H.055.C.3.j 20.25E.080.B 20.25E.080.G	20.25H.055.C.3.j 20.25H.100	20.25H.055.C.3.j 20.25H.080.A
New Public Parks - Trails	20.25H.055.C.3.g 20.25E.080.B 20.25E.080.P	20.25H.055.C.3.g 20.25H.100	20.25H.055.C.3.g 20.25H.080.A

**ii. Consistency With Land Use Code Critical Areas Performance Standards
Applicable to All Critical Areas**

20.25H.055.C.3.j - Habitat Improvement Projects. Disturbance, clearing and grading are allowed in the critical area or critical area buffer for habitat improvement projects demonstrating an improvement to functions and values of a critical area or critical area buffer. Habitat improvement projects shall be:

1. Sponsored or cosponsored by a public agency or federally recognized tribe and whose primary function is habitat restoration; or
2. Approved by the Director pursuant to LUC [20.25H.230](#).

The project applicant is the City of Bellevue Parks and Community Services Department Natural Resource Division whose primary responsibility is the stewardship of the City of Bellevue's natural areas. Based on the existing condition of the area with the dominance of invasive Himalayan blackberry and the proposal to install a wide variety of native trees and shrubs, it is expected that the project will result in a significant improvement to the functions and values of the critical areas in the project area.

20.25H.055.C.3.g - Trails.

New non-motorized trails within the critical area or critical area buffer must meet following standards:

1. Trail location and design shall result in the least impacts on the critical area or critical area buffer;

The trail is being designed to be outside of the critical area, except in one location where the trail footbridge will span a tributary to the Mercer Slough. In this case the bridge is being designed to with the footings outside of the top of bank and with the freeboard at a foot or more above the anticipated 100-year flood elevation. It is expected that this design will have the least impact on the critical area and critical area buffer.

2. Trails shall be designed to compliment and enhance the environmental, educational, and social functions and values of the critical area with trail design and construction focused on managing and controlling public access and limiting uncontrolled access;

The trail will follow generally the edge of the cleared blackberry area and will be constructed of a soft-surface material that will not impede storm flows or impede root growth. The trail will also provide valuable wildlife viewing access to trail users.

3. Trails shall be designed to avoid disturbance of significant trees and to limit disturbance of native understory vegetation;

Trail has been designed to avoid desirable native vegetation and to preserve all significant trees in the project area. The project will route the trail through areas of dense non-native species. These areas will be restored with a dense coverage of native plants in accordance with critical areas requirements for mitigation and restoration per LUC 20.25H.210.

4. Trails shall be designed to avoid disturbance of habitat used for salmonid rearing or spawning or by any species of local importance;

The trail bridge is designed to span over a Type 4 stream with a height that is above the 100-year flood elevation and with footings outside of the top of bank. The bridge will have no disturbance to spawning or rearing habitat of Salmonid species.

5. The trail shall be the minimum width necessary to accommodate the intended function or objective;

The trail width is a typical 4-foot width. This is the minimum standard for a non-motorized, soft-surface trail that affords a safe and maintainable surface.

6. All work shall be consistent with the City of Bellevue's "Environmental Best Management Practices" and all applicable City of Bellevue codes and standards, now or as hereafter amended;

The Bellevue Parks and Community Services Department is the applicant and follows the best management practices the City of Bellevue's "Environmental Best Management Practices."

7. The facility shall not significantly change or diminish overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

The project is adding no new fill material that will significantly change, diminish or alter aquatic area flow peaks duration or volume or flood storage capacity.

8. Where feasible and consistent with any accessibility requirements, any trail shall be constructed of pervious materials;

The trail is not intended to be universally accessible. It will be constructed of a native soil subgrade with a medium grade bark mulch surface. It will be permeable.

9. Crossings over and penetrations into wetlands and streams shall be generally perpendicular to the critical area, and shall be accomplished by bridging or other technique designed to minimize critical area disturbance considering the entire trail segment and function; and

The only penetration into a stream riparian area is for the trail bridge. As stated above, the design minimizes the intrusion by utilizing a span that can be high enough and far enough across to be above the flood elevation and outside of the top of bank.

10. Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

A mitigation plan meeting the requirements of LU 20.25H.210 has been submitted by the Parks and Community Services Department.

iii. Consistency With Shoreline Performance Standards

20.25E.080.B - General Regulations Applicable to All Land Use Districts and Activities.

1. Where applicable, all federal and state water quality and effluent standards shall be met.

No work will be occurring below the ordinary high water mark. Temporary erosion and sedimentation controls will be in place and inspected by the City of Bellevue inspectors prior to commencement of clearing of invasive vegetation.

2. If a property extends into the Shoreline Overlay District, the Shoreline Master Program Policies and these use regulations shall apply only to that portion of the property lying within the Shoreline Overlay District.

The entire project area is within the Shoreline Overlay District. Therefore, the entire project is subject to the provisions of the Shoreline Master Program. The project is consistent with natural resource restoration and recreational access policies of the master program.

3. All development within the Shoreline Overlay District shall be accompanied by a plan indicating methods of preserving shoreline vegetation and for control of erosion during and following construction in accordance with Part [20.25H](#) LUC, City of Bellevue Clearing and Grading regulations, Chapter 23.76 BCC, and the Comprehensive Plan.

The project plans include a plan to preserve desirable native vegetation and to ensure control of erosion through a temporary erosion and sedimentation control plan.

4. Special care shall be exercised to preserve vegetation in wetland, shoreline and stream corridor bank areas in order to prevent soil erosion. Removal of vegetation from or disturbance of shoreline critical areas and shoreline critical area buffers, and from other critical area and critical area buffers shall be prohibited, except in conformance with Part [20.25H](#) LUC and the specific performance standards of this section.

The project includes a plan to mitigate and restore the entire project area in accordance with LUC 20.25H.210.

5. Maximum height limitation for any proposed structure within the Shoreline Overlay District shall be 35 feet, except in land use districts with more restrictive height limitations. The method of measuring the maximum height is described in WAC 173-14-030(6). Variances to this height limitation may be granted pursuant to Part [20.30H](#) LUC.

No structure is proposed that is taller than 4 feet. The structures that will be as tall as 4 feet are the railings on the proposed trail bridge and possibly on the stairway leading up to the intersection of 112th Ave SE and Bellevue Way SE.

6. The Bellevue Shoreline Master Program, in conjunction with existing Bellevue land use ordinances and Comprehensive Plan policies, shall guide all land use decisions in the Shoreline Overlay District.

The project has been reviewed for conformance with the Comprehensive Plan, the Shoreline Master Program and the Land Use Code.

7. Any development within the Shoreline Overlay District shall comply with all applicable Bellevue ordinances, including but not limited to the Bellevue Land Use Code, Sign Code, and clearing and grading regulations.

The project has been reviewed for compliance with applicable city codes and standards. The project must apply for subsequent underlying development permits to further ensure compliance with applicable codes and regulations.

8. The dead storage of watercraft seaward of the ordinary high water mark of the shoreline is prohibited.

This standards is not applicable.

9. Where applicable, state and federal standards for the use of herbicides, pesticides and/or fertilizers shall be met, unless superseded by City of Bellevue ordinances. Use of such substances in the shoreline critical area and shoreline critical area buffer shall comply with the City's "Environmental Best Management Practices."

The Bellevue Parks and Community Services Department is the applicant and follows the best management practices the City of Bellevue's "Environmental Best Management Practices."

10. Adequate storm drainage and sewer facilities must be operational prior to construction of new development within the Shoreline Overlay District. Storm drainage facilities shall be separated from sewage disposal systems.

This standard is not applicable.

20.25E.080.G - Clearing and Grading Regulations.

1. All clearing, grading, excavating, and fill in the Shoreline Overlay District shall comply with the provisions of Chapter 23.76 BCC, now or as hereafter amended.
2. No clearing, grading, excavating, or fill shall be allowed within the shoreline critical area or shoreline critical area buffer except as permitted by this Part 20.25E, or in association with activities allowed under Part [20.25H](#) LUC.
3. Wherever the City determines that the act or intended act of clearing, grading, excavation or fill has become or will constitute a hazard to life or limb, or endangers property, or adversely affects the safety, use of, or stability of a public way, drainage channel or natural stream corridor, including siltation and sedimentation therein, the owner of the property upon which the clearing, excavation or fill is located or other person or agent in the City shall, within the period specified therein, terminate such clearing, grading, excavation, embankment or fill, or eliminate the same from the development plan, or modify the plans, as may be required so as to eliminate the hazard and be in conformance with the requirements of this Code.

The project has preliminarily been reviewed and approved with conditions for compliance with the Clearing and Grading Code. The project will be review under a subsequent underlying building permit, where final temporary erosion and sedimentation controls will be reviewed and approved for compliance.

20.25E.080.P - Recreation Activities Regulations.

1. Swimming shall be separated from public or semipublic boat launching areas.
2. Public street ends in the Shoreline Overlay District may be developed for public recreational activities.
3. Recreational activities within the Shoreline Overlay District shall be permitted when designed subject to the provisions of the Bellevue Shoreline Master

Program and its use regulations.

4. Public and private recreation activities in the shoreline critical area and shoreline critical area buffer shall comply with the requirements of LUC [20.25H.055](#).

The project has been reviewed for consistency with the Shoreline Master Program and compliance with the requirements of the critical areas overlay district. The actions of habitat improvement and new public park-trails are both specified activities in LUC 20.25H.055.

iv. Consistency With Wetlands Performance Standards

20.25H.100 – General

Development on sites with a wetland or wetland critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

1. Lights shall be directed away from the wetland.
2. Activity that generates noise such as parking lots, generators, and residential uses, shall be located away from the wetland, or any noise shall be minimized through use of design and insulation techniques.
3. Toxic runoff from new impervious area shall be routed away from the wetlands.
4. Treated water may be allowed to enter the wetland critical area buffer.
5. The outer edge of the wetland critical area buffer shall be planted with dense vegetation to limit pet or human use.
6. Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream buffer shall be in accordance with the City of Bellevue’s “Environmental Best Management Practices,” now or as hereafter amended.

Only performance standards 5 and 6 are applicable to the project. The entire buffer area that is being restored will be planted with native vegetation. The Bellevue Parks and Community Services Department is the applicant and will install and maintain the project to ensure success and adherence to the practices contained in the city’s “Environmental Best Management Practices.”

v. Consistency With Stream Performance Standards

20.25H.080.A - General

Development on sites with a type S or F stream or associated critical area buffer shall incorporate the following performance standards in design of the development, as applicable:

1. Lights shall be directed away from the stream.
2. Activity that generates noise such as parking lots, generators, and residential uses, shall be located away from the stream, or any noise shall be minimized through use of design and insulation techniques.
3. Toxic runoff from new impervious area shall be routed away from the stream.
4. Treated water may be allowed to enter the stream critical area buffer.
5. The outer edge of the stream critical area buffer shall be planted with dense vegetation to limit pet or human use.
6. Use of pesticides, insecticides and fertilizers within 150 feet of the edge of the stream buffer shall be in accordance with the City of Bellevue’s “Environmental Best Management Practices,” now or as hereafter amended.

Only performance standards 5 and 6 are applicable to the project. The entire buffer area that is being restored will be planted with native vegetation. The Bellevue Parks and Community Services Department is the applicant and will

install and maintain the project to ensure success and adherence to the practices contained in the city's "Environmental Best Management Practices."

IV. Public Notice and Comment

Application Date: December 12, 2008
Public Notice (500 feet): January 15, 2009
Minimum Comment Period: February 16, 2009

The Notice of Application for this project was published in the City of Bellevue weekly permit bulletin on January 15, 2009. It was mailed to property owners within 500 feet of the project site. No comments have been received from the public as of the writing of this staff report.

V. Summary of Technical Reviews

Clearing and Grading:

The Clearing and Grading Division of the Planning and Community Development Department has reviewed the proposed site development for compliance with Clearing and Grading codes and standards. The Clearing and Grading staff found no issues with the proposed development.

Utilities:

The Utilities Department Development Review Division reviewed the proposal and submitted the following comments to be address as conditions of approval of the subsequent underlying development permit. The storm drains that outlet to the project area must be shown on the plan, including the dimension and pipe type.

The foot bridge must provide sufficient capacity for the 100-year storm runoff (for the entire area draining there, as if it were fully developed) to pass with a minimum 1 foot freeboard below the lowest bridge girder. See Utilities Engineering Standard section D4-04.6.

If newly irrigated landscaping exceeds 500 square feet, requirements for water budgeting apply, pursuant to Water Code section 24.02.205.

VI. State Environmental Policy Act (SEPA)

The environmental review indicates no probability of significant adverse environmental impacts occurring as a result of the proposal. The Environmental Checklist submitted with the application adequately discloses expected environmental impacts associated with the project. The City codes and requirements, including the Clear and Grade Code, Utility Code, Land Use Code, Noise Ordinance, Building Code and other construction codes are expected to mitigate potential environmental impacts. Therefore, issuance of a Determination of Non-Significance (DNS) is the appropriate threshold determination under the State Environmental Policy Act (SEPA) requirements.

A. Earth and Water

A temporary erosion and sedimentation control plan is included in the project plans, and addresses all requirements for restoring the site to its current condition as well as erosion and sedimentation management practices. Erosion and sediment control best management practices include the installation of silt fencing around the work area and covering exposed soils to prevent migration of soils to the adjacent

waterways. The applicant will also be required to submit information regarding the use of pesticides, insecticides, and fertilizers to avoid impacts to water resources. See Section X for a related condition of approval.

B. Animals

The project site is part of a larger natural area that contains quality habitat for birds and mammals. The proposed trail is designed to snake through existing mature vegetation, and no significant trees will be removed with this proposal. No impacts are anticipated since no significant trees will be removed. The adjacent water way is known habitat for salmonid fish species. The proposal include the installation of trees along the edge of the water way that will eventually enhance overwater coverage by vegetation and should result in an improvement to the wildlife habitat value of the area.

C. Plants

Mitigation for temporary and permanent disturbance will be approved pursuant to an approved restoration plan. See Section X for related conditions of approval.

D. Noise

The site is most adjacent to an office complex that is most sensitive to disturbance from noise during weekday, day time hours. Across the four-lane roadway with a vegetated median there is residential land uses who are most sensitive to noise disturbance during evening, late night and weekend hours when they are likely to be at home. Construction noise will be limited by the City's Noise Ordinance (Chapter 9.18 BCC) which regulates construction hours and noise levels. See Section X for a related condition of approval.

VII. Changes to proposal as a result of City review

The only significant changes resulting from city review of the proposal was a realignment of the trail route to avoid disturbance to a steep slope area beneath the roadway and to increase planting densities to result in more immediate vegetative cover in the restoration area. These changes improved the usability of the proposed trail layout and increased the potential for earlier realization of improvement in functions and values.

VIII. Decision Criteria

A. Shoreline Substantial Development Permit Decision Criteria 20.30R

The Director may approve or approve with modifications if:

- 1. The applicant has carried the burden of proof and produced evidence sufficient to support the conclusion that the application merits approval or approval with modifications; and**

Finding: The applicant has supplied a restoration and mitigation plan consistent with the Land Use Code along with a wetland report that has demonstrated that the project merits approval with conditions.

- 2. The applicant has demonstrated that the proposal complies with the applicable decision criteria of the Bellevue City Code; and**

Finding: The applicant's application materials and support documentation including the attached plans, SEPA environmental checklist and wetland delineation report are demonstration of compliance with the applicable decision criteria.

3. The applicant has demonstrated that the proposal is consistent with the policies of the Shoreline Management Act and the provisions of Chapter 173-14 WAC and the Master Program.

Finding: The applicant's application materials and support documentation including the attached plans, SEPA environmental checklist and wetland delineation report are demonstration of consistency with shoreline master program. For example, master program policy SH-3 states, "Give priority to uses and activities which improve or are compatible with the natural amenities of the shorelines, provide public access, or depend on a shoreline location." The proposal enhances shoreline recreational access in a highly populated area in a low-impact, passive way. It is also supported by master program policy SH-13, which states, "Protect and improve wildlife and aquatic habitats, particularly spawning waters." The restoration component of this proposal is anticipated to enhance the habitat features of the Mercer Slough by shading the waters to enhance rearing habitat for salmon.

B. Critical Areas Land Use Permit Decision Criteria 20.30P

The proposal, as conditioned below, meets the applicable regulations and decision criteria for a Critical Areas Land Use Permit pursuant to LUC Section 20.30P.

1. The proposal obtains all other permits required by the Land Use Code;

Finding: In addition to the Shoreline Substantial Development and Critical Areas Land Use Permit, the project will apply for and obtain the necessary building permit to carry out the proposed action.

2. The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer;

Finding: The proposed project involves the removal of invasive species (Himalayan blackberry) from a critical area and critical area buffer to allow for construction of a pervious pedestrian trail, bridge crossing and timber staircase. Design and placement of the trail, bridge and staircase have avoided impacts to the on-site wetland and stream channels. Impacts are proposed within the 200-foot shoreline buffer (from Mercer Slough), 225-foot Category II wetland buffer, 100-foot Type F stream buffer, and 50-foot Type N stream buffer.

Additionally, the project proposes an extensive restoration plan that includes native plantings within the wetland and wetland buffer (see attached plans). Therefore, through blackberry removal and native restoration, the design and development of the proposed project is anticipated to improve ecological function over the long-term. Furthermore, the public will now have access to this area to enjoy the improved habitat.

3. The proposal incorporates the performance standards of Part 20.25H to the maximum extent applicable, and ;

Finding: Design of the proposed trail, bridge crossing, and staircase will result in the least amount of critical area impacts possible. All impacts will take place within critical area buffers. Additionally, invasive species within the critical area and critical area buffer will be removed and an extensive restoration plan will be implemented.

The entire length of the trail is approximately 1,890 feet long, all of which will be located within shoreline and wetland buffers, and 307 feet of which will be located within stream buffers. The project also proposes the removal of approximately 73,625 sq. ft. of invasive plants and the planting of 62,875 sq. ft. of native vegetation. Furthermore, to limit impacts within the critical area buffer, the proposed trail will be constructed of pervious materials. The woodchips proposed for the trail will help avoid erosion of the trail during wet weather.

4. The proposal will be served by adequate public facilities including street, fire protection, and utilities; and;

Finding: The proposed project will be served by adequate public facilities. No additional public facilities will be required with implementation of the proposed project.

5. The proposal includes a mitigation or restoration plan consistent with the requirements of LUC Section 20.25H.210; and

Finding: A mitigation and restoration plan has been prepared in accordance with the requirements of LUC 20.25H.210.

6. The proposal complies with other applicable requirements of this code.

Finding: As discussed in Section IV & V of this report, the proposal complies with all other applicable requirements of the Land Use Code.

IX. Conclusion and Decision

After conducting the various administrative reviews associated with this proposal, including Land Use Code consistency, SEPA, City Code and Standard compliance reviews, the Director does hereby **approve with conditions** the proposal for the removal of approximately 73,625 square feet of Himalayan blackberry, restoration of approximately 62,875 square feet of that area with a diversity of native plant species and the installation of a soft-surface trail and a timber-frame pedestrian bridge and stairway. All trail, bridge and stairway is proposed to occur outside of the of the ordinary high water mark of the Mercer Slough and adjacent Type F stream.

Note- Expiration of Approval: In accordance with LUC 20.30R.150 a Shoreline Substantial Development Permit automatically expires and is void if the applicant fails to file for a Building Permit, Clearing and Grading Permit or other necessary development permits within two years of the effective date of the approval.

X. Conditions of Approval

The applicant shall comply with all applicable Bellevue City Codes and Ordinances including but not limited to:

<u>Applicable Ordinances</u>	<u>Contact Person</u>
Clearing and Grading Code- BCC 23.76	Savina Uzunow, 425-452-7860
Land Use Code- BCC 20.25H	Kevin LeClair, 425-452-2928
Noise Control- BCC 9.18	Kevin LeClair, 425-452-2928

The following conditions are imposed under the Bellevue City Code or SEPA authority referenced:

1. Restoration for Areas of Temporary Disturbance: A restoration plan for all areas of temporary disturbance is required to be submitted for review and approval by the City of Bellevue prior to the issuance of the Building Clearing and Grading Permit. The plan shall include the documentation of existing site conditions and shall identify the restoration measures to return the site to its existing conditions per LUC 20.25H.220.H.

Authority: Land Use Code 20.25H.220.H
Reviewer: Kevin LeClair, Land Use Division

2. Restoration for Areas of New Permanent Disturbance: A restoration plan for all areas of permanent new disturbance is required to be submitted for review and approval by the City of Bellevue prior to issuance of the Clearing and Grading Permit. The plan shall document the total area of permanent disturbance and area of new critical area buffer to satisfy a replacement ratio of one to one.

Authority: Land Use Code 20.25H.220
Reviewer: Kevin LeClair, Land Use Division

3. Rainy Season restrictions: Due to the proximity to INSERT TYPE OF CRITICAL AREA, no clearing and grading activity may occur during the rainy season, which is defined as November 1 through April 30 without written authorization of the Department of Planning and Community Development. Should approval be granted for work during the rainy season, increased erosion and sedimentation measures, representing the best available technology must be implemented prior to beginning or resuming site work.

Authority: Bellevue City Code 23.76.093.A,
Reviewer: Savina Uzunow, Development Service Department

4. Pesticides, Insecticides, and Fertilizers: The applicant must submit as part of the required Clearing and Grading Permit information regarding the use of pesticides, insecticides, and fertilizers in accordance with the City of Bellevue's "Environmental Best Management Practices".

Authority: Land Use Code 20.25H.220.H
Reviewer: Kevin LeClair, Land Use Division

5. Noise Control: The proposal will be subject to normal construction hours of 7 am to 6 pm Monday through Friday and 9 am to 6 pm on Saturdays, except for Federal holidays and as further defined by the Bellevue City Code. Upon written request to PCD, work hours may be extended to 10 pm if the criteria for extension of work hours as stated in BCC 9.18 can be met.

Authority: Bellevue City Code 9.18
Reviewer: Kevin LeClair, Land Use Division

January 29, 2008

Geoff Bradley
City of Bellevue
Parks and Community Services Department
450 – 110th Avenue NE
Bellevue, WA 98004
Email: gbradley@bellevuewa.gov

Re: **112th Avenue/Mercer Slough Restoration Project**
Wetland and Stream Delineation Study – TWC Ref# 070203

Dear Geoff:

On January 25, 2008, The Watershed Company Ecologists Meagan McManus and I conducted a wetland and stream delineation study along Mercer Slough West, located east of 112th Avenue NE and north of Bellevue Way SE in Bellevue. Bellevue Parks is currently considering an improvement plan for this site that would include invasive plant removal, a trail, and native plantings.

This letter summarizes the findings of this study and details applicable federal, state, and local wetland regulations. The following attachments are included:

- Wetland and Stream Delineation Sketch
- Wetland Determination Data Forms
- Wetland Rating Form

Methods

Wetland

The subject property was evaluated for wetlands using methodology from the *Washington State Wetlands Identification and Delineation Manual* (Manual) (Washington Department of Ecology [Ecology] 1997). Wetland boundaries were determined on the basis of an examination of vegetation, soils, and hydrology. Areas meeting the criteria set forth in the Manual were determined to be wetland. Soil, vegetation, and hydrologic data were sampled at several locations on the property to make the determination. We recorded data at six of these locations. Data points are marked with yellow- and black-striped flags.

Wetland edges are marked with pink- and black-striped flags. The boundary of Wetland A is marked with 109 flags.

Pursuant to the Bellevue Land Use Code (LUC 20.25H.095), Wetland A was classified using the *Western Washington Wetland Rating System* (Ecology, Aug 2004, version 2). Field observations and aerial photos from King County's mapping website (iMAP) were used to rate this wetland.

Streams

Stream ordinary high water marks (OHWM) in the restoration project vicinity were determined based on the definition provided by the Washington Department of Fish and Wildlife (WDFW) and WAC 220-110-020(57). The OHWM is located by examining the bed and bank physical characteristics and vegetation to ascertain the water elevation for mean annual floods. Areas meeting the WDFW definition were determined to be the OHWM edge.

Stream OHWMs are marked with blue- and white-striped flags. Streams A and B are marked with 11 and 15 flags, respectively. The streams are classified according to LUC 20.25H.075. Field observations and King County watershed maps (iMAP) were used to classify the subject streams.

Findings

The restoration project area is located along Mercer Slough West in the Cedar-Sammamish Watershed (WRIA 08). Two streams and one wetland are located in or adjacent to the project area.

Wetland

The on-site wetland area closely follows the edge of the slough, except at the south end where it spreads out beyond the dredged channel. Patches of yellow pond-lily (*Nuphar lutea*) are scattered along the Mercer Slough West channel. Red alder (*Alnus rubra*), Pacific willow (*Salix lucida spp lasiandra*), red osier-dogwood (*Cornus sericea*), salmonberry (*Rubus spectabilis*), and Himalayan blackberry (*Rubus armeniacus*) characterize the wetland edge. Native trees and shrubs dominate the southern extent of the flagged wetland area. Some invasive Himalayan blackberry and reed canarygrass (*Phalaris arundinacea*) are also present. Soils in Wetland A range in color from a black (7.5YR 2.5/1) to a very dark brown (7.5YR 2.5/2, 10YR 2/2). These wetland soils are organic and emit a strong sulfidic odor. Soils were saturated to the surface at the time of our site visit and free water was observed at a 10-inch depth.

Non-wetland

The non-wetland project area is dominated by Himalayan blackberry and mowed lawn grasses. Birch (*Betula sp.*), black cottonwood, red alder, and red elderberry are sparsely interspersed with the Himalayan blackberry. The south end of the site is characterized by black cottonwood, Himalayan blackberry, and highly invasive Bohemian knotweed (*Polygonum x. bohemicum*). Soils beyond the wetland edge ranged from a dry dark gray (10YR 3/1) silty loam to a very dark brown (7.5YR 2.5/2) organic soil with no sulfidic odor. Soils in these areas either lacked saturation or had minimal surface saturation. Additionally, fifty percent or fewer of the

dominant plants were facultative, facultative-wet, or obligate. These areas did not meet the wetland criteria for vegetation or hydrology.

Streams

King County DNR maps show that Chinook, Coho, and Steelhead utilize the eastern channel through Mercer Slough. Cutthroat trout and Sockeye salmon are known to use both the eastern and western slough channels. It is reasonable to presume that fish in Lake Washington could potentially access Mercer Slough West.

Stream A, located near the north end of the site, is conveyed under 112th Avenue SE via a corrugated metal pipe. The stream daylights at the end of the culvert, which is approximately three feet in diameter, and flows into Mercer Slough West. The stream channel is approximately ten feet wide and the gradient is slight. Fish use is presumed in this short segment of Stream A, between the culvert and Mercer Slough West, due to a lack of fish barriers, low gradient, and connectivity to the slough and Lake Washington. However, fish use upstream is unlikely due to a plunge of approximately two feet at the culvert.

Located at the south end of the project area, Stream B is conveyed under the 112th Avenue SE and Bellevue Way SE intersection via two corrugated metal pipes. The pipes are approximately three feet and two feet in diameter, respectively. There is a four to five foot plunge at the culverts, where the stream daylights and flows through an incised channel before sheet flowing through Wetland A. Stream B had some flow on the day of our site visit, but the flow and defined channel infiltrated inside Wetland A before reaching Mercer Slough. Approaching the edge of the slough, a narrow shallow channel appears to carry flow along a moderate gradient during storm events. However, this stream appears to be ephemeral and not fish passable.

Wildlife

The slough wetland area provides habitat for a variety of waterfowl, including herons, and several duck species. Forested and scrub-shrub wetland patches also provide habitat for song birds, including red-wing blackbirds, chidadees, wrens, finches, and robins. The dense corridor of Himalayan blackberry along the wetland edge also provides habitat and food for these birds.

Local Regulations

In Bellevue, wetlands and streams are regulated under critical areas ordinance no. 5680. According to LUC 20.25H.095, buffer width determinations for wetlands are based on wetland category and habitat functions score. Wetland A contains multiple hydrogeomorphic (HGM) classes, including lake-fringe, depressional, and some riverine patches. This makes Wetland A difficult to classify by HGM class. Therefore, the ratings for both depressional and lake-fringe HGM classes were compared using the Ecology rating form. Both HGM ratings resulted in a Category II rating. Additionally according to the special conditions rating criteria, Wetland A is a Category II wetland, because it is at least 1 acre, contains depressions with open water, and contiguous freshwater wetlands. Wetland A scores 31 points for habitat functions and 66 points

total. Category II wetlands in the City of Bellevue with habitat scores of 29 to 36 points require a 225 foot buffer (LUC 20.25H.095.C). Additionally, Bellevue requires that there be a structure setback of 20 feet (for Category II wetlands with high habitat functions) measured from the edge of the wetland buffer (20.25H.035.A). However, no structures are proposed for this project.

Buffer width determinations for streams are based on stream type and the current site condition (developed or undeveloped). This parcel tract is currently undeveloped. Due to documented fish use in the adjacent slough, Stream A meets the definition of a Type F stream. Stream B is classified as Type N, due to ephemeral flow and lack of a channel through the wetland area above the slough. Open streams on undeveloped sites in Bellevue require the buffer listed in Table 2 below. Additionally, Bellevue requires that there be a structure setback of 20 feet for Type F streams and 15 feet for Type N streams (20.25H.075.D).

Table 2. Stream classification and buffer per LUC 20.25H.075.C.

Stream	Stream Classification	Buffer
Stream A	Type F	100 feet
Stream B	Type N	50 feet

Uses and development allowed within critical areas pursuant to LUC 20.25H.055 include new or expanded city and public parks, vegetation management, and new or expanded bridges and culverts. The applicable performance standards in subsection C would apply to the allowed uses. Pursuant to LUC 20.25H.055.C.2, new and expanded uses or development may be allowed in a critical area or critical area buffer if there are no feasible alternatives with less impact. The project plan must minimize critical area impacts. New or expanded bridges and culverts shall comply with the WDFW *Design of Road Culverts for Fish Passage*. According to LUC 20.25H.055.C.3.g, trails in new and expanded city and public parks that are located within a critical area and/or buffer must meet the following standards:

- (A) Trail location and design shall result in the least impacts on the critical area or critical area buffer;
- (B) Trails shall be designed to compliment and enhance the environmental, educational, and social functions and values of the critical area with trail design and construction focused on managing and controlling public access and limiting uncontrolled access;
- (C) Trails shall be designed to avoid disturbance of significant trees and to limit disturbance of native understory vegetation;
- (D) Trails shall be designed to avoid disturbance of habitat used for salmonid rearing or spawning or by any species of local importance;
- (E) The trail shall be the minimum width necessary to accommodate the intended function or objective;
- (F) All work shall be consistent with the City of Bellevue’s “Environmental Best Management Practices” and all applicable City of Bellevue codes and standards, now or as hereafter amended;
- (G) The facility shall not significantly change or diminish overall aquatic area flow peaks, duration or volume or flood storage capacity, or hydroperiod;

- (H) Where feasible and consistent with any accessibility requirements, any trail shall be constructed of pervious materials;
- (I) Crossings over and penetrations into wetlands and streams shall be generally perpendicular to the critical area, and shall be accomplished by bridging or other technique designed to minimize critical area disturbance considering the entire trail segment and function; and
- (J) Areas of new permanent disturbance and all areas of temporary disturbance shall be mitigated and/or restored pursuant to a mitigation and restoration plan meeting the requirements of LUC 20.25H.210.

Removal of noxious/invasive species from a critical area buffer is allowed without a Critical Areas Land Use Permit or a Vegetation Management Plan, if the removal is done with hand labor and hand-operated equipment. Hazard trees may also be removed from a critical area or critical area buffer if removed trees are replaced pursuant to a restoration plan meeting the requirements of LUC 20.25H.210, wildlife snags are created where possible, and all cut tree stems and branches are left in the critical area or critical area buffer (LUC 20.25H.055.C.i). Short- and long-term management of vegetation in a critical area or critical area buffer including vegetation replacement requires a Vegetation Management Plan (LUC 20.25H.055.C.iv).

Pursuant to 20.25H.080.A and 20.25H.100, development on sites with a type S or F stream, wetland, or associated critical area buffer must reduce impacts by directing lights and noise away from the critical area, redirecting toxic runoff away from the critical area, limiting the use of pesticides, insecticides and fertilizers as directed by the city's *Environmental Best Management Practices*, and densely planting the outer edge of the buffer to limit access.

Any plan drafted to do work in a critical area or its buffer must be approved by the City of Bellevue through a review process.

State and Federal Regulation

Wetlands are also regulated by the U.S. Army Corps of Engineers (Corps) under section 404 of the Clean Water Act. Any filling of Waters of the State, including wetlands (except isolated wetlands), would likely require notification and permits from the Corps. Wetland A would not be considered isolated. Federally permitted actions that could affect endangered species (i.e. salmon or bull trout) may also require a biological assessment study and consultation with the U.S. Fish and Wildlife Services and/or the National Marine Fisheries Service. Application for Corps permits may also require an individual 401 Water Quality Certification and Coastal Zone Management Consistency determination from the State Department of Ecology.

WDFW has jurisdiction over any project that may "use, divert, obstruct, or change the natural bed of any of the salt or freshwaters of the state" (RCW 77.55.011). Any proposal to conduct in-stream work requires a Hydraulic Project Approval from WDFW.

Generally, neither the Corps nor Ecology regulates buffers unless direct wetland impacts are proposed.

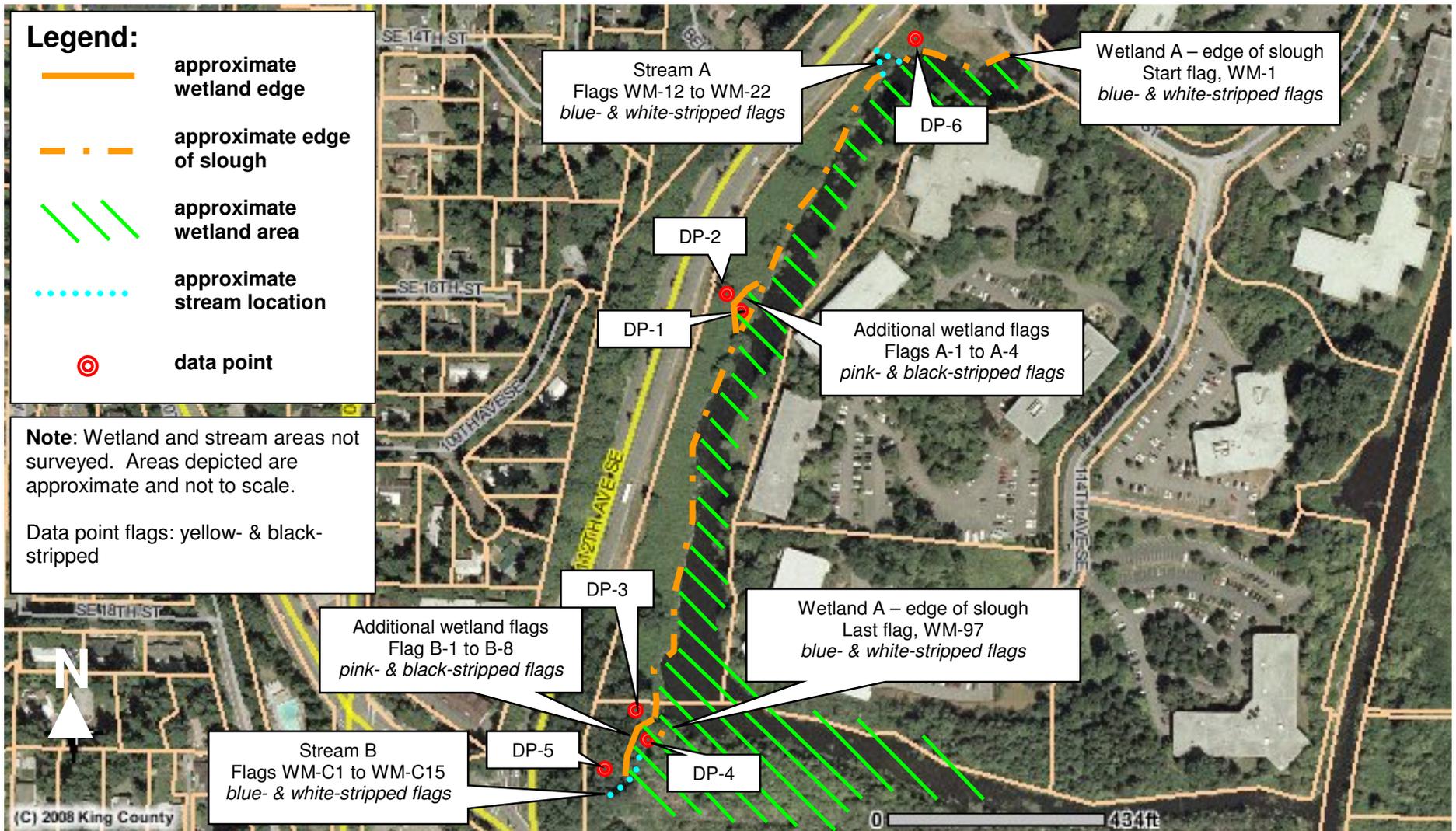
Please call if you have any questions or if we can provide additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Nell Lund". The signature is fluid and cursive, with the first name "Nell" and the last name "Lund" clearly distinguishable.

Nell Lund
Ecologist

Enclosures



Wetland and Stream Delineation Sketch

(parcel number 066288TRCT)

East of 112th Avenue SE and north of Bellevue Way SE

City of Bellevue, Washington

Prepared for Bellevue Parks & Community Services Dept.

Attn: Geoff Bradley

January 24, 2008



750 Sixth Street South | Kirkland | WA 98033

p 425.822.5242 f 425.827.8136

Wetland name or number A

WETLAND RATING FORM – WESTERN WASHINGTON
Version 2 – Updated July 2006 to increase accuracy and reproducibility among users

Name of wetland (if known): 112th Ave SE/Mercer Slough Date of site visit: 1/24/2008

Rated by: MF, NL Trained by Ecology? Yes No Date of Training Fall '06

SEC: 5 TOWNSHIP: 24N RANGE: 5E Is S/T/R in Appendix D? Yes No

Map of wetland unit: Figure Estimated Size

SUMMARY OF RATING

Category based on FUNCTIONS provided by wetland

I II III IV

Score for Water Quality Functions	24
Score for Hydrologic Functions	11
Score for Habitat Functions	31
TOTAL score for functions	66

Category based on SPECIAL CHARACTERISTICS of wetland

I II Does not Apply

Final Category (choose the “highest” category from above)

Check the appropriate type and class of wetland being rated.

Wetland Type	Wetland Class	
Estuarine	Depressional	X
Natural Heritage Wetland	Riverine	X
Bog	Lake-fringe	X
Mature Forest	Slope	
Old Growth Forest	Flats	
Coastal Lagoon	Freshwater Tidal	
Interdunal		
None of the above	X Check if unit has multiple HGM classes present	X

Wetland name or number A

Does the wetland unit being rated meet any of the criteria below?

If you answer YES to any of the questions below you will need to protect the wetland according to the regulations regarding the special characteristics found in the wetland.

Check List for Wetlands That May Need Additional Protection (in addition to the protection recommended for its category)	YES	NO
SP1. <i>Has the wetland unit been documented as a habitat for any Federally listed Threatened or Endangered animal or plant species (T/E species)?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state or federal database.		X
SP2. <i>Has the wetland unit been documented as habitat for any State listed Threatened or Endangered animal species?</i> For the purposes of this rating system, “documented” means the wetland is on the appropriate state database. Note: Wetlands with State listed plant species are categorized as Category I Natural Heritage Wetlands (see p. 19 of data form).	X ¹	X
SP3. <i>Does the wetland unit contain individuals of Priority species listed by the WDFW for the state?</i>	X ²	
SP4. <i>Does the wetland unit have a local significance in addition to its functions?</i> For example, the wetland has been identified in the Shoreline Master Program, the Critical Areas Ordinance, or in a local management plan as having special significance.	X ³	

¹**Threatened and Endangered animals (fish) are not documented as present in Mercer Slough West, but cannot be presumed absent**

²**Puget sound Steelhead are listed as a Washington State Species of Concern**

³**Continuation of 320-acre park, largest wetland on Lake Washington**

To complete the next part of the data sheet you will need to determine the Hydrogeomorphic Class of the wetland being rated.

The hydrogeomorphic classification groups wetlands into those that function in similar ways. Classifying the wetland first simplifies the questions needed to answer how it functions. The Hydrogeomorphic Class of a wetland can be determined using the key below. See p. 24 for more detailed instructions on classifying wetlands.

Classification of Wetland Units in Western Washington

If the hydrologic criteria listed in each question do not apply to the entire unit being rated, you probably have a unit with multiple HGM classes. In this case, identify which hydrologic criteria in Questions 1-7 apply, and go to Question 8.

1. Are the water levels in the wetland unit usually controlled by tides (i.e. except during floods)?
 NO – go to 2 YES – the wetland class is **Tidal Fringe**

If yes, is the salinity of the water during periods of annual low flow below 0.5 ppt (parts per thousand)? **YES – Freshwater Tidal Fringe** **NO – Saltwater Tidal Fringe (Estuarine)**

*If your wetland can be classified as a Freshwater Tidal Fringe use the forms for **Riverine** wetlands. If it is Saltwater Tidal Fringe it is rated as an **Estuarine** wetland.* Wetlands that were called estuarine in the first and second editions of the rating system are called Salt Water Tidal Fringe in the Hydrogeomorphic Classification. Estuarine wetlands were categorized separately in the earlier editions, and this separation is being kept in this revision. To maintain consistency between editions, the term “Estuarine” wetland is kept. Please note, however, that the characteristics that define Category I and II estuarine wetlands have changed (see p.).

2. The entire wetland unit is flat and precipitation is only source (>90%) of water to it. Groundwater and surface water runoff are NOT sources of water to the unit
 NO – go to 3 YES – The wetland class is **Flats**

If your wetland can be classified as a “Flats” wetland, use the form for **Depressional** wetlands.

3. Does the entire wetland unit **meet both** of the following criteria?
 The vegetated part of the wetland is on the shores of a body of open water (without any vegetation on the surface) at least 20 acres (8 ha) in size;
 At least 30% of the open water area is deeper than 6.6 ft (2 m)?
 NO – go to 4 YES – The wetland class is **Lake-fringe (Lacustrine Fringe)**

4. Does the entire wetland unit **meet all** of the following criteria?
 The wetland is on a slope (*slope can be very gradual*),
 The water flows through the wetland in one direction (unidirectional) and usually comes from seeps. It may flow subsurface, as sheetflow, or in a swale without distinct banks.
 The water leaves the wetland **without being impounded**?
NOTE: *Surface water does not pond in these types of wetlands except occasionally in very small and shallow depressions or behind hummocks (depressions are usually <3ft diameter and less than a foot deep).*
 NO – go to 5 YES – The wetland class is **Slope**

Wetland name or number A

5. Does the entire wetland unit **meet all** of the following criteria?
- The unit is in a valley, or stream channel, where it gets inundated by overbank flooding from that stream or river.
 - The overbank flooding occurs at least once every two years

NOTE: The riverine unit can contain depressions that are filled with water when the river is not flooding.

NO - go to 6 **YES** – The wetland class is **Riverine**

6. Is the entire wetland unit in a topographic depression in which water ponds, or is saturated to the surface, at some time during the year. *This means that any outlet, if present, is higher than the interior of the wetland.*

NO – go to 7 **YES** – The wetland class is **Depressional**

7. Is the entire wetland unit located in a very flat area with no obvious depression and no overbank flooding. The unit does not pond surface water more than a few inches. The unit seems to be maintained by high groundwater in the area. The wetland may be ditched, but has no obvious natural outlet.

NO – go to 8 **YES** – The wetland class is **Depressional**

8. Your wetland unit seems to be difficult to classify and probably contains several different HGM classes. For example, seeps at the base of a slope may grade into a riverine floodplain, or a small stream within a depressional wetland has a zone of flooding along its sides. **GO BACK AND IDENTIFY WHICH OF THE HYDROLOGIC REGIMES DESCRIBED IN QUESTIONS 1-7 APPLY TO DIFFERENT AREAS IN THE UNIT** (make a rough sketch to help you decide). Use the following table to identify the appropriate class to use for the rating system if you have several HGM classes present within your wetland. **NOTE:** Use this table only if the class that is recommended in the second column represents 10% or more of the total area of the wetland unit being rated. If the area of the class listed in column 2 is less than 10% of the unit, classify the wetland using the class that represents more than 90% of the total area.

<i>HGM classes within the wetland unit being rated</i>	<i>HGM Class to Use in Rating</i>
Slope + Riverine	Riverine
Slope + Depressional	Depressional
Slope + Lake-fringe	Lake-fringe
Depressional + Riverine along stream within boundary	Depressional
Depressional + Lake-fringe	Depressional
Salt Water Tidal Fringe and any other class of freshwater wetland	Treat as ESTUARINE under wetlands with special characteristics

If you are unable still to determine which of the above criteria apply to your wetland, or you have more than 2 HGM classes within a wetland boundary, classify the wetland as **Depressional** for the rating.

D	Depressional and Flats Wetlands	Points
WATER QUALITY FUNCTIONS - Indicators that wetland functions to improve water quality		
D	D 1. Does the wetland have the potential to improve water quality?	<i>(see p. 38)</i>
D	D 1.1 Characteristics of surface water flows out of the wetland: Unit is a depression with no surface water leaving it (no outlet)..... points = 3 Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2 Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 1 Unit is a “flat” depression (Q.7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet , and/or outlet is a man-made ditch points = 1 <i>(If ditch is not permanently flowing treat unit as “intermittently flowing”)</i>	1
D	D 1.2 The soil 2 inches below the surface (or duff layer) is clay or organic (<i>use NRCS definitions</i>). YES points = 4 NO points = 0	4
D	D 1.3 Characteristics of persistent vegetation (emergent, shrub, and/or forest Cowardin class): Wetland has persistent, ungrazed, vegetation > = 95% of area points = 5 Wetland has persistent, ungrazed, vegetation > = 1/2 of area points = 3 Wetland has persistent, ungrazed vegetation > = 1/10 of area points = 1 Wetland has persistent, ungrazed vegetation < 1/10 of area points = 0	5
D	D1.4 Characteristics of seasonal ponding or inundation. <i>This is the area of the wetland unit that is ponded for at least 2 months, but dries out sometime during the year. Do not count the area that is permanently ponded. Estimate area as the average condition 5 out of 10 yrs.</i> Area seasonally ponded is > ½ total area of wetland..... points = 4 Area seasonally ponded is > ¼ total area of wetland..... points = 2 Area seasonally ponded is < ¼ total area of wetland..... points = 0 NOTE: See text for indicators of seasonal and permanent inundation.	2
D	Total for D 1	<i>Add the points in the boxes above</i>
D	D 2. Does the wetland unit have the opportunity to improve water quality?	<i>(see p. 44)</i>
D	Answer YES if you know or believe there are pollutants in groundwater or surface water coming into the wetland that would otherwise reduce water quality in streams, lakes or groundwater downgradient from the wetland? <i>Note which of the following conditions provide the sources of pollutants. A unit may have pollutants coming from several sources, but any single source would qualify as opportunity.</i> <input type="checkbox"/> Grazing in the wetland or within 150 ft <input checked="" type="checkbox"/> Untreated stormwater discharges to wetland <input checked="" type="checkbox"/> Tilled fields or orchards within 150 ft of wetland <input checked="" type="checkbox"/> A stream or culvert discharges into wetland that drains developed areas, residential areas, farmed fields, roads, or clear-cut logging <input checked="" type="checkbox"/> Residential, urban areas, golf courses are within 150 ft of wetland <input type="checkbox"/> Wetland is fed by groundwater high in phosphorus or nitrogen <input type="checkbox"/> Other _____ YES multiply score in D 1. by 2 NO multiply score in D 1. by 1	multiplier <u>2</u>
D	TOTAL - Water Quality Functions	Multiply the score from D1 by D2 <i>Add score to table on p. 1</i>
		24

D Depressional and Flats Wetlands		
HYDROLOGIC FUNCTIONS - Indicators that wetland functions to reduce flooding and stream degradation		
D	D 3. Does the wetland have the <u>potential</u> to reduce flooding and erosion?	<i>(see p. 46)</i>
D	<p>D 3.1 Characteristics of surface water flows out of the wetland unit</p> <p>Unit is a depression with no surface water leaving it (no outlet)..... points = 4</p> <p>Unit has an intermittently flowing, or highly constricted permanently flowing outlet..... points = 2</p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 1</p> <p>Unit is a “flat” depression (Q.7 on key), or in the Flats class, with permanent surface outflow and no obvious natural outlet, and/or outlet is a man-made ditch points = 1</p> <p><i>(If ditch is not permanently flowing treat unit as “intermittently flowing”)</i></p> <p>Unit has an unconstricted, or slightly constricted, surface outlet (<i>permanently flowing</i>). points = 0</p>	1
D	<p>D 3.2 Depth of storage during wet periods</p> <p><i>Estimate the height of ponding above the bottom of the outlet For units with no outlet measure from the surface of permanent water or deepest part (if dry).</i></p> <p>Marks of ponding are at least 3 ft or more above the surface or bottom of outlet..... points = 7</p> <p>The wetland is a “headwater” wetland” points = 5</p> <p>Marks of ponding between 2 ft to < 3 ft from surface or bottom of outlet..... points = 5</p> <p>Marks are at least 0.5 ft to < 2 ft from surface or bottom of outlet points = 3</p> <p>Unit is flat (yes to Q.2 or Q.7 on key) but has small depressions on the surface that trap water points = 1</p> <p>Marks of ponding less than 0.5 ft..... points = 0</p>	7
D	<p>D 3.3 Contribution of wetland unit to storage in the watershed</p> <p><i>Estimate the ratio of the area of upstream basin contributing surface water to the wetland to the area of the wetland unit itself.</i></p> <p>The area of the basin is less than 10 times the area of the unit points = 5</p> <p>The area of the basin is 10 to 100 times the area of the unit points = 3</p> <p>The area of the basin is more than 100 times the area of the unit points = 0</p> <p>Entire unit is in the FLATS class points = 5</p>	3
D	Total for D 3 <i>Add the points in the boxes above</i>	11
D	<p>D 4. Does the wetland unit have the <u>opportunity</u> to reduce flooding and erosion?</p> <p>Answer YES if the unit is in a location in the watershed where the flood storage, or reduction in water velocity, it provides helps protect downstream property and aquatic resources from flooding or excessive and/or erosive flows. Answer NO if the water coming into the wetland is controlled by a structure such as flood gate, tide gate, flap valve, reservoir etc. OR you estimate that more than 90% of the water in the wetland is from groundwater in areas where damaging groundwater flooding does not occur.</p> <p><i>Note which of the following conditions apply.</i></p> <p><input type="checkbox"/> Wetland is in a headwater of a river or stream that has flooding problems</p> <p><input type="checkbox"/> Wetland drains to a river or stream that has flooding problems</p> <p><input type="checkbox"/> Wetland has no outlet and impounds surface runoff water that might otherwise flow into a river or stream that has flooding problems</p> <p><input type="checkbox"/> Other _____</p> <p><input type="checkbox"/> YES multiplier is 2 <input checked="" type="checkbox"/> NO multiplier is 1</p>	<i>(see p. 49)</i> multiplier <u>1</u>
D	TOTAL - Hydrologic Functions Multiply the score from D 3 by D 4 <i>Add score to table on p. 1</i>	11

These questions apply to wetlands of all HGM classes.									
HABITAT FUNCTIONS - Indicators that wetland functions to provide important habitat									
H 1. Does the wetland have the potential to provide habitat for many species?									
<p>H 1.1 <u>Vegetation structure</u> (see p. 72) Check the types of vegetation classes present (as defined by Cowardin) if the class covers more than 10% of the area of the wetland or ¼ acre.</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Aquatic bed <input checked="" type="checkbox"/> Emergent plants <input checked="" type="checkbox"/> Scrub/shrub (areas where shrubs have >30% cover) <input checked="" type="checkbox"/> Forested (areas where trees have >30% cover) <input checked="" type="checkbox"/> Forested areas have 3 out of 5 strata (canopy, sub-canopy, shrubs, herbaceous, moss/ground-cover) <p>Add the number of vegetation types that qualify. If you have:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">4 types or more</td> <td>points = 4</td> </tr> <tr> <td style="text-align: right;">3 types</td> <td>points = 2</td> </tr> <tr> <td style="text-align: right;">2 types</td> <td>points = 1</td> </tr> <tr> <td style="text-align: right;">1 type</td> <td>points = 0</td> </tr> </table>	4 types or more	points = 4	3 types	points = 2	2 types	points = 1	1 type	points = 0	4
4 types or more	points = 4								
3 types	points = 2								
2 types	points = 1								
1 type	points = 0								
<p>H 1.2. <u>Hydroperiods</u> (see p. 73) Check the types of water regimes (hydroperiods) present within the wetland. The water regime has to cover more than 10% of the wetland or ¼ acre to count. (see text for descriptions of hydroperiods)</p> <ul style="list-style-type: none"> <input checked="" type="checkbox"/> Permanently flooded or inundated <input checked="" type="checkbox"/> Seasonally flooded or inundated <input checked="" type="checkbox"/> Occasionally flooded or inundated <input checked="" type="checkbox"/> Saturated only <input checked="" type="checkbox"/> Permanently flowing stream or river in, or adjacent to, the wetland <input type="checkbox"/> Seasonally flowing stream in, or adjacent to, the wetland <input type="checkbox"/> Lake-fringe wetland = 2 points <input type="checkbox"/> Freshwater tidal wetland = 2 points <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">4 or more types present</td> <td>points = 3</td> </tr> <tr> <td style="text-align: right;">3 types present.....</td> <td>points = 2</td> </tr> <tr> <td style="text-align: right;">2 types present</td> <td>points = 1</td> </tr> <tr> <td style="text-align: right;">1 types present.....</td> <td>points = 0</td> </tr> </table>	4 or more types present	points = 3	3 types present.....	points = 2	2 types present	points = 1	1 types present.....	points = 0	3
4 or more types present	points = 3								
3 types present.....	points = 2								
2 types present	points = 1								
1 types present.....	points = 0								
<p>H 1.3. <u>Richness of Plant Species</u> (see p. 75) Count the number of plant species in the wetland that cover at least 10 ft². (different patches of the same species can be combined to meet the size threshold) You do not have to name the species. Do not include Eurasian milfoil, reed canarygrass, purple loosestrife, Canadian thistle</p> <p style="text-align: center;">If you counted:</p> <table style="width: 100%; border: none;"> <tr> <td style="text-align: right;">> 19 species</td> <td>points = 2</td> </tr> <tr> <td style="text-align: right;">5 - 19 species</td> <td>points = 1</td> </tr> <tr> <td style="text-align: right;">< 5 species</td> <td>points = 0</td> </tr> </table> <p>List species below if you want to:</p>	> 19 species	points = 2	5 - 19 species	points = 1	< 5 species	points = 0	2		
> 19 species	points = 2								
5 - 19 species	points = 1								
< 5 species	points = 0								

<p>H 2.3 <u>Near or adjacent to other priority habitats listed by WDFW (see p. 82)</u> Which of the following priority habitats are within 330ft (100m) of the wetland? (see text for a more detailed description of these priority habitats)</p> <p><input checked="" type="checkbox"/> Riparian: The area adjacent to aquatic systems with flowing water that contains elements of both aquatic and terrestrial ecosystems which mutually influence each other.</p> <p><input type="checkbox"/> Aspen Stands: Pure or mixed stands of aspen greater than 0.8 ha (2 acres).</p> <p><input type="checkbox"/> Cliffs: Greater than 7.6 m (25 ft) high and occurring below 5000 ft.</p> <p><input type="checkbox"/> Old-growth forests: (Old-growth west of Cascade crest) Stands of at least 2 tree species, forming a multi-layered canopy with occasional small openings; with at least 20 trees/ha (8 trees/acre) > 81 cm (32 in) dbh or > 200 years of age.</p> <p><input type="checkbox"/> Mature forests: Stands with average diameters exceeding 53 cm (21 in) dbh; crown cover may be less than 100%; crown cover may be less than 100%; decay, decadence, numbers of snags, and quantity of large downed material is generally less than that found in old-growth; 80 - 200 years old west of the Cascade crest.</p> <p><input type="checkbox"/> Prairies: Relatively undisturbed areas (as indicated by dominance of native plants) where grasses and/or forbs form the natural climax plant community.</p> <p><input type="checkbox"/> Talus: Homogenous areas of rock rubble ranging in average size 0.15 - 2.0 m (0.5 - 6.5 ft), composed of basalt, andesite, and/or sedimentary rock, including riprap slides and mine tailings. May be associated with cliffs.</p> <p><input type="checkbox"/> Caves: A naturally occurring cavity, recess, void, or system of interconnected passages</p> <p><input type="checkbox"/> Oregon white Oak: Woodlands Stands of pure oak or oak/conifer associations where canopy coverage of the oak component of the stand is 25%.</p> <p><input checked="" type="checkbox"/> Urban Natural Open Space: A priority species resides within or is adjacent to the open space and uses it for breeding and/or regular feeding; and/or the open space functions as a corridor connecting other <i>priority habitats</i>, especially those that would otherwise be isolated; and/or the open space is an isolated remnant of natural habitat larger than 4 ha (10 acres) and is surrounded by urban development.</p> <p><input type="checkbox"/> Estuary/Estuary-like: Deepwater tidal habitats and adjacent tidal wetlands, usually semi-enclosed by land but with open, partly obstructed or sporadic access to the open ocean, and in which ocean water is at least occasionally diluted by freshwater runoff from the land. The salinity may be periodically increased above that of the open ocean by evaporation. Along some low-energy coastlines there is appreciable dilution of sea water. Estuarine habitat extends upstream and landward to where ocean-derived salts measure less than 0.5% during the period of average annual low flow. Includes both estuaries and lagoons.</p> <p><input type="checkbox"/> Marine/Estuarine Shorelines: Shorelines include the intertidal and subtidal zones of beaches, and may also include the backshore and adjacent components of the terrestrial landscape (e.g., cliffs, snags, mature trees, dunes, meadows) that are important to shoreline associated fish and wildlife and that contribute to shoreline function (e.g., sand/rock/log recruitment, nutrient contribution, erosion control).</p> <p>If wetland has 3 or more priority habitats = 4 points If wetland has 2 priority habitats = 3 points If wetland has 1 priority habitat = 1 point No habitats = 0 points</p> <p><i>Note: All vegetated wetland are by definition a priority habitat but are not included in this list. Nearby wetlands are addressed in question H2.4.</i></p>	<p>3</p>
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Wetland name or number A

<p>H 2.4 <u>Wetland Landscape</u> (<i>choose the one description of the landscape around the wetland that best fits</i>) <i>(see p. 84)</i> There are at least 3 other wetlands within ½ mile, and the connections between them are relatively undisturbed (light grazing between wetlands OK, as is lake shore with some boating, but connections should NOT be bisected by paved roads, fill, fields, or other development. points = 5 The wetland is Lake-fringe on a lake with little disturbance and there are 3 other lake-fringe wetlands within ½ mile points = 5 There are at least 3 other wetlands within ½ mile, BUT the connections between them are disturbed points = 3 The wetland is Lake-fringe on a lake with disturbance and there are 3 other lake-fringe wetland within ½ mile points = 3 There is at least 1 wetland within ½ mile. points = 2 There are no wetlands within ½ mile points = 0</p>	5
<p>H 2. TOTAL Score - opportunity for providing habitat <i>Add the scores from H2.1, H2.2, H2.3, H2.4</i></p>	15
<p>TOTAL for H1 from page 14</p>	16
<p>Total Score for Habitat Functions – add the points for H 1, H 2 and record the result on p. 1</p>	31

WETLAND DETERMINATION DATA FORM

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242 Fax (425) 827-8136

WETLAND? YES NO

Date: January 25, 2008 Data point: 1 Wetland #: A
 Project Name: 112th Ave/Mercer Slough Data point location: _____ See sketch
 Biologist(s): MF, NL

Do normal environmental conditions exist? YES NO
 Has vegetation, soils &/or hydrology been significantly disturbed within the past 5 yrs? YES NO

<i>Stratum: T=tree, S=shrub, H=herb, V=vine</i>		VEGETATION			
Dominant Species	Stratum	WIS	Other Species	Stratum	WIS
<i>Cornus sericea</i>	S	FACW	<i>Alnus rubra</i>	T	FAC
<i>Rubus armeniacus</i>	V	FACU			
<i>Salix lucida</i> spp. <i>lasiandra</i>	T	FACW+			

Percent of dominant species that are FAC, FACW or OBL 67%

Vegetation criteria met? YES NO

Notes: _____

SOILS

Depth	Horizon	Matrix Color	Mottles <small>(Distinct/Prominent)</small>	Texture	Hydric Indicators:
0-14"	B	10YR 2/2	None	organic	<input type="checkbox"/> Gleyed/Low Chroma <input checked="" type="checkbox"/> Sulfidic odor <input type="checkbox"/> Histosol <input type="checkbox"/> Other (list in notes)

Soil Criteria Met? YES NO

Notes: _____

HYDROLOGY

Surface saturation? YES NO	Primary Indicators: (1 required)	Secondary Indicators: (≥2 required)
Depth to saturation <u>0"</u>	<input type="checkbox"/> Observation of inundation	<input type="checkbox"/> Oxidized root channels
Depth of inundation <u>0"</u>	<input checked="" type="checkbox"/> Observation of soil saturation	<input type="checkbox"/> Water-stained leaves
Depth to free water in pit <u>10"</u>	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
Flow? YES NO	<input type="checkbox"/> Drift lines or drainage patterns	<input type="checkbox"/> FAC-neutral test
Channel? <input type="checkbox"/> Sheet? <input type="checkbox"/>	<input type="checkbox"/> Sediment deposits	

Hydrologic Criteria Met? YES NO Recent rainfall: Very high High Normal Low Very low

Notes: _____

WILDLIFE OBSERVATIONS AND GENERAL NOTES

WETLAND DETERMINATION DATA FORM

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242 Fax (425) 827-8136

WETLAND? YES NO

Date: January 25, 2008 Data point: DP-2 Wetland #: A
 Project Name: 112th Ave/Mercer Slough Data point location: _____
 Biologist(s): MF, NL

Do normal environmental conditions exist? YES NO
 Has vegetation, soils &/or hydrology been significantly disturbed within the past 5 yrs? YES NO

VEGETATION					
<i>Stratum: T=tree, S=shrub, H=herb, V=vine</i>					
Dominant Species	Stratum	WIS	Other Species	Stratum	WIS
<u>Rubus armeniacus</u>	<u>V</u>	<u>FACU</u>			

Percent of dominant species that are FAC, FACW or OBL 0%

Vegetation criteria met? YES NO

Notes: _____

SOILS

Depth	Horizon	Matrix Color	Mottles <small>(Distinct/Prominent)</small>	Texture	Hydric Indicators:
<u>0-12"</u>	<u>B</u>	<u>10YR 2/2</u>	<u>None</u>	<u>organic</u>	<u> </u> Gleyed/Low Chroma
					<u>No</u> Sulfidic odor
					<u> </u> Histosol
					<u>X</u> Other (list in notes)

Soil Criteria Met? YES NO

Notes: Soil texture crumbly, profile not saturated

HYDROLOGY

Surface saturation? YES NO	Primary Indicators: (1 required)	Secondary Indicators: (≥2 required)
Depth to saturation <u>~top 6"</u>	<u> </u> Observation of inundation	<u> </u> Oxidized root channels
Depth of inundation <u>No</u>	<u>* X</u> Observation of soil saturation	<u> </u> Water-stained leaves
Depth to free water in pit <u>No</u>	<u> </u> Water marks	<u> </u> Local soil survey data
Flow? YES NO	<u> </u> Drift lines or drainage patterns	<u> </u> FAC-neutral test
Channel? <u> </u> Sheet? <u> </u>	<u> </u> Sediment deposits	

Hydrologic Criteria Met? YES NO * Recent rainfall: Very high High Normal Low Very low

Notes: * saturation in top of profile only, most likely not saturated in the growing season

WILDLIFE OBSERVATIONS AND GENERAL NOTES

Song birds

WETLAND? YES NO

WETLAND DETERMINATION DATA FORM

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242 Fax (425) 827-8136

Date: January 25, 2008 Data point: DP-3 Wetland #: A
 Project Name: 112th Ave/Mercer Slough Data point location: _____
 Biologist(s): MF, NL

Do normal environmental conditions exist? YES NO
 Has vegetation, soils &/or hydrology been significantly disturbed within the past 5 yrs? YES NO

VEGETATION					
<i>Stratum: T=tree, S=shrub, H=herb, V=vine</i>					
Dominant Species	Stratum	WIS	Other Species	Stratum	WIS
<i>Polygonum bohemicum</i>	H	NI	<i>Populus balsamifera</i>	T	FAC
<i>Rubus armeniacus</i>	V	FACU			
<i>Salix sp.</i>	T	FAC			

Percent of dominant species that are FAC, FACW or OBL 33%

Vegetation criteria met? YES NO
 Notes: _____

SOILS

Depth	Horizon	Matrix Color	Mottles <small>(Distinct/Prominent)</small>	Texture	Hydric Indicators:
0-10"	B	7.5YR 2.5/2	None	organic	<input type="checkbox"/> Gleyed/Low Chroma <input type="checkbox"/> Sulfidic odor <input type="checkbox"/> Histosol <input checked="" type="checkbox"/> Other (list in notes)

Soil Criteria Met? YES NO
 Notes: _____

HYDROLOGY

Surface saturation?	YES	NO	Primary Indicators: (1 required)	Secondary Indicators: (≥2 required)
Depth to saturation	<u>12"</u>		<input type="checkbox"/> Observation of inundation	<input type="checkbox"/> Oxidized root channels
Depth of inundation	<u>No</u>		<input checked="" type="checkbox"/> Observation of soil saturation	<input type="checkbox"/> Water-stained leaves
Depth to free water in pit	<u>No</u>		<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
Flow? YES NO			<input type="checkbox"/> Drift lines or drainage patterns	<input type="checkbox"/> FAC-neutral test
Channel? <input type="checkbox"/> Sheet? <input type="checkbox"/>			<input type="checkbox"/> Sediment deposits	

Hydrologic Criteria Met? YES NO
 Recent rainfall: Very high High Normal Low Very low
 Notes: Soil saturation starts at 12 inch depth

WILDLIFE OBSERVATIONS AND GENERAL NOTES

Song birds

WETLAND? YES NO

Date: January 25, 2008 Data point: DP-4 Wetland #: A

WETLAND DETERMINATION DATA FORM

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242 Fax (425) 827-8136

Project Name: 112th Ave/Mercer Slough Data point location: _____
Biologist(s): MF, NL

Do normal environmental conditions exist? YES NO
Has vegetation, soils &/or hydrology been significantly disturbed within the past 5 yrs? YES NO

VEGETATION					
Stratum: T=tree, S=shrub, H=herb, V=vine					
Dominant Species	Stratum	WIS	Other Species	Stratum	WIS
<i>Phalaris arundinacea</i>	H	FACW	<i>Rubus armeniacus</i>	V	FACU
			<i>Populus balsamifera</i>	T	FAC
			<i>Polygonum x bohemicum</i>	H	NI

Percent of dominant species that are FAC, FACW or OBL 100%

Vegetation criteria met? YES NO

Notes: _____

SOILS

Depth	Horizon	Matrix Color	Mottles <small>(Distinct/Prominent)</small>	Texture	Hydric Indicators:
0-10"	B	7.5YR 2.5/1	None	Organic	_____ Gleyed/Low Chroma
10-16"	B	7.5YR 2.5/1	None	Organic	Yes _____ Sulfidic odor
10-16"	B	7.5YR 2.5/2	None	Organic	_____ Histosol
					_____ Other (list in notes)

Soil Criteria Met? YES NO

Notes: Sulfidic odor starts at approximate 10-inch depth

HYDROLOGY

Surface saturation? YES NO	Primary Indicators: (1 required)	Secondary Indicators: (≥2 required)
Depth to saturation <u>0"</u>	_____ Observation of inundation	_____ Oxidized root channels
Depth of inundation <u>No</u>	<u>X</u> Observation of soil saturation	_____ Water-stained leaves
Depth to free water in pit <u>10"</u>	_____ Water marks	_____ Local soil survey data
Flow? YES NO	_____ Drift lines or drainage patterns	_____ FAC-neutral test
Channel? _____ Sheet? _____	_____ Sediment deposits	

Hydrologic Criteria Met? YES NO Recent rainfall: Very high High Normal Low Very low

Notes: _____

WILDLIFE OBSERVATIONS AND GENERAL NOTES

Song birds

WETLAND? YES NO

Date: January 25, 2008 Data point: DP-5 Wetland #: A
Project Name: 112th Ave/Mercer Slough Data point location: _____

WETLAND DETERMINATION DATA FORM

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242 Fax (425) 827-8136

Biologist(s): MF, NL

Do normal environmental conditions exist? YES NO

Has vegetation, soils &/or hydrology been significantly disturbed within the past 5 yrs? YES NO

Stratum: T=tree, S=shrub, H=herb, V=vine

VEGETATION

Dominant Species	Stratum	WIS	Other Species	Stratum	WIS
<i>Pyrus fusca</i>	T	FACW	<i>Populus balsamifera</i>	T	FAC
<i>Sambucus racemosa</i>	S	FACU	<i>Rubus armeniacus</i>	V	FACU
			<i>Polystichum munitum</i>	H	FACU
			<i>Cornus sericea</i>	S	FACW

Percent of dominant species that are FAC, FACW or OBL 50%

Vegetation criteria met? YES NO

Notes: _____

SOILS

Depth	Horizon	Matrix Color	Mottles <small>(Distinct/Prominent)</small>	Texture	Hydric Indicators:
0-10"	B	10YR 3/1	None	Silty loam	<input type="checkbox"/> Gleyed/Low Chroma <input type="checkbox"/> No Sulfidic odor <input type="checkbox"/> Histosol <input checked="" type="checkbox"/> Other (list in notes)

Soil Criteria Met? YES NO

Notes: Approx. 15% of matrix contains brown organic specs

HYDROLOGY

Surface saturation? YES NO	Primary Indicators: (1 required)	Secondary Indicators: (≥2 required)
Depth to saturation <u>NA</u>	<input type="checkbox"/> Observation of inundation	<input type="checkbox"/> Oxidized root channels
Depth of inundation <u>NA</u>	<input type="checkbox"/> Observation of soil saturation	<input type="checkbox"/> Water-stained leaves
Depth to free water in pit <u>NA</u>	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
Flow? YES NO	<input type="checkbox"/> Drift lines or drainage patterns	<input type="checkbox"/> FAC-neutral test
Channel? <input type="checkbox"/> Sheet? <input type="checkbox"/>	<input type="checkbox"/> Sediment deposits	

Hydrologic Criteria Met? YES NO Recent rainfall: Very high High Normal Low Very low

Notes: Soil not saturated

WILDLIFE OBSERVATIONS AND GENERAL NOTES

WETLAND? YES NO

Date: January 25, 2008 Data point: DP-6 Wetland #: A

Project Name: 112th Ave/Mercer Slough Data point location: _____

Biologist(s): MF, NL

WETLAND DETERMINATION DATA FORM

750 Sixth Street South
Kirkland, Washington 98033
(425) 822-5242 Fax (425) 827-8136

Do normal environmental conditions exist? YES NO
Has vegetation, soils &/or hydrology been significantly disturbed within the past 5 yrs? YES NO

Stratum: T=tree, S=shrub, H=herb, V=vine

VEGETATION

Dominant Species	Stratum	WIS	Other Species	Stratum	WIS
<i>Rubus armeniacus</i>	V	FACU			
<i>Cornus sericea</i>	S	FACW			

Percent of dominant species that are FAC, FACW or OBL 0%

Vegetation criteria met? YES NO

Notes: _____

SOILS

Depth	Horizon	Matrix Color	Mottles <small>(Distinct/Prominent)</small>	Texture	Hydric Indicators:
0-12"	B	10YR 2/1.5	None	Sandy loam	<input type="checkbox"/> Gleyed/Low Chroma <input checked="" type="checkbox"/> Sulfidic odor <input type="checkbox"/> Histosol <input type="checkbox"/> Other (list in notes)

Soil Criteria Met? YES NO

Notes: Chroma brighter than 1, but slightly darker than 2

HYDROLOGY

Surface saturation? YES NO	Primary Indicators: (1 required)	Secondary Indicators: (≥2 required)
Depth to saturation <u>NA</u>	<input type="checkbox"/> Observation of inundation	<input type="checkbox"/> Oxidized root channels
Depth of inundation <u>NA</u>	<input type="checkbox"/> Observation of soil saturation	<input type="checkbox"/> Water-stained leaves
Depth to free water in pit <u>NA</u>	<input type="checkbox"/> Water marks	<input type="checkbox"/> Local soil survey data
Flow? YES NO	<input type="checkbox"/> Drift lines or drainage patterns	<input type="checkbox"/> FAC-neutral test
Channel? <input type="checkbox"/> Sheet? <input type="checkbox"/>	<input type="checkbox"/> Sediment deposits	

Hydrologic Criteria Met? YES NO Recent rainfall: Very high High Normal Low Very low

Notes: Soil moist but not saturated

WILDLIFE OBSERVATIONS AND GENERAL NOTES

Song birds

ENVIRONMENTAL CHECKLIST

12/21/00

Thank you in advance for your cooperation and adherence to these procedures. If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.

INTRODUCTION**Purpose of the Checklist:**

The State Environmental Policy Act (SEPA), chapter 43.21c RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An environmental impact statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the City of Bellevue identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the City decide whether an EIS is required.

Instructions for Applicants:

This environmental checklist asks you to describe some basic information about your proposal. Answer the questions briefly, with the most precise information known, or give the best description you can. You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the Planner in the Permit Center can assist you. The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. Include references to any reports or studies that you are aware of which are relevant to the answers you provide. The City may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impacts.

Use of a Checklist for Nonproject Proposals: *A nonproject proposal includes plans, policies, and programs where actions are different or broader than a single site-specific proposal.*

For nonproject proposals, complete the Environmental Checklist even though you may answer "does not apply" to most questions. In addition, complete the Supplemental Sheet for Nonproject Actions available from Permit Processing.

For nonproject actions, the references in the checklist to the words *project*, *applicant*, and *property* or *site* should be read as *proposal*, *proposer*, and *affected geographic area*, respectively.

Attach an 8½" x 11" vicinity map which accurately locates the proposed site.

ENVIRONMENTAL CHECKLIST

12/21/00

If you need assistance in completing the checklist or have any questions regarding the environmental review process, please visit or call the Permit Center (425-452-6864) between 8 a.m. and 4 p.m., Monday through Friday (Wednesday, 10 to 4). Our TTY number is 425-452-4636.

BACKGROUND INFORMATION

Property Owner: **City of Bellevue**

Proponent: **City of Bellevue – Parks and Community Services Department, Attn: Geoff Bradley**
450 110th Ave NE
Bellevue, WA 98004
(425) 452-2740

Contact Person: **The Watershed Company, Attn: Kenny Booth**
(If different from the owner. All questions and correspondence will be directed to the individual listed.)

Address: **750 Sixth Street South, Kirkland, WA 98033**

Phone: **(425) 822-5242**

Proposal Title: **112th Ave SE/Mercer Slough Restoration**

Proposal Location (Street address and nearest cross street or intersection) Provide a legal description if available:

Project is located on the east side of 112th Ave SE just north of Bellevue Way SE, Bellevue, 98004 King County. Project is located within two parcels:

- 1. No address, Tax parcel 066288TRCT, no Legal**
- 2. No address, Tax parcel 0662870090, Legal: BELLEFIELD OFFICE PARK**

Please attach an 8½" X 11" vicinity map that accurately locates the proposal site.

Give an accurate, brief description of the proposal's scope and nature:

1. General description:

The applicant proposes to remove invasive blackberries (approximately 73,625 square feet) from an area located between 112th Avenue SE and Mercer Slough. After removal of the blackberries, the applicant proposes to install a soft surface pervious pedestrian trail along the slough. A portion of the trail will cross a small unnamed stream that flows into Mercer Slough. A small bridge will be installed at this location to allow pedestrian access over the drainage. All portions of the bridge will be located above the ordinary high water mark of the stream. The bridge will be assembled on-site with pre-fabricated materials. No in-water work is proposed as part of the bridge installation project. A timber staircase will also be constructed to connect the proposed trail to the sidewalk near the intersection of 112th Avenue SE and Bellevue Way. The proposed project also includes restoration planting alongside the trail and slough. After removal of all invasive blackberries, native plantings will be installed over approximately 62,875 square feet of the project area.

All proposed improvements (invasive species removal, trail construction, staircase and bridge installation, and restoration plantings) would occur entirely within the 200-foot shoreline buffer of Mercer Slough and within the 225-foot buffer of the onsite Category II wetland. The proposed bridge and 220 feet of trail will be located within the 100-foot stream buffer of the on-site Type F stream. 87 feet of trail and the timber staircase are proposed to be located within the 50-foot stream buffer of the on-site Type N stream.

The project site is located adjacent to the Mercer Slough Nature Park. The park contains over 320 acres of wildlife habitat and freshwater wetlands. The park also contains over 7 miles of interconnected elevated boardwalks, soft surface trails, and asphalt paths that transport visitors through the unique urban park. The project proposes to construct an additional soft surface trail adjacent to the park that will allow additional public access along Mercer Slough.

2. Acreage of site: Tax parcel 066288TRCT is approximately 4 acres. Tax parcel 0662870090 is approximately 14.59 acres. However, the project area (where construction will occur) is approximately 144,415 sq. ft. (3.31 acres).
3. Number of dwelling units/buildings to be demolished: **None**
4. Number of dwelling units/buildings to be constructed: **None**
5. Square footage of buildings to be demolished: **N/A**
6. Square footage of buildings to be constructed: **N/A**
7. Quantity of earth movement (in cubic yards): **Cut: 10.5 cubic yards / Fill: 100 cubic yards**
8. Proposed land use: **The project site is just north of the Mercer Slough Nature Park. The subject parcel is located between 112th Avenue SE and the Mercer Slough. Currently undeveloped and overrun with invasive blackberries, the City has proposed using the parcel to extend a portion of the Mercer Slough trail to the north. There are no existing structures on the property and no changes are proposed to the existing land use.**
9. Design features, including building height, number of stories, and proposed exterior materials: **The applicant proposes to remove all invasive blackberries from the site and construct a soft surface pervious trail along the parcel. A 25-foot-long, 4-foot-wide wood bridge will also be installed over a small stream channel that crosses the site before entering the Mercer Slough. The bridge will be assembled on-site with pre-fabricated materials. A small timber staircase will be installed near the intersection of 112th Avenue SE and Bellevue Way SE. The staircase will connect the proposed trail to the existing sidewalk along 112th Avenue SE. Native plantings will also be added along the trail and near the Mercer Slough.**
10. Other

Estimated date of completion of the proposal or timing of phasing:

Once started, blackberry removal, trail and bridge construction, and native planting should take approximately 4-6 weeks. It is anticipated that construction would occur sometime in the summer of 2008.

Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.

None at this time.

List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.

The Watershed Company. 112th Avenue/Mercer Slough Restoration Project – Wetland and Stream Delineation Study – TWC Ref# 070203, Bellevue, Washington. January 29, 2008

Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. List dates applied for and file numbers, if known.

None.

List any government approvals or permits that will be needed for your proposal, if known. If permits have been applied for, list application date and file numbers, if known.

**Critical Areas Land Use Permit – submitted concurrently with this SEPA Checklist (City of Bellevue)
Shoreline Substantial Development Permit (City of Bellevue)
Clearing and Grading Permit (City of Bellevue)
Washington Department of Fish and Wildlife Hydraulic Project Approval (HPA)**

Please provide one or more of the following exhibits, if applicable to your proposal.
(Please check appropriate box(es) for exhibits submitted with your proposal):

- Land Use Reclassification (rezone)
Map of existing and proposed zoning
- Preliminary Plat or Planned Unit Development
Preliminary plat map
- Clearing & Grading Permit
Plan of existing and proposed grading
Development plans
- Building Permit (or Design Review)
Site plan
Clearing & grading plan
- Shoreline Management Permit
Site plan

A. ENVIRONMENTAL ELEMENTS

1. EARTH

- a. General description of the site (circle one): Flat Rolling Hilly Steep slopes Mountains Other:

The subject site is relatively flat near 112th Avenue SE, but begins to slope as it nears Mercer Slough. Slopes adjacent to Mercer Slough are steep. The proposed trail will run roughly parallel to 112th Avenue SE and will be cut into the gradual slope.

- b. What is the steepest slope on the site (approximate percent slope)?

The steepest slope on-site is approximately 65%, located along the edge of Mercer Slough.

- c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland.

According to the King County Soil Survey, the site is mapped as Alderwood gravelly sandy loam, 6 to 30 percent slopes and Seattle muck.

- d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.

No indications of unstable soils were observed.

- e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill.

	FILL	CUT
Purpose	All cut and fill activities are planned as part of trail and bridge construction.	
Type and Quantity	Trail: 90 c.y. woodchips 10 c.y. soil Bridge: 0 c.y.	Trail: 10 c.y. soil Bridge: 0.5 c.y. soil
Total	100 c.y.	10.5 c.y.
Fill Source	-Local source for woodchips -Balance on-site for fill soil	

- f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.

Erosion could occur if exposed soils are mobilized by rainfall. Short-term erosion may occur during the trail construction, at the stream bank during bridge construction, and in buffer and wetland areas cleared of invasive vegetation. However, any impacts would be short-term and the measures described below would help minimize erosion.

- g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?

The proposed trail would be constructed of 100% pervious materials. However, the bridge crossing and timber stairs would be considered impervious surfaces. These surfaces, however, total less than 350 square feet and are not anticipated to affect drainage patterns on the site or flow regimes in Mercer Slough and surrounding tributaries.

- h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:

All clearing and grading construction would be in accordance with City of Bellevue Clearing & Grading Code (Chapter 23.76), permit conditions, and all other applicable codes, ordinances, and standards. All construction activities are to occur above the OHWM and therefore no erosion impacts to the streams are anticipated. However, to ensure that no impacts occur, the applicant proposes to use temporary erosion and sedimentation control measures such as silt fencing. The fencing would be installed around soil stockpile areas and exposed soils as necessary to prevent any silt-laden water from reaching adjacent waters during rainfall.

The work is expected to occur during the dry season and it is not anticipated that soils would be left exposed for more than 5 days. However, to ensure that erosion potential is minimized, disturbed soils shall be covered with straw, hydroseeded, or otherwise revegetated with native plants as soon after construction as possible. In all cases, exposed soil must be covered at the end of the construction week and also at the threat of rain.

2. AIR

- a. What types of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.

Any air quality impacts from construction-related vehicle trips would be temporary. No heavy equipment will be used during the construction process. Only hand-held power equipment will be used. After project completion, no further impacts to air would occur.

- b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.

There are no off-site sources of emissions that will affect the project.

- c. Proposed measures to reduce or control emissions or other impacts to air, if any:

Standard methods of reducing impacts to air would be utilized, and include keeping all hand-held power equipment in good operating condition and managing disturbed soils as described above under 1h.

3. WATER

- a. Surface:

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.

The project site is adjacent to Mercer Slough and its associated wetlands. Mercer Slough is classified as a Type S water and the adjacent wetland has been delineated as Category II wetland. Additionally, a Type F stream drains into Mercer Slough near the northern boundary of the project site and a Type N stream drains into the slough near the southern boundary of the project site.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.

The proposed bridge will be built directly over an unnamed Type F stream channel, but above the ordinary high water mark. The proposed trail will be constructed above the ordinary high water mark of the Mercer Slough and outside the limits of its associated Category II wetland.

All proposed improvements (invasive species removal, trail construction, staircase and bridge installation, and restoration plantings) would occur entirely within the 200-foot shoreline zone of Mercer Slough and within the 225-foot buffer of the onsite Category II wetland. The proposed bridge and 220 feet of trail will be located within the 100-foot stream buffer of the on-site Type F stream. 87 ft of trail and the timber staircase are proposed to be located within the 50-foot stream buffer of the on-site Type N stream.

Critical Area	Buffer	Improvements Proposed Within Critical Area/Buffers					
		Invasive Removal	Restoration Plantings	Ornamental Plantings	Trail	Bridge	Staircase
Wetland	---	9,720 s.f.	9,720 s.f.	----	----	----	----
Shoreline Buffer	200 ft	73,625 s.f.	62,875 s.f.	45,500 s.f.	7,560 s.f. (1,890 ft)	120 s.f.	280 s.f.
Wetland Buffer	225 ft	73,625 s.f.	62,875 s.f.	45,500 s.f.	7,560 s.f. (1,890 ft)	120 s.f.	280 s.f.
Stream A (Type F) Buffer	100 ft	7,650 s.f.	7,000 s.f.	5,650 s.f.	880 s.f. (220 ft)	120 s.f.	----
Stream B (Type N) Buffer	50 ft	---	1,100 s.f.	2,200 s.f.	348 s.f. (87 ft)	----	280 s.f.
Total		73,625 s.f.	62,875 s.f.	45,500 s.f.	7,560 s.f.	120 s.f.	280 s.f.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

No material would be installed in or excavated from Mercer Slough, two unnamed stream channels, or onsite wetland. All trail and bridge improvements are located outside of the on-site wetland and above the ordinary high water mark of all on-site waters.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.

No.

- 5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.

The subject parcel is adjacent to Mercer Slough, which is considered to be within a 100-year floodplain. However, all trail and bridge improvements are proposed outside the ordinary high water mark of the Mercer Slough and outside of the 100-year floodplain.

- 6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.

No intentional discharges of waste materials would occur during project construction.

b. Ground

1. Will ground water be withdrawn, or will water be discharged to ground water? Give a general description, purpose, and approximate quantities if known.

There will be no withdrawal of or discharge to ground water associated with this project.

- 2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.

There will be no waste material from septic tanks or other sources discharged into the ground as part of this project.

c. Water runoff (including stormwater):

1. Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

Runoff from the immediate project site is not expected except at natural, pre-project rates. The proposed trail will be made of a pervious surface. The bridge will be sufficiently wide enough and located above the ordinary high water mark so as not to affect the flow of water within the unnamed stream channel.

- 2) Could waste materials enter ground or surface waters? If so, generally describe.

It is not expected that waste materials will enter either Mercer Slough or the unnamed drainage channel. All construction and installation will be done by hand. Therefore, no heavy equipment is required and the chance of a fuel spill is not likely.

d. Proposed measures to reduce or control surface, ground, and runoff water impacts, if any:

The erosion control measures described under question 1h would help control impacts to surface and runoff water. Hydraulic Project Approvals (HPAs) issued by Washington Department of Fish and Wildlife (WDFW) direct the contractor to take extreme care for the duration of the project to “ensure that no petroleum products, hydraulic fluid, fresh cement, sediments, sediment-laden water, chemicals, or any other toxic or deleterious materials are allowed to enter or leach into adjacent waters.” In addition, all hand-held power equipment would be in good working order.

4. PLANTS

a. Check or circle types of vegetation found on the site:

- deciduous tree: **alder, maple**, aspen, other: **black cottonwood**
- evergreen tree: **fir, cedar, pine**, other:
- shrubs: **Himalayan blackberry, Pacific willow, red-osier dogwood, salmonberry, red elderberry, Bohemian knotweed**
- pasture
- crop or grain

- wet soil plants: cattail, buttercup, bulrush, skunk cabbage, other: **reed canarygrass, yellow pond-lily**
- water plants: water lily, eelgrass, milfoil, other:
- other types of vegetation:

b. What kind and amount of vegetation will be removed or altered?

Himalayan blackberry is present on site. Blackberries will be removed and replanted with native species. Approximately 73,625 sq. ft. of blackberries will be removed.

c. List threatened or endangered species known to be on or near the site.

No threatened or endangered plant species are known to be on or near the site.

d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:

Invasive vegetation will be removed from the majority of the project site and patches of native vegetation will be planted. It is anticipated that approximately 62,875 square feet of native plantings are proposed along the trail corridor and adjacent to Mercer Slough.

5. ANIMALS

a. Circle any birds and animals which have been observed on or near the site or are known to be on or near the site:

birds: **hawk, heron, eagle, songbirds**, other: **waterfowl, herons, blackbirds, chickadees, wrens finches, robins**

mammals: deer, bear, elk, **beaver**, other:

fish: **bass, salmon, trout**, herring, shellfish, other:

b. List any threatened or endangered species known to be on or near the site.

Adult and juvenile chinook salmon, steelhead trout (listed as Threatened under the Federal Endangered Species Act), coho salmon, and sockeye salmon migrate through Lake Washington and up Mercer Slough. Adults migrate upstream to reach spawning grounds; juveniles migrate downstream from their natal streams to reach the ocean.

c. Is the site part of a migration route? If so, explain.

As described above, adult and juvenile salmonids migrate up and downstream, respectively. Migrating waterfowl may use the nearby slough as resting and foraging areas during spring and fall migrations.

d. Proposed measures to preserve or enhance wildlife, if any:

The proposed project will enhance wildlife habitat through the removal of invasive species and the planting of native species along Mercer Slough. It is anticipated that approximately 62,875 sq. ft. of native restoration plantings will occur. This proposed enhancement would add habitat complexity and help improve fish passage conditions along the shoreline.

6. ENERGY AND NATURAL RESOURCES

- a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.

Hand-held power equipment or a slope mower will be used for invasive species removal, and hand-held power equipment will be used for the trail construction and bridge installation. However, no energy will be necessary after the project is completed.

- b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.

No

- c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:

No forms of energy are necessary for the completed project.

7. ENVIRONMENTAL HEALTH

- a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.

Typical hazards related to electrical and gasoline powered hand tools are associated with construction of the proposed project.

- 1) Describe special emergency services that might be required.

Emergency services are not anticipated at the site. In the unlikely event that an accident (spill, fire, other exposure) occurs involving toxic chemicals or hazardous wastes, the local Fire Department's Hazardous Materials Team would respond. If necessary, local medical services might also be required. The full range of safety and accident response supplies would be on-site to treat any emergency during construction.

- 2) Proposed measures to reduce or control environmental health hazards, if any:

Standard precautions would be taken to ensure the safety of the work crew. The construction manager would be contacted by a crew member immediately upon discovery of a spill. The construction manager would then ensure that the spill is cleaned up in the manner dictated by the chemical use instructions and would contact the appropriate authorities.

- b. Noise

- 1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?

There is no noise in the area that would affect this project.

- 2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.

Noise associated with the proposed project would be restricted to the use of a slope mower, hand-operated power tools, and hand excavation during the construction phase. Construction noise would be limited to normal daytime working hours as dictated by the City of Bellevue's noise policy. There would be no long-term noise associated with the proposed project.

- 3) Proposed measures to reduce or control noise impacts, if any:

As mentioned above, noise would be limited to daylight weekday hours. No other noise-control measures are necessary.

8. LAND AND SHORELINE USE

- a. What is the current use of the site and adjacent properties?

The Archon Group, owner of the nearby Bellefield Office Park, currently owns the project site. The City of Bellevue Parks and Community Services Department is negotiating with the Archon Group to obtain an easement for use of the proposed trail and restoration plantings. Single-family residences are located westerly of the site and commercial office buildings within the Bellefield Office Park are located easterly of the site across the Mercer Slough.

- b. Has the site been used for agriculture? If so, describe.

No.

- c. Describe any structures on the site.

There are currently no structures on the site.

- d. Will any structures be demolished? If so, what?

No structures are proposed for demolition.

- e. What is the current zoning classification of the site?

The northern portion of the project site is designated as Office (O) zoning. The southern portion of the project site (within the Mercer Slough Nature Park) is zoned Single-Family Residential (R-1).

- f. What is the current comprehensive plan designation of the site?

The northern portion of the project site is designated as Office (O). The southern portion of the project site (within the Mercer Slough Nature Park) has a Comprehensive Plan designation of Parks/Single-Family Residential – Low Density (P/SF-L).

- g. If applicable, what is the current shoreline master program designation of the site?

Residential

- h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.

Mercer Slough, on-site wetland, and two on-site unnamed streams are considered to be "environmentally sensitive" areas. The applicant will apply for a Critical Areas Land Use Permit to allow for disturbances within the sensitive area buffers.

- i. Approximately how many people would reside or work in the completed project?

No person will reside or work in the completed project.

- j. Approximately how many people would the completed project displace?

No person will be displaced as a result of this project.

- k. Proposed measures to avoid or reduce displacement impacts, if any:

Does not apply.

- l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:

The size, topography, and sensitive area status of the site will prevent any future development opportunities. Therefore, it is appropriate and compatible that the site be used as open space and managed by the Parks and Community Services Department. The improved trail and bridge crossing are in accordance with the City's long-term goal of making open and natural spaces accessible to citizens for passive recreation.

9. HOUSING

- a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.

None.

- b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.

None.

- c. Proposed measures to reduce or control housing impacts, if any:

Does not apply.

10. AESTHETICS

- a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?

The proposed bridge will be approximately 3.5-ft above the top of bank and will be composed of wood.

- b. What views in the immediate vicinity would be altered or obstructed?

The bridge will be visible from the trail on both sides of the drainage channel. However, the bridge will provide an additional view for trail users, as they would now be able to view the creek and surrounding area from the bridge. Additionally, all invasive plants will be removed from the site and replaced with plantings of native species. Overall, the proposed project will provide increased passive recreational and wildlife viewing opportunities for the public.

- c. Proposed measures to reduce or control aesthetic impacts, if any:

No measures are necessary.

11. LIGHT AND GLARE

- a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

No light or glare will be produced by the proposed project.

- b. Could light or glare from the finished project be a safety hazard or interfere with views?

No.

- c. What existing off-site sources of light or glare may affect your proposal?

None.

- d. Proposed measures to reduce or control light and glare impacts, if any:

No measures are necessary.

12. RECREATION

- a. What designated and informal recreational opportunities are in the immediate vicinity?

The Mercer Slough Nature Area is used for passive recreational activities such as hiking, bird watching, etc. The proposed project will create an additional portion of trail and additional open space accessible to the public for passive recreational use.

- b. Would the proposed project displace any existing recreational uses? If so, describe.

No. The proposed project will enhance passive recreational use within the area.

- c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:

No measures are necessary.

13. HISTORIC AND CULTURAL PRESERVATION

- a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe.

No places or objects of this type are known to exist in the immediate vicinity.

- b. Generally describe any landmarks or evidence of historic, archaeological, scientific, or cultural importance known to be on or next to the site.

There is no known evidence of historic or cultural importance on the project site.

- c. Proposed measures to reduce or control impacts, if any:

Should historic, archeological, scientific or cultural significant items be encountered during implementation of this project, work would be temporarily stopped while the appropriate agencies are notified.

14. TRANSPORTATION

- a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any.

The proposed trail will connect to the intersection of Bellevue Way SE and 112th Avenue NE. It will then run in a north-northeast direction and roughly parallel to 112th Avenue NE before connecting with SE 15th Street.

- b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop?

The nearest King County Metro transit stop is located at the corner of 112th Avenue SE and SE 15th Street, at the northern terminus of the proposed trail. A second transit stop is located at the corner of Bellevue Way SE and 108th Avenue SE (several hundred feet west of the proposed trail).

- c. How many parking spaces would the completed project have? How many would the project eliminate?

This project will neither create nor eliminate parking spaces.

- d. Will the proposal require any new roads or streets, or improvements to existing roads or streets, not including driveways? If so, generally describe (indicate whether public or private).

This project will not affect public roads in any way.

- e. Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.

Water, rail, or air transportation would not be utilized by the completed project.

- f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak volumes would occur.

None.

- g. Proposed measures to reduce or control transportation impacts, if any:

None.

15. PUBLIC SERVICES

- a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe.

No increase in public service needs will result from this project.

- b. Proposed measures to reduce or control direct impacts on public services, if any.

None

16. UTILITIES

- a. Circle utilities currently available at the site: electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other.

No utilities are currently available at the site.

- b. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.

No new utilities are proposed as part of the project.

Signature

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature



Date Submitted: _____

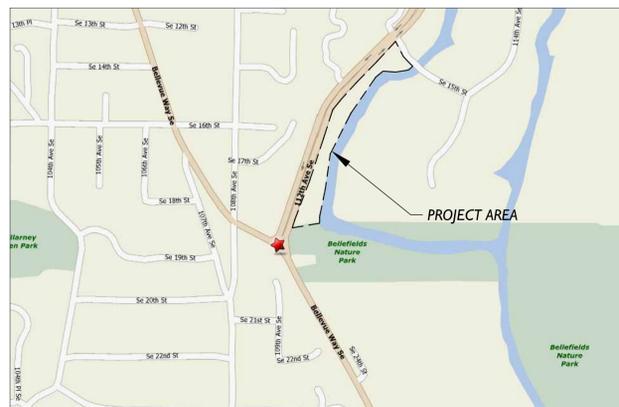
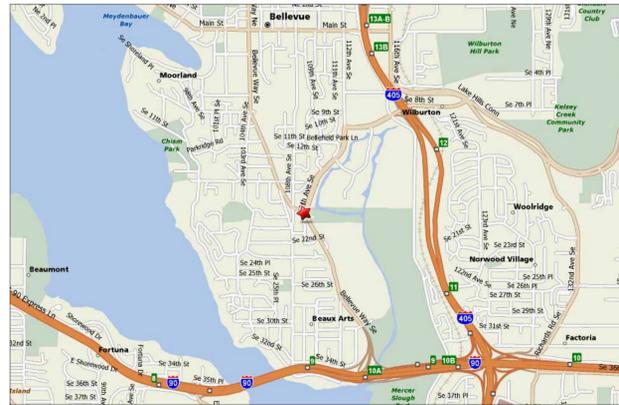
Vicinity Map from Google Maps (top) Google Earth (middle) and iMAP (bottom)





MERCER SLOUGH / 112th AVE SE RESTORATION

BELLEVUE, WA

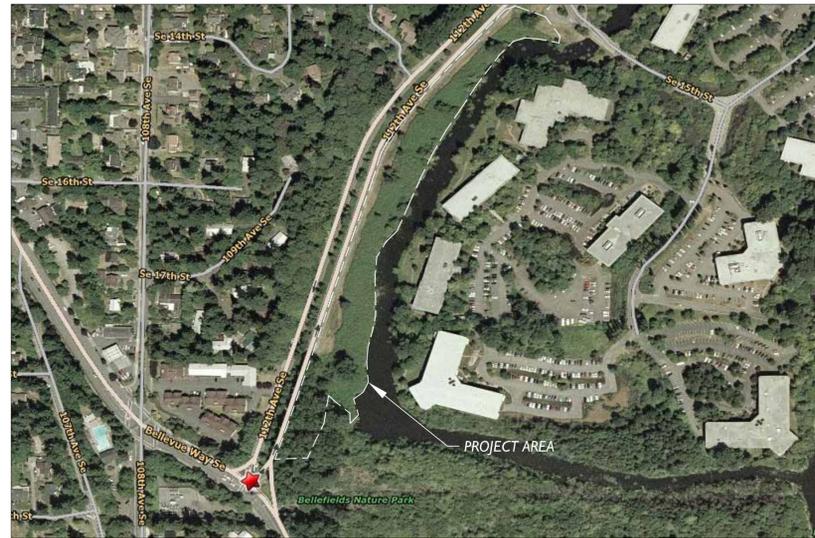


VICINITY MAPS

SHEET INDEX

- COVER SHEET
- 1 CRITICAL AREA / BUFFER FIGURE
- 2 TESC PLAN
- 3 CLEARING / GRADING PLAN - SOUTH
- 4 CLEARING / GRADING PLAN - NORTH
- 5 PLANTING PLAN - SOUTH / PLANT SPECS.
- 6 PLANTING PLAN - CENTER
- 7 PLANTING PLAN - NORTH
- 8 STRUCTURAL DETAILS & ENHANCEMENT PLAN NOTES
- S1 FOOT BRIDGE DETAILS
- S2 FOOT BRIDGE DETAILS

ORIGINAL PLANS ON 24" x 36" SHEETS. ADJUST SCALES ACCORDINGLY.



PROJECT AERIAL VIEW

IMPORTANT:
ANY ALTERATION OR REVISION TO THESE PLANS REQUIRES A SEPARATE REVIEW OR OTHER WRITTEN APPROVAL.

GENERAL NOTES

1. All construction must be in accordance with the City of Bellevue's Development Standards; the City of Bellevue's Engineering & Utility Standards; the Bellevue City Code; the Uniform Building Codes; permit conditions; and all other applicable codes, ordinances, standards and policies. Applicable installation details are incorporated by reference to Bellevue's Engineering & Utilities published standards. All applicable erosion control measures must be taken.
2. A copy of approved plans must be on-site whenever construction is in progress.
3. The Contractor is responsible for obtaining any mechanical, electrical, or other required permits prior to beginning construction.
4. The survey information was provided by the City of Bellevue based on Aerial photography & GIS database and contains limited information on the location of existing utilities and site structures. Contractor is to field check grades, elevations, underground utilities and site conditions prior to construction.
5. It is the sole responsibility of the contractor to: 1) independently verify all existing utility locations and 2) discover and avoid any other utilities / features which may be affected by implementation of this plan.
6. Site shall be restored to better or equal conditions in any areas affected by this work.
7. Scheduling: All work shall be coordinated with Owner to achieve minimal disturbance to roadway operations.
8. Contractor shall have proven experience in similar projects and be thoroughly familiar with City of Bellevue applicable standards and codes prior to commencement of work.
9. This layout is diagrammatic. Contractor shall coordinate exact locations of points of connection to existing systems with Owner prior to beginning of work.

PROJECT SUMMARY:

RESTORATION OF HILLSIDE AND WETLAND ALONG MERCER SLOUGH. WORK INCLUDES (BUT IS NOT LIMITED TO) MOBILIZATION, TEMPORARY EROSION & SEDIMENTATION CONTROL, REMOVAL OF ALL BLACKBERRY & OTHER INVASIVE PLANTS, CONSTRUCTION OF A 4' WIDE SOFT SURFACE TRAIL, WOODEN BRIDGE & STAIRS, AND THE INSTALLATION OF TREES, SHRUBS, AND GROUNDCOVER.

BEFORE WORK BEGINS:

CALL 425 - 452 - 6865 TO SCHEDULE PRE-CONSTRUCTION MEETING WITH THE BUILDING INSPECTOR.

CLEARING AND GRADING STANDARD NOTES

1. All clearing & grading construction must be in accordance with City of Bellevue (COB) Clearing & Grading Code, Clearing & Grading Erosion Control Standard Details (EC-1 through EC-23), Development Standards, Land Use Code, Uniform Building Code, permit conditions, and all other applicable codes, ordinances, and standards. The design elements within these plans have been reviewed according to these requirements. Any variance from adopted erosion control standards is not allowed unless specifically approved by the City of Bellevue Department of Planning & Community Development (PCD) prior to construction. It shall be the sole responsibility of the applicant and the professional civil engineer to correct any error, omission, or variation from the above requirements found in these plans. All corrections shall be at no additional cost or liability to the COB. All details for structural walls, rockeries over four feet in height, geogrid reinforced rockeries and geogrid reinforced modular block walls, must be stamped by a professional engineer.
2. A copy of the approved plans must be on-site during construction. The applicant is responsible for obtaining any other required or related permits prior to beginning construction.
3. All locations of existing utilities have been established by field survey or obtained from available records and should, therefore, be considered only approximate and not necessarily complete. It is the sole responsibility of the contractor to independently verify the accuracy of all utility locations and to discover and avoid any other utilities not shown which may be affected by the implementation of this plan.
4. The area to be cleared and graded must be flagged by the contractor and approved by the Clearing and Grading Inspector prior to beginning any work on the site.
5. A reinforced silt fence must be installed in accordance with COB EC-5 and shall be located as shown on the approved plans or per the Clearing and Grading Inspector, along slope contours and down slope from the building site.
6. A hard-surface construction access pad is required per Clearing & Grading Standard Detail EC-1 or EC-2. This pad must remain in place until paving is installed.
7. Clearing shall be limited to the areas within the approved disturbance limits. Exposed soils must be covered at the end of each working day when working from October 1st through April 30th. From May 1st through September 30th, exposed soils must be covered at the end of each construction week and also at the threat of rain.
8. Any excavated material removed from the construction site and deposited on property within the City limits must be done in compliance with a valid clearing & grading permit. Locations for the mobilization area and stockpiled material must be approved by the Clearing and Grading Inspector at least 24 hours in advance of any stockpiling.
9. To reduce the potential for erosion of exposed soils, or when rainy season construction is permitted, the following Best Management Practices (BMPs) are required.
 - Preserve natural vegetation for as long as possible or as required by the Clearing and Grading Inspector.
 - Protect exposed soil using plastic (EC-14), erosion control blankets, straw or mulch (COB Guide to Mulch Materials, Rates, and Use Chart), or as directed by the Clearing and Grading Inspector.
 - Install catch basin inserts as required by the Clearing and Grading Inspector or permit conditions of approval.
 - Install a temporary sediment pond, a series of sedimentation tanks, temporary filter vaults, or other sediment control facilities. Installation of exposed aggregate surfaces requires a separate effluent collection pond onsite.
10. Final site grading must direct drainage away from all building structures at a minimum 2% slope, per the Uniform Building Code.
11. The contractor must maintain a sweeper on site during earthwork and immediately remove soil that has been tracked onto paved areas as result of construction.
12. Turbidity monitoring may be required as a condition of clearing and grading permit approval. If required, turbidity monitoring must be performed in accordance with the approved turbidity monitoring plan and as directed by the Clearing and Grading Inspector. Monitoring must continue during site (earthwork) construction until the final sign-off by the Clearing and Grading Inspector.
13. Any project that is subject to Rainy Season Restrictions will not be allowed to perform clearing and grading activities without written approval from the PCD Director. The rainy season extends from November 1st through April 30th, as defined in section 23.76.093A of the Clearing and Grading Code.

NO.	DATE	BY	APPR.	REVISIONS
11.28.06	JMJB	JFB		PERMIT SET
03.21.07	JMJB	JFB		REVIEW SET
02.21.08	MGZS	MGWB		REVIEW FOR PERMITTING
04.25.08	MGZS	GB		PERMIT SET
04.06.09	MGZS	GB		PERMIT REVISIONS PER CITY OF BELLEVUE

Approved By		MG / ZS	02.18.08
PARKS DESIGN MANAGER	DATE	DESIGNED BY	DATE
Geoff Bradley		ZS	02.18.08
PROJECT MANAGER	DATE	DRAWN BY	DATE
		MG / KB	02.18.08
		CHECKED BY	DATE

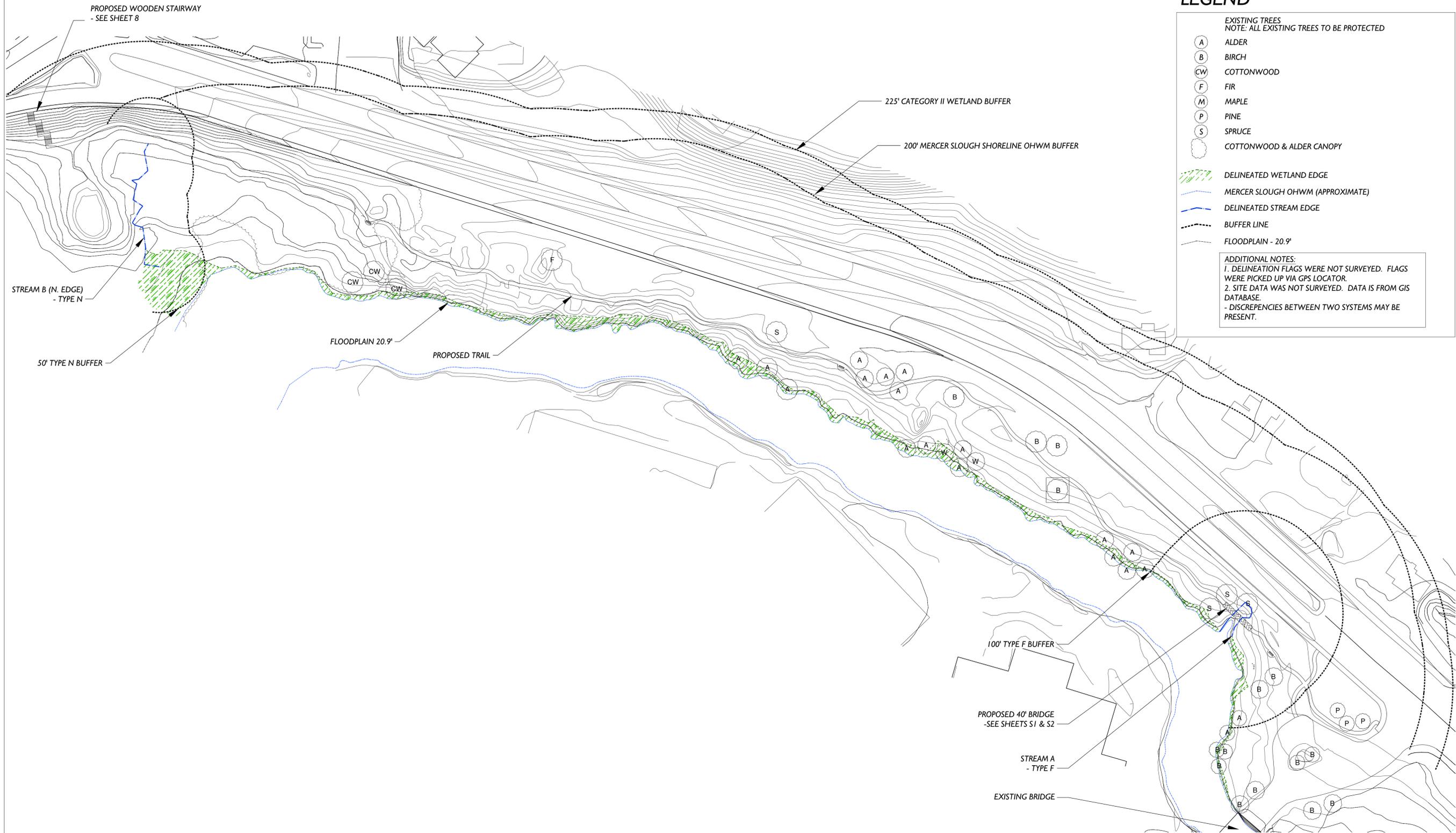

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 THE WATERSHED COMPANY
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 www.watershedco.com


 STATE OF WASHINGTON
 DEPARTMENT OF ECOLOGY
 WATER & SEWER
 DEVELOPMENT DIVISION

MERCER SLOUGH / 112th AVE SE RESTORATION

COVER
 TWC #: 070203



LEGEND

EXISTING TREES
NOTE: ALL EXISTING TREES TO BE PROTECTED

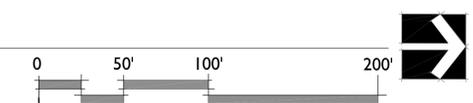
- (A) ALDER
- (B) BIRCH
- (CW) COTTONWOOD
- (F) FIR
- (M) MAPLE
- (P) PINE
- (S) SPRUCE
- () COTTONWOOD & ALDER CANOPY

- DELINEATED WETLAND EDGE
- MERCER SLOUGH OHWM (APPROXIMATE)
- DELINEATED STREAM EDGE
- BUFFER LINE
- FLOODPLAIN - 20.9'

ADDITIONAL NOTES:
1. DELINEATION FLAGS WERE NOT SURVEYED. FLAGS WERE PICKED UP VIA GPS LOCATOR.
2. SITE DATA WAS NOT SURVEYED. DATA IS FROM GIS DATABASE.
- DISCREPANCIES BETWEEN TWO SYSTEMS MAY BE PRESENT.

CRITICAL AREA / BUFFER FIGURE

SCALE: 1" = 50'-0" ORIGINAL PLANS ON 24" x 36" SHEETS. ADJUST SCALES ACCORDINGLY.



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MERCER SLOUGH / 112th AVE SE RESTORATION

CRITICAL AREA / BUFFER FIGURE

TWC #: 070203

Sheet 1 of 8

LEGEND

- EXISTING TREES**
NOTE: ALL EXISTING TREES TO BE PROTECTED
- (A) ALDER
 - (B) BIRCH
 - (CW) COTTONWOOD
 - (F) FIR
 - (M) MAPLE
 - (P) PINE
 - (S) SPRUCE
 - () COTTONWOOD & ALDER CANOPY
- GROUND STABILIZATION FABRIC**
(AREAS SHOWN APPROX.)
- COIR - LOG SILT BARRIER**
(AREAS SHOWN APPROX.)
- LIMIT OF WORK** (148,320 SF)
- DELINEATED STREAM EDGE**
- FLOODPLAIN** - 20.9'

GENERAL NOTES:

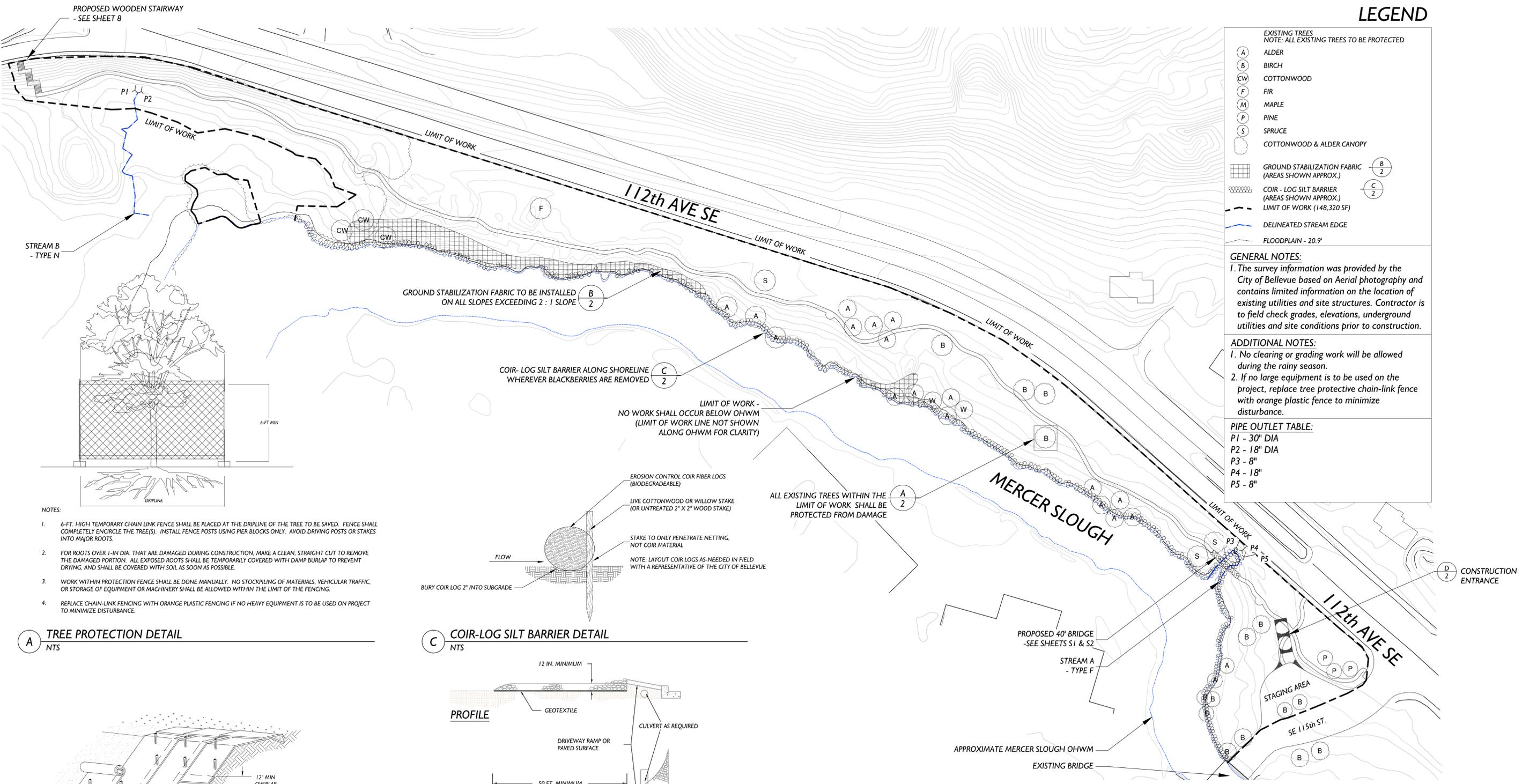
- The survey information was provided by the City of Bellevue based on Aerial photography and contains limited information on the location of existing utilities and site structures. Contractor is to field check grades, elevations, underground utilities and site conditions prior to construction.

ADDITIONAL NOTES:

- No clearing or grading work will be allowed during the rainy season.
- If no large equipment is to be used on the project, replace tree protective chain-link fence with orange plastic fence to minimize disturbance.

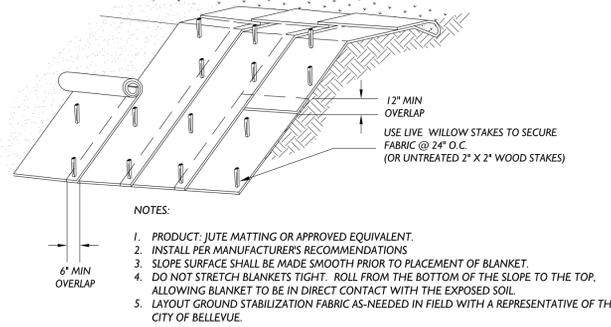
PIPE OUTLET TABLE:

P1 - 30" DIA
P2 - 18" DIA
P3 - 8"
P4 - 18"
P5 - 8"

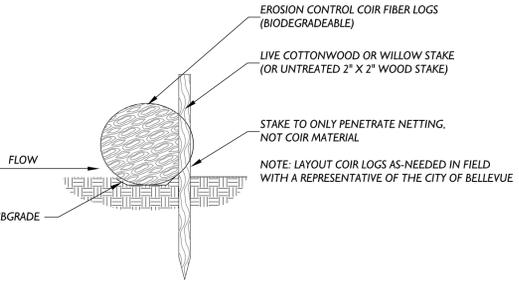


- NOTES:**
- 6-FT. HIGH TEMPORARY CHAIN LINK FENCE SHALL BE PLACED AT THE DRIFLINE OF THE TREE TO BE SAVED. FENCE SHALL COMPLETELY ENIRCLE THE TREE(S). INSTALL FENCE POSTS USING PIER BLOCKS ONLY. AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS.
 - FOR ROOTS OVER 1-IN DIA. THAT ARE DAMAGED DURING CONSTRUCTION, MAKE A CLEAN, STRAIGHT CUT TO REMOVE THE DAMAGED PORTION. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND SHALL BE COVERED WITH SOIL AS SOON AS POSSIBLE.
 - WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMIT OF THE FENCING.
 - REPLACE CHAIN-LINK FENCING WITH ORANGE PLASTIC FENCING IF NO HEAVY EQUIPMENT IS TO BE USED ON PROJECT TO MINIMIZE DISTURBANCE.

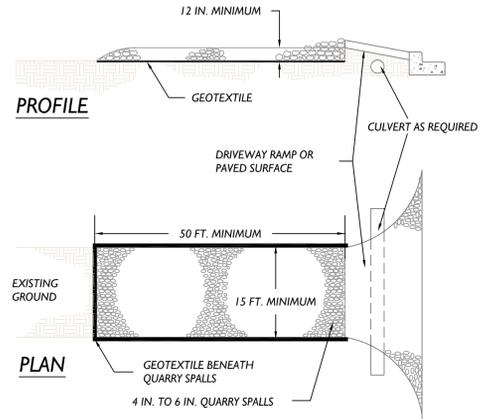
A TREE PROTECTION DETAIL
NTS



B GROUND STABILIZATION FABRIC DETAIL
NTS - INVASIVE PLANTS TO BE REMOVED PRIOR TO INSTALLATION



C COIR-LOG SILT BARRIER DETAIL
NTS



- NOTES:**
- PAD SHALL BE REMOVED AND REPLACED WHEN SOIL IS EVIDENT ON THE SURFACE OF THE PAD OR AS DIRECTED BY THE CITY CLEARING AND GRADING INSPECTOR.
 - PAD SHALL BE INSTALLED IN PLANTING STRIP AS APPROPRIATE.
 - PAD THICKNESS SHALL BE INCREASED IF SOIL CONDITIONS DICTATE OR PER THE DIRECTION OF THE CITY CLEARING AND GRADING INSPECTOR.
 - MINIMUM DIMENSIONS MAY BE MODIFIED AS REQUIRED BY SITE CONDITIONS UPON APPROVAL OF THE CITY CLEARING AND GRADING INSPECTOR.

D CONSTRUCTION ENTRANCE DETAIL
NTS

TESC PLAN

SCALE: 1" = 50'-0" ORIGINAL PLANS ON 24" x 36" SHEETS. ADJUST SCALES ACCORDINGLY.



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PARKS DESIGN MANAGER		MG / ZS	02.18.08
PROJECT MANAGER	Geoff Bradley	ZS	02.18.08
		MG / KB	02.18.08
		CHECKED BY	DATE

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MERCER SLOUGH / 112th AVE SE RESTORATION

TWC #: 070203

TESC PLAN

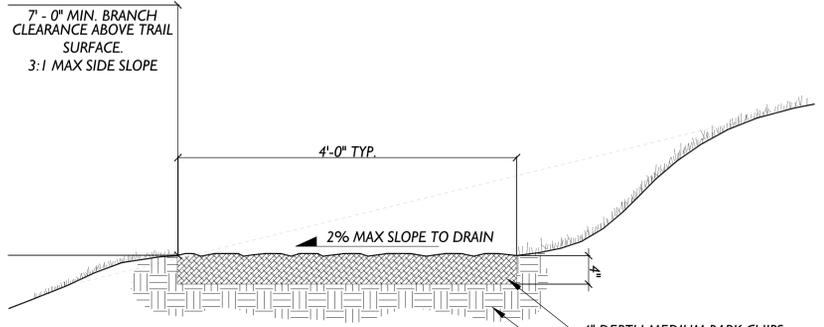
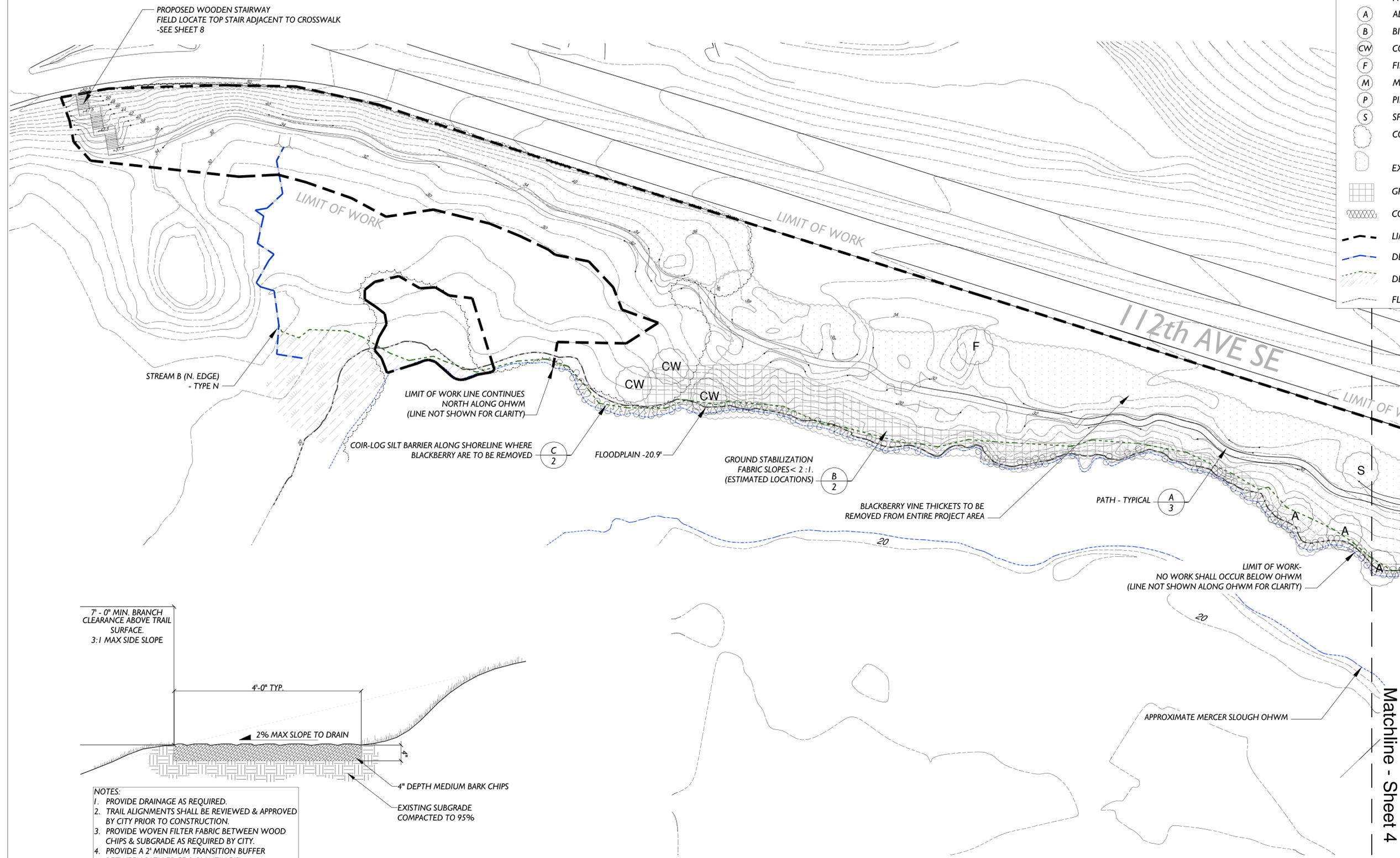
Sheet 2 of 8

LEGEND

- EXISTING TREES
NOTE: ALL EXISTING TREES TO BE PROTECTED
- (A) ALDER
- (B) BIRCH
- (CW) COTTONWOOD
- (F) FIR
- (M) MAPLE
- (P) PINE
- (S) SPRUCE
- (COTTONWOOD & ALDER CANOPY)
- EXISTING BLACKBERRY VINE THICKETS
- GROUND STABILIZATION FABRIC (B/2)
- COIR - LOG SILT BARRIER (C/2)
- LIMIT OF WORK (148,320 SF)
- DELINEATED STREAM EDGE
- DELINEATED WETLAND
- FLOODPLAIN - 20.9'

INVASIVE REMOVAL NOTES:
Blackberry: Outside of the delineated wetland area, blackberry vine thickets shall be cut to the ground using a slope mower, by hand operated power tools, or other approved method. Vines, crowns and other removal-generated debris shall be removed from the site during or upon completion of the clearing work. Re-emerging and re-sprouting growth shall be treated with an approved herbicide by state-licensed applicators. Such treatment is to be during the active growing season only (May-September). Re-application may be necessary throughout the first growing season and in subsequent growing seasons during the monitoring/maintenance period. Within the wetland, removal will be by hand tools or hand-operated power tools only, making sure to grub out as many roots as practical.
Other Invasive Weeds to Remove: Not limited to: English ivy, English laurel, Scotch Broom, Holly, Morning Glory, and Knotweed.

ADDITIONAL NOTES:
 1. Work shall not occur below OHWM.
 2. All existing trees within project area shall be protected.
 3. Trail grading may need alteration as determined by contractor based on in-field observations. Verify all layout change with City of Bellevue.



- NOTES:**
1. PROVIDE DRAINAGE AS REQUIRED.
 2. TRAIL ALIGNMENTS SHALL BE REVIEWED & APPROVED BY CITY PRIOR TO CONSTRUCTION.
 3. PROVIDE WOVEN FILTER FABRIC BETWEEN WOOD CHIPS & SUBGRADE AS REQUIRED BY CITY.
 4. PROVIDE A 2' MINIMUM TRANSITION BUFFER BETWEEN PATH EDGE & PLANTING(S).

A PATH DETAIL - TYPICAL
NTS

CLEARING / GRADING PLAN - SOUTH

SCALE: 1" = 30'-0" ORIGINAL PLANS ON 24" x 36" SHEETS. ADJUST SCALES ACCORDINGLY.



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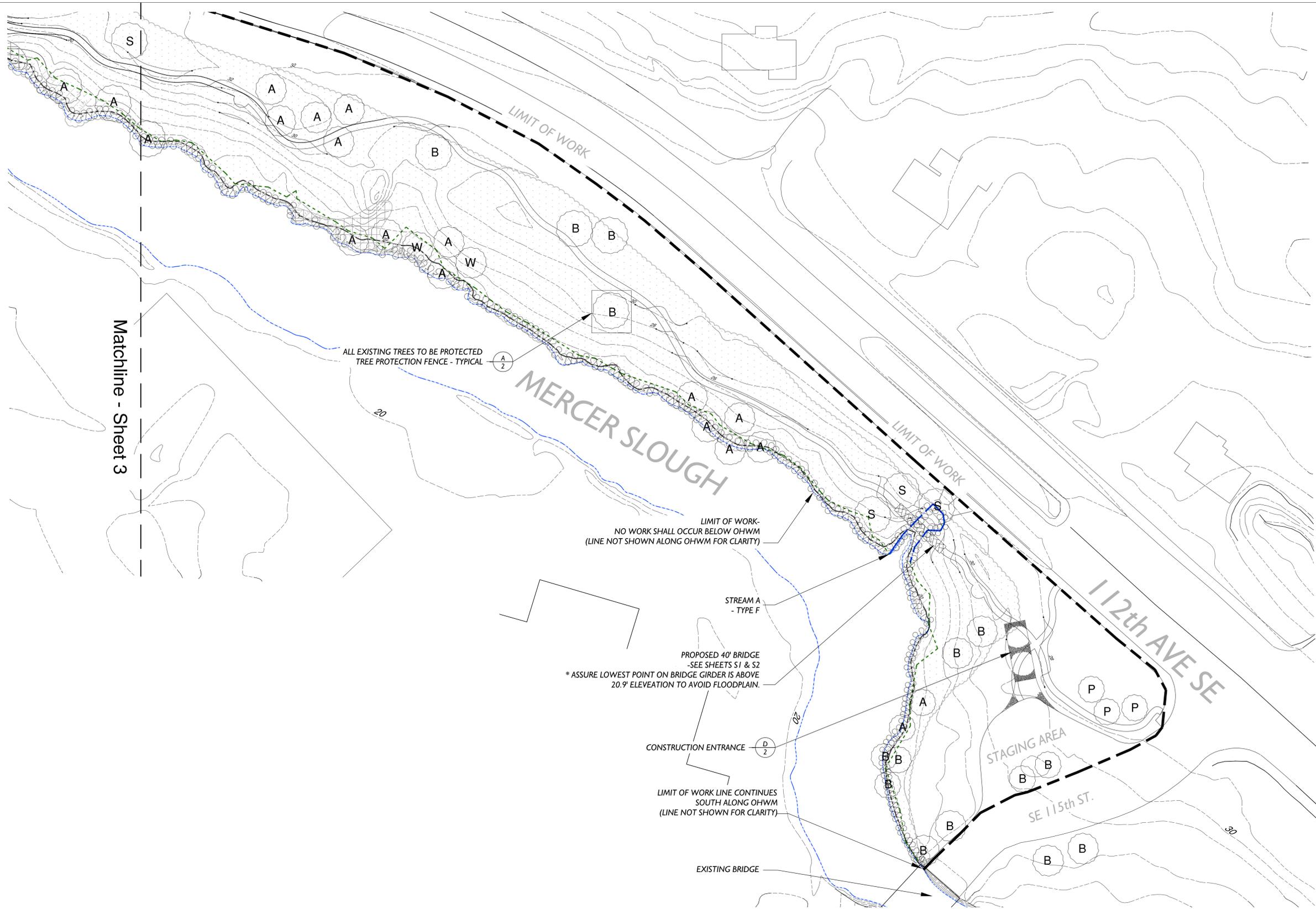
Approved By		DATE
PARKS DESIGN MANAGER	DATE	MG / ZS 02.18.08
PROJECT MANAGER	DATE	ZS 02.18.08
	DATE	MG / KB 02.18.08
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MERCER SLOUGH / 112th AVE SE RESTORATION

CLEARING / GRADING PLAN - SOUTH
 TWC #: 070203
 Sheet 3 of 8



LEGEND

EXISTING TREES
NOTE: ALL EXISTING TREES TO BE PROTECTED

- (A) ALDER
- (B) BIRCH
- (CW) COTTONWOOD
- (F) FIR
- (M) MAPLE
- (P) PINE
- (S) SPRUCE
- (Cottonwood & Alder symbol) COTTONWOOD & ALDER CANOPY
- (Blackberry symbol) EXISTING BLACKBERRY VINE THICKETS
- (Grid symbol) GROUND STABILIZATION FABRIC
- (Wavy line symbol) COIR - LOG SILT BARRIER
- (Dashed line) LIMIT OF WORK (148,320 SF)
- (Blue line) DELINEATED STREAM EDGE
- (Green line) DELINEATED WETLAND
- (Dashed line) FLOODPLAIN - 20.9'

INVASIVE REMOVAL NOTES:

Blackberry:
Outside of the delineated wetland area, blackberry vine thickets shall be cut to the ground using a slope mower, by hand operated power tools, or other approved method. Vines, crowns and other removal-generated debris shall be removed from the site during or upon completion of the clearing work. Re-emerging and re-sprouting growth shall be treated with an approved herbicide by state-licensed applicators. Such treatment is to be during the active growing season only (May-September). Re-application may be necessary throughout the first growing season and in subsequent growing seasons during the monitoring/maintenance period. Within the wetland, removal will be by hand tools or hand-operated power tools only, making sure to grub out as many roots as practical.

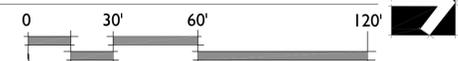
Other Invasive Weeds to Remove:
Not limited to: English ivy, English laurel, Scotch Broom, Holly, Morning Glory, and Knotweed.

ADDITIONAL NOTES:

1. Work shall not occur below OHWM.
2. All existing trees within project area shall be protected.
3. Trail grading may need alteration as determined by contractor based on in-field observations. Verify all layout change with City of Bellevue.

CLEARING / GRADING PLAN - NORTH

SCALE: 1" = 30'-0"
ORIGINAL PLANS ON 24" x 36" SHEETS. ADJUST SCALES ACCORDINGLY.



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04.06.09	MG/ZS	GB		PERMIT REVISIONS PER CITY OF BELLEVUE

Approved By		DATE	
PARKS DESIGN MANAGER	MG / ZS	DESIGNED BY	02.18.08
Geoff Bradley	ZS	DRAWN BY	02.18.08
PROJECT MANAGER	MG / KB	CHECKED BY	02.18.08

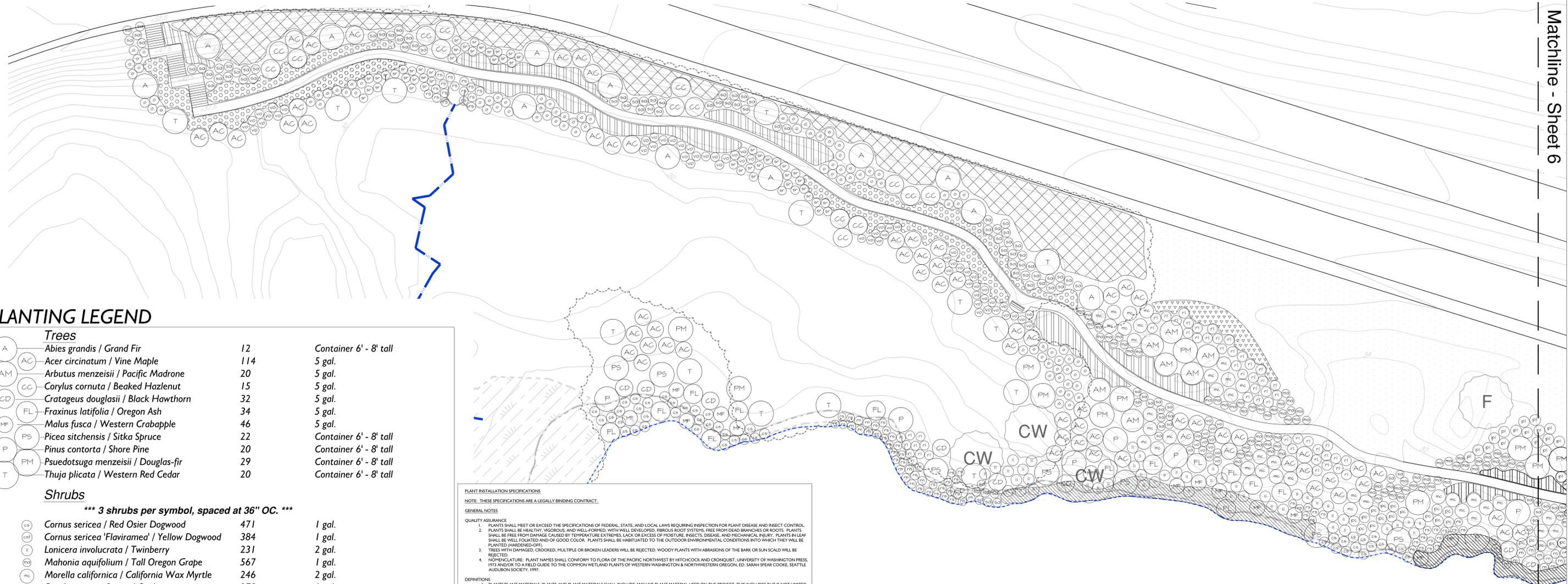


City of Bellevue
Dept. of Parks and Community Services



MERCER SLOUGH / 112th AVE SE RESTORATION

CLEARING / GRADING PLAN -NORTH
TWC #: 070203
Sheet 4 of 8



PLANTING LEGEND

Trees		
A	<i>Abies grandis / Grand Fir</i>	12
AC	<i>Acer circinatum / Vine Maple</i>	114
AM	<i>Arbutus menzeisii / Pacific Madrone</i>	20
CC	<i>Corylus cornuta / Beaked Hazelnut</i>	15
CD	<i>Crataegus douglasii / Black Hawthorn</i>	32
FL	<i>Fraxinus latifolia / Oregon Ash</i>	34
MF	<i>Malus fusca / Western Crabapple</i>	46
PS	<i>Picea sitchensis / Sitka Spruce</i>	22
P	<i>Pinus contorta / Shore Pine</i>	20
PM	<i>Pseudotsuga menzeisii / Douglas-fir</i>	29
T	<i>Thuja plicata / Western Red Cedar</i>	20

Shrubs		
*** 3 shrubs per symbol, spaced at 36" OC. ***		
CS	<i>Cornus sericea / Red Osier Dogwood</i>	471
CF	<i>Cornus sericea 'Flaviramea' / Yellow Dogwood</i>	384
LI	<i>Lonicera involucrata / Twinberry</i>	231
MO	<i>Mahonia aquifolium / Tall Oregon Grape</i>	567
MC	<i>Morella californica / California Wax Myrtle</i>	246
OS	<i>Oemleria cerasiformis / Osoberry</i>	270
PL	<i>Philadelphus lewisii / Mock Orange</i>	366
PC	<i>Physocarpus capitatus / Pacific Ninebark</i>	390
RI	<i>Ribes sanguineum / Red Flowering Currant</i>	732
RO	<i>Rosa nutkana / Nootka Rose</i>	711
RS	<i>Rubus spectabilis / Salmonberry</i>	282
RA	<i>Sambucus racemosa / Red Elderberry</i>	159
SD	<i>Spiraea douglasii / Hardhack</i>	78
SN	<i>Symphoricarpos albus / Snowberry</i>	930
VO	<i>Vaccinium ovatum / Evergreen Huckleberry</i>	567

Groundcover & Live Stakes		
AY	<i>Achillea millefolium / Western Yarrow</i>	184
GO	<i>Aruncus dioicus / Goatsbeard</i>	266
LA	<i>Ledum palustre / Labrador Tea</i>	100
LP	<i>Lupinus polyphyllus / Bigleaf Lupine</i>	400
SW	<i>Polystichum munitum / Sword Fern</i>	123

Slope to be removed of ivy avoiding damage to existing native shrubs and trees.		
Replant with following species. Layout in field with landscape architect.		
SA	<i>Gaultheria shallon / Salal</i>	600
SN	<i>Symphoricarpos albus / Snowberry</i>	120

* Hydroseed all disturbed or exposed soil areas that are not to be planted using spec. below.		
PROTIME 404 NATIVE WATER QUALITY SEED MIX		
BR	<i>Bromus carinatus / California Brome</i>	- 55%
EL	<i>Elymus glaucus / Blue Wild Rye</i>	- 25%
LU	<i>Lupinus albus / Lupine</i>	- 15%
YR	<i>Yarrow millefolium / Western Yarrow</i>	- 5%
2500	<i>Cornus sericea / Red-twig Dogwood</i>	- Stakes
500	<i>Salix lasianдра & Salix Stitchensis</i>	- Fascine Bundles
Pacific & Sitka Willow		

PLANT INSTALLATION SPECIFICATIONS
NOTE: THESE SPECIFICATIONS ARE A LEGALLY BINDING CONTRACT.

GENERAL NOTES

QUALITY ASSURANCE

- PLANTS SHALL MEET OR EXCEED THE SPECIFICATIONS OF FEDERAL, STATE, AND LOCAL LAWS REQUIRING INSPECTION FOR PLANT DISEASE AND INSECT CONTROL.
- PLANTS SHALL BE HEALTHY, VIGOROUS, AND WELL-FORMED, WITH WELL DEVELOPED, FIBROUS ROOT SYSTEMS, FREE FROM DEAD BRANCHES OR ROOTS. PLANTS SHALL BE FREE FROM DAMAGE CAUSED BY TERRESTRIAL OR EXCESS OF HOSTS, INSECTS, DISEASE, AND MECHANICAL INJURY. PLANTS IN LEAF SHALL BE WELL FOLIATED AND OF GOOD COLOR. PLANTS SHALL BE HABITUATED TO THE OUTDOOR ENVIRONMENTAL CONDITIONS INTO WHICH THEY WILL BE PLANTED (HARDENED).
- TREES WITH DAMAGED, CROOKED, MULTIPLE OR BROKEN LEADERS WILL BE REJECTED. WOODY PLANTS WITH ABRASIONS OF THE BARK OR SUN SCALD WILL BE REJECTED.
- NOMENCLATURE: PLANT NAMES SHALL CONFORM TO FLORA OF THE PACIFIC NORTHWEST BY HITCOCK AND CRONQUIST, UNIVERSITY OF WASHINGTON PRESS, 1973 AND/OR TO A FIELD GUIDE TO THE COMMON WETLAND PLANTS OF WESTERN WASHINGTON AND NORTHWESTERN OREGON, ED. SARAH SPEAR COOKE, SEATTLE AUDUBON SOCIETY, 1997.

DEFINITIONS

- PLANT MATERIALS: PLANTS AND PLANT MATERIALS SHALL INCLUDE ANY LIVE PLANT MATERIAL USED ON THE PROJECT. THIS INCLUDES BUT IS NOT LIMITED TO CONTAINER GROWN, B&B OR BAREROOT PLANTS, LIVE STAKES AND FASCINE BUNDLES, TUBERS, CORNS, BULBS, ETC., SPRIGS, PLUGS, AND LINERS.
- CONTAINER GROWN: CONTAINER GROWN PLANTS ARE THOSE WHOSE ROOTBALLS ARE ENCLOSED IN A POT OR BAG IN WHICH THAT PLANT GREW.

SUBSTITUTIONS

- IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN SPECIFIED MATERIALS IN ADVANCE IF SPECIAL GROWING, MARKETING OR OTHER ARRANGEMENTS MUST BE MADE IN ORDER TO SUPPLY SPECIFIED MATERIALS.
- SUBSTITUTION OF PLANT MATERIALS NOT ON THE PROJECT LIST WILL NOT BE PERMITTED UNLESS AUTHORIZED IN WRITING BY THE RESTORATION CONSULTANT.
- IF PROOF IS SUBMITTED THAT ANY PLANT MATERIAL SPECIFIED IS NOT OBTAINABLE, A PROPOSAL WILL BE CONSIDERED FOR USE OF THE NEAREST EQUIVALENT SIZE OR ALTERNATIVE SPECIES, WITH CORRESPONDING ADJUSTMENT OF CONTRACT PRICE.
- SUCH PROOF WILL BE SUBSTANTIATED AND SUBMITTED IN WRITING TO THE CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION.

INSPECTION

- PLANTS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE RESTORATION CONSULTANT FOR CONFORMANCE TO SPECIFICATIONS, EITHER AT TIME OF DELIVERY ON-SITE OR AT THE GROWER'S NURSERY. APPROVAL OF PLANT MATERIALS AT ANY TIME SHALL NOT IMPAIR THE SUBSEQUENT RIGHT OF INSPECTION AND REJECTION DURING PROGRESS OF THE WORK.
- PLANTS INSPECTED ON SITE AND REJECTED FOR NOT MEETING SPECIFICATIONS MUST BE REMOVED IMMEDIATELY FROM SITE OR RED-TAGGED AND REMOVED AS SOON AS POSSIBLE.
- THE RESTORATION CONSULTANT MAY ELECT TO INSPECT PLANT MATERIALS AT THE PLACE OF GROWTH. AFTER INSPECTION AND ACCEPTANCE, THE STRAIP RESTORATION CONSULTANT MAY REQUIRE THE INSPECTED PLANTS BE LABELED AND RESERVED FOR PROJECT. SUBSTITUTION OF THESE PLANTS WITH OTHER INDIVIDUALS, EVEN OF THE SAME SPECIES AND SIZE, IS UNACCEPTABLE.

MEASUREMENTS OF PLANTS

- PLANTS SHALL CONFORM TO SIZES SPECIFIED UNLESS SUBSTITUTIONS ARE MADE AS OUTLINED IN THIS CONTRACT.
- HEIGHT AND SPREAD DIMENSIONS SPECIFIED REFER TO MAIN BODY OF PLANT AND NOT BRANCH OR ROOT TIP TO TIP. PLANT DIMENSIONS SHALL BE MEASURED WHEN THEIR BRANCHES OR ROOTS ARE IN THEIR NORMAL POSITION.
- WHERE A RANGE OF SIZE IS GIVEN, NO PLANT SHALL BE LESS THAN THE MINIMUM SIZE AND AT LEAST 50% OF THE PLANTS SHALL BE AS LARGE AS THE MEDIAN OF THE SIZE RANGE. (EXAMPLE: IF THE SIZE RANGE IS 12" TO 18", AT LEAST 50% OF PLANTS MUST BE 15" TALL.)

SUBMITTALS

PROPOSED PLANT SOURCES

- WITHIN 45 DAYS AFTER AWARD OF THE CONTRACT, SUBMIT A COMPLETE LIST OF PLANT MATERIALS PROPOSED TO BE PROVIDED DEMONSTRATING CONFORMANCE WITH THE REQUIREMENTS SPECIFIED. INCLUDE THE NAMES AND ADDRESSES OF ALL GROWERS AND NURSERIES.

PRODUCT CERTIFICATES

- PLANT MATERIALS LIST - SUBMIT DOCUMENTATION TO CONSULTANT AT LEAST 30 DAYS PRIOR TO START OF WORK UNDER THIS SECTION THAT PLANT MATERIALS HAVE BEEN ORDERED. ARRANGE PROCEDURE FOR INSPECTION OF PLANT MATERIAL WITH CONSULTANT AT TIME OF SUBMISSION.
- HAVE COPIES OF WHOLESALE OR GROWER'S INVOICES OR PACKING SLIPS FOR ALL PLANTS ON SITE DURING INSTALLATION. INVOICE OR PACKING SLIP SHOULD LIST SPECIES BY SCIENTIFIC NAME, QUANTITY, AND DATE DELIVERED (AND GENETIC ORIGIN IF THAT INFORMATION WAS PREVIOUSLY REQUESTED).

DELIVERY, HANDLING, & STORAGE

NOTIFICATION

CONTRACTOR MUST NOTIFY CONSULTANT 48 HOURS OR MORE IN ADVANCE OF DELIVERIES SO THAT CONSULTANT MAY ARRANGE FOR INSPECTION.

PLANT MATERIALS

- TRANSPORTATION - DURING SHIPPING, PLANTS SHALL BE PACKED TO PROVIDE PROTECTION AGAINST CLIMATE EXTREMES, BREAKAGE AND DRYING. PROPER VENTILATION AND PREVENTION OF DAMAGE TO BARK, BRANCHES, AND ROOT SYSTEMS MUST BE ENSURED.
- SCHEDULING AND STORAGE - PLANTS ARE TO BE STORED AS CLOSE TO PLANTING AS POSSIBLE. PLANTS IN STORAGE MUST BE PROTECTED AGAINST ANY CONDITION THAT IS DETRIMENTAL TO THEIR CONTINUED HEALTH AND VIGOR.
- HANDLING - PLANT MATERIALS SHALL NOT BE HELD BY THE TRUNK LIMBS OR FOLIAGE BUT ONLY BY THE CONTAINER, B&B BOX, OR OTHER PROTECTIVE STRUCTURE, EXCEPT BAREROOT PLANTS SHALL BE KEPT IN BUNDLES UNTIL PLANTING AND THEN HANDLED CAREFULLY BY THE TRUNK OR STEM.
- LABELS - PLANTS SHALL HAVE DURABLE, LEGIBLE LABELS STATING CORRECT SCIENTIFIC NAME AND SIZE. TEN PERCENT OF CONTAINER GROWN PLANTS IN INDIVIDUAL POTS SHALL BE LABELED. PLANTS SUPPLIED IN FLATS, B&B BOXES, BAGS, OR BUNDLES SHALL HAVE ONE LABEL PER GROUP.

WARRANTY

PLANT WARRANTY

PLANTS MUST BE GUARANTEED TO BE TRUE TO SCIENTIFIC NAME AND SPECIFIED SIZE, AND TO BE HEALTHY AND CAPABLE OF VIGOROUS GROWTH.

REPLACEMENT

- PLANTS NOT FOUND MEETING ALL OF THE REQUIRED CONDITIONS MUST BE REMOVED FROM SITE AND REPLACED IMMEDIATELY AT THE CONSULTANT'S DISCRETION.
- PLANTS NOT SURVIVING AFTER ONE YEAR TO BE REPLACED.

PLANT MATERIAL

GENERAL

- PLANTS SHALL BE NURSERY GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICES UNDER CLIMATIC CONDITIONS SIMILAR TO OR MORE SEVERE THAN THOSE OF THE PROJECT SITE.
- PLANTS SHALL BE TRUE TO SPECIES AND VARIETY OR SUBSPECIES. NO CLONALS OR NAMED VARIETIES SHALL BE USED UNLESS SPECIFIED AS SUCH.

QUANTITIES

SEE PLANT LIST ON ACCOMPANYING PLANS.

ROOT TREATMENT

- CONTAINER GROWN PLANTS (INCLUDES PLUGS): PLANT ROOT BALLS MUST HOLD TOGETHER WHEN THE PLANT IS REMOVED FROM THE POT, EXCEPT THAT A SMALL AMOUNT OF LOOSE SOIL MAY BE ON THE TOP OF THE ROOTBALL.
- PLANTS MUST NOT BE ROOT-BALDING. THERE MUST BE NO CIRCULAR ROOTS PRESENT IN ANY PLANT INSPECTED.
- ROOTBALLS THAT HAVE CRACKED OR BROKEN WHEN REMOVED FROM THE CONTAINER SHALL BE REJECTED.

PLANTING PLAN - SOUTH

SCALE: 1" = 20'-0" ORIGINAL PLANS ON 24" x 36" SHEETS. ADJUST SCALES ACCORDINGLY.



NO.	DATE	BY	APPR.	REVISIONS
11.28.06	JM/JB	JFB		PERMIT SET
03.21.07	JM/JB	JFB		REVIEW SET
02.21.08	MG/ZS	MG/KB		REVIEW FOR PERMITTING
04.25.08	MG/ZS	GB		PERMIT SET
04.06.09	MG/ZS	GB		PERMIT REVISIONS PER CITY OF BELLEVUE

Approved By	
PARKS DESIGN MANAGER	DATE
Geoff Bradley	
PROJECT MANAGER	DATE
MG / ZS	02.18.08
ZS	02.18.08
MG / KB	02.18.08
CHECKED BY	DATE

City of Bellevue
Dept. of Parks and Community Services

THE WATERSHED COMPANY
Science & Design
750 Sixth Street South
Kirkland WA 98033
425.822.5242 / 425.822.8134
www.watershedco.com

MERCER SLOUGH / 112th AVE SE RESTORATION

PLANTING PLAN - SOUTH

TWC #: 070203

Sheet 5 of 8

PLANTING LEGEND

Trees		
A	Abies grandis / Grand Fir	12
AC	Acer circinatum / Vine Maple	114
AM	Arbutus menzeisii / Pacific Madrone	20
CC	Corylus cornuta / Beaked Hazelnut	15
CD	Crataegus douglasii / Black Hawthorn	32
FL	Fraxinus latifolia / Oregon Ash	34
MF	Malus fusca / Western Crabapple	46
PS	Picea sitchensis / Sitka Spruce	22
P	Pinus contorta / Shore Pine	20
PM	Psuedotsuga menzeisii / Douglas-fir	29
T	Thuja plicata / Western Red Cedar	20

Shrubs		
*** 3 shrubs per symbol, spaced at 36" OC. ***		
cs	Cornus sericea / Red Osier Dogwood	471
cd	Cornus sericea 'Flaviramea' / Yellow Dogwood	384
ll	Lonicera involucrata / Twinberry	231
mg	Mahonia aquifolium / Tall Oregon Grape	567
mc	Morella californica / California Wax Myrtle	246
o	Oemleria cerasiformis / Osoberry	270
pl	Philadelphus lewisii / Mock Orange	366
pc	Physocarpus capitatus / Pacific Ninebark	390
ri	Ribes sanguineum / Red Flowering Currant	732
rn	Rosa nutkana / Nootka Rose	711
rs	Rubus spectabilis / Salmonberry	282
rb	Sambucus racemosa / Red Elderberry	159
sd	Spiraea douglasii / Hardhack	78
sa	Symphoricarpos albus / Snowberry	930
vo	Vaccinium ovatum / Evergreen Huckleberry	567

Groundcover & Live Stakes		
ay	Achillea millefolium / Western Yarrow	184
go	Aruncus dioicus / Goatsbeard	266
la	Ledum palustre / Labrador Tea	100
bl	Lupinus polyphyllus / Bigleaf Lupine	400
sw	Polystichum munitum / Sword Fern	123

Slope to be removed of ivy avoiding damage to existing native shrubs and trees. Replant with following species. Layout in field with landscape architect.

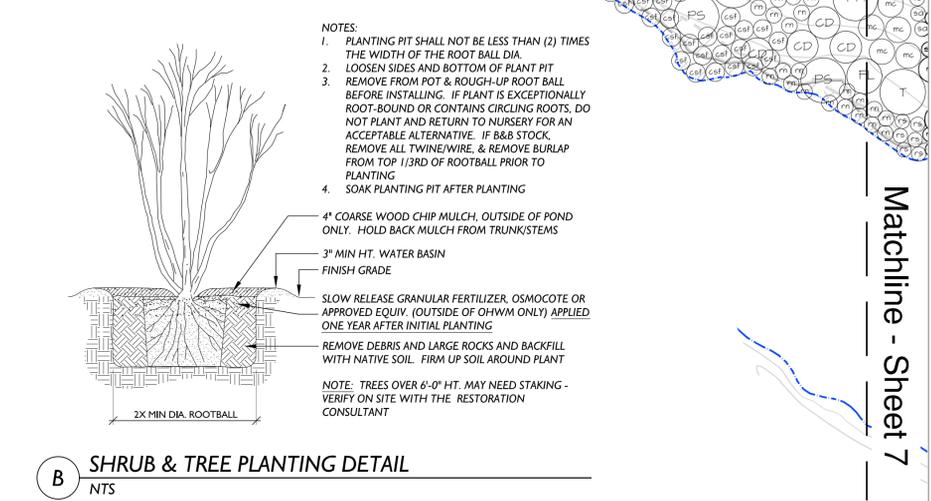
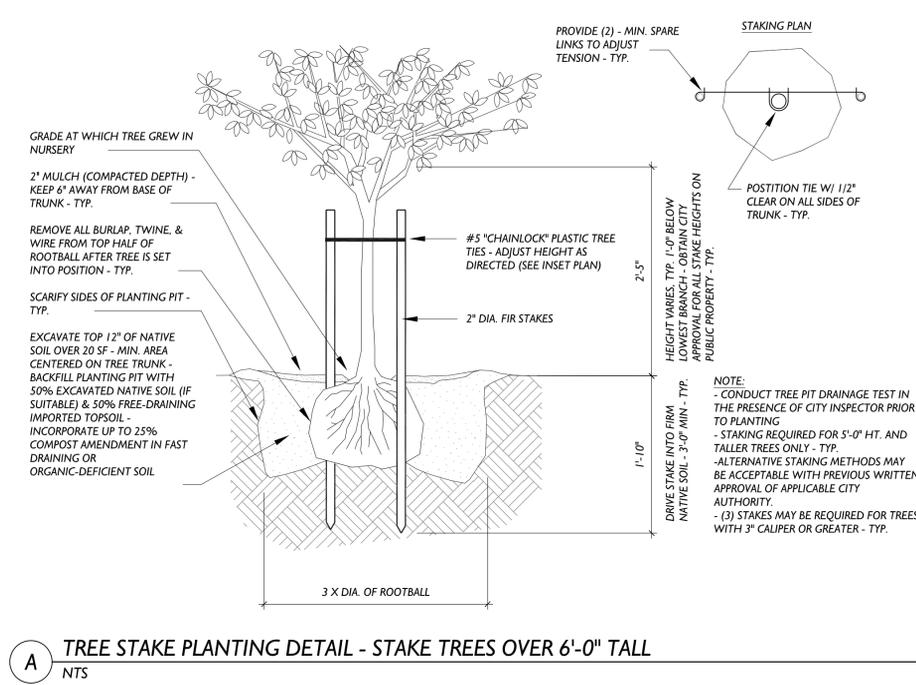
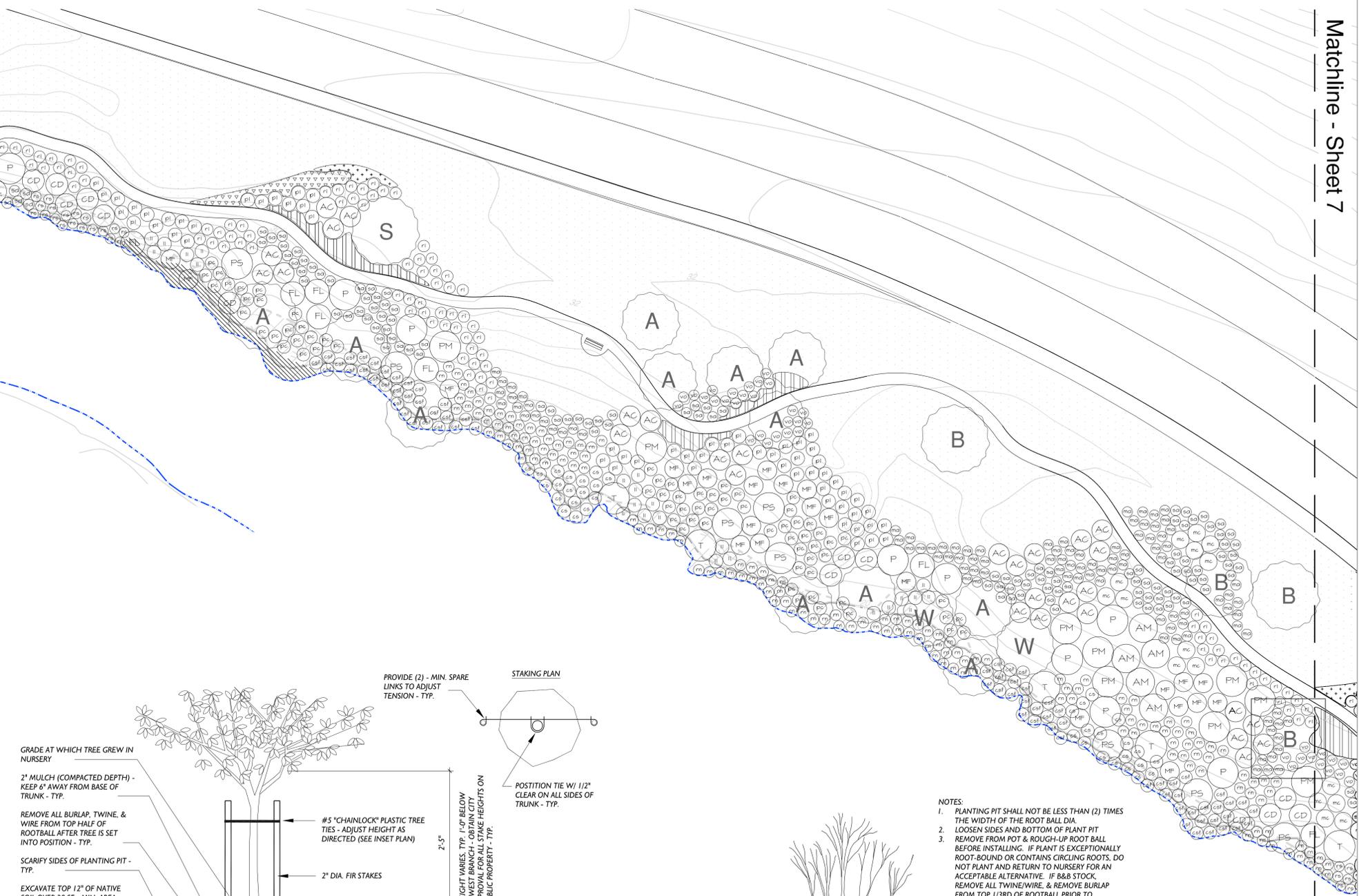
sh	Gaultheria shallon / Sala	600	1 gal.
sn	Symphoricarpos albus / Snowberry	120	1 gal.

* Hydroseed all disturbed or exposed soil areas that are not to be planted using spec. below.

PROTIME 404 NATIVE WATER QUALITY SEED MIX

br	Bromus carinatus / California Brome - 55%
el	Elymus glaucus / Blue Wild Rye - 25%
lu	Lupinus albus / Lupine - 15%
ya	Yarrow millefolium / Western Yarrow - 5%

2500	Cornus sericea / Red-twig Dogwood - Stakes	SEE DETAIL D, SHEET 7 FOR LAYOUT.
500	Salix lasianдра & Salix stichensis - Fascine Bundles	SEE DETAIL D, SHEET 7 FOR LAYOUT.
	Pacific & Sitka Willow	



PLANTING PLAN - CENTER

SCALE: 1" = 20'-0"
ORIGINAL PLANS ON 24" x 36" SHEETS. ADJUST SCALES ACCORDINGLY.

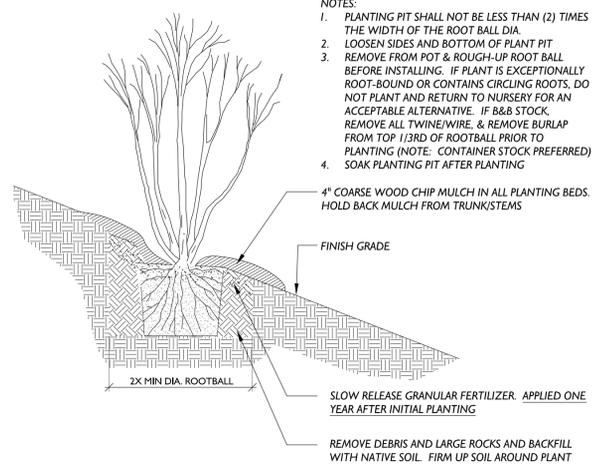


NO.	DATE	BY	APPR.	REVISIONS
11.28.06	JM/JB	JFB		PERMIT SET
03.21.07	JM/JB	JFB		REVIEW SET
02.21.08	MG/ZS	MG/KB		REVIEW FOR PERMITTING
04.25.08	MG/ZS	GB		PERMIT SET
04.06.09	MG/ZS	GB		PERMIT REVISIONS PER CITY OF BELLEVUE

Approved By		DATE	
PARKS DESIGN MANAGER	DATE	MG / ZS	02.18.08
PROJECT MANAGER	DATE	ZS	02.18.08
	DATE	MG / KB	02.18.08
	DATE		



MERCER SLOUGH / 112th AVE SE RESTORATION



C SHRUB & TREE PLANTING DETAIL - SLOPE
NTS

PLANTING LEGEND

Trees

A	Abies grandis / Grand Fir	12	Container 6' - 8' tall
AC	Acer circinatum / Vine Maple	114	5 gal.
AM	Arbutus menzeisii / Pacific Madrone	20	5 gal.
CC	Corylus cornuta / Beaked Hazelnut	15	5 gal.
CD	Crataegus douglasii / Black Hawthorn	32	5 gal.
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P	Pinus contorta / Shore Pine	20	Container 6' - 8' tall
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Shrubs

*** 3 shrubs per symbol, spaced at 36" OC. ***

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ca	Cornus sericea 'Flaviramea' / Yellow Dogwood	384	1 gal.
li	Lonicera involucrata / Twinberry	231	2 gal.
ma	Mahonia aquifolium / Tall Oregon Grape	567	1 gal.
mc	Morella californica / California Wax Myrtle	246	2 gal.
o	Oemleria cerasiformis / Osoberry	270	1 gal.
pl	Philadelphus lewisii / Mock Orange	366	2 gal.
pc	Physocarpus capitatus / Pacific Ninebark	390	1 gal.
ri	Ribes sanguineum / Red Flowering Currant	732	2 gal.
ro	Rosa nutkana / Nootka Rose	711	1 gal.
rs	Rubus spectabilis / Salmonberry	282	1 gal.
sa	Sambucus racemosa / Red Elderberry	159	1 gal.
sd	Spiraea douglasii / Hardhack	78	1 gal.
so	Symphoricarpos albus / Snowberry	930	1 gal.
vo	Vaccinium ovatum / Evergreen Huckleberry	567	1 gal.

Groundcover & Live Stakes

ay	Achillea millefolium / Western Yarrow	184	1 gal. @ 24" o.c.
go	Aruncus dioicius / Goatsbeard	266	1 gal. @ 36" o.c.
la	Ledum palustre / Labrador Tea	100	1 gal. (Field Located)
lu	Lupinus polyphyllus / Bigleaf Lupine	400	1 gal. @ 24" o.c.
sw	Polystichum munitum / Sword Fern	123	1 gal. @ 36" o.c.

Slope to be removed of ivy avoiding damage to existing native shrubs and trees. Replant with following species. Layout in field with landscape architect.

ga	Gaultheria shallon / Salal	600	1 gal.
sa	Symphoricarpos albus / Snowberry	120	1 gal.

* Hydroseed all disturbed or exposed soil areas that are not to be planted using spec. below.

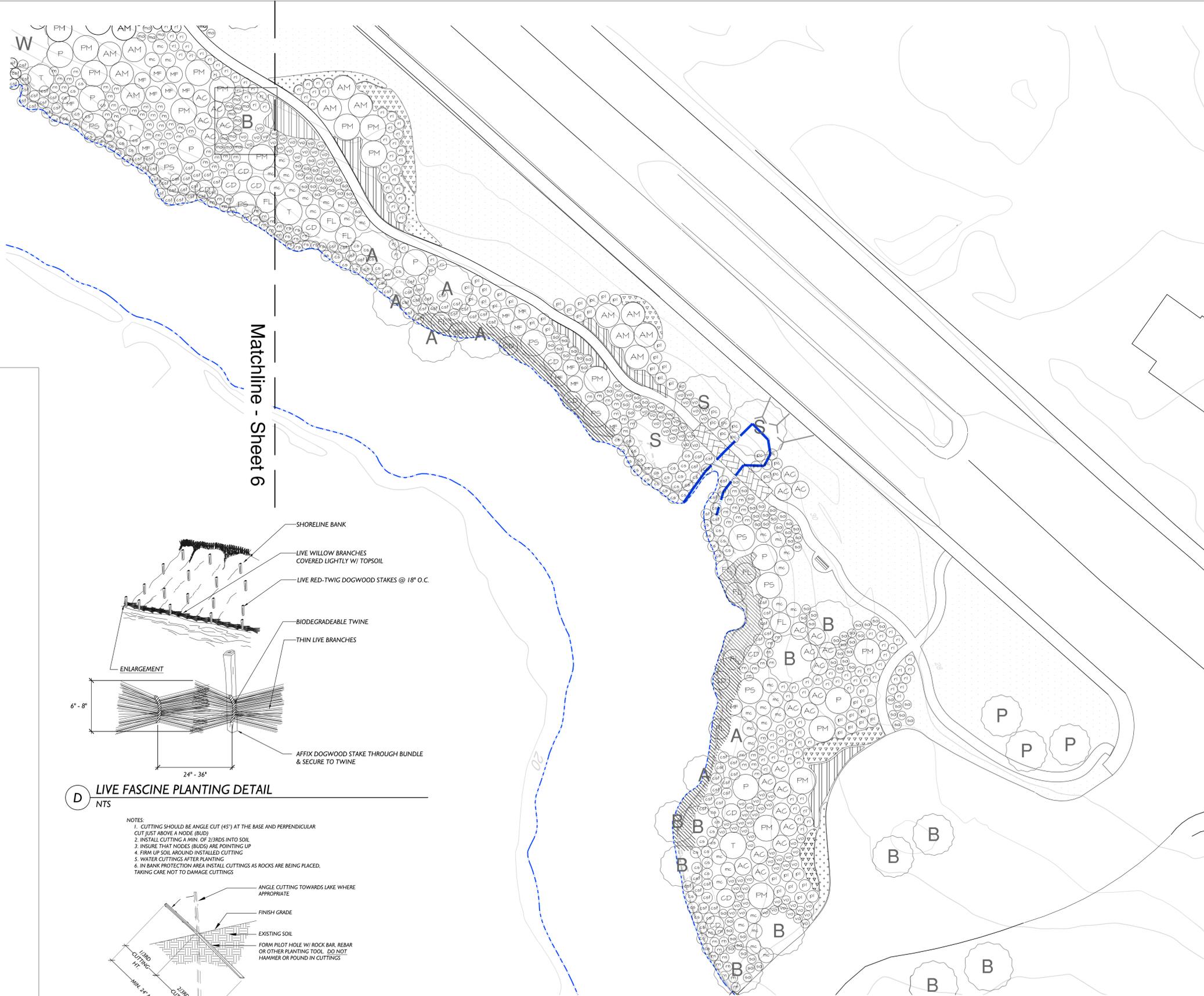
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el	Elymus glaucus / Blue Wild Rye	- 25%
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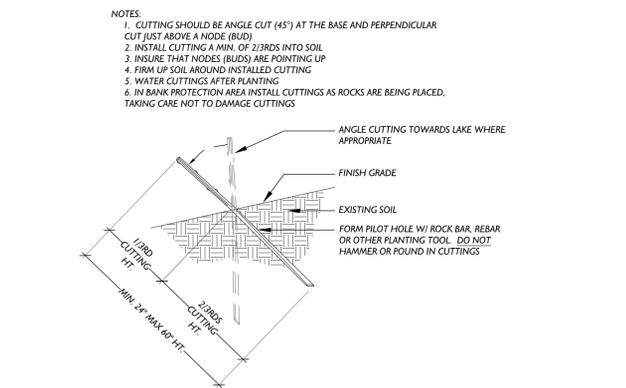
2500 Cornus sericea / Red-twig Dogwood - Stakes SEE DETAIL D, SHEET 7 FOR LAYOUT.

500 Salix lasiandra & Salix Stichensis - Fascine Bundles SEE DETAIL D, SHEET 7 FOR LAYOUT.

Pacific & Sitka Willow



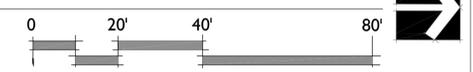
D LIVE FASCINE PLANTING DETAIL
NTS



E LIVE STAKE PLANTING DETAIL
NTS

PLANTING PLAN - NORTH

SCALE: 1" = 20'-0" ORIGINAL PLANS ON 24" x 36" SHEETS. ADJUST SCALES ACCORDINGLY.



NO.	DATE	BY	APPR.	REVISIONS
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03.21.07	JM/JB	JFB		REVIEW SET
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Approved By		DATE	
PARKS DESIGN MANAGER	DATE	MG / ZS	02.18.08
Geoff Bradley		ZS	02.18.08
PROJECT MANAGER	DATE	MG / KB	02.18.08
Geoff Bradley			
CHECKED BY	DATE		



MERCER SLOUGH / 112th AVE SE RESTORATION

Executive Summary

This project is to provide a pedestrian trail, invasive weed removal, and enhancement plantings along Mercer Slough, just east of 112th Avenue SE in Bellevue. The trail will be a soft surface path except for the bridge crossing at a small Type F stream, which is a tributary to the slough near the southern project limit. The entire trail will be built within stream, wetland and shoreline buffers. A wide variety of trees, shrubs and groundcover will replace most of the areas where blackberry vines and ivy will be removed. Plantings and seeded meadow areas are proposed west of the proposed trail.

Goals

1. Provide pedestrian access along Mercer Slough.
2. Remove invasive vegetation from the wetland and buffer areas shown on the plan.
3. Establish a predominance of diverse native vegetation in the cleared areas along the slough.
4. Limit re-invasion of invasive weeds within planted areas.

Performance Standards

The standards listed below shall be used to judge the success of the plan over time. If performance standards are met at the end of Year 5, then the City shall consider the plant implementation successful. The following performance standards apply to all planted areas within the wetland and wetland and stream buffers:

1. **Survival:** Achieve 100% survival of installed plants by the end of Year 1. This standard can be met through plant establishment or through replanting as necessary to achieve the required numbers. Experimental plants excluded from this standard: Pacific madrone, Labrador tea. Further, this standard shall not apply to the seed mix areas (covered under a separate standard, below).
2. **Seed mix cover:** Seeded areas shall reach 100% cover within one year of installation. At least three of the four species shall be established in seeded areas in each year of the monitoring period.
3. **Native woody vegetation cover within shrub and tree areas:**
 - Achieve 40% cover of native trees and shrubs by Year 3. Volunteer species may count towards this cover standard.
 - Achieve 60% cover of native trees and shrubs by Year 5. Volunteer species may count towards this cover standard.
4. **Native woody vegetation cover within shrub and tree areas (wetland areas only):**
 - Achieve 60% cover of native trees and shrubs by Year 3. Volunteer species may count towards this cover standard.
 - Achieve 85% cover of native trees and shrubs by Year 5. Volunteer species may count towards this cover standard.
5. **Diversity standard:**
 - Container plant areas: Establish at least 8 native sapling tree or shrub species by Year 5 in planted areas. Volunteer species may count towards this standard.
 - Live stake/cuttings areas: Establish at least one native willow species. Establish red-twig dogwood shrubs.
6. **Invasive cover:**
 - No more than 10% cover by invasive weed species in the planted/seeded areas in any monitoring year (formal lawn areas are excluded).

Monitoring Methods

This monitoring program is designed to track the success of the planted/seeded areas over time and to measure the degree to which it is meeting the performance standards outlined elsewhere in this document. Formal lawn areas are excluded from the monitoring.

An as-built plan will be prepared prior to the beginning of the monitoring period. The as-built plan shall be a mark-up of the planting plans included in this plan set. The as-built plan will document any departures in plant placement or other components from the proposed plan.

All planted areas will be visually assessed and noted as to how they are meeting the performance standards during regularly scheduled Parks maintenance visits.

Monitoring will take place on an on-going basis during regularly scheduled park maintenance visits for no less than five years. First-year monitoring should commence in the first spring subsequent to installation.

Construction Notes and Specifications

Work Sequence

Note: specifications for items in **bold** can be found below under "Material Specifications and Definitions."

Note: A **Restoration Specialist** shall monitor:

1. All site preparation
 - Weed removal
 - Soil deconsolidation and amendment.
2. Plant material inspection
 - 50% plant installation inspection.
 - 100% plant installation inspection.

General Work Sequence

1. Install construction entrance as approved by City of Bellevue representative. See detail D, sheet 2.
2. Install tree protection on all trees to remain per detail A on sheet 2 of these plans.
3. Install coir logs at toe of slope to establish a perimeter before blackberries are removed. See detail C, sheet 2.
4. Clear the trail corridor and all blackberries where shown on the plans taking care to avoid existing desirable native tree and shrub vegetation where possible.
5. Install the trail and bridge crossing per the details in this plan set.
6. Evaluate existing soil conditions. If the **Restoration Specialist** determines the soils are deficient in organic material, the **Restoration Specialist** shall make a recommendation for amendment with **compost**.
7. Invasive blackberry removal just prior to planting:
 - If practical roto-till areas infested with Himalayan or evergreen blackberry to loosen soil and roots.
 - Hand-rake and grub the roto-tilled area to remove as many blackberry roots and root fragments as is practical.
 - Dispose of blackberry roots off-site in an approved manner.
 - Cover with at least 4 inches of **wood chip mulch** where directed by the **Restoration Specialist**.
8. Immediately upon completion of soil preparation, install ground stabilization fabric. See detail B, sheet 2.
9. Prepare a planting pit for each container plant and install per the planting details A and B on sheet 6 of these plans. Container plant installation is to take place during the dormant season only (October 15th - May 1st), for best survival.
10. Prepare a pilot hole for each willow live stake and install per the live stake detail E on sheet 7 of these plans. All live stake/cutting installation shall only take place prior to leaf-out of cutting species (October 15th - March 15th).
11. Mulch the entire planting area with **wood chip mulch** to a depth of four inches thick.

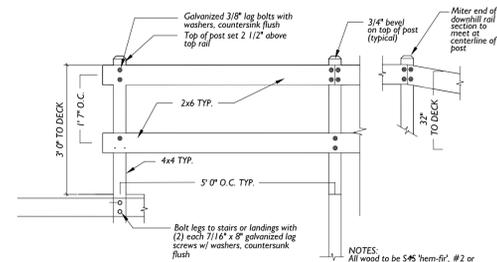
Material Specifications and Definitions

1. **Wood chip mulch:** Coarsely chipped, cedar and weed free woody material. Maximum length is 6". Mulch shall not contain appreciable quantities of garbage, plastic, metal, soil, and dimensional lumber or construction/demolition debris.
2. **Fertilizer:** Slow release, no phosphorous, granular fertilizer such as Osmocote™ or equal product. Most retail nurseries carry this product. Follow manufacturer's instructions for application. Keep fertilizer in a weather-tight container while on site. Note that fertilizer is to be applied only in years two, three, four and five and not in the first year. Do not apply fertilizer to saturated or inundated areas of the shoreline.
3. **Compost:** Cedar Grove Compost or equivalent product. 100% vegetable compost with no appreciable quantities of sand, gravel sawdust or other non-organic materials.
4. **Restoration Specialist:** Qualified professional able to evaluate and monitor the construction of environmental restoration projects.

Maintenance

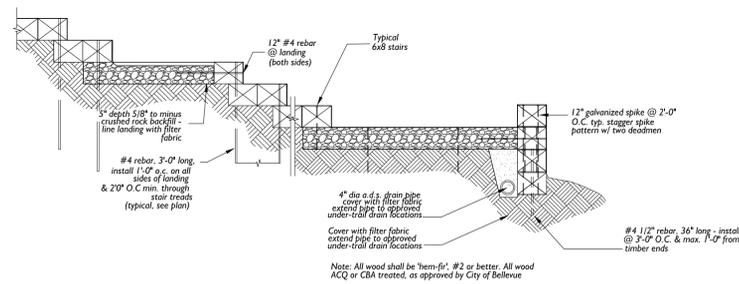
The site will be maintained for five years following completion of the construction. Note: specifications for items in **bold** can be found above under "Material Specifications and Definitions."

1. Replace each plant found dead in the summer monitoring visits during the upcoming fall dormant season (October 15th to March 1st).
2. Reed canarygrass is currently not present on site, but may develop following blackberry clearing. Reed canarygrass maintenance plan (within planted areas only):
 - Remove reed canarygrass and roots from the base of all installed plants and desirable volunteer vegetation to a distance of 18 inches from the main plant stem. If weeding is difficult due to a thick sod layer, herbicide may be used if approved by City of Bellevue Best Management Practices Notebook. Areas around desirable plants shall be treated with herbicide only by a state licensed applicator. Glyphosate without a surfactant (Rodeo) is approved for use in aquatic areas.
 - Identify reed canarygrass monoculture areas defined as a 50 square-foot patch of 100% reed canarygrass that is entirely absent of healthy native trees or shrubs. Patches are not linear or long and narrow (e.g. 2 feet wide and 25 feet long). Rather, patches are roughly square, circular, or otherwise simply shaped polygons.
 - (1) Cut monoculture areas to the ground and install trees and shrubs in monoculture areas. Species selection shall be based on plants shown on this plan or as directed by the **Restoration Specialist**.
 - (2) Cover with at least 4 inches of **wood chip mulch**.
3. Blackberry maintenance plan (within planted areas only):
 - Ensure adequate native plants cover the infested area. Install replacement plants at the direction of the **Restoration Specialist** to ensure adequate native cover.
 - Ensure a 4-inch thick cover of **wood chip mulch** is in place in all planted areas.
 - Encroaching Himalayan blackberry from off-site shall be cut back to 10 feet beyond the project boundary on an ongoing basis (at least 4 times per growing season).
 - Sprouting or rooted Himalayan blackberry shall be grubbed out by hand on an ongoing basis, being careful to grub out roots.
 - Should hand grubbing of invasive weeds prove unsuccessful, application of an herbicide approved for use in aquatic areas may be used. Herbicide applications must be conducted by a state licensed applicator. Applications should be done only between mid-spring and mid-summer for maximum effectiveness. Application should be by a targeted method such as spot spray or wick (preferred).
4. General weeding for all planted areas:
 - At least twice-yearly, remove all competing weeds and weed roots from beneath each installed plant and any desirable volunteer vegetation to a distance of 18 inches from the main plant stem. Weeding should occur at least twice during the spring and summer. Frequent weeding will result in lower mortality and lower plant replacement costs.
 - More frequent weeding may be necessary depending on weed conditions that develop after plan installation.
 - Do not weed the area near the plant bases with string trimmer (weed whacker/weed eater). Native plants are easily damaged or killed, and weeds easily recover after trimming.
5. Apply slow release granular **fertilizer** to each installed plant annually in the spring (by June 1) of years two through five.
6. Mulch the weeded areas beneath each plan with **wood chip mulch** as necessary to maintain a 4-inch thick mulch ring and keep down weeds.
7. The manager shall ensure that water is provided should it be necessary during the summer drought period.



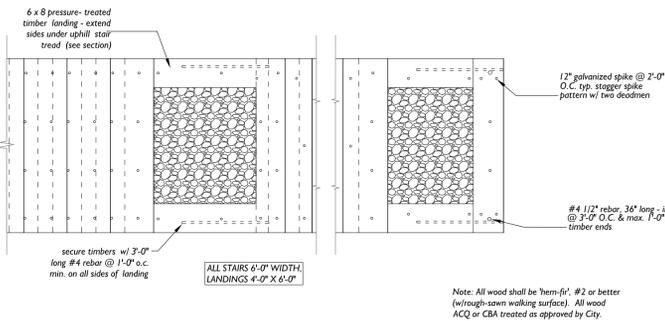
1 WOODEN STAIRWAY - RAIL DETAIL

NTS



2 WOODEN STAIRWAY - SECTION

NTS



3 WOODEN STAIRWAY - PLAN

NTS

NO.	DATE	BY	APPR.	REVISIONS
11.28.06	JMUB	JFB		PERMIT SET
03.21.07	JMUB	JFB		REVIEW SET
02.21.08	MGZS	MGKB		REVIEW FOR PERMITTING
04.25.08	MGZS	GB		PERMIT SET
04.06.09	MGZS	GB		PERMIT REVISIONS PER CITY OF BELLEVUE

Approved By		DATE
PARKS DESIGN MANAGER	Geoff Bradley	02.18.08
PROJECT MANAGER	MG / KB	02.18.08

City of Bellevue

Dept. of Parks and Community Services

Science & Design
750 Sixth Street South
Kirkland WA 98033
P 425.822.5342 F 425.827.8136
www.watershedco.com

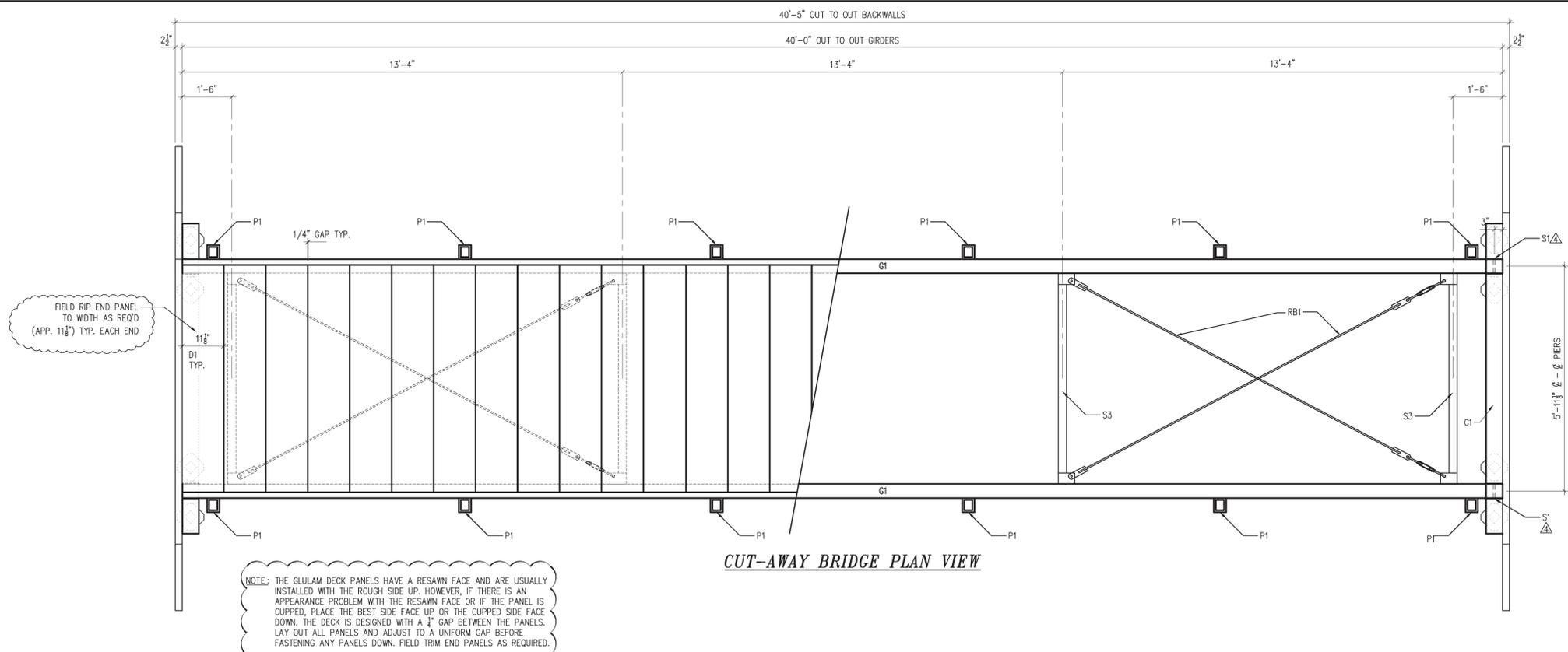
WATER QUALITY
SUPPORTS LIFE

MERCER SLOUGH / 112th AVE SE RESTORATION

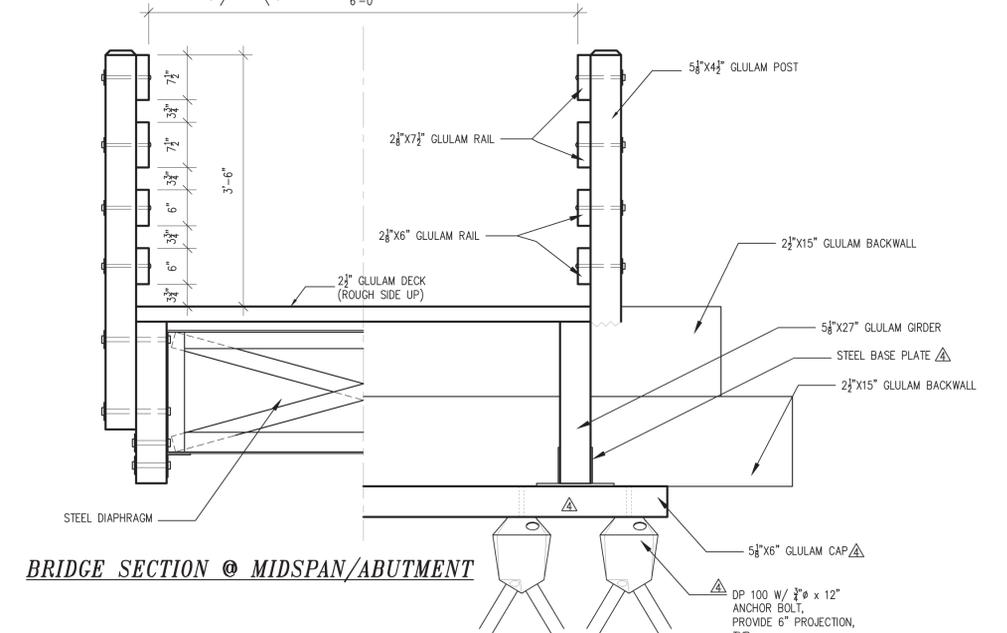
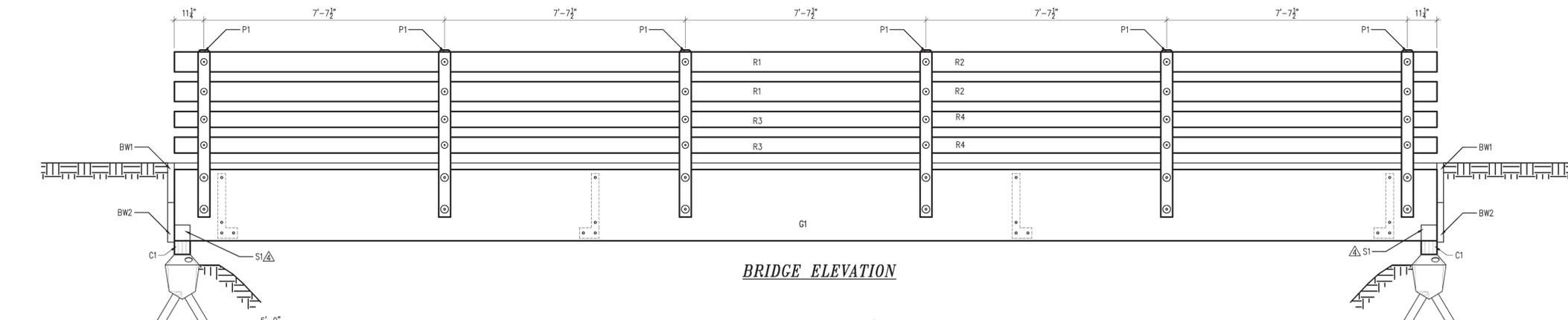
STRUCTURAL DETAILS & ENHANCEMENT NOTES

TWC #: 070203

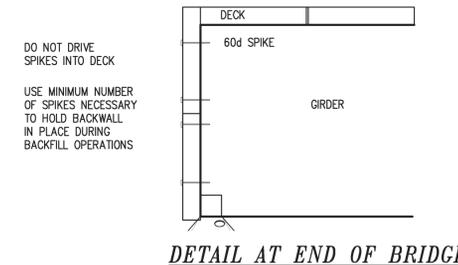
Sheet 8 of 8



NOTE: THE GLULAM DECK PANELS HAVE A RESAWN FACE AND ARE USUALLY INSTALLED WITH THE ROUGH SIDE UP. HOWEVER, IF THERE IS AN APPEARANCE PROBLEM WITH THE RESAWN FACE OR IF THE PANEL IS CUPPED, PLACE THE BEST SIDE FACE UP OR THE CUPPED SIDE FACE DOWN. THE DECK IS DESIGNED WITH A 1/4" GAP BETWEEN THE PANELS. LAY OUT ALL PANELS AND ADJUST TO A UNIFORM GAP BEFORE FASTENING ANY PANELS DOWN. FIELD TRIM END PANELS AS REQUIRED.



- 8 DIAMOND PIER TO GLULAM CAP
- STEEL BENT PLATE - MARK PC
- 3/4" MACHINE BOLT
- 1 3/8" ANCHOR BOLT @ DIAMOND PIER MIN. 6" PROJECTION
- 3 3/8" CUT WASHER @ SLOTTED HOLE
- 4 GLULAM GIRDER TO GLULAM CAP
- 1 STEEL BASE PLATE - MARK S1
- 2 1" X 6" MACHINE BOLT
- 1 3/4" X 7" MACHINE BOLT
- 4 1" CUT WASHER
- 2 3/4" CUT WASHER
- 8 DIAPHRAGM TO GIRDER
- 4 3/8" X 7" MACHINE BOLT
- 3 3/8" CUT WASHER @ SLOTTED HOLE
- 3 MALLEABLE IRON WASHER
- 4 ROD BRACE CONNECTION
- 1 1/2" X 2" MACHINE BOLT
- 12 POST TO GIRDER
- 2 3/8" X 12" MACHINE BOLT
- 4 3/8" MALLEABLE IRON WASHER
- 48 RAIL TO POST
- 1 1/2" X 8 1/2" ECONOMY HEAD BOLT
- 1 1/2" MALLEABLE IRON WASHER
- 64 DECK TO GIRDER
- 3 1/8" X 5" DECK SCREW
- 4 BACKWALL TO GIRDER
- 4 60d SPIKE



DESIGN CRITERIA:
 LIVE LOAD : 100 PSF
 WIND LOAD : 100 MPH - EXPOSURE B PER UBC
 SEISMIC LOAD : ZONE 4

GLULAM SPECIFICATIONS:
 MATERIAL : WEST COAST DOUGLAS FIR 24F-V4 OR COMBINATION 2 AS NOTED
 ADHESIVE : WATERPROOF PHENOLIC
 FABRICATION : AS SHOWN AND NOTED. MACHINE INCISE ALL GLULAM EXCEPT RAILS. DO NOT INCISE RAILS.
 APPEARANCE : AS SHOWN & NOTED
 FINISH : SEE TREATMENT SPECIFICATIONS
 PROTECTION : NONE
 CERTIFICATE : AITC 117-2004 / APA-EWS

GLULAM MATERIAL INCLUDES GIRDERS, DECK PANELS, POSTS, RAILS & BACKWALL

STEEL SPECIFICATIONS:
 STEEL SHAPES : ASTM A36
 HARDWARE : ASTM A307
 HOT DIP GALVANIZE ALL STEEL SHAPES AFTER FABRICATION.
 HOT DIP GALVANIZE ALL HARDWARE.

ALL WELDING TO BE PER AWS SPECIFICATIONS BY CERTIFIED WELDERS. TREAT ALL FIELD MODIFICATIONS W/ COLD GALVANIZING PAINT.

TREATMENT SPECIFICATIONS:

ALL DIMENSIONED CUTS AND HOLES IN TIMBER MATERIAL SHALL BE MADE PRIOR TO PRESSURE TREATMENT. TREAT ALL FIELD CUTS AND BORES WITH COPPER NAPHTHENATE IN ACCORDANCE WITH AWPA SPECIFICATION M4.

TREAT ALL GLULAM MATERIAL EXCEPT RAILS WITH HI-CLEAR II PROCESS: VACUUM/PRESSURE TREATMENT WHICH CONFORMS WITH PROCESS SPECIFICATION IN AWPA STANDARD C1 (LATEST EDITION).

SPECIFICATIONS: THE MINIMUM SPECIFIED AVERAGE RETENTION IS 0.006 PCF PERMETHRIN AND 0.035 PCF IPRC IN THE ASSAY ZONE. THE REQUIRED ASSAY ZONE FOR SOUTHERN PINE IS 0.0 TO 0.6 INCH FOR ALL WOOD PRODUCTS UP TO TWO INCHES IN THICKNESS AND 0.0 TO 1.0 INCH FOR ALL WOOD PRODUCTS OVER TWO INCHES THICK; AND FOR REFRACTORY SPECIES I.E. DOUGLAS FIR AND HEM FIR, THE ASSAY ZONE IS 0.0 TO 0.6 INCH FOR ALL WOOD PRODUCTS.

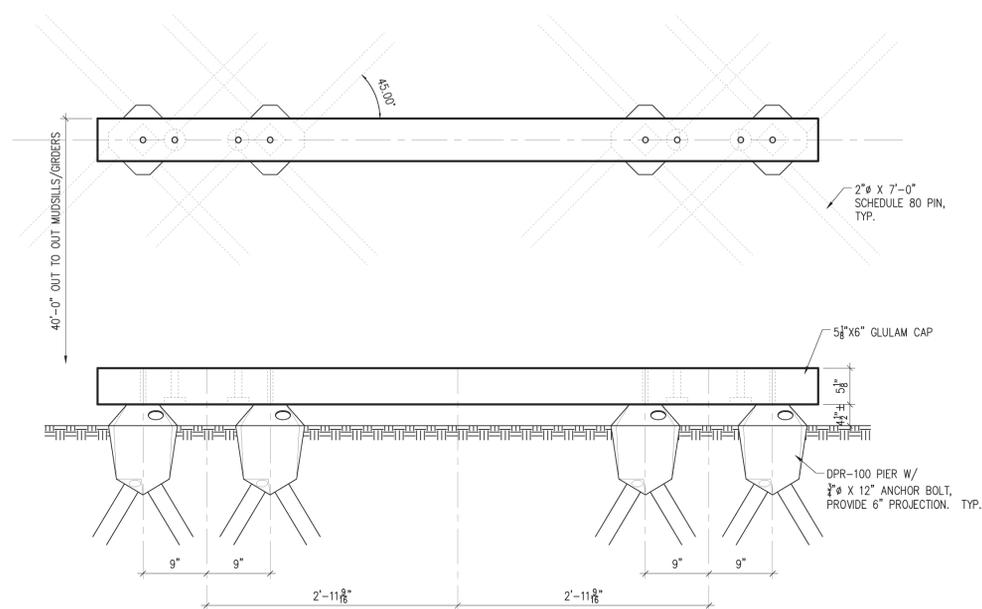
---NOTE---
 THE GLULAM ON THIS PROJECT IS PRESSURE TREATED WITH HI-CLEAR II WHICH INSURES A LONG AND USEFUL SERVICE LIFE. WORKMEN SHOULD USE COMMON SENSE IN HANDLING THESE TREATED TIMBERS. AVOID DIRECT SKIN CONTACT WITH THE PRESERVATIVE BY WEARING RUBBER WORK GLOVES, LONG SLEEVE SHIRTS, AND LONG PANTS. WHEN TREATED WOOD IS FIELD FABRICATED, WORKMEN SHOULD ALSO WEAR A FACE MASK AND GOGGLES.

IF BRIDGE MATERIAL IS TO BE STOCK PILED AT THE SITE, IT MUST BE STORED IN A LEVEL AREA AND STICKERED APPROXIMATELY EVERY 6 FEET. IF THE MATERIAL IS STORED IN A HOT, DRY CLIMATE, IT MUST ALSO BE COVERED WITH PLYWOOD OR OTHER MATERIAL TO PROTECT IT. FAILURE TO STICKER AND COVER MAY CAUSE WARPING AND EXCESSIVE SEASONING CHECKS.

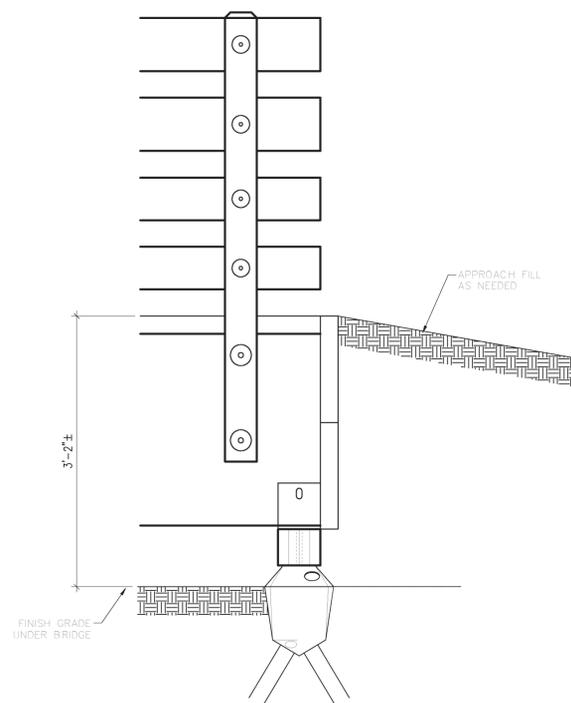
Additional Notes:
 1. Lowest part of girder must be greater than 20.9'.
 2. Bridge must be set to match existing approach grade.

		PROJECT: MERCER SLOUGH BELLEFIELDS BRIDGE LOCATION: BELLEVUE, WASHINGTON KING COUNTY	
P.O. BOX 130 TUALATIN, OREGON 97062 503/692-6900 FAX 503/692-6434 800/547-5411		ARCHITECT: _____ ENGINEER: _____ CONTRACTOR: BELLEVUE PARKS & RECREATION	
DRAWN BY: SP DATE 07/03/07 JOB NO. 074029 CHECKED BY: JS DATE 07/09/07 PLOT DATE 03/20/09 DATE PRINTED: _____		SHEET 074029 Sheet 51	

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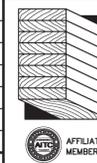


△ PIN PILE LAYOUT



END OF BRIDGE ELEVATION

NO.	DATE	REVISIONS	BY
1	3/20/09	ABUTMENT REVISION	SP



WESTERN WOOD STRUCTURES, INC.
 P.O. BOX 130 TUALATIN, OREGON 97062
 503/692-6900 FAX 503/692-6434
 800/547-5411

PROJECT:	MERCER SLOUGH BELLEFIELDS BRIDGE ABUTMENT
LOCATION:	BELLEVUE, WASHINGTON
ARCHITECT:	
ENGINEER:	
CONTRACTOR:	BELLEVUE PARKS & RECREATION
DRAWN BY:	SP DATE 3/19/09
CHECKED BY:	DATE
DATE PRINTED:	
JOB NO.	074029
PLOT DATE	03/23/09
Sheet S2	

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