



CITY OF MERCER ISLAND

9611 SE 36th Street • Mercer Island, WA 98040-3732

(206) 275-7605 • FAX (206) 275-7726

www.mercergov.org

CRITICAL AREAS DETERMINATION

NOTICE OF DECISION

May 21, 2018

Project Number:	CAO17-009
Description:	Request to reduce a Type II watercourse buffer to 25 feet and reduce Category IV wetland buffer to 25 feet in order to accommodate a new Single Family Residence.
Applicant:	Jim Dearth Ripple Design Studio, Inc. 4303 Stone Way N Seattle WA 98103
Owner:	New Horizon Real Estate Development 8744 126 th Ave NE Kirkland WA 98033
Site Address:	8375 E Mercer Way, Mercer Island WA 98040; Identified by King County Assessor tax parcel number 032110-0145
Zoning District:	R-8.4
SEPA Compliance:	The proposal is categorically exempt from SEPA review per WAC 197-11-800(6)(e).
Exhibits:	<ol style="list-style-type: none">1. Development Application for a Critical Area Determination, signed June 19, 20172. Critical Area Study prepared by Evergreen Aquatic Resource Consultants, LLC dated June 22, 2017, revised November 9, 20173. Revised mitigation Plan prepared by Evergreen Aquatic Resource Consultants, LLC dated June 22, 2017, revised November 9, 20174. Peer review memo prepared by ESA, dated October 10, 20175. Public comment letters<ol style="list-style-type: none">a. Karen Walter, Muckleshoot Tribeb. Louise Haslundc. Roger Shantz6. Public comment response letters from Ripple Design Studio and Evergreen Aquatic Resource Consultants, LLC

I. FINDINGS OF FACT

1. Application Description:

The request is for approval to reduce a Type II watercourse buffer from 50 to 25 feet and reduce Category IV wetland buffer from 35 to 25 feet in order to accommodate a new Single-Family Residence.

2. Zoning:

The existing zoning of the subject site is Single Family Residential R-8.4 (Residential, 8,400 square foot minimum lot area).

3. Adjacent Land Use:

Land uses adjacent to the subject site include of single family residences to the northeast, southeast, southwest, and northwest.

4. Consistency with Land Use Code/Zoning Requirements:

Mercer Island City Code (MICC) 19.07.070(B)(2) and 19.07.080(C)(2) allow for watercourse and wetland buffers to be reduced “in accordance with an approved critical area study when he/she determines that a smaller area is adequate to protect the watercourse, the impacts will be mitigated by using combinations of the below mitigation options, and the proposal will result in no net loss of watercourse and buffer functions.”

The applicant must provide mitigation as described in MICC 19.07.070(B)(2)(b). The applicant’s revised critical area study and mitigation plan (Exhibits 2 and 3) verify that a reduced buffer is adequate to protect the watercourse and the proposal will result in no net loss of watercourse and buffer functions, based on the analysis below.

5. State Environmental Policy Act (SEPA) Compliance:

The proposal is categorically exempt from SEPA review pursuant to WAC 197-11-800(6)(e).

6. Public Noticing and Comments:

There is no public hearing requirement for a critical areas determination (an administrative action) pursuant to MICC 19.15.010(E) and 19.15.020(F)(1). On August 14, 2017, City staff sent a Public Notice of Application to all property owners within 300 feet of the subject property and placed the Public Notice of Application in the City Weekly Permit Bulletin. A public comment period ran from August 14, 2017 through 5:00 P.M. on September 13, 2017. The City received three comment letters during the public comment period (Exhibits 5a – 5c) regarding the topics below:

- a. Request for verification of the gradient of the watercourse;

Staff response: *In resubmitted materials, the applicant provided data on the watercourse gradient, consistent with the standards cited in the comment letter (Exhibit 6).*

- b. Request to the restore the wetland to a more natural condition;

Staff response: *In a response letter, the applicant’s wetland consultant provided an analysis of the site-specific reasons for why such a restoration would be challenging and would likely not provide increased critical area function (Exhibit 6).*

- c. Concerns about slope stability;

Staff response: *The applicant has designed the project to follow the recommendations from the geotechnical report prepared for this project. Further, construction specifics will be reviewed under the site development and building permits for this project.*

- d. Concerns about impacts to an adjacent property from grading and restoration work around the subject site wetland and watercourse;

Staff response: *The applicant has confirmed that all grading will be confined to the subject properties and reasonable efforts will be made to protect trees. To address this comment, a condition of approval has been added to this decision, requiring tree protection methods and locations to be shown on construction plans. The applicant does propose to remove two Douglas Firs near the property edge—this proposal will be review at future permit stages, and is not approved by this Critical Area Determination. Lastly, the applicant proposes to use*

coir logs along the wetland edge during construction in order to minimize erosion impacts on downstream neighbors.

7. MICC 19.07.070(A):

Watercourses – Designation and Typing. Watercourses shall be designated as Type 1, Type 2, Type 3 and Restored according to the following criteria:

1. Type 1 Watercourse. Watercourses or reaches of watercourses used by fish, or are downstream of areas used by fish.
2. Type 2 Watercourse. Watercourses or reaches of watercourses with year-round flow, not used by fish.
3. Type 3 Watercourse. Watercourses or reaches of watercourses with intermittent or seasonal flow and not used by fish.
4. Restored Watercourse. Any Type 1, 2 or 3 watercourses created from the opening of previously piped, channelized or culverted watercourses.

The applicant provided a critical areas study (Exhibit 3) that identifies the watercourse as a Type 2.

8. MICC 19.07.070(B)(1):

Watercourse Buffer Widths. Standard buffer widths shall be as follows, measured from the ordinary high water mark (OHWM), or top of bank if the OHWM cannot be determined through simple nontechnical observations.

Watercourse Type	Standard (Base) Buffer Width (feet)	Minimum Buffer Width with Enhancement (feet)
Type 1	75	37
Type 2	50	25
Type 3	35	25
Restored or Piped	25	Determined by the code official

Staff Analysis:

Both the City's resources and the applicant's critical area study (Exhibit 2) identify the existing watercourse as a Type 2. Type 2 watercourses are subject to a 50 foot regulated buffer that may be reduced to 25 feet with an approved critical areas determination.

9. MICC 19.07.080(B):

Wetland Ratings. Wetlands shall be rated as Category I, Category II, Category III or Category IV according to the wetland classification system.

Staff Analysis:

The applicant provided a critical areas study (Exhibit 3) that identifies the watercourse as a Category IV.

- 10. MICC 19.07.080(C):** 1. Standard Wetland Buffer Widths. The following standard buffer widths shall be established from the outer edge of wetland boundaries:

Wetland Type	Standard (Base) Buffer Width (feet)	Minimum Buffer Width with Enhancement (feet)
Category I	100	50
Category II	75	37
Category III	50	25
Category IV	35	25

Staff Analysis:

Both the City's resources and the applicant's critical areas study (Exhibit 2) identify the existing wetland as a Category IV. Category IV wetlands are subject to a 35 foot regulated buffer that may be reduced to 25 feet with an approved critical area determination.

- 11. MICC 19.07.070(B)(2)(a):**

Reduction of Buffer Widths. The code official may allow the standard buffer width to be reduced to not less than the above listed minimum width in accordance with an approved critical area study when he/she determines that a smaller area is adequate to protect the watercourse, the impacts will be mitigated by using combinations of the below mitigation options, and the proposal will result in no net loss of watercourse and buffer functions. However, in no case shall a reduced buffer contain a steep slope.

Staff Analysis:

The applicant is requesting to reduce the buffers of both the Type 2 watercourse and the Category III wetland on site to the minimum buffer widths allow by code (25 feet for both the watercourse and wetland). The applicant is proposing to enhance the watercourse and wetland buffer by removing existing surface improvements, removing non-native plant species, amending the soil, and planting native plants (Exhibit 2). An analysis provided in the Critical Area Study states that these measures will create no net loss of ecological function by the reduce buffer width. A peer review of the Critical Area Study concluded that the proposed mitigation would create no net loss of ecological function (Exhibit 4). The peer review also included recommendations to ensure opportunity for mitigation success; these were incorporated into the revised mitigation plan (Exhibit 3).

- 13. MICC 19.07.040(J)(1):**

Maintenance and Monitoring. Landscape maintenance and monitoring may be required for up to five years from the date of project completion if the code official determines such condition is necessary to ensure mitigation success and critical area protection.

Staff Analysis

The project approval is conditioned with a requirement to maintain and monitor the proposed mitigation landscaping for five years.

- 14. MICC 19.07.040(J)(2):**

Maintenance and Monitoring. Where monitoring reveals a significant variance from predicted impacts or a failure of protection measures, the applicant shall be responsible for appropriate corrective action, which may be subject to further monitoring.

Staff Analysis

Staff finds that this requirement is appropriate as a condition of approval.

- 15. Permit Expiration:**

MICC 19.15.020(K) states “Except for building permits or unless otherwise conditioned in the approval process, permits shall expire one year from the date of notice of decision if the activity approved by the permit is not exercised. Responsibility for knowledge of the expiration date shall be with the applicant.”

Staff Analysis

A condition of approval has been added to this decision, setting an expiration date consistent with this code standard.

II. CONCLUSIONS OF LAW

Based on the above Findings of Facts, the following Conclusions of Law have been made:

1. The subject property contains a Type 2 watercourse and Category IV wetland which require buffers as described in MICC 19.07.070 and MICC 19.07.080.
2. The buffers will not be less than the minimum widths specified in MICC 19.07.070(B)(1) and MICC 19.07.080(C)(1).
3. A critical area study consistent with MICC 19.07.050 was submitted (Exhibit 2).
4. The proposed buffer widths plus mitigation measures will cause no net loss of ecological function.
5. As shown in Exhibit 3, no portion of the reduced buffer is on a steep slope.

III. DECISION

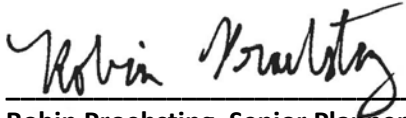
Based upon the above noted Findings of Fact and Conclusions of Law, critical areas determination application CAO17-009 to reduce the width of a Type 2 watercourse buffer from 50 feet to 25 feet, and to reduce the Category IV wetland buffer from 35 feet to 25 feet as depicted by Exhibit 3, is hereby **APPROVED** subject to the Conditions of Approval. This decision is final, unless appealed in writing consistent with adopted appeal procedures.

IV. CONDITIONS OF APPROVAL

1. The following conditions shall be binding on the “Applicant,” which shall include the owner or owners of the property, heirs, assign and successors.
2. The approval of the permit is based on the proposal complying with the submittal, as demonstrated in Exhibits 2 and 3.
3. Prior to approval of site development permit 1709-007, the applicant shall submit a bond quantity worksheet for the proposed mitigation, which will provide the basis for a potential future financial guarantee.
4. Civil plan sheets provided for site development permit 1709-007 shall show all trees, numbered according to the numbering in the Arborist report. Tree protection methods and locations shall also be shown on construction plans.
5. Upon completion of the mitigation work, a letter written by a qualified professional detailing compliance with the approved mitigation plan shall be submitted to the City of Mercer Island Development Services Group. The compliance letter shall be accompanied by a set of as-built drawings depicting type and location of mitigation plantings. A maintenance and monitoring memo shall be submitted to the City of Mercer Island Development Services Group annually for a period of five years. Plant survival rates are to meet or exceed the performance standards listed in Exhibit 3.
6. This permit approval shall expire one year from the date of notice of decision if the activity approved by the permit is not exercised.

7. The applicant shall install and have inspected full temporary erosion and sediment control measures prior to construction.

Approved this 21st day of May, 2018.



**Robin Proebsting, Senior Planner
Development Services Group
City of Mercer Island**

Parties of record have the right to appeal the decision on this action when it is issued. If at that time you desire to file an appeal, you must submit the appropriate form, available from the Development Services Group, and file it with the City Clerk within fourteen (14) days from the date this decision is signed. Upon receipt of a timely complete appeal application and appeal fee, an appeal hearing will be scheduled. To reverse, modify or remand this decision, the appeal hearing body must find that there has been substantial error, the proceedings were materially affected by irregularities in procedure, the decision was unsupported by material and substantial evidence in view of the entire record, or the decision is in conflict with the city's applicable decision criteria.

Please note that the City will provide notice of this decision to the King County Department of Assessment, as required by State Law (RCW 36.70B.130). Pursuant to RCW 84.41.030(1), affected property owners may request a change in valuation for property tax purposes notwithstanding any program of revaluation by contacting the King County Department of Assessment at (206) 296-7300.

CITY OF MERCER ISLAND

DEVELOPMENT SERVICES GROUP

9611 SE 36TH STREET | MERCER ISLAND, WA 98040
 PHONE: 206.275.7605 | www.mercergov.org



CITY USE ONLY		
PERMIT #	RECEIPT #	FEE

Date Received: _____

DEVELOPMENT APPLICATION	Received By: _____
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STREET ADDRESS/LOCATION 8375 E. MERCER WAY, 98040		ZONE R-8.4
COUNTY ASSESSOR PARCEL #S 032110-0145		PARCEL SIZE (SQ. FT.) 15,159 SF
PROPERTY OWNER (required) NEW HORIZON REAL ESTATE DEVELOPMENT	ADDRESS (required) 8744 126TH AVE NE KIRKLAND WA 98033	CELL/OFFICE (required) 206.557.0772 E-MAIL (required) MLU0127MUA@GMAIL.COM
PROJECT CONTACT NAME RIPPLE DESIGN STUDIO, INC JIM DEARTH	ADDRESS 4303 STONE WAY N SEATTLE, WA	CELL/OFFICE 206.913.2333 E-MAIL PROJECTS@RIPPLEDESIGNSTUDIO.COM
TENANT NAME	ADDRESS	CELL PHONE E-MAIL

DECLARATION: I HEREBY STATE THAT I AM THE OWNER OF THE SUBJECT PROPERTY OR I HAVE BEEN AUTHORIZED BY THE OWNER(S) OF THE SUBJECT PROPERTY TO REPRESENT THIS APPLICATION, AND THAT THE INFORMATION FURNISHED BY ME IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE.

SIGNATURE

19 JUNE 2017

DATE

PROPOSED APPLICATION(S) AND CLEAR DESCRIPTION OF PROPOSAL (PLEASE USE ADDITIONAL PAPER IF NEEDED):

DEMOLITION OF EXISTING RESIDENCE + CONSTRUCTION OF NEW SINGLE FAMILY RESIDENCE. REQUEST REDUCTION OF WETLAND BUFFER TO 25' THROUGH MITIGATION PLANTING.

ATTACH RESPONSE TO DECISION CRITERIA IF APPLICABLE

CHECK TYPE OF LAND USE APPROVAL REQUESTED:

APPEALS	DEVIATIONS Continued	SUBDIVISION SHORT PLAT Continued
<input type="checkbox"/> Building (+cost of file preparation)	<input type="checkbox"/> Impervious Surface (5% Lot overage)	<input type="checkbox"/> Short Plat Amendment
<input type="checkbox"/> Land use (+cost of verbatim transcript)	<input type="checkbox"/> Shoreline	<input type="checkbox"/> Final Short Plat Approval
<input type="checkbox"/> Code Interpretation	<input type="checkbox"/> Wet Season Construction Moratorium	VARIANCES (Plus Hearing Examiner Fee)
CRITICAL AREAS	ENVIRONMENTAL REVIEW (SEPA)	<input type="checkbox"/> Type 1**
<input type="checkbox"/> Determination	<input type="checkbox"/> Checklist: Single Family Residential Use	<input type="checkbox"/> Type 2***
<input type="checkbox"/> Reasonable Use Exception	<input type="checkbox"/> Checklist: Non-Single Family Residential Use	OTHER LAND USE
DESIGN REVIEW	<input type="checkbox"/> Environmental Impact Statement	<input type="checkbox"/> Accessory Dwelling Unit
<input type="checkbox"/> Administrative Review	SHORELINE MANAGEMENT	<input type="checkbox"/> Code Interpretation Request
<input type="checkbox"/> Design Review – Major	<input type="checkbox"/> Exemption	<input type="checkbox"/> Comprehensive Plan Amendment (CPA)
<input type="checkbox"/> Design Review – Minor	<input type="checkbox"/> Semi-Private Recreation Tract (modification)	<input type="checkbox"/> Conditional Use (CUP)
WIRELESS COMMUNICATIONS FACILITIES	<input type="checkbox"/> Semi-Private Recreation Tract (new)	<input type="checkbox"/> Lot Line Revision
<input type="checkbox"/> Wireless Communications Facilities- 6409 Exemption	<input type="checkbox"/> Substantial Dev. Permit	<input type="checkbox"/> Lot Consolidation
<input type="checkbox"/> New Wireless Communications Facility	SUBDIVISION LONG PLAT	<input type="checkbox"/> Noise Exception
DEVIATIONS	<input type="checkbox"/> Long Plat	<input type="checkbox"/> Reclassification of Property (Rezoning)
<input type="checkbox"/> Changes to Antenna requirements	<input type="checkbox"/> Subdivision Alteration to Existing Plat	<input type="checkbox"/> ROW Encroachment Agreement (requires separate ROW Use Permit)
<input type="checkbox"/> Changes to Open Space	<input type="checkbox"/> Final Subdivision Review	<input type="checkbox"/> Zoning Code Text Amendment
<input type="checkbox"/> Fence Height	SUBDIVISION SHORT PLAT	
<input checked="" type="checkbox"/> Critical Areas Setback	<input type="checkbox"/> Short Plat	
	<input type="checkbox"/> Deviation of Acreage Limitation	

**Includes all variances of any type or purpose in all zones other than single family residential zone: B, C-O, PBZ, MF-2, MF2L, MF-2L, MF-3, TC, P)

***Includes all variances of any type or purpose in single family residential zone: R-8.4, R-9.6, R-12, R-15)

June 22, 2017
Project Number 17029

PO Box 1721
Issaquah, Washington 98027

Ripple Design Studio
4303 Stone Way North
Seattle, Washington 98103

(425) 677-7166
www.evergreenarc.com

Attention: Jeff Almeter

**Regarding: Critical Area Study: Wetland & Watercourse Buffer Reduction
East Mercer Development
8375 + 8383 East Mercer Way – Mercer Island, Washington**

Dear Jeff:

At your request, this critical area study has been prepared to describe wetland and watercourse buffer reductions proposed for a three lot residential development project located at approximately 8375/8383 East Mercer Way.

PROJECT SITE

The project site is located on the southeast side of Mercer Island near the intersection of East Mercer Way and Avalon Drive. The project site measures 58,373 sf (1.34 acres) in total area and includes the following three residential lots that were created through the “Run Yong USA” lot line revision (Mercer Island Lot Line Revision File No. SUB 16-004):

- Parcel A - Tax Parcel No. 032110-0145; 8375 E. Mercer Way; 15,683 sf (0.36 acres)
- Parcel B - Tax Parcel No. 032110-0140; 8383 E. Mercer Way; 16,638 sf (0.38 acres)
- Parcel C - Tax Parcel No. 032110-0141; 26,053 sf (0.60 acres)

Parcel A and Parcel B are developed residential lots that maintain street frontage on East Mercer Way. Parcel C is an undeveloped lot located behind Parcel A and Parcel B.

Single-family residences currently exist on Parcel A and Parcel B in the approximate central portion of the larger project site. The residences are two-story structures constructed in the early 1960’s. Areas surrounding the residences comprise mature tree and shrub landscaping, patios, paths, a large asphalt sport court, and lawn. Moderately steep slopes exist in the approximate western 1/3 of the site as well as along East Mercer Way. The sloped areas located in the western 1/3 of the site support an upland deciduous forest. The sloped areas along East Mercer Way support primarily non-native invasive shrub and vine species. A man-made pond exists in the north-central portion of the site.

CRITICAL AREAS

In 2014, The Watershed Company¹ completed a “Wetland and Watercourse Delineation Study” that

¹ The Watershed Company. 2014. Letter to Max Chau regarding 8375 and 8383 East Mercer Way, Wetland and Watercourse Delineation Study. The Watershed Company Reference Number 140618. August 1, 2014.

covered the project site. The study was completed prior to the 2016 short plat, but encompassed the three lots that comprise the project site. As a result of this work, a small wetland (referred to in text as "Wetland A") and narrow stream (referred to in text as "Watercourse A") were identified in the north-central portion of the project site.

Wetland A

Wetland A is an excavated two-cell landscape pond located on Parcel A and Parcel C. The two cells within the wetland are separated by a small constructed island. The upper cell of the pond is dominated by a dense stand of small fruited bulrush (*Scirpus microcarpus*). The lower cell of the pond supports dense stands of both creeping spikerush (*Eleocharis palustris*) and mannagrass (*Glyceria* sp.) as well as areas of open water. Common lady fern (*Athyrium filix-femina*), soft rush (*Juncus effusus*), creeping buttercup (*Ranunculus repens*), an ornamental iris, and Himalayan blackberry (*Rubus armeniacus*) are present along the pond margins. Wetland A was rated by The Watershed Company as a Category IV wetland. A 35 foot buffer is required from the delineated limits of Wetland A.

Watercourse A

Watercourse A is a narrow stream that drains north and east from Wetland A. Within the project site, Watercourse A exists only on Parcel A. Watercourse A was classified by The Watershed Company as a Type 2 watercourse. A 50 foot buffer is required from Watercourse A.

PROPOSED PROJECT

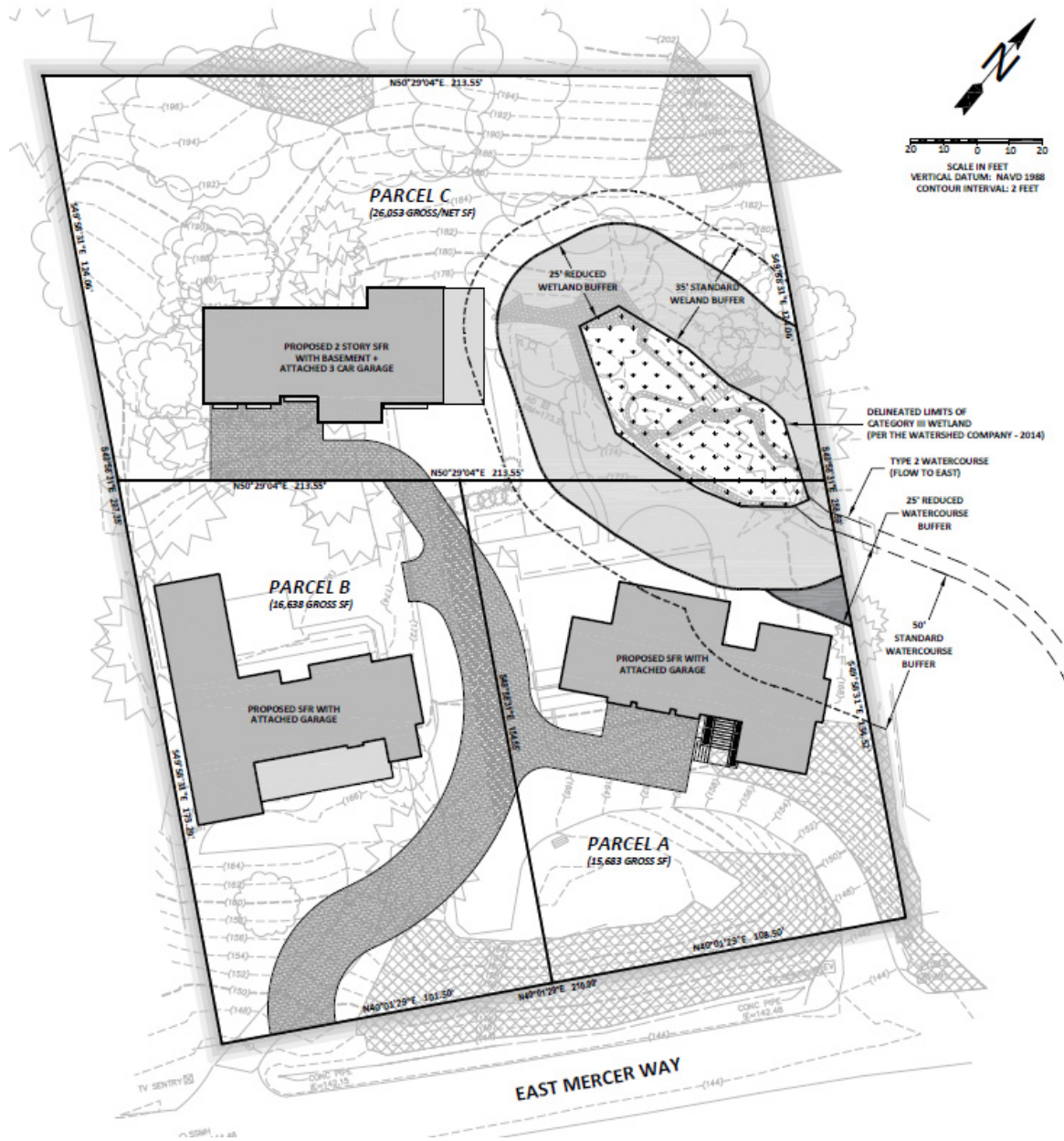
The proposed project includes the demolition of the existing single-family residences, driveways, and related improvements that currently exist within the project site. A new single-family residence will then be constructed on each of the three parcels. Access to the new residences will be provided by a shared driveway that originates from East Mercer Way on Parcel B. The proposed project is shown in Figure 1 (next page).

The purpose of the proposed project is to re-develop the project site for single-family residential use by replacing the outdated residences and constructing a new residence on Parcel C. The overall goal of the project is to improve each parcel in a similar scope and scale to that of other properties within the local area while at the sometime providing vehicular access to Parcel C. The new residences will be 2 story structures with attached garages that have all the essential components of a modern-day residence.

Development opportunities within the project site are constrained by the combination of relatively small lot size(s), topography, and the presence of critical areas (Wetland A, Watercourse A, steep slopes). The proposed project results in a consolidated development envelop for each parcel, removes non-conforming structures and improvements that are currently located within critical area buffers, and provides for the enhancement of degraded critical area buffers.

To accommodate the proposed site development, the standard wetland buffer will be reduced to 25 feet and the standard stream buffer will be reduced to 25 feet. A 5 foot building setback will be provided from the outer limits of the reduced buffer. The proposed buffer reductions are the minimum necessary to accommodate the proposed development and the reduced buffers conform to the minimum width established in Mercer Island City Code (MICC) 19.07.

Figure 1 – Site Plan



PROPOSED MITIGATION

As part of the proposed project, the reduced buffer will be enhanced using native trees, shrubs, and groundcovers. The overall mitigation goal and objective is to enhance buffer functions by providing a dense, structurally diverse, and species rich native plant community within the reduced buffer area. Specific mitigation work includes the following:

- **Remove existing surface improvements:** Existing patios, walkways, a wood gazebo, and related improvements will be removed from the reduced buffer.

- **Remove non-native plants and noxious weed species:** Existing ornamental (landscape) shrubs and trees as well as noxious weeds will be removed from the reduced buffer.
- **Soil amendments and mulches:** Existing soils within the reduced buffer will be decompacted and then amended using organic compost. Mulch will be placed throughout the reduced buffer following plant installation.
- **Dense native plants:** Proposed mitigation plantings include 350 total plants comprising 3 tree species, 8 shrub species, and 2 groundcover species.
- **Temporary irrigation:** Two years of temporary irrigation will be provided to ensure installed plants are properly established.
- **Maintenance and Monitoring:** A five-year maintenance and monitoring program is included to ensure the mitigation performs as designed.

The proposed planting plan is shown in Figure 2

Figure 2 – Proposed Planting Plan



BUFFER FUNCTIONAL LIFT

Mercer Island City Code 19.07.070.B.2 and 19.07.080.C.2 requires that watercourse and wetland buffer reductions result in no net loss of buffer functioning. This section presents an analysis of existing buffer functioning as well as how the proposed buffer reduction results in a net increase in buffer functioning when compared to existing conditions.

The wetland and watercourse buffers located within the project site are highly modified, include various impervious surface improvements, and contain a wide variety of non-native vegetation.

Buffer areas located south and east of Wetland A include a portion of the residence located on Parcel A, an associated concrete patio/walkway, a wood gazebo, and an unmaintained lawn area comprising bentgrass (*Agrostis* sp.), bird's-foot trefoil (*Lotus corniculatus*), and clover (*Trifolium* sp.). A large English laurel (*Prunus laurocerasus*) also exists along the northeast property line of Parcel A.

Buffer areas located north and west of Wetland A include a large diameter bigleaf maple (*Acer macrophyllum*) and a large diameter western redcedar (*Thuja plicata*). The remaining vegetation within the buffer is a mix of non-native trees and tall shrubs including arborvitae (*Thuja occidentalis/orientalis*), apple (*Malus* sp.), rhododendron (*rhododendron* sp.), juniper (*Juniperus* sp.), English holly (*Ilex aquifolium*), and camellia (*Camellia* sp.). A small patch of unmaintained bluegrass (*Poa* sp.) lawn exists along a gravel path that crosses the buffer and a stand of giant horsetail (*Equisetum telmateia*) exists near the northern property line.

Vegetation on the small island within Wetland A includes a small red maple (*Acer rubrum*), a small pine tree (*Pinus* sp.), western swordfern (*Polystichum munitum*), and soft rush.

The presence of dense non-native plants within the buffer limits available forage and breeding habitat for wildlife and contributes to a cumulative reduction in animal species richness and abundance within the local area. On-site buffers also provide a significant seed source in the local area from which dispersal vectors can expand the presence of non-native plant species within and beyond the project site. The presence of man-made structures, impervious surfacing, and lawn within the buffer increases surface water runoff rates and prevents the infiltration of surface water. The vegetation within the buffer does not provide critical screening functions that can limit human intrusion and filter out noise, light, and movement generated by the developed portions of the project site.

With enhancement, the reduced wetland and watercourse buffer can provide seasonal foraging opportunities and escape cover for small mammals and passerine birds accustomed to urbanized environments. In addition, enhancement can improve hydroperiod and base flow functioning by increasing the surface water infiltration capabilities of the reduced buffer. Similarly, enhancement of the reduced buffer can increase water quality functions by providing the physical structure required to filter nutrients and toxics in stormwater. Finally, enhancement of the reduced buffer can significantly improve buffer screening functions by presenting a dense multi-layered natural vegetation barrier that currently does not exist within the buffer.

Table 1 (next page) presents a summary of the “functional lift” provided by the proposed project.

TABLE 1 – CRITICAL AREA BUFFER FUNCTIONAL LIFT ANALYSIS

BUFFER FUNCTION	EXISTING CONDITIONS	AFTER ENHANCEMENT	EXPECTED FUNCTIONAL IMPROVEMENT
Hydroperiod Maintenance / Base Flow Support	Limited potential to provide function due to vegetative conditions, the presence of impervious surfacing, and compacted soils.	Increased potential to provide function because impervious surfacing and lawn will be removed, soils will be decompacted/amended, and dense native planting will be installed.	Improved. Proposed enhancements improve function by providing the physical structure required to infiltrate stormwater runoff that flows towards the wetland/watercourse.
Water Quality Improvement	Limited potential to provide function due to vegetative conditions and compacted soils with limited to no duff layer.	Increased potential to provide function because soils will be decompacted/amended and dense native planting will be installed. Removal of existing lawn and landscaping within buffer reduces potential for chemical use near wetland/stream.	Improved. Proposed enhancements improve function by providing the physical structure required to filter nutrients/toxics in stormwater runoff that flows towards the wetland/watercourse.
General Wildlife Habitat Suitability	Low potential to provide function due to the presence of structures, impervious surfacing, and extensive non-native plant species.	Significant increase in potential to provide function because impervious surfacing, structures, and lawn will be removed, soils will be decompacted/amended, and dense native planting will be installed.	Significantly Improved. Proposed enhancements significantly improve function by providing a dense, structurally diverse, and species rich native plant community that currently does not exist.
Screening from Adjacent Disturbance	Low potential to provide function because buffer is a highly modified non-native landscape that includes lawn, concrete, and other improvements.	Significant increase in potential to provide function because dense multi-layered native planting will be installed.	Significantly Improved. Proposed enhancements significantly improve function by providing a screening barrier between development and wetland/watercourse that currently does not exist.

CONCLUSIONS AND CLOSURE

The proposed buffer reduction associated with the 3 lot East Mercer Way development project results in the permanent preservation and protection of a Category IV wetland and a Type 2 watercourse. The project conforms to the minimum buffers widths established in MICC 19.07 and provides for the enhancement of degraded buffer areas thereby improving overall buffer functioning. The project removes existing non-conforming improvements as well as non-native plant species, improves existing soil conditions, and requires the installation of dense native plantings. A five year maintenance and monitoring program will ensure the project achieves the required buffer functional improvement.

I trust that this study meets your present needs. If you have any questions regarding the information presented in this study or require additional assistance with this project, please do not hesitate to call me at (425) 677-7166 or email me at psuper@evergreenarc.com.

Sincerely,

Evergreen Aquatic Resource Consultants, LLC



Peter P. Super

Professional Wetland Scientist

Attachments:

Attachment 1 – Site Photographs



Photo 1 – View of Upper Landscape Pond Cell within Wetland A
Date: June 7, 2017



Photo 2 – View of Lower Landscape Pond Cell within Wetland A
Date: June 7, 2017



Photo 3 – Existing Buffer Conditions Located East of Wetland A
Date: June 7, 2017



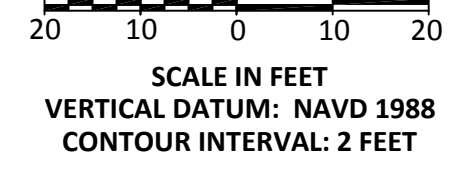
Photo 4 – Existing Gazebo located in Wetland Buffer
Date: June 7, 2017



Photo 5 – Existing Buffer Conditions Located West of Wetland A
Date: June 7, 2017



Photo 6 – Gravel Path Located West and South of Wetland A
Date: June 7, 2017



AREA CALCULATIONS:

- 2,179 SF - WETLAND (EXISTING - NO CHANGE)
- 9,617 SF - STANDARD 35 FT WETLAND & 50 FT WATERCOURSE BUFFER
- 6,011 SF - REDUCED 25 FT WETLAND & WATERCOURSE BUFFER

DRAWING NOTES:

- THE SURVEY AND SITE PLAN USED TO PREPARE THIS PLAN WAS PROVIDED BY RIPPLE DESIGN STUDIO (4303 STONE WAY NORTH - SEATTLE, WASHINGTON 98103). SOURCE DRAWINGS HAVE BEEN MODIFIED FOR VISUAL ENHANCEMENT.

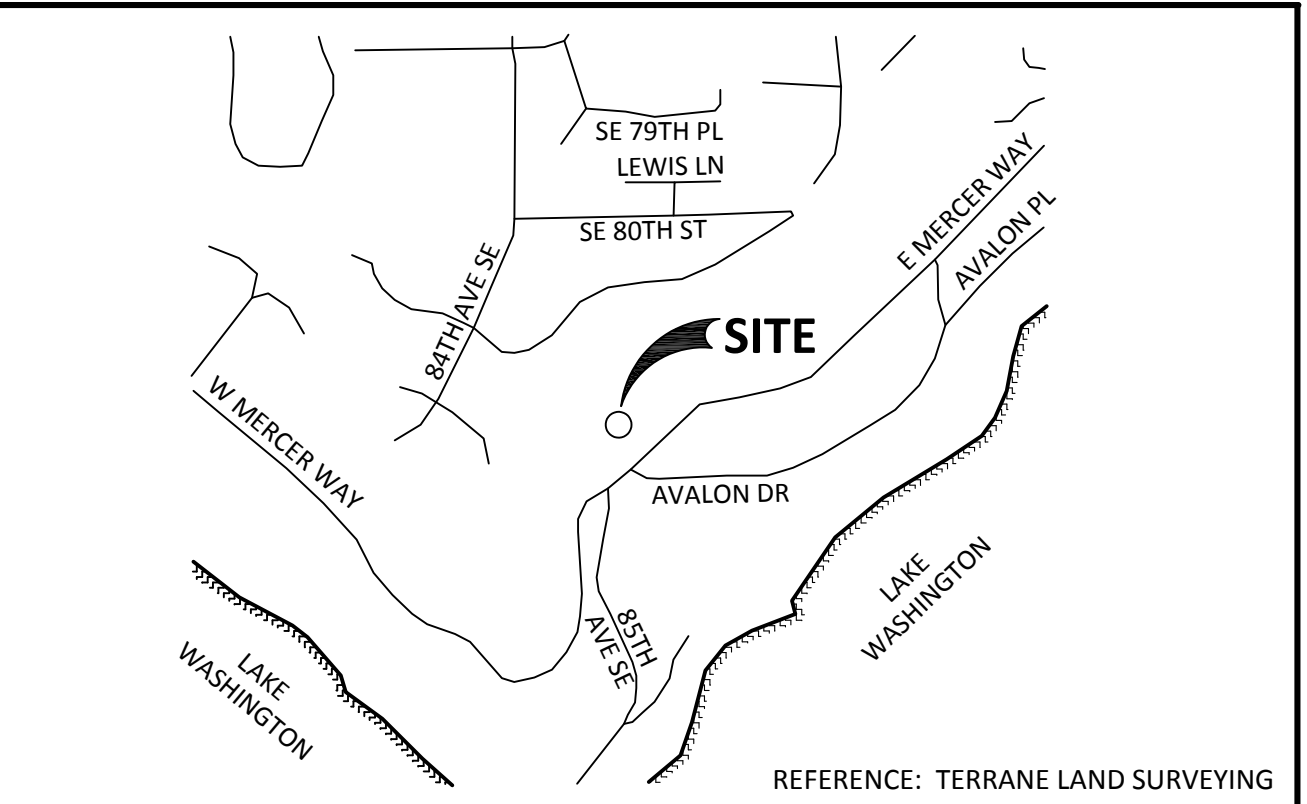
RECOMMENDED CONSTRUCTION SEQUENCE:

- FLAG WORK AREA LIMITS.
- LOCATE AND PROTECT ALL UNDERGROUND UTILITIES.
- INSTALL TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) MEASURES PER DETAIL 2-1 AND CITY OF MERCER ISLAND STANDARDS.
- REQUEST AND ATTEND A PRE-CONSTRUCTION MEETING WITH OWNER.
- CONTROL NOXIOUS WEEDS.
- REMOVE ALL NON-NATIVE PLANTS (TREES, SHRUBS, GRASSES).
- DEMOLISH AND REMOVE EXISTING IMPROVEMENTS (GAZEBO, CONCRETE, GRAVEL, ETC.)
- DECOMPACT AND AMEND SOILS.
- INSTALL NATIVE PLANTS - SEASONAL RESTRICTIONS APPLY.
- INSTALL MULCH.
- CLEAN-UP AND DEMOBILIZE FROM SITE.
- REQUEST FROM AND ATTEND INSPECTION WITH OWNER.
- CONTRACTOR TO PROVIDE 1 YEAR OF MAINTENANCE UNDER DIRECTION OF OWNER.
- OWNER TO COMPLETE 5 YEARS OF MONITORING.

1
1
BUFFER REDUCTION SITE PLAN

GENERAL CONSTRUCTION NOTES:

- CONSTRUCTION SHALL CONFORM TO ALL CITY OF MERCER ISLAND CODES, ORDINANCES, AND REGULATIONS.
- BEFORE THE START OF ANY CONSTRUCTION, A PRE-CONSTRUCTION MEETING MUST BE HELD BETWEEN THE CITY OF MERCER ISLAND, THE OWNER, AND THE PLAN DESIGNER.
- A COPY OF THESE APPROVED DRAWINGS MUST BE ON THE JOB SITE WHENEVER CONSTRUCTION IS IN PROGRESS.
- SITE CONDITIONS MAY VARY BASED ON SEASON AND/OR TIME OF YEAR. THE CONSTRUCTION CONTRACTOR SHALL ACCOMMODATE REALIZED AND ANTICIPATED SITE CONDITIONS WHEN COMPLETING THE WORK SHOWN ON THESE DRAWINGS.
- THE CONSTRUCTION CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, FLAGGERS, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF THE WORK SHOWN ON THESE DRAWINGS. ANY WORK WITHIN THE TRAVELED RIGHT-OF-WAY THAT MAY INTERRUPT NORMAL TRAFFIC FLOW SHALL REQUIRE TRAFFIC CONTROL IN ACCORDANCE WITH ANY AND ALL CITY OF MERCER ISLAND STANDARDS.
- THE TEMPORARY EROSION AND SEDIMENT CONTROL (TESC) MEASURES SHOWN ON THESE DRAWINGS, IF ANY, ARE THE MINIMUM REQUIRED. ADJUST, AMEND, AND/OR ADD TO THE TESC MEASURES SHOWN TO ACCOMMODATE SITE AND WEATHER CONDITIONS AND/OR AS OTHERWISE DIRECTED BY OWNER OR PER THE CITY OF MERCER ISLAND.



Wetland Delineation
Mitigation Design
Mitigation Monitoring

Evergreen Aquatic Resource Consultants, LLC
PO BOX 1721
ISSAQUAH, WASHINGTON 98027
TEL - (425) 677-1166
WWW.EVERGREENARC.COM

NO	DATE	DESCRIPTION
1	11/09/17	REVISE PER CITY COMMENTS

MAINTENANCE AND MONITORING PLAN:

PLAN GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS

PLAN GOALS, OBJECTIVES, AND PERFORMANCE STANDARDS ARE OUTLINED IN THE TABLE SHOWN ON THIS SHEET. THE GOALS AND OBJECTIVES OF THIS PLAN ARE CONSIDERED ACHIEVED WHEN THE PERFORMANCE STANDARDS ARE SATISFIED.

MONITORING PLAN

AS-BUILT

SCHEDULE: **IMMEDIATELY FOLLOWING CONSTRUCTION**

FOLLOWING COMPLETION OF THE WORK SHOWN ON THIS PLAN, A QUALIFIED PROFESSIONAL SHALL PREPARE AN AS-BUILT OF THE COMPLETED WORK. THE AS-BUILT SHALL SUMMARIZE THE COMPLETED WORK AS WELL AS ANY DEVIATIONS FROM THE APPROVED VERSION OF THIS PLAN.

IN ADDITION, THE AS-BUILT SHALL CONTAIN BASELINE MONITORING DATA AND PHOTOGRAPHS FOR EACH PLANTING AREA. BASELINE MONITORING DATA SHALL BE CONSISTENT WITH THAT DESCRIBED FOR "ANNUAL MONITORING" (PERCENT SURVIVAL, PERCENT COVERAGE, ETC.). IN ADDITION, PERMANENT PHOTO POINTS SHALL BE ESTABLISHED AND REPRESENTATIVE PHOTOGRAPHS SHALL BE TAKEN OF EACH PLANTING AREA.

THE AS-BUILT AND BASELINE MONITORING DATA SHALL BE SUBMITTED TO THE CITY OF MERCER ISLAND NO LATER THAN **30 DAYS** FROM THE DATE THAT THE WORK SHOWN ON THIS PLAN HAS BEEN COMPLETED.

ANNUAL MONITORING (5 YEARS)

SCHEDULE: **ANNUALLY FOR A PERIOD OF 5 YEARS**

FOLLOWING ACCEPTANCE OF THE AS-BUILT BY THE CITY OF MERCER ISLAND, ANNUAL MONITORING SHALL BE COMPLETED BY A QUALIFIED PROFESSIONAL AND SHALL COMPRISE SITE INVESTIGATIONS AND REPORTING PER THE FOLLOWING INTERVAL:

- AT THE END OF THE GROWING SEASON DURING YEARS 1, 2, 3, 4, AND 5.
- EACH ANNUAL MONITORING SHALL COMPRISE A QUANTITATIVE ASSESSMENT OF CONDITIONS WITHIN THE PLANTING AREA FOR PURPOSES OF EVALUATING THE CURRENT YEAR'S PERFORMANCE STANDARDS. AT THE TIME OF EACH MONITORING, THE FOLLOWING INFORMATION SHALL BE COLLECTED AND ASSESSED RELATIVE TO THE PERFORMANCE STANDARDS ESTABLISHED FOR THE PROJECT:
 - THE PERCENT SURVIVAL OF INSTALLED PLANT STOCK (**ALL YEARS**). A DIRECT COUNT INVENTORY AND ASSESSMENT OF ALL INSTALLED PLANTS SHALL BE USED TO EVALUATE PERCENT SURVIVAL. THE RATIONAL FOR POOR SURVIVAL, IF PRESENT, WILL BE DETERMINED TO THE EXTENT FEASIBLE.
 - THE PERCENT COVERAGE PROVIDED BY NATIVE PLANT SPECIES (**ALL YEARS**). INSTALLED PLANT STOCK PERCENT COVERAGE SHALL BE ASSESSED USING APPROPRIATELY SIZED SAMPLE PLOTS OR LINE INTERCEPT TRANSECTS.
 - THE PERCENT COVERAGE PROVIDED BY NOXIOUS WEED SPECIES (**ALL YEARS**). INSTALLED PLANT STOCK PERCENT COVERAGE SHALL BE ASSESSED USING APPROPRIATELY SIZED SAMPLE PLOTS OR LINE INTERCEPT TRANSECTS.

IN ADDITION TO THE DATA COLLECTION AND ANALYSIS REGARDING PLANT COMMUNITY CONDITIONS, PHOTOGRAPHS OF EACH PLANTING AREA SHALL BE TAKEN FROM THE PERMANENT PHOTO POINTS ESTABLISHED DURING THE AS-BUILT.

THE RESULTS OF EACH MONITORING ASSESSMENT SHALL BE SUMMARIZED IN A WRITTEN REPORT AND SUBMITTED TO THE CITY OF MERCER ISLAND NO LATER THAN **30 DAYS** AFTER EACH MONITORING ASSESSMENT.

GOALS, OBJECTIVES, MONITORING SCHEDULE, & PERFORMANCE STANDARDS

GOAL	OBJECTIVE	SCHEDULE	PERFORMANCE STANDARDS
TO SUCCESSFULLY ESTABLISH A DENSE NATIVE PLANT COMMUNITY WITHIN REDUCED WETLAND AND WATERCOURSE BUFFERS.	TO INSTALL AND SUCCESSFULLY ESTABLISH 350 NATIVE PLANTINGS WITHIN REDUCED WETLAND WATERCOURSE BUFFERS.	AUGUST OR SEPTEMBER OF YEARS 1, 2, 3, 4 & 5 FOLLOWING ACCEPTANCE OF AN AS-BUILT BY THE CITY OF MERCER ISLAND.	<ul style="list-style-type: none"> 100% SURVIVAL BY INSTALLED PLANT STOCK AFTER THE FIRST GROWING SEASON (YEAR 1). THIS STANDARD CAN BE MET THROUGH PLANT ESTABLISHMENT OR REPLANTING, AS NECESSARY, TO ACHIEVE THE REQUIRED PLANT NUMBERS. 85% SURVIVAL BY INSTALLED PLANT STOCK AFTER THE SECOND AND THIRD GROWING SEASONS (YEAR 2 & YEAR 3). COVERAGE BY NATIVE TREES AND SHRUBS PER THE FOLLOWING STANDARDS: 40% (YEAR 3); 60% (YEAR 5). UP TO 20% OF TREE/SHRUB COVERAGE MAY BE COMPRISED OF DESIRABLE NATIVE COLONIZING SPECIES. SPECIES DIVERSITY: ESTABLISHMENT OF A MINIMUM OF 2 TREE AND 4 SHRUB SPECIES BY THE END OF THE FIFTH GROWING SEASON (YEAR 5)
TO LIMIT NOXIOUS WEED SPECIES WITHIN REDUCED WETLAND AND WATERCOURSE BUFFERS.	TO PROVIDE FULL INITIAL CONTROL OF NOXIOUS WEED SPECIES AND THEN TO MINIMIZE THE GENERAL PRESENCE OF NOXIOUS WEED SPECIES THROUGH THE MONITORING PERIOD WITHIN REDUCED WETLAND AND WATERCOURSE BUFFERS.	AUGUST OR SEPTEMBER OF YEARS 1, 2, 3, 4 & 5 FOLLOWING ACCEPTANCE OF AN AS-BUILT BY THE CITY OF MERCER ISLAND.	<ul style="list-style-type: none"> LESS THAN 10% COVERAGE BY ALL CLASS "A", "B", AND "C" NOXIOUS WEEDS (INCLUDING NON-REGULATED "B" AND "C" NOXIOUS WEEDS) IDENTIFIED ON THE LATEST KING COUNTY NOXIOUS WEED LIST.

CONTINGENCY PLAN

SHOULD ANY COMPLIANCE MONITORING ASSESSMENT REVEAL THAT THE PERFORMANCE STANDARDS FOR THE RESPECTIVE YEAR ARE NOT SATISFIED, THE PERMITTEE SHALL WORK WITH THE CITY OF MERCER ISLAND TO DEVELOP A CONTINGENCY PLAN TO ADDRESS THE DEFICIENCY(IES). CONTINGENCY PLANS CAN INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING ACTIONS:

- ADDITIONAL PLANT INSTALLATION;
- EROSION CONTROL;
- HERBIVORY PROTECTION;
- MODIFICATION TO THE IRRIGATION REGIME; AND/OR
- PLANT SUBSTITUTIONS OF TYPE, SIZE, QUANTITY, AND LOCATION.

SUCH CONTINGENCY PLAN SHALL BE SUBMITTED TO THE CITY OF MERCER ISLAND NO LATER THAN JANUARY 31 OF ANY YEAR WHEN DEFICIENCIES ARE DISCOVERED. UNLESS OTHERWISE APPROVED BY THE CITY OF MERCER ISLAND, ACTIONS SPECIFIED ON AN APPROVED CONTINGENCY PLAN MUST BE COMPLETED WITHIN 60 DAYS. IF THE FAILURE IS SUBSTANTIAL, THE CITY OF MERCER ISLAND MAY EXTEND THE COMPLIANCE MONITORING PERIOD.

MAINTENANCE PLAN

THIS SECTION PROVIDES A GENERAL OVERVIEW OF THE MAINTENANCE PROGRAM NECESSARY TO ENSURE THE SUCCESS STANDARDS ESTABLISHED FOR THIS PLAN ARE ACHIEVED.

NOXIOUS WEED CONTROL

NOXIOUS WEEDS SHALL BE CONTROLLED WITHIN THE WETLAND AND REDUCED WETLAND BUFFER AT REGULAR INTERVALS DURING THE COMPLIANCE MONITORING PERIOD.

TARGET NOXIOUS WEED SPECIES SHALL INCLUDE THE FOLLOWING: ALL CLASS "A", "B", AND "C" NOXIOUS WEEDS (INCLUDING NON-REGULATED "B" AND "C" NOXIOUS WEEDS) IDENTIFIED ON THE LATEST KING COUNTY NOXIOUS WEED LIST.

NOXIOUS WEED CONTROL WORK SHALL CONSIST OF THE CUTTING AND REMOVAL FROM THE SITE OF ALL NOXIOUS WEED SPECIES STEMS, CANES, RUNNERS, SHOOTS, SEED PODS, FRUITING BODIES, AND LEAVES PER THE FOLLOWING METHODS:

- HAND PULLING.
- MANUALLY CUTTING USING MACHETES, LOPPERS, AND/OR CLIPPERS.

SPOT TREATMENT SHALL OCCUR MONTHLY AND/OR AT A GREATER FREQUENCY, IF NECESSARY, TO CONTROL NOXIOUS WEED SPECIES TO A MAXIMUM OF TEN (10) PERCENT OR LESS COVERAGE WITHIN EACH PLANTING AREA.

DURING ALL NOXIOUS WEED CONTROL WORK, EXISTING OR PLANTING NATIVE VEGETATION SHALL BE PROTECTED FROM DAMAGE.

GENERAL MAINTENANCE

EACH PLANTING AREA SHALL BE MAINTAINED AT REGULAR INTERVALS DURING THE COMPLIANCE MONITORING PERIOD TO PROMOTE THE SUCCESSFUL ESTABLISHMENT AND VIGOROUS GROWTH OF THE INSTALLED PLANT STOCK.

GENERAL MAINTENANCE SHALL INCLUDE:

- WEEDING OF EACH PLANTING AREA.
- RE-APPLYING BARK MULCH TO MAINTAIN A 6" MINIMUM APPLIED THICKNESS - YEAR 1 ONLY.
- THE PRUNING OF INSTALLED PLANTS TO REMOVE DEAD WOOD AND PROMOTE VIGOROUS PLANT GROWTH AND PROPER FORM.
- THE REPLACEMENT OF PLANTS THAT APPEAR TO BE IN DISTRESS AND/OR DISEASED.
- THE REMOVAL OF TRASH, LITTER, AND/OR OTHER NON-DECOMPOSING DEBRIS.

GENERAL MAINTENANCE WORK SHALL OCCUR MONTHLY DURING THE GROWING SEASON AND/OR AT A FREQUENCY OTHERWISE NECESSARY TO ENSURE THE SUCCESSFUL ESTABLISHMENT AND VIGOROUS GROWTH OF THE INSTALLED PLANTS AND/OR THE CONTROL OF NOXIOUS WEEDS.

811
Know what's below.
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THE UNDERGROUND ROUTING AND CONDITION OF BURIED UTILITIES HAS NOT BEEN VERIFIED OR CONFIRMED. FIELD LOCATE, VERIFY DEPTH OF, AND ADEQUATELY PROTECT ALL UTILITIES PRIOR TO THE START OF WORK.

CAO17-008 & CAO17-009

PERMIT NO:

APPROVED BY:

DATE:

PROJECT:

WETLAND & WATERCOURSE BUFFER REDUCTION PLAN

EAST MERCER DEVELOPMENT

8375 + 8379 E MERCER WAY
MERCER ISLAND, WA
TPN# 032110-0141 + 032110-0145

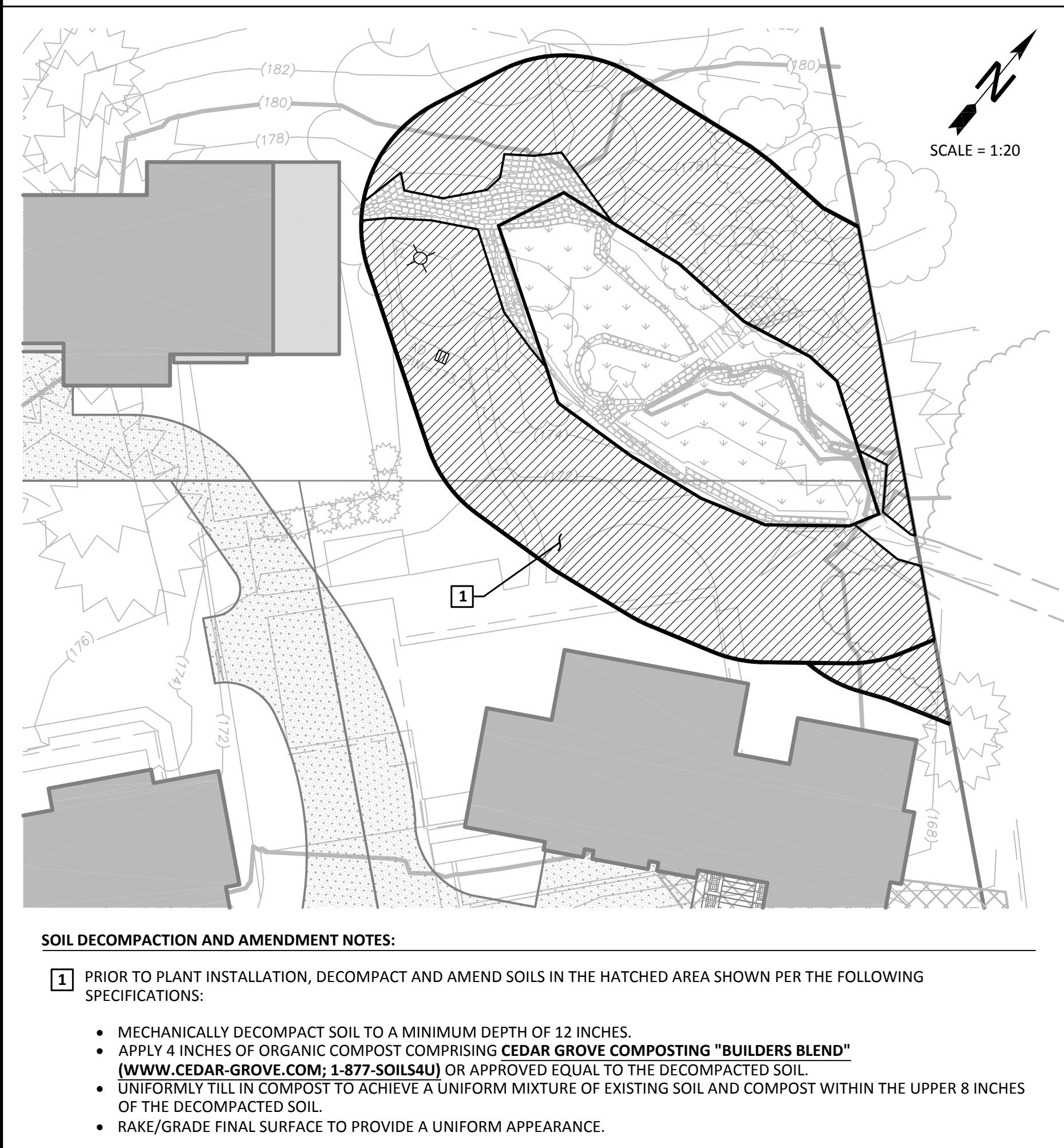
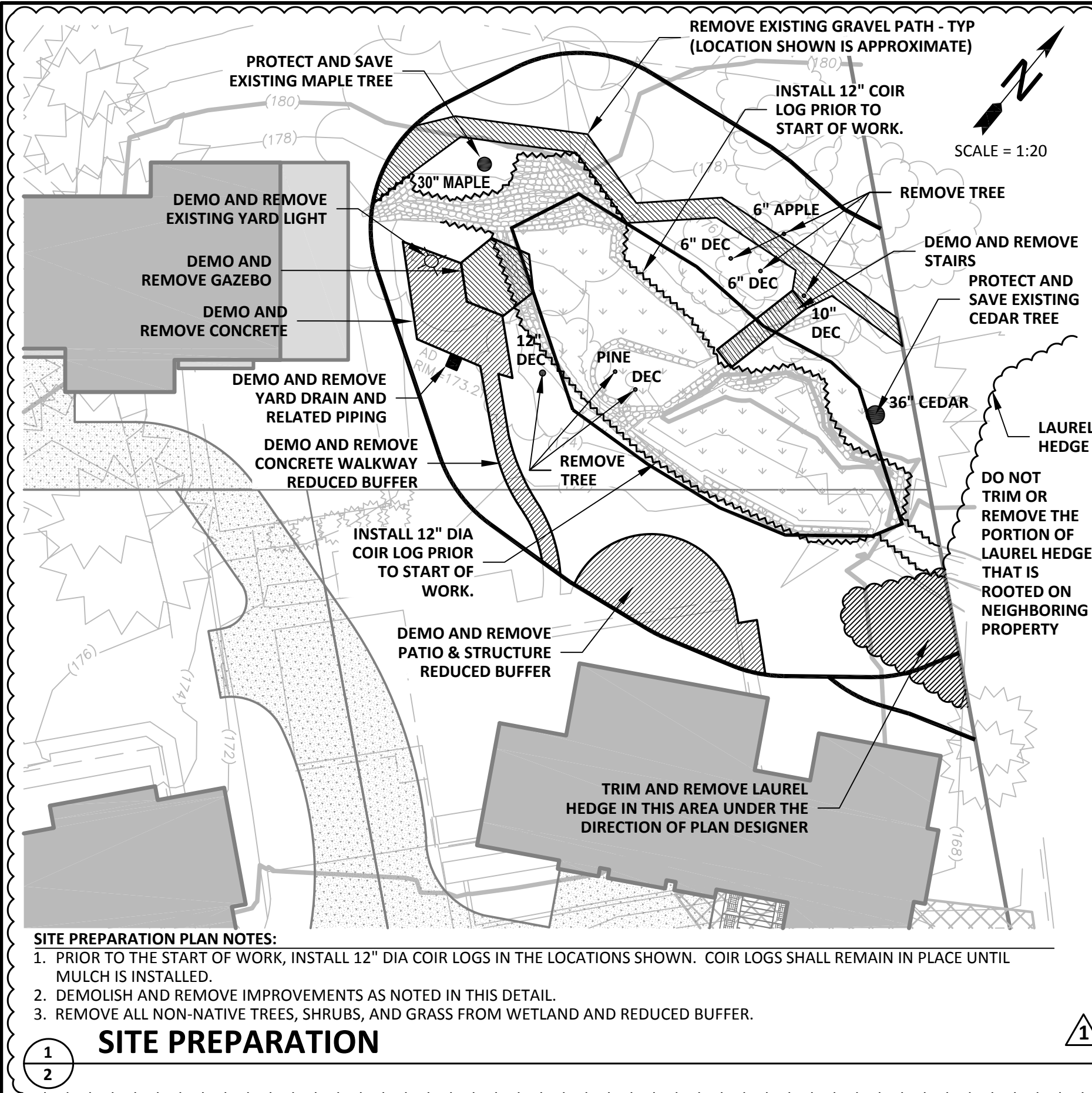
PREPARED FOR:
RIPPLE DESIGN STUDIO
4303 STONE WAY NORTH
SEATTLE, WASHINGTON 98103

SITE PLAN, NOTES, MAINTENANCE & MONITORING PLAN

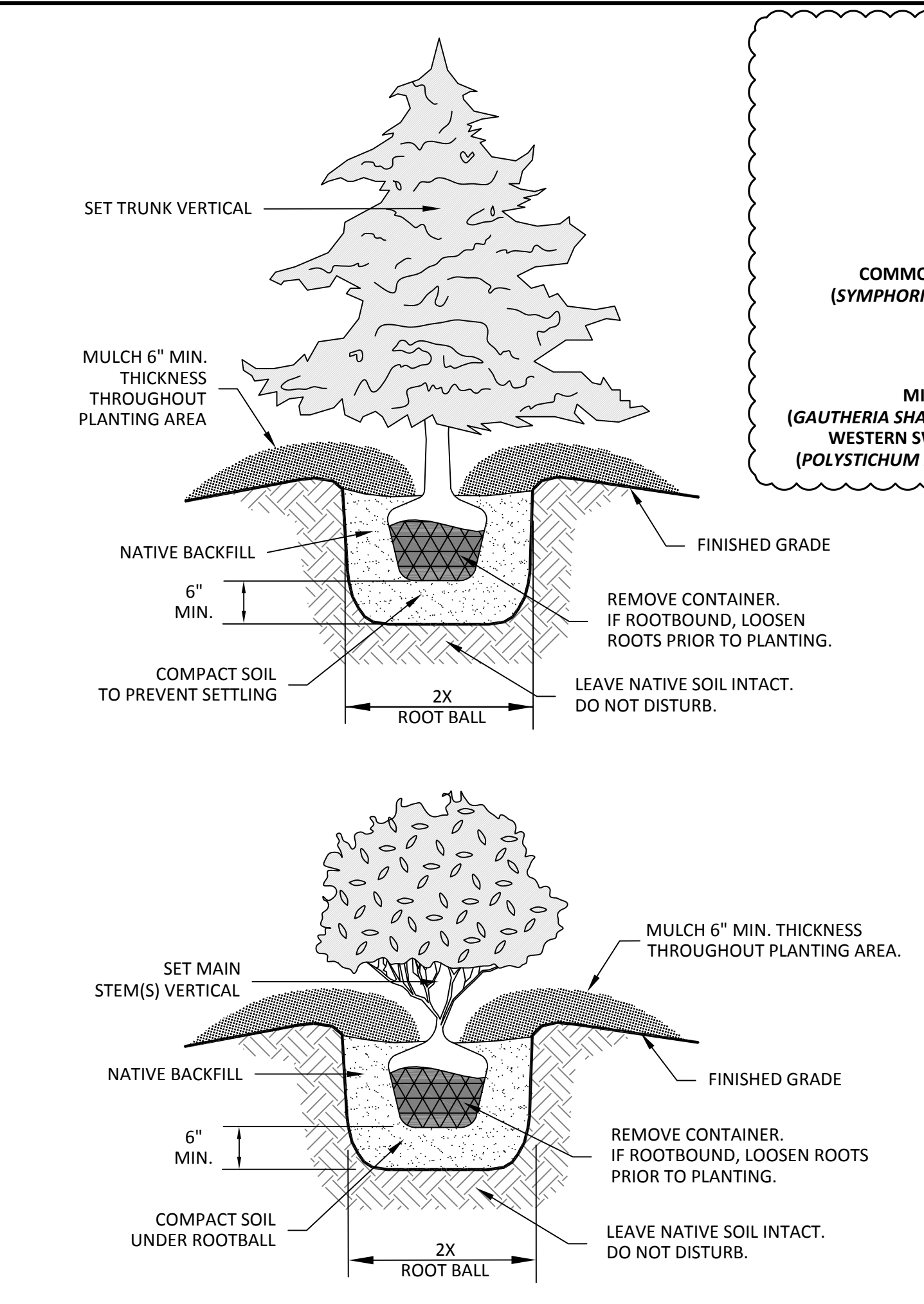
PROJECT NO: 17029

DATE: 06/22/2017

SHEET NUMBER:



SOIL DECOMPACTION AND AMENDMENT PLAN



PLANT MATERIAL SOURCE AND SPECIFICATIONS:

PLANTS SHALL BE DERIVED FROM STOCK ACCLIMATED TO WESTERN WASHINGTON ENVIRONMENTAL CONDITIONS, HAVING BEEN CONSISTENTLY CULTIVATED AND GROWN UNDER SIMILAR CONDITIONS. ACCEPTABLE PLANT SUPPLIERS INCLUDE STORM LAKE GROWERS (WWW.SLGGROWERS.COM), SOUND NATIVE PLANTS (WWW.SOUNDNATIVEPLANTS.COM), PACIFIC PLANTS (425-392-6164), OR APPROVED EQUAL.

PLANTS SHALL BE NATIVE TO THE PACIFIC NORTHWEST, PREFERABLY THE PUGET SOUND REGION OF WASHINGTON STATE. PLANTS SHALL BE PROPAGATED FROM NATIVE STOCK; NO CULTIVARS OR HORTICULTURAL VARIETIES ARE ALLOWED. SALVAGED PLANTS ARE NOT ACCEPTABLE.

PLANTS SHALL BE NORMAL IN PATTERN OF GROWTH, HEALTHY, WELL-BRANCHED AND HAVE ALL LEADERS AND BUDS INTACT. TREES SHALL NOT HAVE SUNSCALDS, DISFIGURING KNOTS, FRESH CUTS OF LIMBS, DAMAGED LEADERS, AND/OR DEFORMED TRUNKS.

CONTAINERIZED PLANT STOCK SHALL BE GROWN IN A CONTAINER LONG ENOUGH TO DEVELOP A ROOT SYSTEM THAT REACHES THE EDGES OF THE CONTAINER IN WHICH IT HAS GROWN. TREES AND SHRUBS SHALL BE WELL ROOTED AND SHALL HAVE SUFFICIENT ROOT MASS TO HOLD TOGETHER THE SOIL, IN WHICH PLANT IS GROWING, WHEN REMOVED FROM THE POT.

PLANT INSTALLATION TIMING:

PLANT INSTALLATION SHALL OCCUR BETWEEN **NOVEMBER 1** AND **FEBRUARY 15**, UNLESS OTHERWISE APPROVED BY THE PLAN DESIGNER AND THE **CITY OF MERCER ISLAND**.

NOXIOUS WEED CONTROL SPECIFICATIONS:

PRIOR TO PLANT INSTALLATION, CONTROL NOXIOUS WEEDS IN WETLAND AND REDUCED WETLAND BUFFER. TARGET NOXIOUS WEED SPECIES SHALL INCLUDE THE FOLLOWING: **ALL CLASS "A", "B", AND "C" NOXIOUS WEEDS (INCLUDING NON-REGULATED "B" AND "C" NOXIOUS WEEDS AND "WEEDS OF CONCERN")** IDENTIFIED ON THE LATEST KING COUNTY NOXIOUS WEED LIST. DURING NOXIOUS WEED CONTROL WORK, EXISTING NATIVE VEGETATION SHALL BE PROTECTED FROM DAMAGE. ALL NOXIOUS WEED CONTROL CUTTINGS AND DEBRIS SHALL BE REMOVED FROM THE SITE.

CONTROL METHODS:

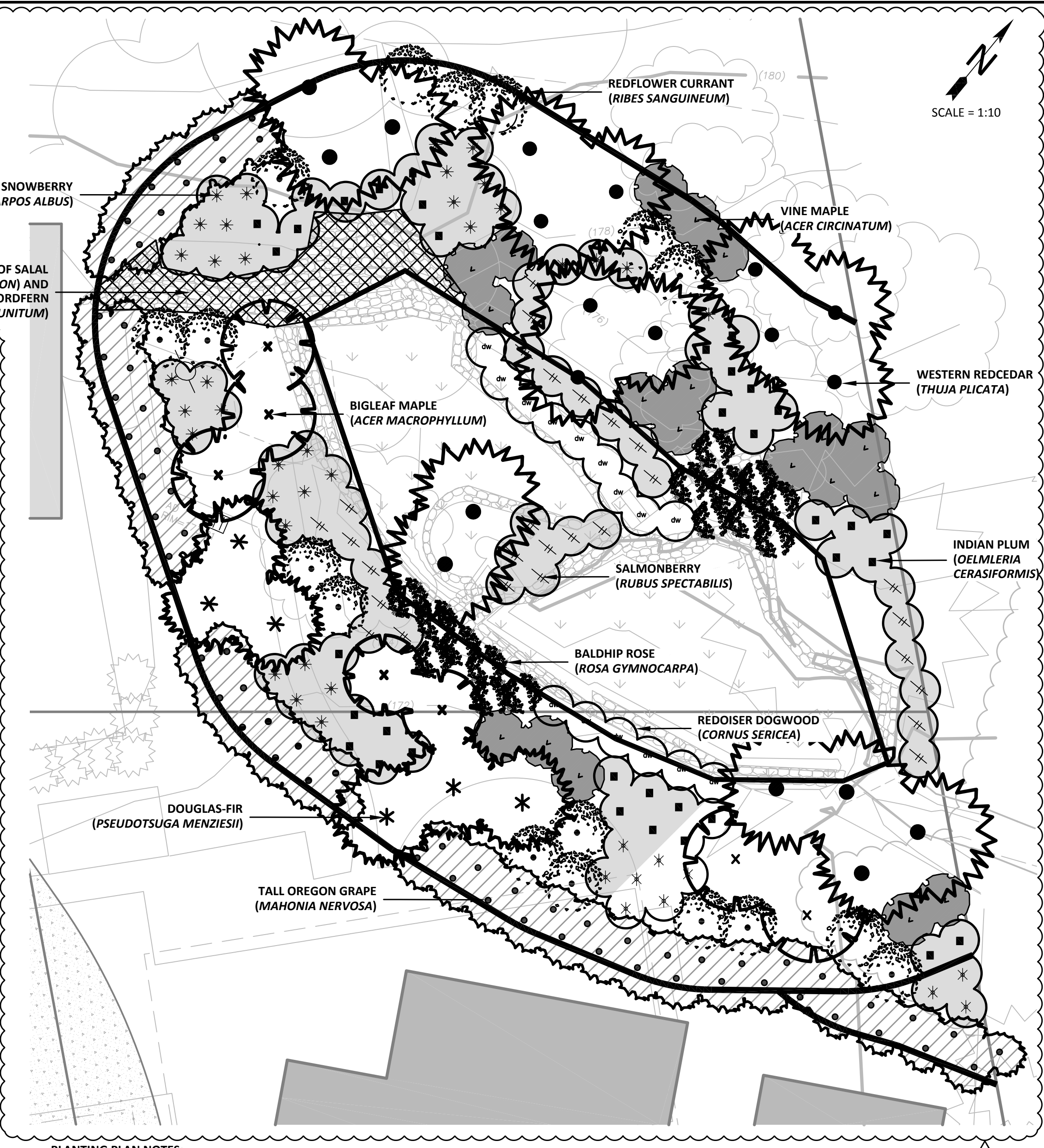
- REDUCE TOP GROWTH OF NOXIOUS WEEDS. ACCEPTABLE METHODS INCLUDE: POWER SAW, BRUSH HOG, LINE TRIMMER, LOPPERS, CLIPPERS, HAND PULLING, OR APPROVED EQUAL.
- GRUB OUT LARGE ROOT CROWNS AND MAJOR ROOTS BY HAND USING CLAW MATTOCK, PULASKI, OR APPROVED EQUAL.

MULCH SPECIFICATION:

MULCH SHALL BE COMMERCIALY AVAILABLE "**DOT WOODCHIP MULCH**" (WWW.PACIFICTOPSOILS.COM; 425-337-2700), ARBORIST CHIPS, OR APPROVED EQUAL. MULCH SHALL NOT CONTAIN RESIN, TANNIN, OR OTHER COMPOUNDS IN QUANTITIES THAT WOULD BE DETRIMENTAL TO PLANT LIFE. MULCH SHALL NOT BE DERIVED FROM STUMP GRINDINGS AND SHALL NOT CONTAIN SOIL. HOG FUEL OR EQUAL IS NOT ACCEPTABLE. SUBJECT TO REVIEW BY THE PLAN DESIGNER, LOCAL ARBORIST AND/OR COMMERCIAL TREE TRIMMING COMPANIES MAY BE ALTERNATIVE ACCEPTABLE MATERIAL SOURCES (WWW.DROPCHIP.IN).

3
2

PLANTING PLAN, SPECIFICATIONS, AND DETAILS



PLANTING PLAN NOTES:

- TOTAL PLANTED AREA = 6,409 SF (6,011 BUFFER + 398 WETLAND).
- PROTECT AND ACCOMMODATE EXISTING NATIVE VEGETATION WITHIN ALL PLANTING AREAS.
- PRIOR TO PLANT INSTALLATION, CONTROL NOXIOUS WEEDS AND REMOVE NON-NATIVE TREES, SHRUBS, AND GRASSES.
- PLANT MATERIAL QUALITY AND LOCATIONS SHALL BE INSPECTED BY PLAN DESIGNER PRIOR TO INSTALLATION.
- PLANT LOCATIONS SHOWN ARE APPROXIMATE. ADJUST PLANT LOCATIONS TO ACCOMMODATE SITE CONDITIONS AND/OR PER PLAN DESIGNER AT TIME OF INSTALLATION.
- FOLLOWING PLANT INSTALLATION, PLACE MULCH AT BASE OF PLANTS TO A MINIMUM DEPTH OF 6 INCHES.

PLANT SCHEDULE:

TREES	COMMON NAME	SCIENTIFIC NAME	SIZE/FORM	QTY	NOTES
●	BIGLEAF MAPLE	ACER MACROPHYLLUM	2 GALLON CONTAINERIZED	7	8' MIN. ON-CENTER SPACING
●	DOUGLAS-FIR	PSEUDOTSUGA MENZIESII	2 GALLON CONTAINERIZED	6	8' MIN. ON-CENTER SPACING
●	WESTERN REDCEDAR	THUJA PLICATA	2 GALLON CONTAINERIZED	19	8' MIN. ON-CENTER SPACING
	TOTAL TREES			32	
●	VINE MAPLE	ACER CIRCINATUM	2 GALLON CONTAINERIZED	19	
●	REDOISIER DOGWOOD	CORNUS SERICEA	2 GALLON CONTAINERIZED	15	
●	TALL OREGON GRAPE	MAHONIA NERVOSA	2 GALLON CONTAINERIZED	64	
●	INDIAN PLUM	OELMLERIA CERASIFORMIS	2 GALLON CONTAINERIZED	36	
●	REDFLOWER CURRANT	RIBES SANGUINEUM	2 GALLON CONTAINERIZED	17	
●	BALDHIP ROSE	ROSA GYMNOCARPA	2 GALLON CONTAINERIZED	15	
●	SALMONBERRY	RUBUS SPECTABILIS	2 GALLON CONTAINERIZED	28	
●	COMMON SNOWBERRY	SYMPHORICARPOS ALBUS	2 GALLON CONTAINERIZED	44	
	TOTAL SHRUBS			238	
■	SALAL	GAUTHERIA SHALLON	1 GALLON CONTAINERIZED	40	2 FEET ON-CENTER TRIANGULAR SPACING
■	WESTERN SWORDFERN	POLYSTICHUM MUNITUM	1 GALLON CONTAINERIZED	40	2 FEET ON-CENTER TRIANGULAR SPACING
	TOTAL GROUNDCOVER			80	

IRRIGATION REQUIREMENTS:

IRRIGATION SHALL BE PROVIDED FOR 2 GROWING SEASONS FOLLOWING PLANT INSTALLATION. IRRIGATION SHALL BE PROVIDED BY AN ABOVE GROUND AUTOMATIC SPRINKLER OR AUTOMATIC DRIP SYSTEM THAT PROVIDES A MINIMUM RAINFALL EQUIVALENT OF 1 INCH PER WEEK FROM **JUNE 15 THROUGH SEPTEMBER 15**. IRRIGATION SHALL BE APPLIED IN A MANNER THAT MAINTAINS PLANT HEALTH, PREVENTS WILTING, AND PROMOTES DEEP PLANT ROOT SYSTEMS.

Evergreen Aquatic Resource Consultants, LLC
 PO BOX 1721
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 TEL - (425) 677-7166
 WWW.EVERGREENARC.COM

Wetland Delineation Mitigation Design Mitigation Monitoring

NO	DATE	DESCRIPTION
1	11/09/17	REVISE PER CITY COMMENTS

811
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THE UNDERGROUND ROUTING AND CONDITION OF BURIED UTILITIES HAS NOT BEEN VERIFIED OR CONFIRMED. FIELD LOCATE, VERIFY DEPTH OF, AND ADEQUATELY PROTECT ALL UTILITIES PRIOR TO THE START OF WORK.

CAO17-008 & CAO17-009
 PERMIT NO:

APPROVED BY:

DATE:

PROJECT:

WETLAND & WATERCOURSE BUFFER REDUCTION PLAN

EAST MERCER DEVELOPMENT

8375 + 8379 E MERCER WAY
 MERCER ISLAND, WA
 TPN# 032110-0141 + 032110-0145

PREPARED FOR:

RIFFLE DESIGN STUDIO
 4303 STONE WAY NORTH
 SEATTLE, WASHINGTON 98103

SHEET TITLE:

SITE PREPARATION, SOIL DECOMPACT & AMENDMENT PLAN, AND PLANTING PLAN

PROJECT NO: 17029
 DATE: 06/22/2017
 SHEET NUMBER:
2/2



5309 Shilshole Avenue, NW
Suite 200
Seattle, WA 98107
206.789.9658 **phone**
206.789.9684 **fax**

www.esassoc.com

memorandum

date October 10, 2017

to Robin Proebsting, City of Mercer Island

from Brooke Benson and Scott Olmsted, ESA

subject Proposed 8375 and 8383 East Mercer Way Development Critical Areas Study (CAO17-008 and CAO17-009) –Environmental Review

Environmental Science Associates (ESA) has prepared this memorandum on behalf of the City of Mercer Island, providing environmental peer review for the development proposal at 8375 and 8383 East Mercer Way. The project (City permit numbers CAO17-008 and CAO17-009) includes three residential lots (Parcels 0321100140, 0321100145 and 0321100141), two of which are currently developed with single-family residences, driveways, and associated improvements. The project proposes to demolish the existing structures and to build one single-family residence on each lot with a shared driveway. A wetland area occurs on two of the lots (Parcels 0321100140 and 0321100145) and outlets into a stream onsite. The applicant's Wetland and Watercourse Delineation Study (The Watershed Company, 2014) suggests that the wetland meets the criteria for a Category IV wetland requiring a 35-foot standard buffer (Mercer Island City Code [MICC] 19.07.080). The Delineation Study classifies the stream as a Type 2 watercourse requiring a 50-foot standard buffer (MICC 19.07.070).

The focus of this review is to confirm the accuracy of the Critical Areas Study (CAS), including proposed buffer reduction and mitigation, and consistency with City Critical Areas Requirements within MICC Chapter 19.07.

Document Review

We reviewed the following City-provided background files: Critical Area Study: Wetland & Watercourse Buffer Reduction East Mercer Development (the CAS and plan sheets, prepared by Evergreen Aquatic Resources Consultants, LLC, June 22, 2017), Wetland and Watercourse Delineation Study (The Watershed Company, April 1, 2014), Arborist Report (AFM, September 3, 2014), and preliminary engineering plan (Civil Engineering Solutions, June 13, 2017).

ESA also reviewed public-domain information for the study area. These sources include National Wetland Inventory maps, Washington Department of Fish and Wildlife web mapping tools (Priority Habitats & Species and SalmonScape), King County's GIS mapping website (iMap), and City of Mercer Island critical areas maps.

Site Visit

ESA ecologist Brooke Benson conducted a site visit to the proposed project site on September 5, 2017. The site visit included visual observations of the wetland, stream, and buffer areas, trees to be removed under the proposal, and the existing conditions of the site.

Review Comments

Wetland Identification and Site Conditions: During our September site visit, we observed that most of the project site consisted of upland plant communities that did not suggest wetland conditions. The overstory was dominated by Douglas fir (*Pseudotsuga menziesii*) and big-leaf maple (*Acer macrophyllum*), and the understory primarily consisted of non-native landscape plants. Invasive species including English ivy (*Hedera helix*) and Himalayan blackberry (*Rubus armeniacus*) were dense in some areas. The soils observed in these upland areas was dry, compacted and brightly colored.

In the area identified as wetland in the CAS (Wetland A), we observed dark, saturated soils above depleted soils with redoximorphic features; these characteristics indicate wetland or “hydric” soil conditions. Based upon our field visit, we agree with the boundary of Wetland A shown on the Figure 1 – Site Plan in the CAS. The wetland consists of the two excavated cells (with an upland island between the two) with riprap around the perimeter of the ponded portion. Because wetland conditions were observed up-gradient from the ponded area, at about the same elevation as the surrounding upland, the area was likely wetland prior to excavation of the cells and therefore is a regulated wetland per MICC 19.07.080. The Delineation Study indicates that several seeps were located adjacent to the wetland and contributed hydrology; however, no seeps were observed during the site visit and their locations are not identified on any site plan. Seeps located outside of the wetland boundary should be identified and data or rationale provided to justify non-wetland conditions within these areas.

Wetland Rating: Per MICC 19.07.080, wetlands are rated according to the 2004 Washington State Rating System for Western Washington. The Delineation Study rated Wetland A as a Category IV depressional wetland. We agree that the HGM class of the wetland is depressional, and based on the September 2017 site conditions, we agree that Wetland A rates as a Category IV wetland. Pursuant to MICC 19.07.080.C, Category IV wetlands require a 35-foot standard buffer, and a 25-foot reduced buffer may be allowable with mitigation. Therefore, we agree that the wetland buffers are correctly shown on the Preliminary Engineering Plan and the Wetland and Watercourse Buffer Reduction Plan sheets.

Stream Identification: Based upon our review, ESA also agrees with the location of the onsite stream (Watercourse A). The stream originates on the project site at the eastern end of Wetland A. At the wetland outlet, Wetland A is armored with riprap. Water flows over the rocks and drops approximately two feet into the stream channel. The stream then immediately flows offsite onto the neighboring property to the east (Parcel 0321100155) and does not approach the project site before flowing under E Mercer Way and eventually into Lake Washington. Based on the amount of flow present in early September following an unusually dry summer, and given that the hydrology is supported by a permanently ponded wetland, we agree that it should be designated as a permanently flowing watercourse.

We also agree that per MICC 19.07.070, the stream should be designated a Type 2 watercourse and accordingly requires a 50-foot standard buffer width. Furthermore, we agree with the CAS characterization of Type 2 watercourse buffer reduction allowances (per MICC 19.07.070.B.2), to a minimum 25-foot buffer when appropriate mitigation is employed that increases riparian functions over existing conditions. Therefore, in our opinion, the stream and associated buffers are correctly shown on the Preliminary Engineering Plan and the Wetland and Watercourse Buffer Reduction Plan sheets.

Proposed Buffer Impacts: The north end of the existing residence on Parcel 0321100145 encroaches into the standard 35-foot wetland buffer and 50-foot watercourse buffer. In addition, a concrete patio, concrete walkway, gravel path, and gazebo are present in the wetland buffer. The project proposes to reduce both the wetland and watercourse buffers to 25 feet and to build a new single-family residence to the edge of the 25-foot buffers on the southeast side of Wetland A. The area proposed for the new development contains an existing residence, lawn, and compacted soils, so this portion of the buffer provides limited functions to the wetland or stream. However, in order to reduce stream standard buffers the proposal must meet mitigation options outlined in Section 19.07.070.B.2. Likewise, to reduce wetland standard buffers, the same mitigation options must apply as above.

Mitigation proposed by the applicant to compensate for buffer reduction includes: 1) permanent removal of impervious surfaces such as concrete pads and gravel walkways, 2) removal of noxious weeds and landscaping plants, 3) replanting with native vegetation and five-year monitoring (consistent with options (i) and (iii) under MICC 19.07.070.B.2. During the site visit, we observed field bindweed (*Convolvus arvensis*), Himalayan blackberry, English ivy, and English holly (*Ilex aquifolium*) in the understory of the wetland buffer; Himalayan blackberry was present in the watercourse buffer. Most of the remaining buffer areas consisted of lawn grass and ornamental plants.

Removing the impervious surfaces, invasive species, and other non-native plants, and planting with native species would improve the habitat function of the wetland and watercourse buffers. We agree that a combination of the chosen mitigation options is appropriate and the buffer reduction should result in no net loss of wetland or watercourse buffer function, as required by MICC 19.07.070.B.2 and 19.07.080.C.2. Instead, given the existing conditions, it is likely that the proposed mitigation will result in improved buffer function. However, we suggest that the plan be revised to remove Himalayan blackberry and other invasive species from the wetland boundary area as well.

Trees within a wetland, watercourse, or their buffers are part of a “Critical Tree Area, per MICC 19.16.010 (Title 19 Definitions). A tree permit is required to cut any large tree in a Critical Tree Area, per MICC 19.10.020.B.3 (City Tree regulations). According to MICC 19.16.010, a large (regulated) tree is any conifer that is six feet tall or greater and any deciduous tree with a diameter greater than six inches. Two of the trees proposed for removal are large trees based on this definition, so a tree permit will be required for removal. Based on assessment by the applicant’s arborist report and verification by the City, tree removal would only be authorized for large trees that are diseased or dead, are a short-lived “weedy” tree species (i.e., alder, bitter cherry, or black cottonwood), or where their removal and replacement would enhance the ecosystem (MICC 19.10.040). According to the arborist report, of the two large trees proposed for removal, one is not viable and one is borderline. For any permitted removal, tree replacement may be required at a ratio ranging from 0:1 to 4:1, as determined by the City arborist (MICC 19.10.080.B).

Buffer Reduction Plan: ESA Landscape Architect Allisona Greenberg completed review of the proposed buffer Planting Plan. We agree that the proposed Mitigation Plan approach is consistent with MICC 19.07.040 and 19.07.070 standards. The plant schedule should support achieving identified objectives and corresponding performance standards, resulting in increased structural and plant species diversity and a reduced extent of invasive and exotic plant species across the enhancement area. We recommend that the tree spacing be increased to 8 feet on center to allow for future growth.

Summary and Recommendations

Based on our site visit and review of project materials, we agree that the Category IV wetland and Type 2 watercourse are accurately located on the proposed project plans and accurately characterized by the CAS. The onsite wetland requires a 35-foot standard buffer and the stream requires a 50-foot standard buffer. Buffer reduction is allowed for both critical areas, to a minimum of 25 feet, with mitigation that increases buffer functions over existing conditions. Implementation of buffer mitigation would result in no net loss of both

wetland and watercourse buffer functions (MICC 19.07.080(C)(2) and 19.07.070(B)(2)). We recommend the following revisions to the Wetland and Watercourse Buffer Reduction Plan in order to ensure opportunity for mitigation success:

- Seeps located outside of the wetland boundary should be identified and data or rationale provided to justify non-wetland conditions within these areas.
- Increase tree spacing to at least 8 feet apart to provide adequate area for trees to grow.
- Remove blackberry and other invasive species from wetland or wetland boundary by hand to ensure buffer enhancement success.

If you have any questions, please call me at (206) 789-9658.

From: Karen Walter
To: [Robin Proebsting](#)
Subject: New Horizon Real Estate, Buffer reduction for streams and wetlands, CAO17-008 and CAO 17-009, Notices of Application
Date: Wednesday, September 13, 2017 2:59:07 PM

Robin,

We have reviewed the propose wetland/stream buffer reduction at 8375 and 8383 East Mercer Way sites referenced above and offer the following comments:

1. The 8375 and 8383 East Mercer Way, Wetland and Watercourse Delineation Study incorrectly identifies a 16% gradient as a complete barrier to fish passage. Per WAC 222-16-031, presumed fish habitat includes streambed gradients up to 20% and the data used for this rule documented resident trout at gradients up to 30%. For this project, the applicant consultants need to provide their data determination to verify that the stream gradients are greater than 20% for a considerable length to correctly call this stream a non-fish habitat stream. They should be using WAC 222-16-031 and the WA Forest Practices Board Manual as part of this analysis.
2. The 8375 and 8383 East Mercer Way, Wetland and Watercourse Delineation Study notes that the onsite wetland was excavated and has riprap around it to make an ornamental pond. Since this site is being redeveloped, the wetland should be restored to its natural condition to the fullest extent possible as part of this project. This will help offset the permanent buffer losses from the project proposal.

We appreciate the opportunity to review this proposal and look forward to the City of Mercer Island's responses.

Thank you,
Karen Walter
Watersheds and Land Use Team Leader

*Muckleshoot Indian Tribe Fisheries Division
Habitat Program
Phillip Starr Building
39015-A 172nd Ave SE
Auburn, WA 98092
253-876-3116*

From: Louise Haslund
To: [Robin Proebsting](#)
Subject: 8375 East Mercer Way
Date: Tuesday, September 5, 2017 11:37:36 AM

Robin Proebsting, Senior Planner
Development Services Group
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040

RE: Proposal to reduce buffers of a Category IV wetland and Type 2 stream etc.at location 8375 E Mercer Way, Mercer Island, WA
File # CA 017-009

My home is on the hill below the planned development. The proposal is possibly a threat to the stability of the hill on my property and those of the homes nearby.

Please consider me a party of record.

Thank you,
Louise Haslund
8345 Avalon Drive
Mercer Island, WA 98040

8363 E Mercer Way
Mercer Island, WA 98040
October 25, 2017

✓ Robin Proebsting, Senior Planner
Development Services Group
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040

File No. CAO17-009
Parcel Nos. 0321100145 and
0321100141

New Horizon Real Estate Development
8744 126th Ave NE
Kirkland, WA 98033

RECEIVED

OCT 30 2017

CITY OF MERCER ISLAND
DEVELOPMENT SERVICE GROUP

Jim Dearth
Ripple Design Studio, Inc
4303 Stone Way N
Seattle, WA 98103

My residence, which is at 8363 E Mercer Way, has a common property line with the New Horizon Real Estate Development project at 8375 E Mercer Way (Parcel 1) and xxxx E Mercer Way (Parcel 3) along their NE borders. These two developments adjacent to my property involve major land use changes, and I would like to express some of my concerns that I would like to be addressed.

- 1) The land use plan for Parcel 1 involves aggressive topography changes to the site. Specifically, the slope to the street will be re-graded to form a steep continuous hillside, and that slope appears in the plan to be matched to the slope on my property. However, the common property line (as shown on Photo 1 and on Map A) is below the crest of the slope, and the plan does not appear to show a transition that stops at the property line. I am concerned that the re-grade of the street slope of Parcel 1 will impact my property. How will this be precluded?
- 2) In anticipation of a development at 8375 E Mercer Way, I have planted four cherry laurels near the crest of the slope on my property along the property line as a privacy shield. These cherry laurels were planted after the Arborist's Field Examination on August 29, 2014 and therefore do not appear in that document. They do, however, show up on the King county GIS map. (Photo 2). I request that the developer respect and protect these laurels during the re-grade of Parcel 1.
- 3) There is currently a very large maple stump which is bisected by the property line between Parcel 1 and my property. (Photo 2). This ivy-covered stump is approximately 4 feet in diameter and 10 feet tall. Because it is not living, this stump also does not appear in the arborist's field report. I would like to retain this

maple stump, but since it straddles the property line, what happens to it will require some discussion between the developer and me.

4) There are two live Douglas-fir trees on my property very near the line between Parcel 1 and my property. These trees are described in the arborist's report as tree 201 and tree 202 on Map B. The drip lines of these trees extend into Parcel 1 and are very close to the corner of the residence planned for Parcel 1. I request that particular care be taken for the viability of these trees during excavation and the construction of the new residence.

5) There is a wetland on Parcel 1 and Parcel 3. This wetland drains into a stream that crosses my property and eventually drains into Lake Washington. The Wetland and Watercourse Plan describes significant changes to this area. These changes may cause silt and effluent that may flow downstream and onto my property. The plan does not address this issue.

6) Near the location where the property line between Parcel 1 and Parcel 3 meet my property, there are several mature cherry laurels. One of these laurels has a bole diameter of 9 inches. It originates on my property but then the stem extends over the property line before returning to my side of the line. I would like to discuss the possibility of retaining this laurel as part of the Wetland and Watercourse Plan.

General Concern:

My house and the planned new residence on Parcel 1 are both very close to the property line. I would like to discuss with the developer some possibilities to create a level of privacy between the two houses, such as plantings or privacy fencing.

Please contact me at your earliest convenience regarding these concerns.

Sincerely,



Roger Shantz
XUSNPilot@aol.com

Letter of 10/25/17 from Roger Shantz to
City of Mercer Island
New Horizon Real Estate Development
Ripple Design Studio, Inc

PHOTO 1



Letter of 10/25/17 from Roger Shantz to
City of Mercer Island
New Horizon Real Estate Development
Ripple Design Studio, Inc

MAP A

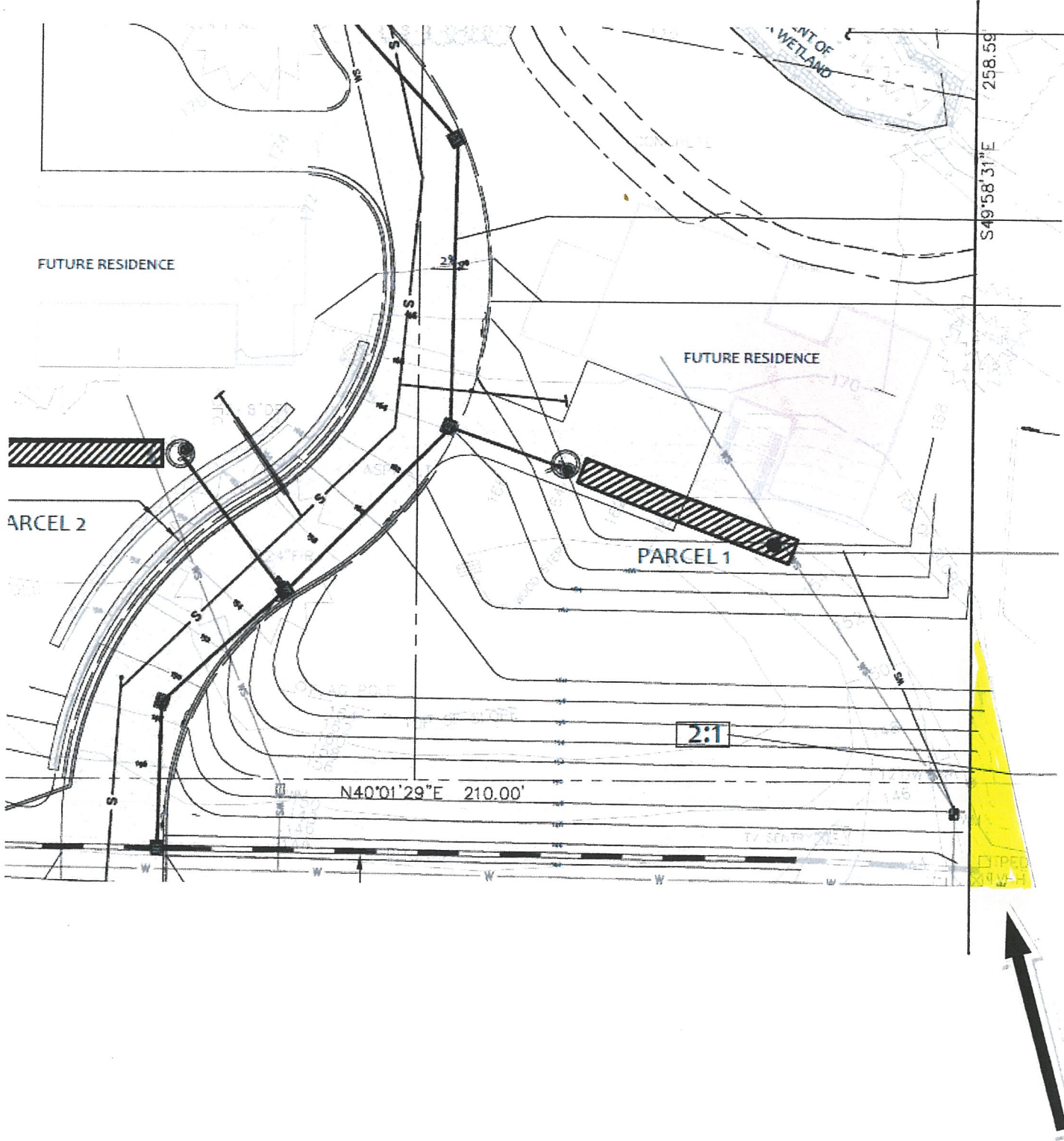
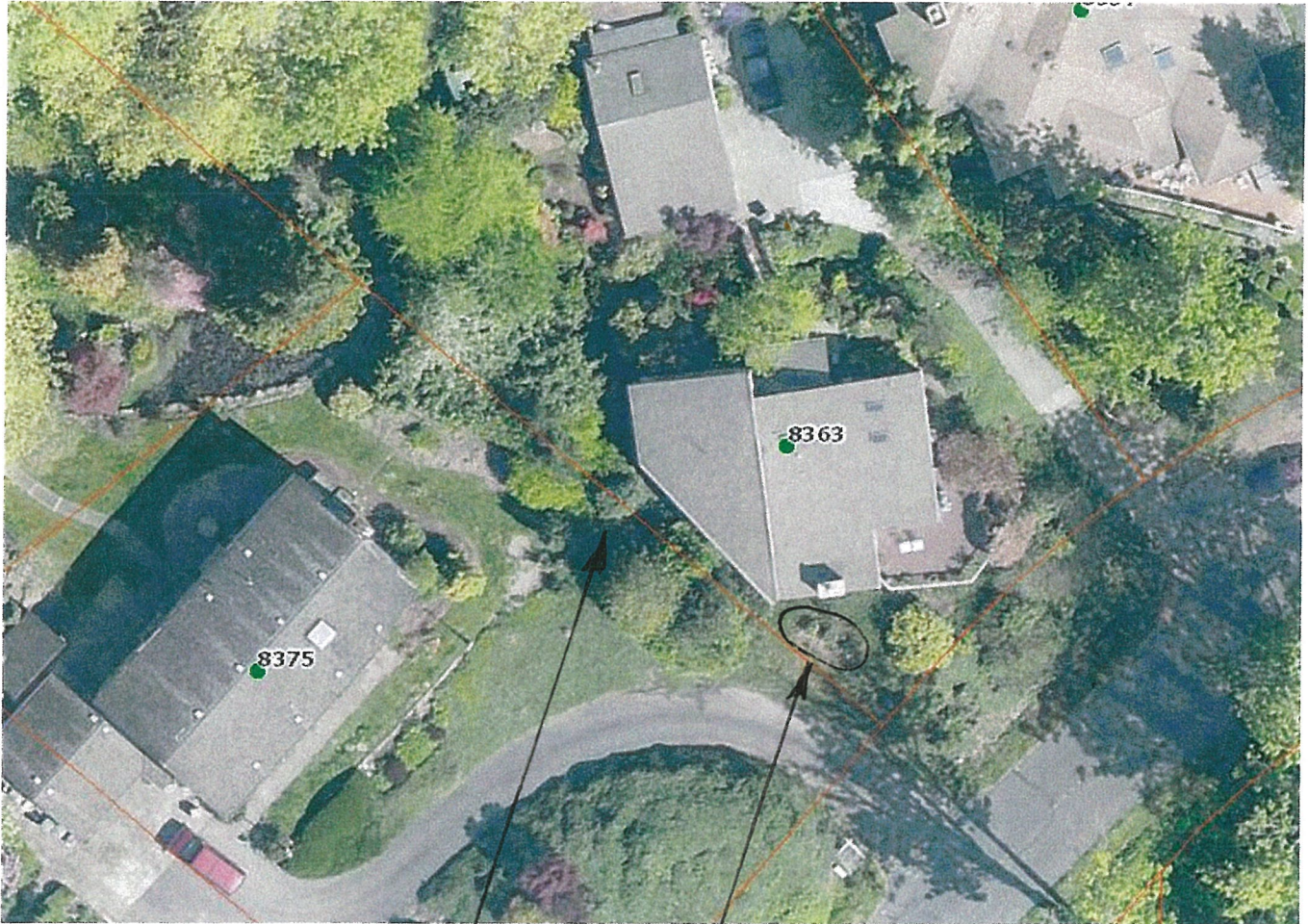


PHOTO 2

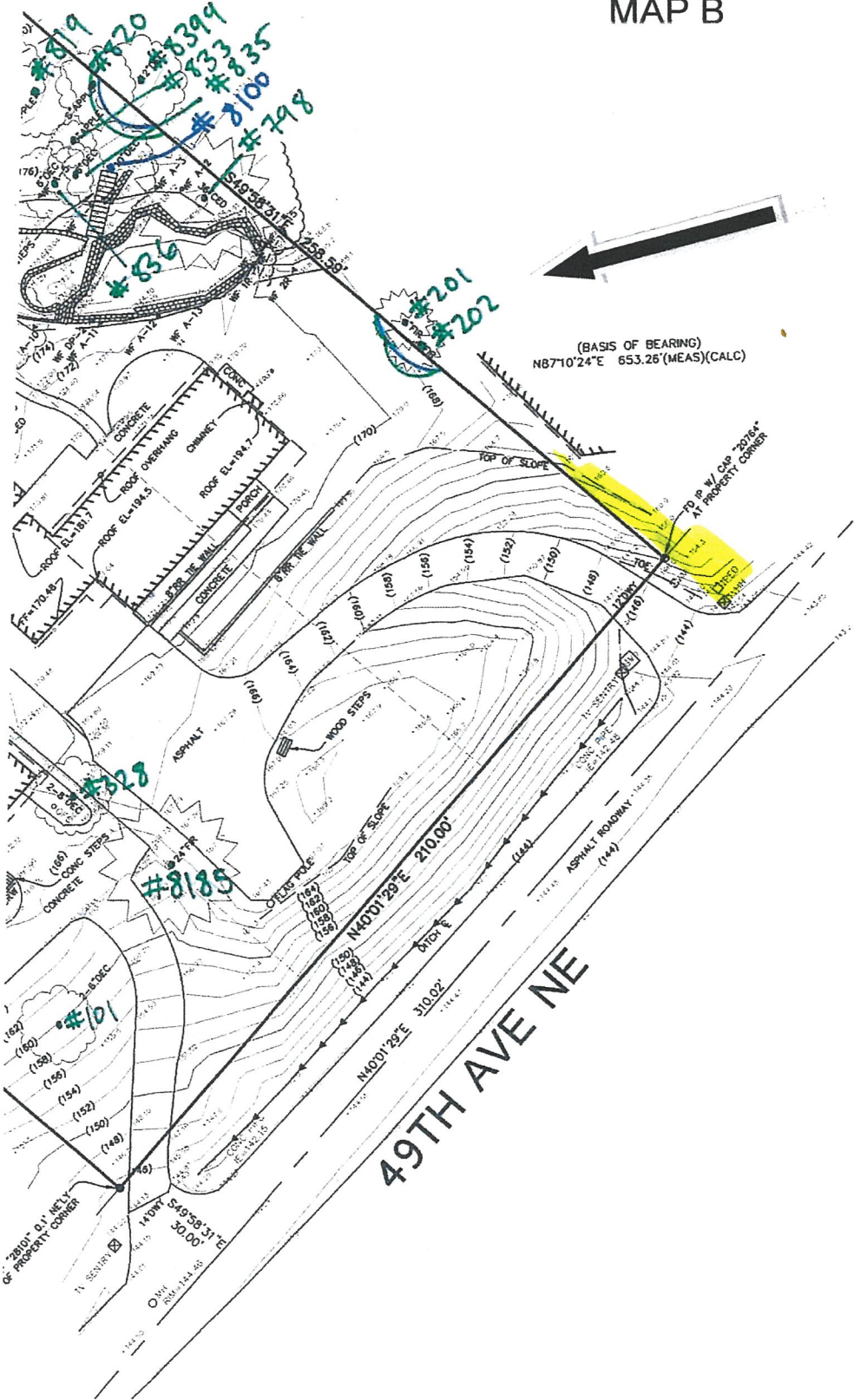


LARGE MAPLE STUMP

CHERRY LAURELS

Letter of 10/25/17 from Roger Shantz to
City of Mercer Island
New Horizon Real Estate Development
Ripple Design Studio, Inc

MAP B





R I P P L E
D E S I G N S T U D I O

CA Determination Response Memo

10 November 2017

To

Robin Proebsting - Planner
City of Mercer Island Development Services Group
9611 SE 36th St.
Mercer Island, WA 98040-7726

By the Architect

Ripple Design Studio, Inc.
4303 Stone Way N
Seattle, WA 98103

For the Project

New Horizon Real Estate Development
8375 + 8379 East Mercer

Summary

Below are Responses to the memo regarding Critical Area Determinations CA017-008 + CA017-009 dated 27 October 2017.

Planning Department

1. A. Please see included memo from Evergreen Aquatic responding to the public comment from the Muckleshoot Indian Tribe Fisheries Division
B. In response to the letters from Louise Haslund;
This project has been designed following the recommendations in the Geotechnical report from PanGEO, which are intended to improve and stabilize the site beyond its current condition. Temporary erosion hazards shall be mitigated with appropriate measures as mentioned in the report, page 5.



R I P P L E
D E S I G N S T U D I O

2. Please see included memo from Evergreen Aquatic responding to the memo from ESA.
3. In response to the letter from Roger Shantz;
 - 1) Any and all regrading will be confined to the subject properties per Mercer Island Municipal Code 19.09.060.G
 - 2) Every reasonable effort will be made to protect trees
 - 3) Duly noted. Property owners will be made aware of the desire to have a conversation regarding the stump.
 - 4) Please note that these trees are taken under consideration and are planned for protection as part of the erosion control plan (C1.0)
 - 5) Please see response from Evergreen Aquatic addressing changes to the wetland area
 - 6) Duly noted. Property owners will be made aware of the desire to have a conversation regarding the preservation of the cherry laurels.

November 9, 2017
Project Number 17029

PO Box 1721
Issaquah, Washington 98027

Ripple Design Studio
Attention: Jeff Almeter
4303 Stone Way North
Seattle, Washington 98103

(425) 677-7166
www.evergreenarc.com

Response to Public Comment and Mitigation Plan Peer Review Comments

Critical Area Determinations: CAO17-0008 & CAO17-009
8375 & 8379 E Mercer Way – Mercer Island, Washington

Jeff,

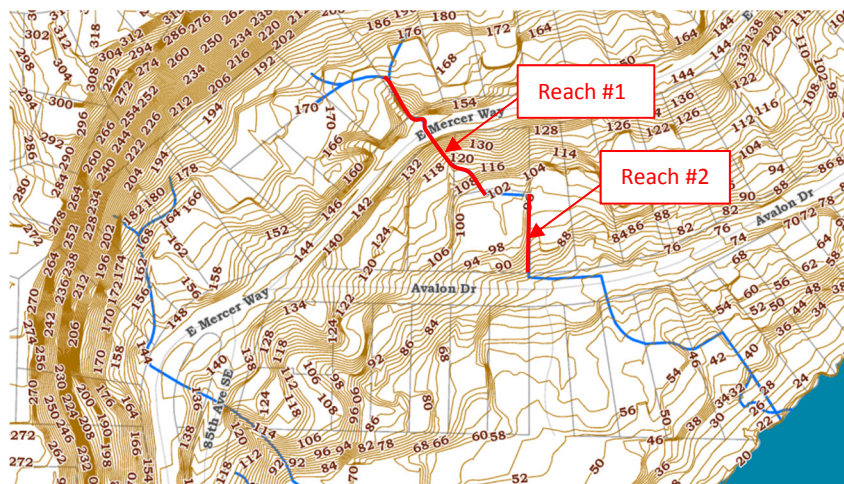
This letter responds to the recent public comment and peer review recommendations that you have received from the City of Mercer Island regarding CAO17-008 and CAO 17-009. This letter should be reviewed in conjunction with the revised mitigation plan and critical area study.

Public Comments:

1. Karen Walter - Muckleshoot Indian Tribe Fisheries Division (September 13, 2017 @ 2:59:07PM)
 1. Additional data regarding stream gradient.

Response: Total stream length is approximately 1,250 feet. There are two stream reaches that exceed a 20% gradient for a total of 253 feet, or 28% of total stream length. Figure 1 shows the location, length, and average gradient for the stream reaches used to determine the watercourse as non-fish bearing. The non-fish bearing determination is consistent with prior City of Mercer Island critical area mapping and supported by recent determinations made regarding the project by City of Mercer Island peer review consultants.

Figure 1 – Mercer Island GIS Map Showing Stream Gradients



Reach #1
283 feet @ 21%

Reach #2
70 feet @ 28%

- b) Restoration of Wetland A to more natural condition.

Response: *Wetland A is a small (2,178 sf) landscape pond located at the base of a slope. Aerial photographs show that the pond has been in existence for over 30 years.*

*As part of the proposed project, existing improvements and impervious surfaces located within the reduced buffer will be removed, existing soils will be decompacted and amended, non-native plants and noxious weeds will be controlled, and dense native plantings will be installed. Although most of the work will occur within the reduced buffer, non-native plants and noxious weeds will also be controlled and dense native plantings will be installed within the non-ponded portion of the wetland. The proposed project will retain the ponded portions of the wetland, which include a dense native emergent plant community dominated by small fruited bulrush (*Scirpus microcarpus*), spikerush (*Eleocharis palustris*), and mannagrass (*Glyceria sp.*).*

Based on the presence of wetland seeps and surrounding topography, it is likely that natural conditions for Wetland A would include a narrow band of hillside seeps that concentrate and form the origin of Watercourse A. Restoration of the existing wetland to this condition would require removal of the pond outlet to reduce water levels, filling the ponded portions of the wetland to raise ground surface elevations, and recontouring the buffer to match the filled pond areas. This more extensive restoration would likely yield in a net reduction in wetland area and no increase in critical area functioning relative to the proposed project. This would be in part because the pond in its current configuration is likely larger than the original wetland, the pond includes a habitat type that is unique to the local area, and the pond provides baseflow support to Watercourse A similar to a natural headwater wetland.

2. Roger Shantz (letter dated 10/25/2017)

- a) Silt and effluent in stream due to proposed buffer enhancement.

Response: *The mitigation plan has been revised to include coir logs along the wetland edge during construction. Coir logs are a biodegradable fiber roll erosion control product that will be used as a temporary perimeter sediment control. The logs will be installed prior to the removal of existing surface improvements and will remain in place until mulch has been applied as the final site stabilization measure.*

- b) Retaining large cherry laurels.

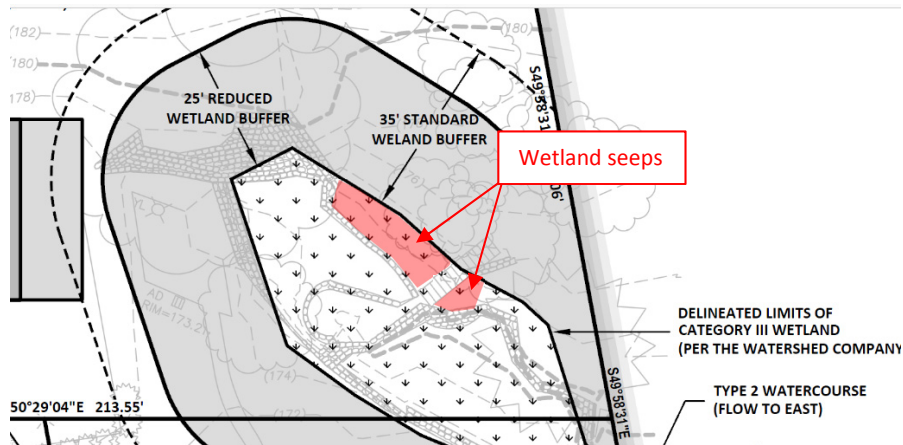
Response: *The mitigation plan has been revised to retain all cherry laurels that are rooted on the Shantz parcel.*

Peer Review Recommendations:

- a) Location of seeps within Wetland A.

Response: *Wetland seeps are located on the north side of Wetland A between the permanent pond and the delineated wetland limits. Figure 2 shows the location of seeps within Wetland A.*

Figure 2 – Location of Wetland Seeps within Wetland A



- b) Increase tree spacing to at least 8 feet apart.

Response: The planting plan has been revised to show a minimum tree spacing of 8 feet and the plant schedule has been revised to require a minimum tree spacing of 8 feet.

- c) Remove blackberry and other invasive species from wetland or wetland boundary

Response: The mitigation plan has been revised to require removal of all Class "A", "B", and "C" noxious weeds (including non-regulated "B" and "C" noxious weeds and "Weeds of Concern" identified on the latest King County noxious weed list from both the wetland and buffer.

I trust that this letter meets your present needs. If you have any questions regarding the information presented in this letter or require additional assistance with this project, please do not hesitate to call me at (425) 677-7166 or email me at psuper@evergreenarc.com.

Sincerely,

EVERGREEN AQUATIC RESOURCE CONSULTANTS, LLC
Issaquah, Washington

Peter P. Super
Professional Wetland Scientist