



---

**J. S. Jones and Associates, Inc.**

**-Addendum-**  
**To**  
**Critical Area Study**  
**and**  
**Watercourse and Wetland Buffer Reduction**  
*of the*

*Valentin Property*  
4350 E. Mercer Way  
Mercer Island, WA 98040

*Tax Parcel Numbers: 004610-0150 and 004610-0151*  
*Southeast Quarter of the Northeast Quarter of Section 18,*  
*Township 24N, Range 5E*

*Prepared for:*  
*Johan Valentin & Helena Kjellander Valentin*  
4346 E. Mercer Way, Mercer Island, WA 98040  
[Johan.valentin@gmail.com](mailto:Johan.valentin@gmail.com)  
(214) 228-0536

*Dated: October 1, 2021*

*Prepared by:*  
*Jeffery S. Jones, Professional Wetland Scientist*

# 1 Table of Contents

<b>2</b>	<b>PROJECT DESCRIPTION .....</b>	<b>1</b>
<b>3</b>	<b>METHODOLOGY .....</b>	<b>1</b>
<b>4</b>	<b>STREAM DETERMINATION, RATING, AND BUFFER .....</b>	<b>1</b>
<b>5</b>	<b>CRITICAL AREA BUFFERS .....</b>	<b>1</b>
<b>6</b>	<b>ANALYSIS OF IMPACT TO THE CRITICAL AREA .....</b>	<b>4</b>
6.1	PERMANENT IMPACT .....	4
6.2	TEMPORARY IMPACT .....	4
6.3	PROPOSED TEMPORARY MITIGATION MEASURES .....	5
6.4	MITIGATION SEQUENCING .....	5
6.5	PROJECT LOCATION .....	5
6.6	RESPONSIBLE PARTIES .....	5
6.7	STANDARDS .....	6
6.8	CITY OF MERCER ISLAND CONTACT .....	6
6.9	CONTRACTOR INFORMATION .....	6
6.10	CONTRACTOR'S QUALIFICATIONS .....	6
6.11	SITE CONDITIONS .....	6
<b>7</b>	<b>PROXIMITY TO WILDLIFE HABITAT CONSERVATION AREAS AND PRIORITY SPECIES.....</b>	<b>6</b>
<b>8</b>	<b>CONCLUSION .....</b>	<b>6</b>
<b>9</b>	<b>LIMITATIONS .....</b>	<b>6</b>
<b>10</b>	<b>REFERENCES .....</b>	<b>8</b>

## List of Tables and Figures

## List of Attachments

1. Site Survey Map prepared by WA State Licensed Land Surveyor

## **2 Project Description**

The applicant proposes to amend the Critical Area Study dated September 26, 2018 with this Addendum. The purpose is to add a 6” storm drain to serve the existing residence. The storm drain will run within a Critical Area as identified within 25’ of a piped watercourse. This study analyzes any permanent and temporary impacts to the Critical Area and proposes supplemental mitigation actions to minimize the impact and discusses sequencing, including avoidance.

The Addendum to the Critical Area Study has been prepared in accordance with 19.07.050 of the Mercer Island City Code (MICC) for wetlands and watercourses as in effect at the completion of the Critical Area Study on September 26, 2018.

## **3 Methodology**

The site is well known by the biologist from the Critical Area Study completed in 2018. The site and the Critical Areas including the piped watercourse have been surveyed and are confirmed to be in accordance with the plans as submitted.

## **4 Stream Determination, Rating, and Buffer**

The survey identifies the presence of a stream on the subject parcel. The stream consists of an underground 12” pipe in the subject area. The 12” pipeline constitutes a piped watercourse.

A piped watercourse requires a 25-foot standard buffer width according to Section 19.07.070.B.1.b of the MICC. A buffer for a restored or piped watercourse can be reduced from the standard 25 feet to an amount determined by the code official. The applicant is not requesting a buffer reduction.

The new storm drain will run within the 25’ buffer during approximately 30 lineal feet. The remainder of this report analyzes the impact of the storm pipe on the 25’ buffer and critical area.

## **5 Critical Area Buffers**

The critical areas serving the watercourse are surrounded by lawn. There are no trees in the subject area (see photos below). The pipe is protected by being entirely below ground in the subject area.



Figure 1: View from North-West to South-East

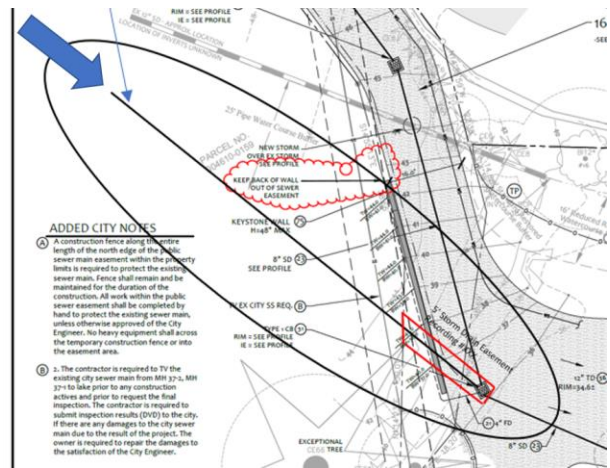
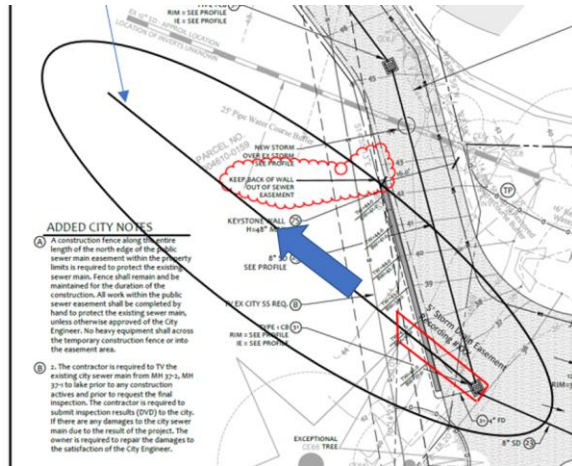




Figure 2: View from South-East to North-West





*Figure 3: Close-up view of the grass*

## **6 Analysis of impact to the Critical Area.**

### **6.1 Permanent Impact**

The 6" pipe will be installed underground approximately at 12 feet depth in the subject area. The subject area is virtually flat at 0 percent. There is no steep slopes present in subject area. Erosion is not a factor. It is my conclusion that there will be no permanent impact on the Critical Area. It is assumed that the area impacted by installing the 6" storm drain be restored to the same condition or better (see further temporary impact and mitigation measures below).

### **6.2 Temporary Impact**

The work is anticipated to take 1-2 days. During this time the earth within the Critical Area adjacent to the watercourse will be disturbed. The impacted area consists entirely of lawn which will be removed in a 3' wide section. It is determined that since the area impacted consists entirely of lawn, there is very little to no riparian or vegetative impact. Provided that the mitigation measures in the following section are followed, the impact to the piped watercourse will be very limited, especially considering the minimal area impacted and the limited time of the proposed work.

### **6.3 Proposed Temporary Mitigation Measures**

In order to minimize the temporary impact to the Critical Area it is important to adhere to the following mitigation measures;

- Protect the piped watercourse
- Place steel plates on the grass to support the soil adjacent to the area with the piped watercourse
- Cover any open soil with minimum 6 mil plastic sheeting
- Backfill according to pipe manufacturer installation guidelines.
- Establish minimum 8” of top-soil over the disturbed area
- Re-plant the area with the same species grass to restore the area to the same condition or better.

### **6.4 Mitigation Sequencing**

The following sequential measures have been considered:

#### **A. Avoidance**

The 6” storm will serve an existing residence in replacement of an approximately 100 year old storm drain consisting partially of clay pipe. The subject storm drain has documented history of root intrusion and blockage. It has been repaired at least twice in the past. As such, it is determined that the installation of a new storm drain is the best available option to limit future repairs and additional disturbance of the Critical Area. In addition, the measure is necessary to protect the existing 100 year old residence from potential flooding due to deficiency of existing storm drain.

#### **B. Minimizing**

The applicant will minimize the impact by utilizing modern technology such as a 12” wide bucket excavator and 36” trench box to limit the amount of earth being disturbed

C. The applicant will rectify the impact, by repairing and restoring the adjacent grassy area to the same or better condition.

D. The installation of the 6” storm pipe is in itself a maintenance activity that will reduce the impact to the Critical Area in the future by limiting the need for repairs.

E. No compensating actions are being proposed as the Critical Area will not be altered.

F. A clean-out will be replaced/installed to allow for inspection of the storm pipe on an annual basis.

### **6.5 Project Location**

4346 East Mercer Way, Mercer Island, WA.

### **6.6 Responsible Parties**

#### **Applicant**

Johan Valentin and Helena Kjellander Valentin  
4346 East Mercer Way, Mercer Island, WA 98040  
(214) 228-0536

#### **Environmental Consultant**

J. S. Jones and Associates, Inc.  
Attn: Jeffery S. Jones, PWS  
P.O. Box 1908, Issaquah WA 98027  
(253) 905-5736

## **6.7 Standards**

All work and materials shall conform to City of Mercer Island standards and specifications, and to the specifications and details shown on these plans.

## **6.8 City of Mercer Island Contact**

Certain actions within this proposal require inspection or approval by City of Mercer Island staff. Requests for inspection/approval shall be coordinated through City of Mercer Island Community Development, (206) 275-7605

## **6.9 Contractor Information**

When it is available, contact information shall be provided to the City of Mercer Island that includes names, addresses and phone numbers of persons/firms that will be responsible for the installation.

## **6.10 Contractor's Qualifications**

The Permittee shall provide that there is one person on the site at all times during work and installation who is thoroughly familiar with the type of materials being installed and the best methods for their installation, and who shall direct all work being performed under these specifications.

## **6.11 Site Conditions**

Changes should be documented and as-built drawings submitted to the City of Mercer Island upon request for formal construction approval.

# **7 Proximity to Wildlife Habitat Conservation Areas and Priority Species**

According to MICC, Section 19.07.090, bald eagles are the only protected non-aquatic wildlife species to inhabit Mercer Island. The city defines "wildlife habitat conservation areas" as "those areas used by these species for nesting, breeding, feeding, and survival". "The provisions of this section do not apply to any habitat areas which come under the jurisdiction of the city's shoreline master program." The city's wetlands, watercourses and shorelines are protected under other sections of the code.

Bald eagles have been delisted federally, but their nests are still provided protection by the state. No bald eagle stick nests were observed within 660 feet of the site, per the city's on-line Eagle nest buffers. Therefore, state requirements for nest buffers and seasonal construction restrictions do not apply.

## **8 Conclusion**

The proposed work and temporary mitigation measures will have a net-zero impact on the functions of the watercourse and associated buffers.

## **9 Limitations**

Stream determinations and delineations are not final until approved by regulatory agencies and/or local jurisdictions. *J. S. Jones and Associates, Inc.* does not guarantee acceptance or approval by



regulatory agencies, or that any intended use will be achieved.

## 10 References

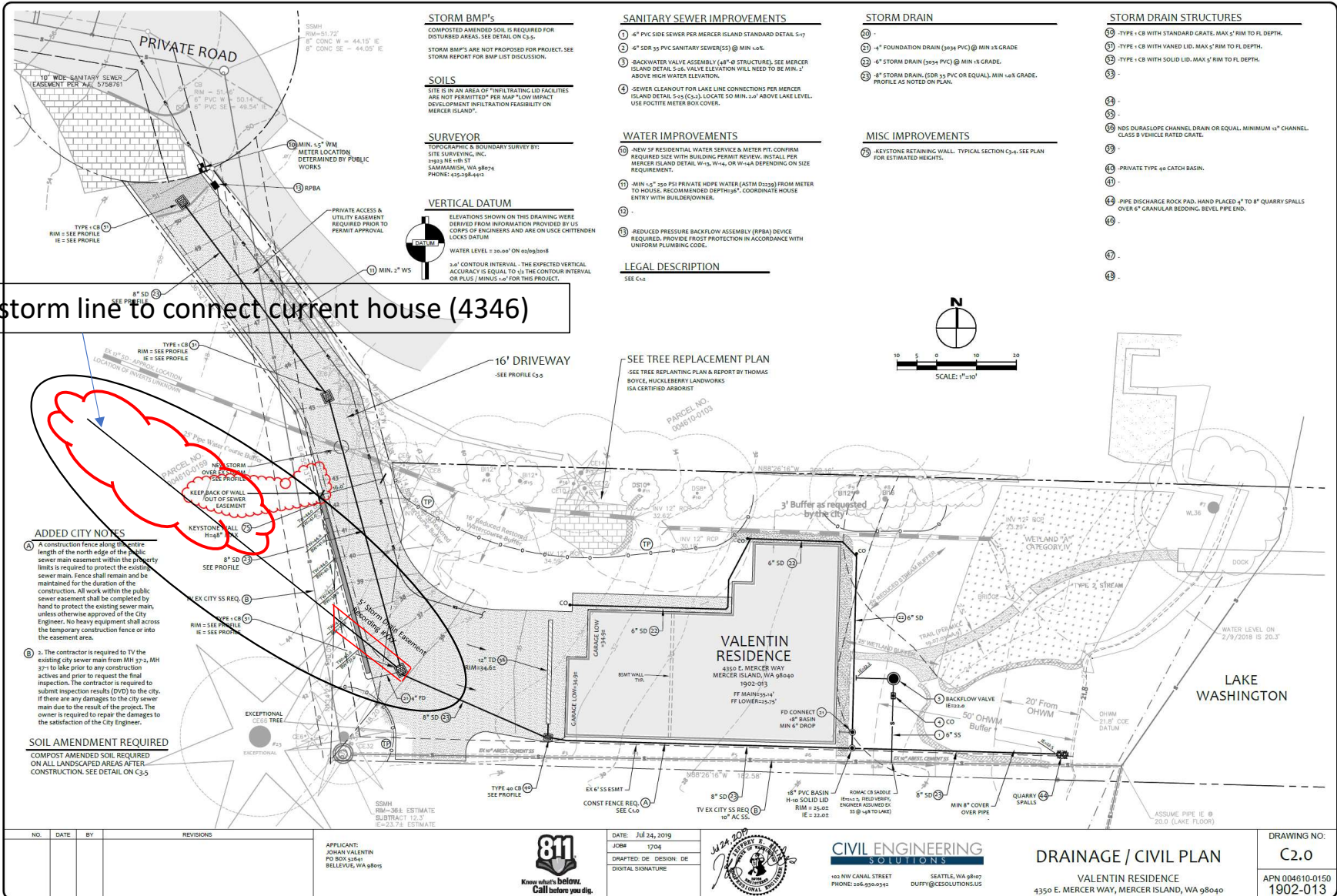
City of Mercer Island, Mercer Island City Code.  
<http://www.codepublishing.com/wa/mercerisland/>

Federal Register. 1980. 40 CFR Part 230: Section 404(b)(1) Guidelines for Specification of Disposal Sites for Dredged or Fill Material. Vol. 45, No. 249, 85352-85353. U.S. Government Printing Office, Washington D.C.

Federal Register. 1982. Title 33: Navigation and Navigable Waters; Chapter II, Regulatory Programs of the Corps of Engineers. Vol. 47, No. 138, p 31810. U.S. Government Printing Office, Washington D.C.

## Attachments

Add 6" storm line to connect current house (4346)



**STORM BMP'S**

COMPOST AMENDED SOIL IS REQUIRED FOR DISTURBED AREAS. SEE DETAIL ON C3.5  
STORM BMP'S ARE NOT PROPOSED FOR PROJECT. SEE STORM REPORT FOR BMP LIST DISCUSSION.

**SOILS**

THIS IS IN AN AREA OF INFILTRATING LID FACILITIES ARE NOT PERMITTED PER MAP "LOW IMPACT DEVELOPMENT INFILTRATION FEASIBILITY ON MERCER ISLAND".

**SURVEYOR**

TOPOGRAPHIC & BOUNDARY SURVEY BY:  
SITE SURVEYING, INC.  
1923 NE 10th ST  
SAMMAMISH, WA 98074  
PHONE: 425-288-4442

**VERTICAL DATUM**

ELEVATIONS SHOWN ON THIS DRAWING WERE DERIVED FROM INFORMATION PROVIDED BY US CORPS OF ENGINEERS AND ARE ON USCHENTEN LOCKS DATUM  
WATER LEVEL = 20.00' ON 02/09/2018

2.0' CONTOUR INTERVAL - THE EXPECTED VERTICAL ACCURACY IS EQUAL TO +/- THE CONTOUR INTERVAL OR PLUS / MINUS 1.2" FOR THIS PROJECT.

**SANITARY SEWER IMPROVEMENTS**

- 1) 4" PVC SIDE SEWER PER MERCER ISLAND STANDARD DETAIL S-17
- 2) 4" SDR 35 PVC SANITARY SEWER(S) @ MIN 1.0% SLOPE
- 3) BACKWATER VALVE ASSEMBLY (48" Ø STRUCTURE). SEE MERCER ISLAND DETAIL S-8. VALVE ELEVATION WILL NEED TO BE MIN. 2' ABOVE HIGH WATER ELEVATION.
- 4) SEWER CLEANOUT FOR LAKE LINE CONNECTIONS PER MERCER ISLAND DETAIL S-23 (C-2). LOCATE 5.0' MIN. 2.0' ABOVE LAKE LEVEL. USE FOOTCIE METER BOX COVER.

**WATER IMPROVEMENTS**

- 1) NEW SF RESIDENTIAL WATER SERVICE & METER PIT. CONFIRM REQUIRED SIZE WITH BUILDING PERMIT REVIEW. INSTALL PER MERCER ISLAND DETAIL W-10, W-14, OR W-14A (DEPENDENT ON SIZE REQUIREMENT).
- 2) MIN 1/2" 250 PPS PRIVATE HOPE WATER (ASTM D2239) FROM METER TO HOUSE. RECOMMENDED DEPTH 36". COORDINATE HOUSE ENTRY WITH BUILDER/OWNER.
- 3) REDUCED PRESSURE BACKFLOW ASSEMBLY (RPBA) DEVICE REQUIRED. PROVIDE FROST PROTECTION IN ACCORDANCE WITH UNIFORM PLUMBING CODE.

**LEGAL DESCRIPTION**

SEE C.2

**STORM DRAIN**

- 1) 4" FOUNDATION DRAIN (3034 PVC) @ MIN 1% GRADE
- 2) 4" STORM DRAIN (3034 PVC) @ MIN 1% GRADE
- 3) 8" STORM DRAIN (SDR 35 PVC OR EQUAL) MIN 1.0% GRADE. PROFILE AS NOTED ON PLAN.

**MISC IMPROVEMENTS**

- 1) KEYSTONE RETAINING WALL. TYPICAL SECTION C3-44. SEE PLAN FOR ESTIMATED HEIGHTS.

**STORM DRAIN STRUCTURES**

- 1) TYPE 1 CB WITH STANDARD GRATE. MAX 5' RIM TO FL DEPTH.
- 2) TYPE 1 CB WITH VANED LID. MAX 5' RIM TO FL DEPTH.
- 3) TYPE 1 CB WITH SOLID LID. MAX 5' RIM TO FL DEPTH.
- 4) NDS DURASLOPE CHANNEL DRAIN OR EQUAL. MINIMUM 1/2" CHANNEL. CLASS B VEHICLE RATED GRATE.
- 5) PRIVATE TYPE 40 CATCH BASIN.
- 6) PIPE DISCHARGE ROCK PAD. HAND PLACED 4" TO 8" QUARRY SPALLS OVER 6" GRANULAR BEDDING. BEVEL PIPE END.
- 7)
- 8)

**ADDED CITY NOTES**

- 1) A construction fence along the entire length of the north edge of the public sewer main easement within the property limits is required to protect the existing sewer main. Fence shall remain and be maintained for the duration of the construction. All work within the public sewer easement shall be completed by hand to protect the existing sewer main, unless otherwise approved of the City Engineer. No heavy equipment shall cross the temporary construction fence or into the easement area.
- 2) The contractor is required to TV the existing city sewer main from MH 37-2, MH 37-1 to lake prior to any construction activities and prior to request the final inspection. The contractor is required to submit inspection results (DVD) to the city. If there are any damages to the city sewer main due to the result of the project, the owner is required to repair the damages to the satisfaction of the City Engineer.

**SOIL AMENDMENT REQUIRED**

COMPOST AMENDED SOIL REQUIRED ON ALL LANDSCAPED AREAS AFTER CONSTRUCTION. SEE DETAIL ON C3.5

NO.	DATE	BY	REVISIONS

APPLICANT:  
JOHAN VALENTIN  
PO BOX 31441  
BELLEVUE, WA 98015

DATE: Jul 24, 2019  
JOB#: 1704  
DRAFTED: DE  
DESIGN: DE  
DIGITAL SIGNATURE:

**CIVIL ENGINEERING SOLUTIONS**  
102 NW CANAL STREET  
PHONE: 206-950-0342  
SEATTLE, WA 98107  
DUFFY@CESOLUTIONS.US

**DRAINAGE / CIVIL PLAN**  
VALENTIN RESIDENCE  
4350 E. MERCER WAY, MERCER ISLAND, WA 98040

DRAWING NO:  
**C2.0**  
APN 004610-0150  
1902-013