# 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:**

**Received By:**

## DEVELOPMENT APPLICATION

| STREET ADDRESS/LOCATION | ZONE |
|---|---|
| 4525 W. MERCER WAY | R-15 |
| **COUNTY ASSESSOR PARCEL #'S** | **PARCEL SIZE (SQ. FT.)** |
| 7700100110 | 27,524 |

| PROPERTY OWNER *(required)* | ADDRESS *(required)* | CELL/OFFICE *(required)* |
|---|---|---|
| RKK CONST. INC | 3056 70TH AVE SE - MI | 206-236-2920<br>E-MAIL *(required)*<br>RANDY@RKKCONSTRUCTION.COM |
| **PROJECT CONTACT NAME** | **ADDRESS** | **CELL/OFFICE** |
| RANDY KOEHLER | 3056 70TH AVE SE, MI | SAME<br>E-MAIL<br>SAME |
| **TENANT NAME** | **ADDRESS** | **CELL PHONE**<br>**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.

RK Koehler - Pres. — SIGNATURE

7-25-17 — DATE

**PROPOSED APPLICATION(S) AND CLEAR DESCRIPTION OF PROPOSAL** (PLEASE USE ADDITIONAL PAPER IF NEEDED):
CRITICAL AREAS DETERMINATION / - CRITICAL AREA STUDY - WATERCOURSE BUFFER AVERAGING

ATTACH RESPONSE TO DECISION CRITERIA IF APPLICABLE

**CHECK TYPE OF LAND USE APPROVAL REQUESTED:**

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

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

CRITICAL AREA STUDY

# 4525 W. Mercer Way: Watercourse Buffer Averaging Plan

Prepared for:

Randy Koehler
RKK Construction
3056 70th Ave SE
Mercer Island, WA 98040

Prepared by:

THE WATERSHED COMPANY

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watershedco.com

**August 2017**

**The Watershed Company Reference Number:**
**161208**

**Cite this document as:**
The Watershed Company. August 2017. Critical Area Study,
4525 W. Mercer Way: Watercourse Buffer Averaging Plan.

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# LIST OF FIGURES

The approximately 0.65-acre residential property contains one single-family residence, associated out-building, a gravel access drive, and associated lawn and ornamental shrub areas. Much of the property is forested with a mix of Douglas-fir, western red cedar, and bigleaf maple in the canopy layer with a mix of native, ornamental, and non-native invasive species in the shrub layer. Sword fern, lawn grasses, and ornamental planting comprise the groundcover layer. There is one watercourse, Watercourse A (see below), on the property.

## 2.2 Watercourse A

Watercourse A enters the northeast portion of the property via a culvert located beneath W. Mercer Way. The watercourse flows northwesterly in an open channel for a short distance (approximately 50 feet) before entering a pipe beneath the gravel access drive that runs along the northern property boundary. Beyond the culvert, Watercourse A remains piped just off-site on the adjacent property to the north (Parcel #7700100100) and continues as a piped watercourse for the remainder of its length before discharging into Lake Washington approximately 800 feet southwest of the driveway culvert (Mercer Island GIS). According to the Mercer Island Watercourse Inventory, Watercourse A is a permanently flowing feature.

Watercourse A averages approximately one to two feet in width on the subject property and was approximately two inches deep at the time of the inspection. Watercourse A neither currently, nor historically, provides fish habitat. While Watercourse A is currently piped downstream of the driveway culvert, the historic channel would have flowed down a gradient averaging 40-50 percent just west of the subject property. The steep gradient combined with the small channel size (less than two feet) precludes fish use currently and historically. In Western Washington, streams are not considered fish-bearing if the channel width is less than two feet and/or the gradient is more than 16 percent (20 percent for larger contributing basins) (WAC 222-16-031).

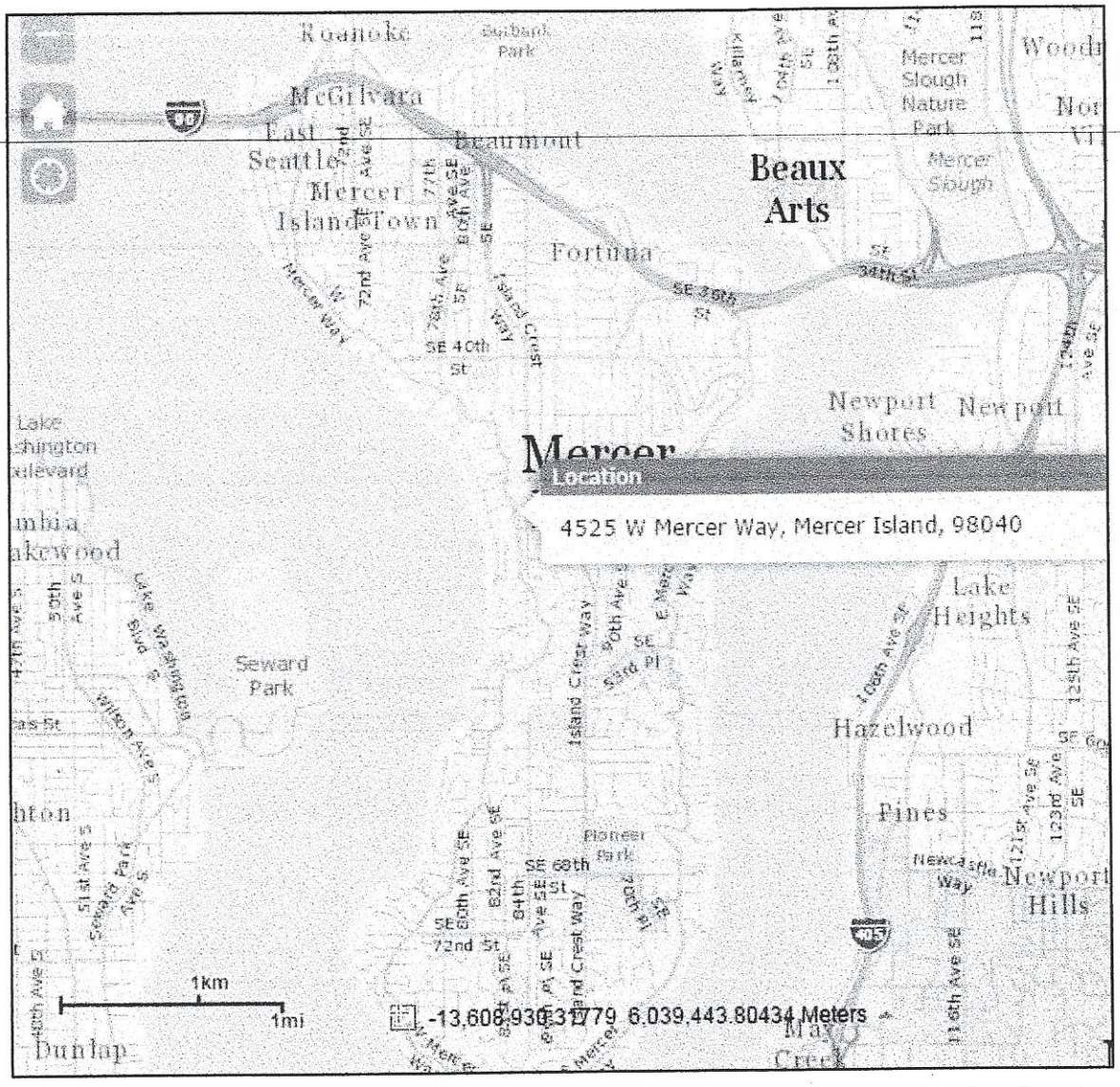



Figure 1. A vicinity map showing the location of the site (imagery source: King County Imap).


Figure 2. An aerial view of the subject property (imagery source: King County Imap).

## 2.3 Critical Area Buffers

Outside of the existing structures and driveway, the existing watercourse buffer areas are predominantly forested with a mix of bigleaf maple, Douglas-fir, and western red cedar in the canopy layer. Understory within the Type 2 watercourse buffer is mostly a dense layer of sword fern and interspersed mountain ash, rhododendron, and ornamental plantings, along with an isolated patch of Himalayan blackberry. The piped watercourse buffer is also forested, but the understory east of the existing house (where buffer reduction is proposed) is very sparse, with only a few sword fern in the understory along with scattered laurel sprouts. The piped watercourse buffer west of the existing house, which will remain in its current condition is dominated by mature bigleaf maple and western red cedar trees with a dense vine maple and sword fern understory. The area of proposed buffer addition includes a 22-inch Douglas-fir tree and an extremely dense (100% cover) understory composed of snowberry and mock orange.

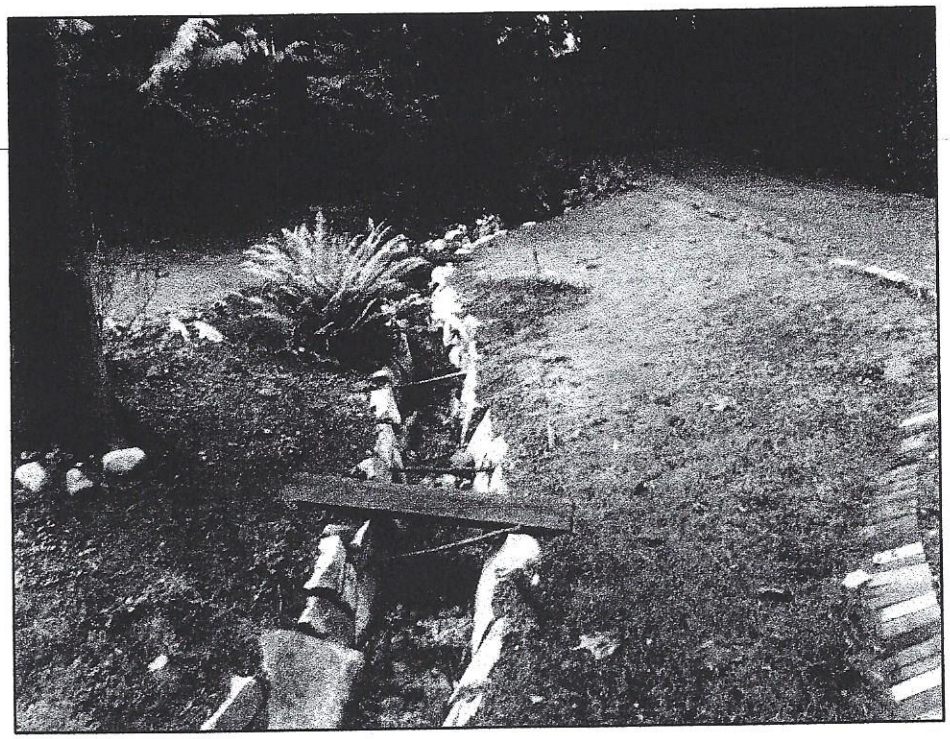


Photo 1: Watercourse A, facing downstream (west).

Photo 2: Standard 50-foot buffer to be preserved.

Photo 3: Standard 50-foot buffer to be preserved.

Photo 4: Standard 25-foot buffer to be preserved.

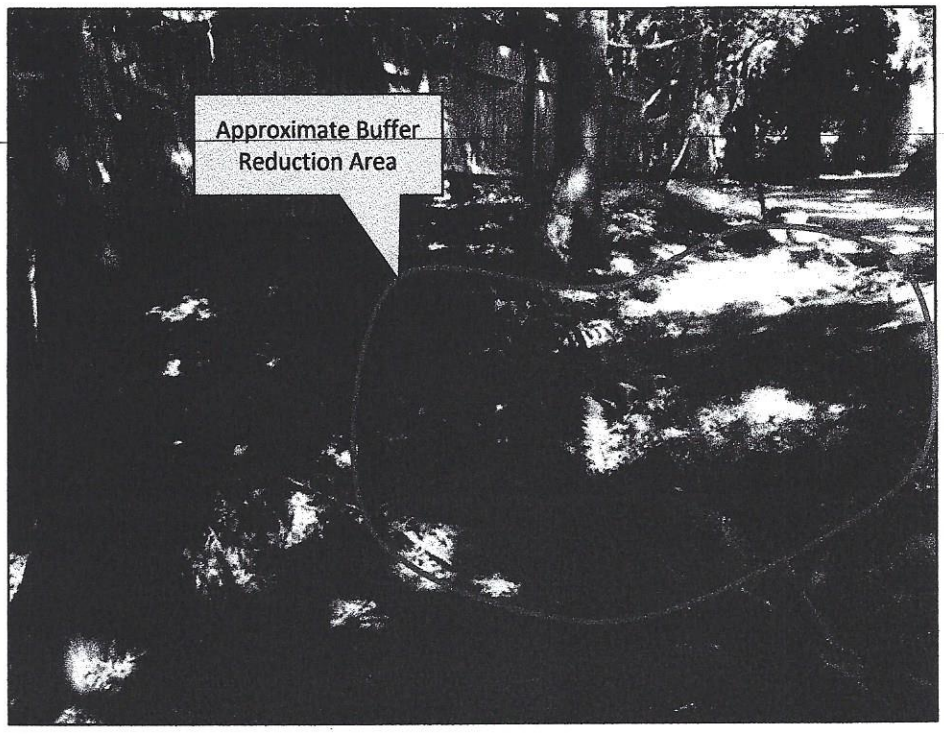



Photo 5: Area of proposed buffer reduction. Trees to be retained.

Photo 6: Proposed buffer addition area.

Photo 7: Proposed buffer addition area.

# 3 Local Regulations

In the City of Mercer Island, watercourses are regulated under the Mercer Island City Code (MICC), Chapter 19.07 – Environment. Watercourse buffers are designated based on the watercourse classification (MICC 19.07.070). Watercourses in Mercer Island are classified as one of four types based on fish use, permanence of flow, and whether the watercourse is piped. Non-fish-bearing, permanent streams, such as the open channel segment of Watercourse A, are classified as Type 2 and require a standard buffer width of 50 feet. The lower section of Watercourse A is piped. Piped watercourses require a standard buffer with of 25 feet.

Watercourse buffers may be reduced through a variety of enhancement measures in accordance with MICC 19.07.070.B.2, provided a smaller buffer will result in no net loss of watercourse and buffer function. Type 2 watercourse buffers may be reduced to a minimum of 35 feet, while for piped watercourses the minimum buffer width is determined on a case-by-case basis by the City.

Watercourse buffers may be modified through buffer averaging provided the following criteria are satisfied:

a. *The proposal will result in a net improvement of critical area function;*

b. *The proposal will include replanting of the averaged buffer using native vegetation;*

c. *The total area contained in the averaged buffers on the development proposal site is not decreased below the total area that would be provided if the maximum width were not averaged;*

d. *The standard buffer width is not reduced to a width that is less than the minimum buffer width at any location; and*

e. *That portion of the buffer that has been reduced in width shall not contain a steep slope.*

# 4 PROJECT PURPOSE AND APPROACH

The purpose of the project is to construct a new single-family residence with garage. All of the new structures will be located outside of critical areas and buffer. However, these improvements also require an expansion of the existing driveway on-site per fire code requirements. The city fire marshal has agreed to allow the driveway to remain at its current width for the section within the Type 2 watercourse 50-foot buffer but has mandated an expansion to the required width in all areas outside the 50-foot buffer, including within the 25-foot buffer associated with the piped watercourse segment.

In order to achieve the purpose of the project and satisfy the requirements of the fire code, the applicant proposes buffer averaging for a portion of the piped watercourse buffer. The proposed reduction will result in no net loss of critical area or buffer functions and satisfies the relevant provisions of MICC 19.07.070.B.3:

a. *The proposal will result in a net improvement of critical area function;*

The area of proposed buffer reduction is generally the lowest functioning, non-developed buffer area on the property. The reduction area includes mostly bare ground with a few sword ferns and scattered laurel sprouts. Existing trees in the vicinity will remain as part of the reduced buffer (Photo 5). The buffer addition area includes a mature, 22-inch Douglas-fir and an extremely dense, native understory dominated by snowberry and mock orange. Further, the buffer addition area is associated with the 50-foot buffer for the Type 2 watercourse.

The ability of the Type 2 watercourse buffer to provide protection for the open channel segment far exceeds the functions provided by the buffer for a piped watercourse. The buffer addition area is twice the size of the buffer reduction area and provides much greater water quality, hydrology, and habitat functions than the reduced buffer. The net result will be a significant improvement of critical area function. Further, the areas where the standard buffers will be preserved are highly functioning buffers composed of mostly native forest areas, including several mature/old growth trees.

b. *The proposal will include replanting of the averaged buffer using native vegetation;*

The proposal includes additional native plantings in the reduced buffer to compensate for the loss of vegetation in the reduction area. A total of six sword ferns, four snowberry and four evergreen huckleberry will be installed. Trees are not proposed, as no trees or shrubs will be removed, and the area currently contains a forested canopy.

c. *The total area contained in the averaged buffers on the development proposal site is not decreased below the total area that would be provided if the maximum width were not averaged;*

This requirement is exceeded by the proposal. The total averaged buffer area will be greater than the standard buffer area. A net increase in buffer area of 271 square feet is proposed.

d. *The standard buffer width is not reduced to a width that is less than the minimum buffer width at any location;*

The buffer will only be reduced within the piped watercourse buffer. There is no minimum width for piped watercourse buffers. The proposed buffer will not be reduced to less than 10 feet.

e. *That portion of the buffer that has been reduced in width shall not contain a steep slope.*

The reduced buffer does not contain a steep slope.

Additionally, an existing non-conforming structure in the piped watercourse buffer will be removed and the area restored with native grass seed. This is noted for general descriptive purposes. The removal of the structure is not included as proposed mitigation.

## 4.1 Mitigation Sequencing

The project has been designed to avoid, minimize and compensate for impacts to the greatest extent possible given the constraints of the site. The following describes how the mitigation sequencing requirements of the MICC have been met.

*Avoid*

The project area contains one watercourse and its associate buffer areas. Direct impacts to critical areas will be avoided. Buffer impacts will be avoided through buffer averaging.

*Minimize*

The amount of buffer averaging proposed is the minimum necessary to accommodate the proposed development. Buffer averaging is not proposed to allow for structural replacement. The Mercer Island Fire Department is mandating the driveway improvements as a condition of the development. There is no feasible alternative that would not require buffer averaging.

*Mitigate*

Compensatory mitigation is not applicable, as buffer averaging will allow the development to avoid buffer impacts. The averaged buffer will provide greater function than the standard buffer. The addition area is associated with the open channel segment, while the reduction area is associated with the piped watercourse segment. The addition area is composed of dense, native vegetation, while the reduction area is mostly bare ground with only a few isolated groundcover species and non-native laurel.

Table 1: Buffer Averaging Summary.

| Buffer Reduction | Buffer Mitigation |
|---|---|
| Reduce a portion of the standard 25-foot piped watercourse buffer to not less than 10 feet (271 SF total) | Expand a portion of the standard 50-foot Type 2 watercourse buffer (542 SF total); install native vegetation in the reduced buffer at a 1:1 ratio for the reduction area (271 SF total) to replace lost function. |

# 5 IMPACT ASSESSMENT

The proposal is to construct a new single-family residence, associated garage, and expand a portion the driveway, as required by the fire code. Driveway expansion cannot be completed within the constraints of the standard watercourse buffers. Buffer averaging is proposed to allow expansion of the driveway. A portion of the piped watercourse buffer will be reduced, and buffer addition for the Type 2 buffer is proposed at a 2:1 ratio to ensure buffer function improvement. Additionally, a portion of the piped watercourse buffer will be enhanced with native plantings at a 1:1 ratio to the proposed reduction area.

## 5.1 No net loss

Without buffer averaging and enhancement, a slight decrease in hydrologic, water quality, and habitat function could be anticipated to occur under the proposed project due to the partial reduction of the Watercourse A buffer. The proposed buffer expansion and enhancement will result in an overall improvement in buffer function compared to the existing conditions.

Table 1, below, summarizes how the proposed mitigation will achieve an improvement of ecological functions on-site.

Table 2. Summary showing no net loss of critical area buffer functions with proposed conditions.

| Critical Area Buffer Function | Existing Conditions | Proposed Conditions | Determination |
|---|---|---|---|
| **Water Quality** | The current water quality function of the critical area buffers is limited by sparsely vegetated buffer areas and existing buffer intrusions. | Buffer area will increase at a 2:1 ratio, and enhancement in the reduced buffer will occur at a 1:1 ratio. Piped watercourse buffer will decrease in total size, while the Type 2 buffer will increase at 2:1. | Increasing the buffer for the Type 2 (open channel) segment will provide greater protection of the watercourse, as the open channel buffer has the ability to filter and trap sediments and nutrients that could otherwise enter the watercourse. The ability of the piped watercourse buffer to provide these functions is limited as long as the segment remains piped. Increasing amount of dense, rigid vegetation in the reduced areas of the piped watercourse buffer will provide additional filtering capacity in the unlikely event that the watercourse is ever daylighted. The current piped watercourse buffer is very sparsely vegetated at ground level. |
| **Hydrology** | The current hydrologic function of the critical area buffers is limited by sparsely vegetated areas and buffer intrusions. | Vegetative density to be substantially increased in reduced buffer by planting native shrubs and groundcovers. Total buffer area to be increased at a 2:1 ratio, in an area of extremely dense native vegetation. Highest functioning buffer areas will be preserved throughout the site. | Increasing the buffer in a densely vegetated area contiguous with the Type 2 watercourse buffer will increase the ability of the buffer to attenuate peak stormwater flows during rain events. This effect will be realized much more directly, given the proximity to the open channel as opposed to the piped segment.<br>The addition of shrubs and groundcover plants in the reduced buffer would help attenuate flood flow during heavy rain events in the unlikely event that the watercourse is ever daylighted. |

| Critical Area Buffer Function | Existing Conditions | Proposed Conditions | Determination |
|---|---|---|---|
| **Habitat** | The habitat function of the buffer reduction area limited by low understory vegetative density, low structural diversity, and prevalence on non-native plant species. | The reduced buffer will be enhanced through the addition of a native shrub and groundcover community. Increase the buffer area at a 2:1 ratio within a native forested area. Highest functioning buffer areas will be preserved throughout the site. | The additional buffer area proposed for the Type 2 buffer increase is the most densely vegetated, native forest area on the property. Protecting this area as buffer improves the habitat function by increasing forage and cover opportunities for wildlife both in terms of overall area and quality of habitat. Additionally, the buffer reduction area provides little cover or forage opportunities currently. Adding fruit-producing shrubs and groundcover will increase the habitat potential in the reduced buffer area. |
| **Overall** | Low-functioning piped watercourse buffer with little understory vegetation and existing impervious surface. Greater overall function is present in the existing Type 2 buffer which is mostly forested. | Reduce and enhance low-functioning piped watercourse buffer. Expand the higher-functioning Type 2 watercourse at a 2:1 ratio. Highest functioning buffer areas will be preserved throughout the site. | The proposed project is expected to improve ecological functions over existing conditions. This includes habitat, hydrology, and water quality functions of the watercourse buffers. Overall a net increase in size and a net improvement in watercourse buffer function is anticipated. |

# 6 MONITORING PLAN

The buffer enhancement area located within the reduced watercourse buffer will be monitored and protected to ensure success of the installed vegetation. An as-built inspection will be conducted post-installation to ensure the plantings have been installed per the approved plan. An as-built report with representative photographs will be provided to the City within 30 days of installation.

A protective covenant will be recorded on the property title identifying this area as protected watercourse buffer restoration area, noting that native vegetation in this area

will not be disturbed without direction from a qualified restoration specialist and/or the City of Mercer Island.

# 7 SUMMARY

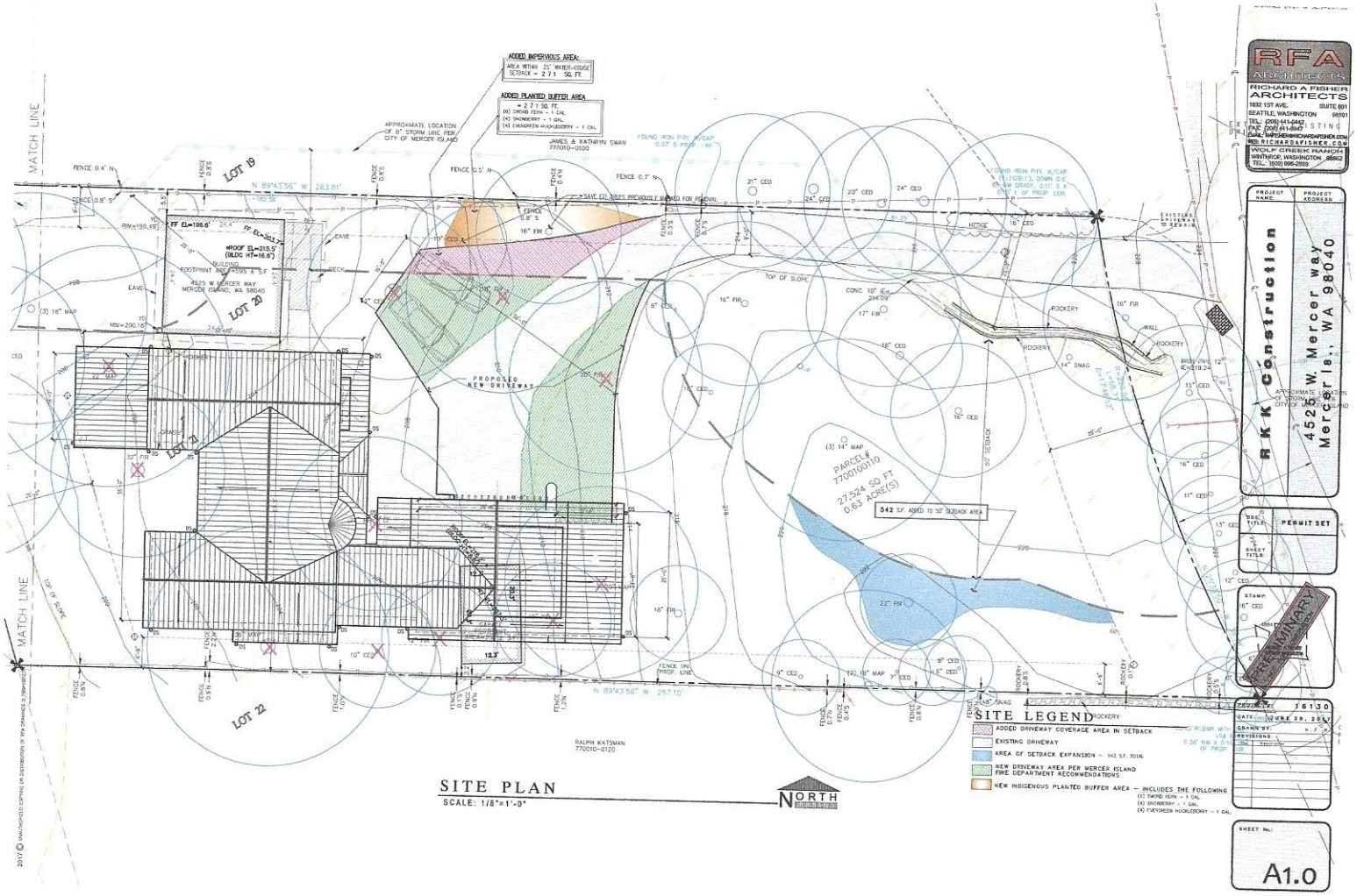
In order to accommodate the proposed improvements at 4525 W. Mercer Way, specifically the requirement to expand the existing driveway as required by code, a buffer averaging plan has been prepared. Buffer reduction is only proposed to allow the necessary driveway expansion. All structures will be located outside of the standard watercourse buffers, including the piped and Type 2 watercourse buffers.

A total of 271 SF of the piped watercourse buffer will be reduced, and a total of 542 square feet will be added to the Type 2 watercourse buffer (2:1 ratio). Additionally, 271 square feet of the reduced piped watercourse buffer will be enhanced with native shrubs and groundcovers. The buffer reduction area is a low-functioning buffer, given the lack of native groundcover in the area. Conversely, both the buffer addition area and the much of the buffer preservation areas are composed of native forest with a dense understory of shrubs and groundcovers.

Given the limited buffer modifications proposed and the satisfaction and/or exceedance of the required criteria under MICC 19.07.070.B.3, the buffer function will be increased upon implementation of the accompanying buffer averaging plan.

# APPENDIX A

# Buffer Averaging Plan



# CITY OF MERCER ISLAND

**DEVELOPMENT SERVICES GROUP**
9611 SE 36TH STREET | MERCER ISLAND, WA 98040
PHONE: 206.275.7605 | www.mercergov.org
Inspection Requests: Online: www.MyBuildingPermits.com VM: 206.275.7730

# ENVIRONMENTAL CHECKLIST

| |
|---|
| Date Received: _____ |
| File No: _____ |
| Fee: _____ |
| **See Development Application for fees** |

## PURPOSE OF CHECKLIST

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

## INSTRUCTIONS FOR APPLICANTS

This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

## USE OF CHECKLIST FOR NONPROJECT PROPOSALS

For nonproject proposals complete this checklist and the supplemental sheet for nonproject actions (Part D). The lead agency may exclude any question for the environmental elements (Part B) which they determine do not contribute meaningfully to the analysis of the proposal.

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

## A. BACKGROUND

1. Name of proposed project, if applicable:
NEW SF RESIDENCE AT 4525 W. MERCER WAY

2. Name of applicant:
RANDY KOETHER - RKK CONST. INC

3. Address and phone number of applicant and contact person:
3056 70TH AVE SE, MI 206-236-2920

4. Date checklist prepared:
AUGUST 3, 2017

5. Agency requesting checklist:
CITY OF MI

6. Proposed timing or schedule (including phasing, if applicable):
FALL 2017

7. Do you have any plans for future additions, expansions, or further activity related to or connected with this proposal? If yes, explain:
NO

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal:
CRITICAL AREAS DETERMINATION - WATERCOURSE BUFFER AVERAGING

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain:
NO

10. List any government approvals or permits that will be needed for your proposal, if known:
BUILDING PERMIT

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)
BUILD A NEW 5000 SF SINGLE FAMILY RESIDENCE ON A 28,524 SF LOT. DEMO EXISTING 600 SF HOME AND 300 SF CARPORT

12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.

4525 WEST MERCER WAY - PARCEL # 7700100110

SEE CAD FOR SITE PLAN, MAP ETC.

SECTION 13 OF TOWNSHIP 24 NORTH, RANGE 4 EAST

**B. ENVIRONMENTAL ELEMENTS**

**1. Earth**

a. General description of the site (check one):

Flat ☐ Rolling ☒ Hilly ☐ Steep slopes ☐ Mountainous ☐ Other ☐

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

27,089 SF OF THE LOT HAS 8% SLOPE
1435 SF OF THE LOT HAS 25% SLOPE

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.

GLACIAL TILL

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

NO

e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.

5000 SF OF EXCAVATION — NO FILLING REQUIRED — MISC. GRADING FOR NEW DRIVEWAY

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

EROSION WILL BE MINIMAL AS EROSION CONTROL SILT FENCING WILL BE USED & EXCAVATION SPOILS TO BE COVERED

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

APPROX 3%

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

SEE "F"

**2. Air**

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

SMALL AMOUNTS OF DUST FROM DEMO & EXCAVATION

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

NO

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

WATER FROM HOSES TO BE USED TO CONTROL DUST

**3. Water**

a. Surface:

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

SEE CRITICAL AREA DETERMINATION REPORT

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

SEE CAD ABOVE IN 3A, I

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

NONE

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

NO

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

NO

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

NO

b. Ground

i. Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well? Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.

NO

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

NONE

c. Water runoff (including stormwater):

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

RUNOFF FROM ROOF, PATIOS & DRIVEWAY WILL BE PIPED TO EXISTING STORM SEWER IN FOREST AVE. TO THE WEST

ii. Could waste materials enter ground or surface waters? If so, generally describe.

NO

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

DETENTION SYSTEM

**4. Plants**

a. Check types of vegetation found on the site

- [x] Deciduous tree: Alder, Maple, Aspen, other
- [x] Evergreen tree: Fir, Cedar, Pine, other
- [x] Shrubs
- [x] Grass
- [ ] Pasture
- [ ] Crop or grain
- [ ] Wet soil plants: Cattail, buttercup, bulrush, skunk cabbage, other
- [ ] Water plants: Water lily, eelgrass, milfoil, other
- [x] Other types of vegetation

b. What kind and amount of vegetation will be removed or altered?
TREES, BRUSH, GRASS TO BE REMOVED – SEE SITE PLAN ON CAD REPORT

c. List threatened or endangered species known to be on or near the site.
NONE

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

e. List all noxious weeds and invasive species known to be on or near the site.
~~GEORGE CRADDOCK~~ THERE IS HIMALAYAN BLACKBERRY AND GIANT HOGWEED. HOGWEED HAS BEEN HAND REMOVED

**5. Animals**

a. State any birds and animals which have been observed on or near the site or are known to be on or near the site. Examples include:
Birds: hawk, heron, eagle, songbirds, other:
Mammals: deer, bear, elk, beaver, other:
Fish: bass, salmon, trout, herring, shellfish, other:
~~BIRDS~~ SUBURBAN BIRDS AND MAMALS ARE LIKELY PRESENT, INCLUDING SQUIRRELS, RACCOONS AND MICE.

b. List any threatened or endangered species known to be on or near the site.
NONE

c. Is the site part of a migration route? If so, explain.
NO

d. Proposed measure to preserve or enhance wildlife, if any:
NONE

e. List any invasive animal species known to be on or near the site.
NONE

**6. Energy and natural resources**

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

NATURAL GAS FOR HEATING & COOKING, ELECTRIC FOR LIGHTS, PLUGS ETC.

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

NO

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

HIGH EFFICIENCY FURNACES, INSULATION, TANKLESS WATER HEATER

**7. Environmental health**

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

NO

i. Describe any known or possible contamination at the site from present or past uses.

NONE KNOWN

ii. Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.

UNDERGROUND NATURAL GAS LINE

iii. Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.

NONE

iv. Describe special emergency services that might be required.

NONE KNOWN

v. Proposed measures to reduce or control environmental health hazards, if any:

NONE KNOWN

b. Noise

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

NONE

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

CIRCULAR SAWS, PNEUMATIC NAILERS M-F 7AM - 4PM

iii. Proposed measures to reduce or control noise impacts, if any:

**8. Land and shoreline use**

a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.

SINGLE FAMILY HOMES. PROPOSAL WILL NOT AFFECT ADJACENT LAND USES.

b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?

NO

c. Describe any structures on the site.

600 SF HOME & 300 SF CARPORT

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

BOOTH DEMOLISHED

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

R-5

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

SINGLE FAMILY

g. If applicable, what is the current shoreline master program designation of the site?
~~DATA~~ PROPERTY IS NOT LOCATED IN SHORELINE JURISDICTION

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
NO

i. Approximately how many people would reside or work in the completed project?
4-6

j. Approximately how many people would the completed project displace?
NONE

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

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

**9. Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low income housing.
1 UNIT OF HIGH INCOME

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

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

**10. Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas? What is the principal exterior material(s) proposed?
30' — WOOD SHINGLES

b. What views in the immediate vicinity would be altered or obstructed?
NONE

c. Proposed measures to reduce or control aesthetics impacts, if any:
LANDSCAPING THE LOT TO MATCH IT'S SURROUNDINGS

**11. Light and glare**

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?
SHOULD NOT CREATE GLARE

b. Could light or glare from the finished project be a safety hazard or interfere with views?
NO

c. What existing off-site sources of light or glare may affect your proposal?
NONE

d. Proposed measures to reduce or control light and glare impacts, if any:
THIS IS A RESIDENTIAL SETTING WITH HOUSES ON EITHER SIDE SO IT WILL FIT IN.

**12. Recreation**

a. What designated and informal recreational opportunities are in the immediate vicinity?
WALKING PATHS ALONG W. MERCER WAY — PARKS WITHIN A MILE

b. Would the proposed project displace any existing recreational uses? If so, describe.
NO

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
NO IMPACT ON RECREATION

**13. Historic and cultural preservation**

a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.
NO

b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation. This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.

NO

c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.

NO KNOWN HISTORIC RESOURCES

d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.

NONE

**14. Transportation**

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

EXISTING DRIVEWAY ENTERS ONTO W. MERCER WHICH LEADS TO I-90

b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?

YES - TRANSIT STOP ON W. MERCER

c. How many additional parking spaces would the completed project or nonproject proposal have? How many would the project or proposal eliminate?

ELIMINATES 1 PARKING SPACE - NEW PROJECT ADDS 3 SPACES + DRIVEWAY PARKING FOR 3 OR 4 MORE

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

NO

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

NO

f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and non-passenger vehicles). What data or transportation models were used to make these estimates?

~~NOT KNOWN~~ VEHICULAR TRIPS WILL BE TYPICAL FOR A SINGLE FAMILY RESIDENCE, LIKELY 2-4 TRIPS TO & FROM THE RESIDENCE EACH DAY.

g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.

NO

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

DNA

**15. Public services**

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

NOT REALLY - IT IS JUST ONE RESIDENTIAL UNIT

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

FIRE SPRINKLERS IN HOUSE

**16. Utilities**

a. Check utilities currently available at the site:

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Electricity | ☒ | Natural Gas | ☒ | Water | ☒ | Refuse Service | ☒ |
| Telephone | ☒ | Sanitary sewer | ☒ | Septic system | ☐ | Other | ☐ |

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

ALL UTILITIES ARE EXISTING AND WILL BE USED BY NEW PROJECT. SOME TRENCHING FROM EXISTING TO NEW HOUSE WILL BE NEEDED ON SITE

**C. SIGNATURE**

I certify (or declare) under penalty of perjury under the laws of the State of Washington that the answers to the attached SEPA Checklist are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: RK Koehler

Date Submitted: _____

# SEPA RULES

## SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS

(do not use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

1. How would the proposal be likely to increase discharge to water; emissions to air; productions, storage, or release of toxic or hazardous substances; or production of noise?

   THE NEW HOUSE HAS MORE IMPERVIOUS SURFACE THAN THE EXIST. BUT DETENTION WILL BE USED TO SLOW THE FLOW OF STORM WATER. NO RELEASE OF TOXIC SUBSTANCE — NOIS IS NORMAL HOME CONST.

   Proposed measures to avoid or reduce increases are:

2. How would the proposal be likely to affect plants, animals, fish, or marine life?

   NO ANIMAL, FISH OR MARINE IMPACT. LOT IS 28,524 SF SO THERE ARE PLENTY OF PLANTS.

   Proposed measures to protect or conserve plants, animals, fish, or marine life are:

   TREE PROTECTION TO BE USED. PLANTS ADDED TO REPLACE THOSE REMOVED.

3. How would the proposal be likely to deplete energy or natural resources?

   NORMAL HOME USEAGE.

   Proposed measures to protect or conserve energy and natural resources are:

   LOTS OF INSULATION — TANKLESS WATER HEATER — 95% EFFICIENT FURNACE

4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?

   SHOULD BE NO EFFECT — THERE IS A 50' WATERCOURSE BUFFER AND A 25' PIPED WATERCOURSE BUFFER

   Proposed measures to protect such resources or to avoid or reduce impacts are:

   BUFFER AVERAGEING PER CAD REPORT.

5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?

DNA

Proposed measures to avoid or reduce shoreline and land use impacts are:

DNA

6. How would the proposal be likely to increase demands on transportation or public services and utilities?

NO INCREASE TO DEMAND

Proposed measures to reduce or respond to such demand(s) are:

7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.

NO CONFLICTS.

[Statutory Authority: RCW 43.21C.110. WSR 16-13-012 (Order 15-09), § 197-11-960, filed 6/2/16, effective 7/3/16. Statutory Authority: RCW 43.21C.110 and 43.21C.100 [43.21C.170]. WSR 14-09-026 (Order 13-01), § 197-11-960, filed 4/9/14, effective 5/10/14. Statutory Authority: RCW 43.21C.110. WSR 13-02-065 (Order 12-01), § 197-11-960, filed 12/28/12, effective 1/28/13; WSR 84-05-020 (Order DE 83-39), § 197-11-960, filed 2/10/84, effective 4/4/84.]