

# CITY OF MERCER ISLAND

## COMMUNITY PLANNING & DEVELOPMENT

9611 SE 36TH STREET | MERCER ISLAND, WA 98040

PHONE: 206.275.7605 | [www.mercer.gov.org](http://www.mercer.gov.org)

Inspection Requests: Online: [www.mybuildingpermit.com](http://www.mybuildingpermit.com) VM: 206.275.7730



## SITE DEVELOPMENT INFORMATION

Worksheet for single family residential development

### PROJECT INFORMATION

Permit Number: 2012-06A Parcel Number: 251130.0021  
Site Address: 4803 FOREST AVE. SE Phone Number: 206-660-2956  
Owner Name: ROSS MURRAY Date: APRIL 15, 2011  
Signature & phone number of individual who completed this worksheet:  
[Signature] 253-359-4039  
Signature Phone Number

### GENERAL INFORMATION

Will any large trees be removed as a result of this development activity? Yes  No   
*Large tree- trees with diameter of greater than or equal to 10 inches.*  
Do you have an Accessory Dwelling Unit? New ADU  Existing ADU  No   
Will you be adding air conditioning to the proposed development? Yes  No

What is the total square footage of all proposed decks (covered and uncovered) on the property? 153 Square Feet  
*This is a worksheet and is not a substitute for the Mercer Island Development Regulations. Please consult the Mercer Island City Code. The City may require additional information to be supplies to document compliance with regulations.* see at back

### LOT SLOPE

According to the Mercer Island City Code, slope is a measurement of the average incline of the lot or other piece of land calculated by subtracting the lowest elevation of the property from the highest elevation and dividing the resulting number by the shortest horizontal distance between these two points. The resulting product is multiplied by 100.

#### LOT SLOPE CALCULATIONS

Highest Elevation Point of Lot: 84.2 Feet  
Lowest Elevation Point of Lot: 26.0 Feet  
Elevation Difference: 58.2 Feet  
Horizontal Distance Between High and Low Points: 260 Feet  
Lot Slope\* 22.4 %

\*Lot slope is the elevation difference divided by horizontal distance multiplied by 100.

Lot slope calculations shown on Sheet # A-11

## LOT COVERAGE

For single family residential development, "lot coverage" is the area of a lot that may be covered by a combination of the buildings and vehicular driving surfaces. Lot coverage is based on "net lot area". Net lot area is the size of the lot minus the area within any access easements on the property that do not provide access to the home on the subject lot. The maximum lot coverage for a specific lot is based upon the lots slope (see above). The area of the lot that cannot be used for lot coverage is "required landscaping area"; the landscaping area is typically improved with either hardscape (see below) or softscape.

**Please note:** Lot coverage is not the same as impervious surface calculations used for drainage review.

Lot Slope	Maximum Lot Coverage (House, driving surfaces, and accessory buildings)	Required Landscaping Area
Less than 15%.	40%	60%
15% to less than 30%	35%	65%
30% to 50%	30%	70%
Greater than 50% slope	20%	80%

## ADJUSTMENTS

A one-time reduction in the required landscaping area and an increase in the allowed maximum lot coverage is allowed if:

- A. The total reduction in required landscaping area shall not exceed 5%, and the total increase in maximum lot coverage shall not exceed 5%; and
- B. The reduction in required landscaping area is associated with:
  1. A development proposal that will result in a single-story dwelling with wheelchair accessible entry, and may also include a single-story accessory building; or
  2. A development proposal on a flag lot that, after optimizing driveway routing and minimizing driveway width, requires a driveway that is more than the 25% of the allowed lot coverage. The allowed reduction in the required landscaping area and increase in the maximum lot coverage shall not exceed 5% or the area of the driveway in excess of 25% of the lot coverage, whichever is less. For example, a development proposal with a driveway that occupies 27% of the allowed lot coverage, may increase the total lot coverage by 2%
- C. A recorded notice on title, covenant, easement, or other documentation in a form approved by the city, shall be required. The notice on title or other documentation shall describe the basis for the reduced landscaping area an increase in lot coverage.

Does this project include a proposed adjustment?

Yes  No

## LOT COVERAGE CALCULATIONS

- A. Gross Lot Area 17634 Square Feet
- B. Net Lot Area 17634 Square Feet
- C. Allowed Lot Coverage Area 6172 Square Feet
- D. Allowed Lot Coverage 35 % of Lot
- E. Existing Lot Coverage:
  1. Main Structure Roof Area 1494 Square Feet
  2. Accessory Building Roof Area 80 Square Feet
  3. Vehicular Use (driveway, paved access easements [portion used by the lot for access], parking) 1945 Square Feet
  4. Covered Patios and Covered Decks 234 Square Feet

5. Total Existing Lot Coverage Area (E1+E2+E3+E4)	<u>3753</u>	Square Feet
F. (Total Lot Coverage Area Removed)	<u>3753</u>	Square Feet
G. Proposed Adjustment for Single Story (Area)	<u>-</u>	Square Feet
H. Proposed Adjustment for Flag Lot	<u>-</u>	Square Feet
I. Total New Lot Coverage Area:		
1. Main Structure Roof Area	<u>2437</u>	Square Feet
2. Accessory Structure Roof Area	<u>1311</u>	Square Feet
3. Vehicular Use (driveway, paved access easement [portion used by the lot for access], parking)	<u>1182</u>	Square Feet
4. Covered Patios and Covered Decks	<u>923</u>	Square Feet
5. Total New Lot Coverage Area (I1 + I2 + I3 + I4)	<u>5853</u>	
J. Total Project Lot Coverage Area = (E5 - F) + I5	<u>5853</u>	Square Feet
K. Proposed Lot Coverage Area = (J/B) x 100	<u>5853 / 17634 = 33.2</u>	% of Lot

Lot coverage calculations shown on Plan Sheet # 8-1

### HARDSCAPE

Up to 9% of the net lot area may consist of hardscape areas. For single family residential development, hardscape is the solid, hard, elements or structures that are incorporated into landscaping. The hardscape includes, but is not limited to, structures, paved areas, stairs, walkways, decks, patios, rockeries and retaining walls, and similar constructed elements that do not have a roof. The hardscape within the landscaping area consists of materials such as wood, stone, concrete, gravel, permeable pavements or pavers, and similar materials. Hardscape does not include solid, hard elements or structures that are covered by a minimum of two feet of soil intended for softscape (for example, a septic tank covered with at least two feet of soil and planted shrubs is not hardscape). The hardscape does not include driving surfaces or buildings. In addition, unused lot coverage may also be improved with hardscape.

### HARDSCAPE CALCULATIONS

A. Gross Lot Area	<u>17634</u>	Square Feet
B. Net Lot Area	<u>17634</u>	Square Feet
C. Area Borrowed from Lot Coverage	<u>319</u>	Square Feet
D. Allowed Hardscape Area = 9% of lot area + C	<u>1581 + 319</u>	% of Lot
E. Allowed Hardscape Area	<u>1906</u>	Square Feet
F. Total Existing Hardscape Area:		
1. Uncovered Decks	<u>732</u>	Square Feet
2. Uncovered Patios	<u>405</u>	Square Feet
3. Walkways	<u>116</u>	Square Feet
4. Stairs	<u>129</u>	Square Feet
5. Rockeries and Retaining Walls	<u>66</u>	Square Feet
6. Other	<u>0</u>	Square Feet
7. Total Existing Hardscape Area (F1+F2+F3+F4+F5+F6)	<u>1256</u>	Square Feet
G. (Total Hardscape Area Removed)	<u>1256</u>	Square Feet
H. Total New Hardscape Area:		
1. Uncovered Decks	<u>452</u>	Square Feet
2. Uncovered Patios	<u>61</u>	Square Feet
3. Walkways	<u>649</u>	Square Feet
4. Stairs	<u>301</u>	Square Feet
5. Rockeries and Retaining Walls	<u>80</u>	Square Feet

1599

6. Other \_\_\_\_\_ 0 Square Feet

7. Total New Hardscape Area  
(H1+H2+H3+H4+H5+H6) 1529 Square Feet

I. Total Project Hardscape Area = (F7 - G) + H7 1549 Square Feet

J. Total Project Hardscape Area = (I/B)x100 8.8 % of Lot

Hardscape calculations shown on Plan Sheet # \_\_\_\_\_

8.1.1 / A-1.5

### GROSS FLOOR AREA (GFA)

For single family residential development, GFA is the total square footage of floor area, bounded by the exterior faces of the building(s). The GFA includes the floor area of the main building, accessory buildings, garages, attached roofed decks on the second or third story of a single family home, staircases, etc. The GFA does not include second- or third-story uncovered decks or uncovered rooftop decks.

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#### Allowed GFA

- A. R-8.4: 5,000 square feet or 40% of the lot area, whichever is less.
- B. R-9.6: 8,000 square feet or 40% of the lot area, whichever is less.
- C. R-12: 10,000 square feet or 40% of the lot area, whichever is less.
- D. R-15: 12,000 square feet or 40% of the lot area, whichever is less.
- E. All zones: Lots with a lot area of 7,500 square feet or less, the lesser of 3,000 square feet or 45% of the lot area.
- F. All zones: If an accessory dwelling unit is proposed, the 40% allowed GFA may be increased by the lesser of 5 percentile points, or the floor area of the accessory dwelling unit. Provided, this allowance shall not result in a GFA of more than 4,500 square feet or 45% of the lot area, whichever is less.

#### GFA Modifiers

The GFA calculation for a floor with a ceiling height of 12 to 16 feet, is 150% of the area of the floor.

The GFA calculation for a floor with a ceiling height of more than 16 feet, is 200% of the area of the floor.

The GFA calculation for a stair case shall be counted as a single floor for the first two stories accessed by the stair case. For each additional story above two stories, the stair case shall count as a single floor area.

*\*Floor plans shall identify rooms with a ceiling height of more than 12 feet and rooms with a ceiling height of more than 16 feet.*

All building areas must be identified and labeled on the site plan. Please distinguish all new construction from existing areas on both your drawing and in the calculations you complete below.

Will you be excluding a portion of the basement floor area? Yes  No

If yes, you must provide basement floor area calculations, with your building permit application, that show how you determined what portion of the basement will be excluded. Refer to page 6.

#### GROSS FLOOR AREA CALCULATIONS

Building Area	Existing Area	Removed Area	New/Addition Area	Total
Upper Floor	_____ Sq. Ft.	_____ Sq. Ft.	<u>3152</u> Sq. Ft.	<u>3152</u> Sq. Ft.
Main Floor	_____ Sq. Ft.	_____ Sq. Ft.	<u>2290</u> Sq. Ft.	<u>2290</u> Sq. Ft.
Gross Basement Area	_____ Sq. Ft.	_____ Sq. Ft.	<u>0</u> Sq. Ft.	_____ Sq. Ft.
Garage/ Carport	_____ Sq. Ft.	_____ Sq. Ft.	<u>228</u> Sq. Ft.	<u>228</u> Sq. Ft.
<b>Total Floor Area</b>	_____ Sq. Ft.	_____ Sq. Ft.	_____ Sq. Ft.	_____ Sq. Ft.
Accessory Buildings	_____ Sq. Ft.	_____ Sq. Ft.	<u>0</u> Sq. Ft.	_____ Sq. Ft.

Accessory Dwelling Unit	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.	1100	Sq. Ft.
2 <sup>nd</sup> & 3 <sup>rd</sup> Story Roofed	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.	upper	Sq. Ft.
Decks	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.	410	Sq. Ft.
Basement Area	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.
Excluded	_____	Sq. Ft.	390	Sq. Ft.	2261	Sq. Ft.	2651	Sq. Ft.
150% GFA Modifier* (main and upper floor x2)	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.
200% GFA Modifier* (main and upper floor x2)	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.
Staircase GFA Modifier* (x2 for a three story staircase, x3 for a four story staircase)	_____	Sq. Ft.	_____	Sq. Ft.	342 x 2	Sq. Ft.	684	Sq. Ft.
<b>TOTAL Building Area</b>	_____	Sq. Ft.	_____	Sq. Ft.	_____	Sq. Ft.	8093	Sq. Ft.

\*Enter the actual room area

heated

- A. Lot Area \_\_\_\_\_ Square Feet
- B. Zone R-8.4  R-9.6  R-12  R-15
- C. Allowed Gross Floor Area (refer to "allowed GFA") 4 x 17634 = 7054 Square Feet
- D. Allowed Gross Floor Area \_\_\_\_\_ % of Lot
- E. Proposed Gross Floor Area 6764 Square Feet
- F. Proposed Gross Floor Area 3814 % of Lot

Gross floor area calculations found on Plan Sheet #

A-1.5 # ATTACHED MARKUPS  
elevations front & rear

Basement exclusion calculations found on Plan Sheet #

**BUILDING HEIGHT**

All building height measurements must be taken from existing grade or finished grade, whichever is lower. Existing grade refers to ground surface as it exists at the proposed building perimeter before grading or other alterations take place. Finished grade refers to the ground surface as it exists at the building perimeter after grading or other alterations take place.

Single family new construction and additions are limited to a maximum height of 30 ft. above the Average Building Elevation (ABE) – see section on next pages. The height is measured to the top of the structure. On the downhill side of a sloping lot, the wall façade height is also limited to a height of 30 feet measured from existing or finished grade (whichever is lower) to the top of the exterior wall facade supporting the roof framing, rafters, trusses, etc.

A topographic survey is required at permit application when the proposed building height is within 2 ft. of the allowable building height. The survey must include a statement that attests the average contour elevation within the vicinity of the building footprint to be accurate within 6 inches vertically and horizontally from actual elevations.

**BUILDING HEIGHT CALCULATIONS**

- A. Average Building Elevation (ABE) calculations located on sheet #: 62.58 A-1.5 / A-1.1
- B. Allowable Building Height (ABE + 30 ft.) 92.58 Feet
- C. Proposed Building Height 92.58 Feet
- D. Benchmark Elevation\* monument to be set @ angle corner A-1.1 Feet
- E. Describe Benchmark Location (must be undisturbed throughout project) Pin/hub set by terrane prior to construction

F. Sloping lot (Downhill side)- maximum height of top of exterior wall façade above lowest existing grade (30-ft max)

see south elev 30 Feet  
4-7.1, 7.2, A7.3  
A-1.3, A-1.4

G. ABE and Allowable Building Height Shown on elevations plan sheet #

H. Topo-survey Accuracy Attested on Plan Sheet #

Note: survey must attest to accuracy when proposed building height is within 2 feet of the allowable building height. Please see page 8 for more information on calculating Average Building Elevation (ABE)

\*The benchmark elevation is a fixed elevation point on or off site that will not be disturbed during development activity and is used to verify the final building height.

### BASEMENT FLOOR AREA CALCULATION

The Mercer Island Development Code allows for the portion of the basement floor area which is below grade to be excluded from the Gross Floor Area. That portion of the basement which will be excluded is calculated as shown:

Portion of Excluded Basement Floor Area = Total Basement Area x

$$\frac{\sum (\text{Wall Segment Coverage} \times \text{Wall Segment Length})}{\text{Total of all Wall Segment lengths}}$$

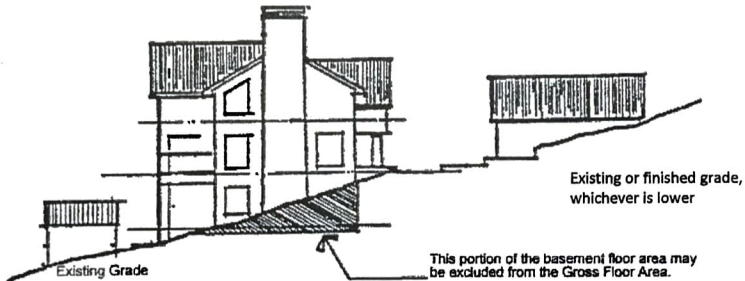
Where the terms are defined as follows:

**Total Basement Area:** The total amount of all basement floor area.

**Wall Segment:** The portion of an exterior wall below existing or finished grade, whichever is lower. It is

**Coverage:** expressed as a percentage. Refer to example below.

**Wall Segment Length:** The horizontal length of each exterior wall in feet.



### EXAMPLE OF BASEMENT FLOOR AREA CALCULATION

This example illustrates how a portion of the basement floor area may be excluded from the Gross Floor Area. In order to complete this example, the following information is needed:

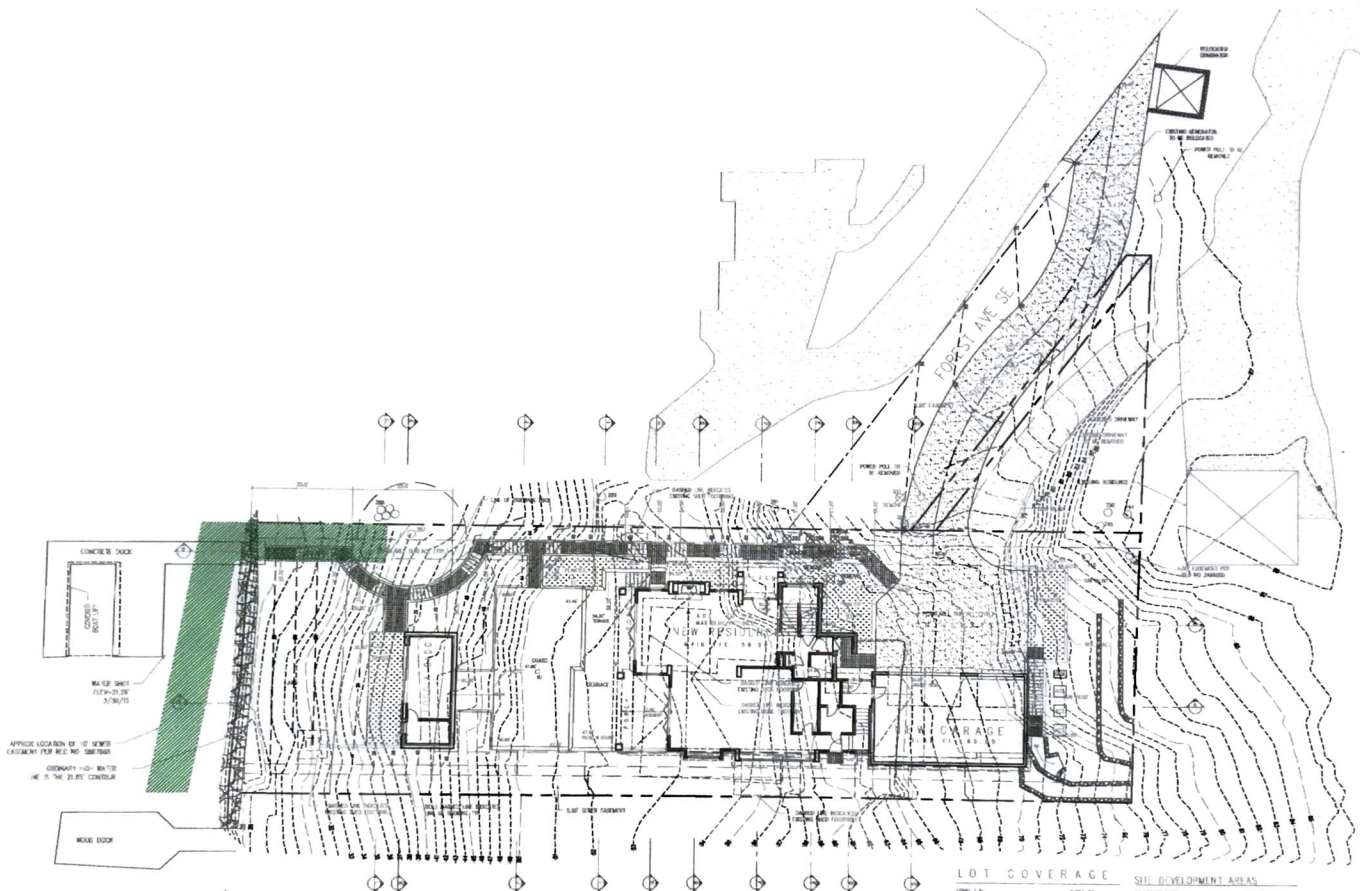
- A topographic map of the existing (e) grades and showing proposed finished (f) grades.
- Building plans showing dimensions of all exterior wall segments and floor areas.
- Building elevations showing the location of existing and finished grades in relation to basement level.

#### Step One

Determine the number and lengths of the Wall Segments.



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SITE PLAN DRIVEWAY OPTION #2 1" = 10'



SCALE 1" = 10'

LOT COVERAGE		SITE DEVELOPMENT AREAS	
AREA A	2,000 SF	LI - SIDEWALK	1,000 SF
AREA B	2,000 SF	LI - SIDEWALK	1,000 SF
AREA C	2,000 SF	LI - SIDEWALK	1,000 SF
AREA D	2,000 SF	LI - SIDEWALK	1,000 SF
AREA E	2,000 SF	LI - SIDEWALK	1,000 SF
AREA F	2,000 SF	LI - SIDEWALK	1,000 SF
AREA G	2,000 SF	LI - SIDEWALK	1,000 SF
AREA H	2,000 SF	LI - SIDEWALK	1,000 SF
AREA I	2,000 SF	LI - SIDEWALK	1,000 SF
AREA J	2,000 SF	LI - SIDEWALK	1,000 SF
AREA K	2,000 SF	LI - SIDEWALK	1,000 SF
AREA L	2,000 SF	LI - SIDEWALK	1,000 SF
AREA M	2,000 SF	LI - SIDEWALK	1,000 SF
AREA N	2,000 SF	LI - SIDEWALK	1,000 SF
AREA O	2,000 SF	LI - SIDEWALK	1,000 SF
AREA P	2,000 SF	LI - SIDEWALK	1,000 SF
AREA Q	2,000 SF	LI - SIDEWALK	1,000 SF
AREA R	2,000 SF	LI - SIDEWALK	1,000 SF
AREA S	2,000 SF	LI - SIDEWALK	1,000 SF
AREA T	2,000 SF	LI - SIDEWALK	1,000 SF
AREA U	2,000 SF	LI - SIDEWALK	1,000 SF
AREA V	2,000 SF	LI - SIDEWALK	1,000 SF
AREA W	2,000 SF	LI - SIDEWALK	1,000 SF
AREA X	2,000 SF	LI - SIDEWALK	1,000 SF
AREA Y	2,000 SF	LI - SIDEWALK	1,000 SF
AREA Z	2,000 SF	LI - SIDEWALK	1,000 SF

MURRAY RESIDENCE  
NEW SINGLE FAMILY RESIDENCE  
4803 DIPS AVE SE  
WELLS FARGO, WA 98591

REVISIONS  
NO. DATE  
BY  
CHKD  
DATE

