

Site Development Information

Worksheet for single family residential development

Project description: NEW SINGLE FAMILY RES Address: 5637 E. MERCER WAY

Owner Name: MI TREEHOUSE LLC Phone No: 425 454 3096 Date 9.30.16

Signature & phone number of Individual who Completed this Worksheet B. H. Holey 425-454-3096
 (I hereby state that the information provided by me is true and correct to the best of my knowledge)

Will any large trees be removed as a result of this development activity? Yes No

Large tree—conifers ≥ 6' tall, deciduous with diameter > 6"

Do you have an Accessory Dwelling Unit? New ADU Existing ADU None

*This is intended as a worksheet and is not a substitute for the Mercer Island Development Regulations. Please consult the Mercer Island City Code
 City of Mercer Island — Development Services Group 9511 S.E. 35th Street, Mercer Island, Washington 98049 — (206) 275-7505*

DEVELOPMENT INFORMATION

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

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LOT INFORMATION

LOT SLOPE

Highest Elevation Point of Lot	<u>226</u>	feet
Lowest Elevation Point of Lot	<u>159</u>	feet
Elevation Difference	<u>67</u>	feet
Horizontal Distance Between High and Low Points	<u>234</u>	feet
Lot Slope*	<u>28.6</u>	%

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

LOT COVERAGE—On Mercer Island, the overall degree of lot slope governs total lot coverage. When calculating maximum allowable lot coverage, include all impervious surfaces, such as roof areas of primary and accessory buildings, impervious decks, patios, sidewalks, driveways and access easements. Refer to page 3 for more information about Pavers and Other Impervious Surfaces and Exemptions.

*The applicant shall note that impervious surface exemptions to lot coverage do not apply to stormwater runoff calculations or to critical areas.

The table below offers basic guidelines on lot slope and allowable lot coverage:

Lot Slope	Allowed Lot Coverage
Less than 15%	No more than 40%
15% - less than 30%	No more than 35%
30% - 50%	No more than 30%
Greater than 50%	No more than 20%

A steep slope is any slope of 40 percent or greater calculated by measuring the vertical rise over any 30-foot horizontal run.

Please refer to page 3 for materials that are exempt from lot coverage calculations per MIRC 19.02.020(D)(2).

Pavers and gravel surfaces for vehicular access are **ALWAYS** considered 100% impervious.

LOT COVERAGE

Allowed Lot Coverage	<u>35</u>	% of Lot
Gross Lot Area	<u>37,554</u>	Sq. Ft.
Main Structure Roof Area	<u>2238</u>	Sq. Ft.
Accessory Building Roof Area	<u>—</u>	Sq. Ft.
Impervious Deck, Patio, Walkway Area	<u>200</u>	Sq. Ft.
Vehicular Use (Driveway, Access Easements, Parking)	<u>1470</u>	Sq. Ft.
Total Existing Impervious Surface	<u>625</u>	Sq. Ft.
(Total Area Removed)	()	Sq. Ft.
Total New Impervious Surface Area	<u>3908</u>	Sq. Ft.
Total Project Impervious Surface Area (Existing plus new)	<u>4595</u>	Sq. Ft.
Proposed Lot Coverage	<u>12.2</u>	% of Lot

Lot Coverage equals total impervious surface area divided by the gross lot area multiplied by 100

BUILDING AREA—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 to the right.

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 4.

BUILDING AREA	Existing Area	Removed Area	New/Addition Area	Total
Upper Floor	Sq. Ft.	Sq. Ft.	926 Sq. Ft.	926 Sq. Ft.
Main Floor	Sq. Ft.	Sq. Ft.	1632 Sq. Ft.	1632 Sq. Ft.
Gross Basement Area	Sq. Ft.	Sq. Ft.	1100 Sq. Ft.	1100 Sq. Ft.
Garage/Carport	Sq. Ft.	Sq. Ft.	Sq. Ft.	Sq. Ft.
Total Floor Area	Sq. Ft.	Sq. Ft.	3658 Sq. Ft.	3658 Sq. Ft.
Accessory Buildings	Sq. Ft.	Sq. Ft.	Sq. Ft.	Sq. Ft.
Basement Area Excluded ()	Sa. Ft. ()	Sa. Ft. ()	(391) Sa. Ft.	391) Sa. Ft.
TOTAL Building Area	Sq. Ft.	Sq. Ft.	3267 Sq. Ft.	3267 Sq. Ft.

GROSS FLOOR AREA—Gross Floor Area (GFA) is the total square footage of floor area bounded by the exterior faces of a building.

The gross floor area of a single-family dwelling includes:
 a. The main building, including but not limited to attached accessory buildings.

b. All garages and covered parking areas, and detached accessory buildings with a gross floor area over 120 square feet.

c. That portion of a basement which projects above existing grade as defined and calculated in Appendix B of this development code.

Exterior decks and below existing grade areas are excluded. The amount of living space, garages and other accessory buildings on a single family lot is limited to **45% of the net lot area**. Please refer to Pages 4 and 5 for details.

GROSS FLOOR AREA

Net Lot Area **34,409** Sq. Ft.

Net Lot Area Gross = Lot area minus ingress/egress easement

Net Lot Area x 45% equals

Allowed Gross Floor Area **15,484** Sq. Ft.

Proposed Gross Floor Area **3,267** Sq. Ft.

Proposed % of Lot Area **9.4** %

BUILDING HEIGHT – All building height measurements must be taken from existing grade. Existing grade refers to ground surface as it exists at the proposed building perimeter before grading or other alterations take place.

The Average Building Elevation (ABE) is a calculated reference elevation from which the allowable building height is measured. It is a weighted average of the mid-point elevations of the building's wall segments and is established by the following formula:

$$\frac{(\text{Mid-point elevation of individual wall segment}) \times (\text{Length of wall segment})}{(\text{Total length of wall segments})}$$

Single family new construction and additions are limited to a maximum height of 30 ft. above the ABE. The height is measured to the top of the structure. On the downhill side of a sloping lot, the building may extend to a height of 35 feet measured from existing grade to the top of the exterior wall facade supporting the roof framing, rafters, trusses, etc., provided, the roof ridge does not exceed 30 feet in height above the average building elevation.

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

Average Building Elevation (ABE) calculations located on sheet # **183.7**

Allowable Building Height (ABE + 30 ft.): **213.7**

Proposed Building Height (ft.): **31.75'**

Benchmark elevation (ft.):

Describe Benchmark location (must be undisturbed throughout project): **12th CB** **175.5'**

Sloping lot (Downhill side) – maximum height of top exterior wall facade above lowest existing grade (35-ft. max.):

ABE and allowable building height shown on elevations-plan sheet #: **10 SECTION**

Topo-survey accuracy attested on plan sheet #: **SURVEY**

(Note- survey must attest to accuracy when proposed building height is within 2 ft. of the allowable building height)

Please see page 5 for more information about 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 final building height.

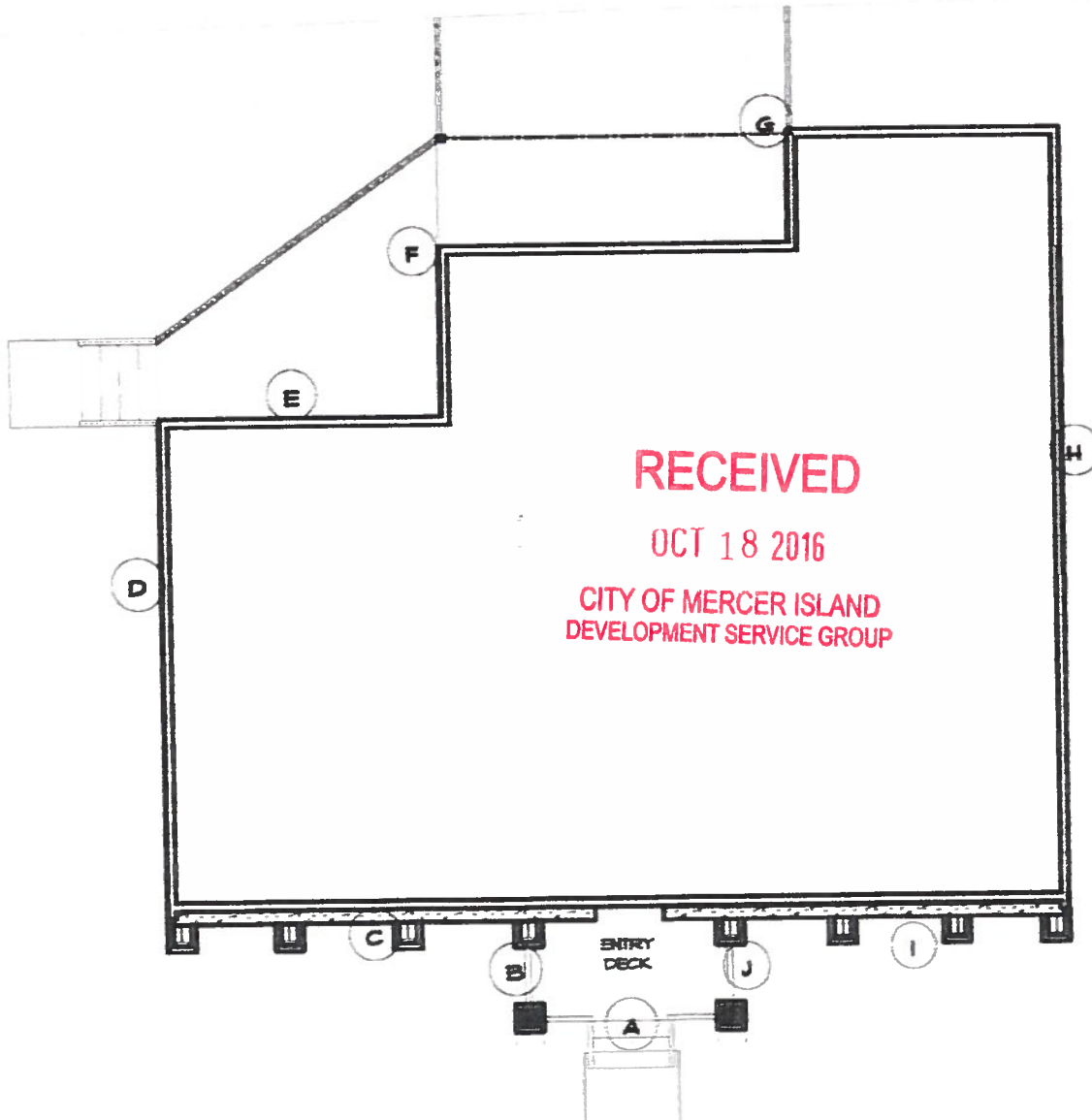
AVERAGE BUILDING ELEVATION

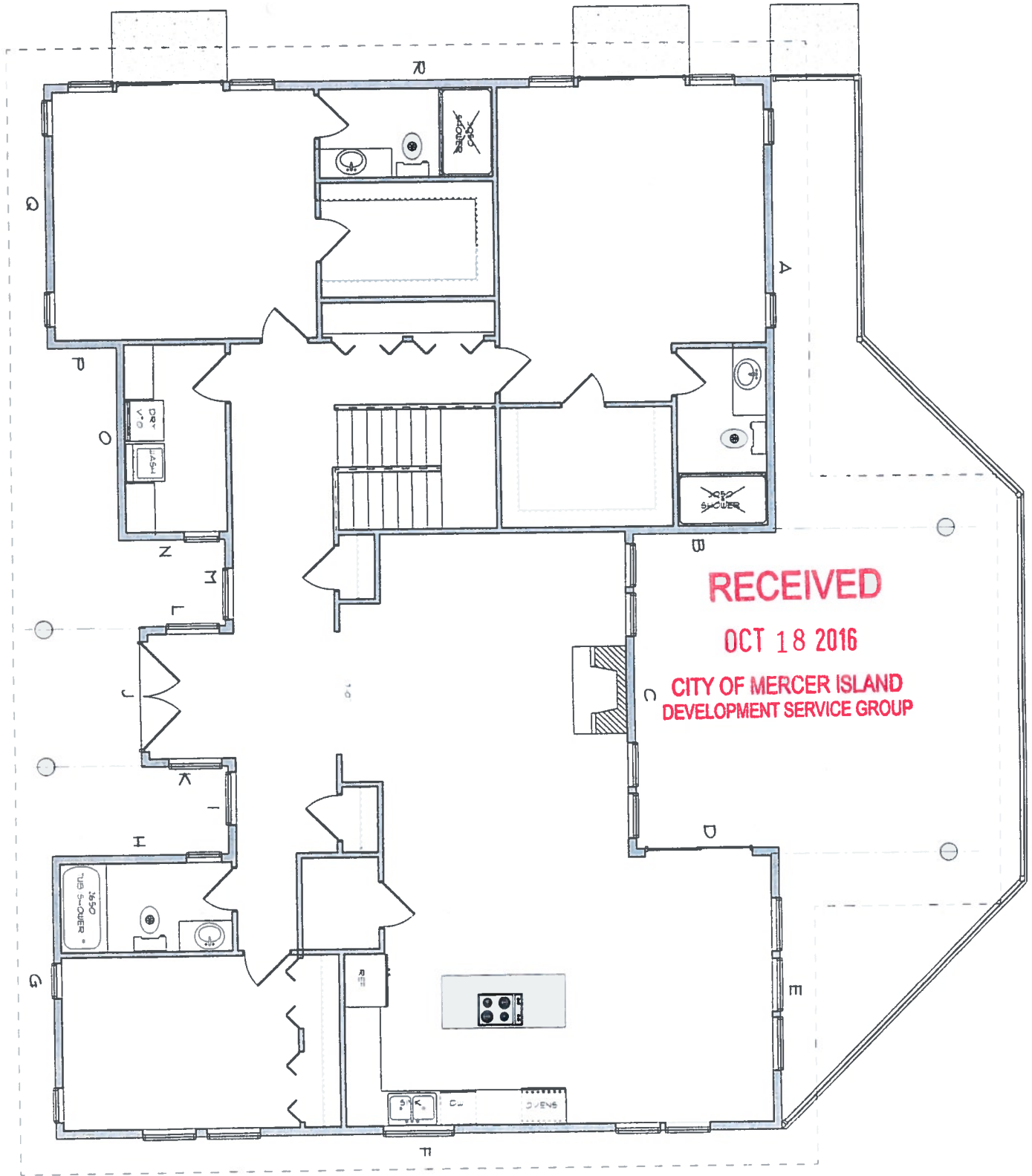
	WALL SEGMENT LENGTH	MIDPOINT ELEVATION	
A	11	188.1	2069.1
B	6	188.2	1129.2
C	19	189	3591
D	26.5	189	5008.5
E	15	185.5	2782.5
F	15	181.9	2728.5
G	33	179	5907
H	42	178	7476
I	18	186.5	3357
J	6	187.5	1125
SUM	191.5		35173.8

ABE

35173.8
191.5

183.6752





ABE CALCULATION 1/2

	length	elevation	total
A	26	186	4836
B	8	181.5	1452
C	18	181.2	3261.6
D	8	178.25	1426
E	16	176.3	2820.8
F	41	176.5	7236.5
G	16	184	2944
H	10	184.6	1846
I	5	184	920
J	5	185	925
K	8	185.5	1484
L	5	186	930
M	5	186.5	932.5
N	6	187	1122
O	11	188	2068
P	4	187	748
Q	15	189.6	2844
R	41	189.8	7781.8
S	248		45578.2

ABE = 183.7831

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ABE CALCULATION 2/2

