

PROJECT TEAM

OWNER:
Tom & Kim TSO
8802 SE 37th St.
Mesracer Island WA 98040
email:

DESIGNER:
Kesh Design Lines
Tel: 425.361.7325
email: kesh@keshdesignlines.com

ENGINEERING:
As Needed

PROPERTY DETAILS

JOB NAME: TSO ADDITION & ADU
SITE ADDRESS:
8802 SE 37th ST. MERCER ISLAND WA 98040

LEGAL DISCRPTION:
MADRONA CREST ADD

ZONING: R-8.4 Single Family(Res Use/Zone)

PARCEL #: 502190-0455

PROJECT NARATIVE

Proposed is a 2 story Addition above and to the rear of the existing 750 SF garage.
One bedroom and One bath on lower level and Master Bed and Bath on upper level -
ADU totaling 844 SF. 894.02 SF
Principal dwelling unit will be owner occupied.
New construction details will follow the existing design of the house including windows,
siding and roof pitch.
2 Additional on site parking will be designated for the ADU
No trees will be removed or disturbed

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- P2 SUPP. SHEET & GFA CALCULATIONS
- A2 GENERAL NOTES
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- D1 DETAILS & NOTES
- D2 DETAILS & NOTES

- STRUCTURAL:
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- S1 FRAMING PLAN
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- STRUCTURAL CALCULATIONS:
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LOT COVERAGE

A. Gross Lot Area	12,100	Square Feet
B. Net Lot Area	10,060 12,100	Square Feet
C. Allowed Lot Coverage Area	4,840	Square Feet
D. Allowed Lot Coverage	40	% of Lot
E. Existing Lot Coverage:		
1. Main Structure Roof Area	2,837 2,873	Square Feet
2. Accessory Building Roof Area	117 94	Square Feet
3. Vehicular Use (driveway, paved access easements [portion used by the lot for access], parking)	790	Square Feet
4. Covered Patios and Covered Decks	216	Square Feet
5. Total Existing Lot Coverage Area (E1+E2+E3+E4)	3,996 3,973	Square Feet
F. (Total Lot Coverage Area Removed)	(117) (94)	Square Feet
G. Proposed Adjustment for Single Story (Area)	0	Square Feet
H. Proposed Adjustment for Flag Lot	0	Square Feet
I. Total New Lot Coverage Area:		
1. Main Structure Roof Area	336 340	Square Feet
2. Accessory Structure Roof Area	0	Square Feet
3. Vehicular Use (driveway, paved access easement [portion used by the lot for access], parking)	0	Square Feet
4. Covered Patios and Covered Decks	0	Square Feet
5. Total New Lot Coverage Area (I1 + I2 + I3 + I4)	336 340	Square Feet
J. Total Project Lot Coverage Area = (E5 - F) + I5	4,216 4,219	Square Feet
K. Proposed Lot Coverage Area = (J/B) x 100	38.46% 38.49%	% of Lot

HARDSCAPE CALCULATIONS

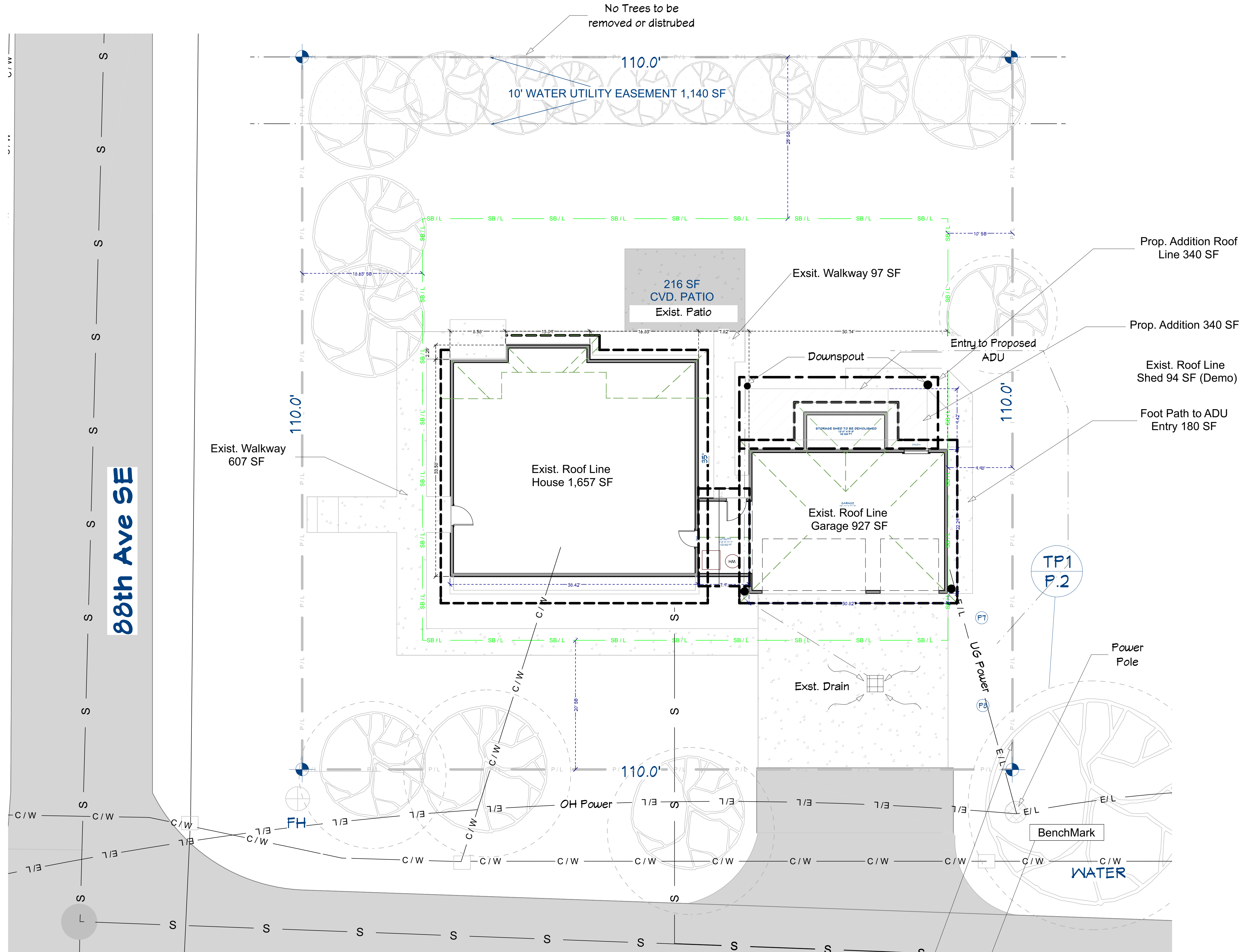
A. Gross Lot Area	12,100	Square Feet
B. Net Lot Area	10,060 12,100	Square Feet
C. Area Borrowed from Lot Coverage	0	Square Feet
D. Allowed Hardscape Area = 9% of lot area + C	9	% of Lot
E. Allowed Hardscape Area	999 1,089	Square Feet
F. Total Existing Hardscape Area:		
1. Uncovered Decks	0	Square Feet
2. Uncovered Patios	0	Square Feet
3. Walkways	703 704	Square Feet
4. Stairs	0	Square Feet
5. Rockeries and Retaining Walls	0	Square Feet
6. Other	0	Square Feet
7. Total Existing Hardscape Area (F1+F2+F3+F4+F5+F6)	703 704	Square Feet
G. (Total Hardscape Area Removed)		
H. Total New Hardscape Area:		
1. Uncovered Decks	0	Square Feet
2. Uncovered Patios	0	Square Feet
3. Walkways	94 180	Square Feet
4. Stairs	0	Square Feet
5. Rockeries and Retaining Walls	0	Square Feet
6. Other	0	Square Feet
7. Total New Hardscape Area (H1+H2+H3+H4+H5+H6)	94 180	Square Feet
I. Total Project Hardscape Area = (F7 - G) + H7	800 884	Square Feet
J. Total Project Hardscape Area = (I/B)x100	7.3% 8.07%	% of Lot

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:	301	Feet
Lowest Elevation Point of Lot:	302	Feet
Elevation Difference:	1	Feet
Horizontal Distance Between High and Low Points:	110	Feet
Lot Slope*	0.91	%



SITE PLAN

SCALE: 1" = 10'-0"

To remain Grass (Critical root zone for city tree)
NOTE: Existing driveway apron will not be extended to ROW.

SHEET NUMBER

P1

DATE: 11.15.22

DRAWN BY: K.C.

SITE PLAN

SCALE: 1" = 10'-0"

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ADDITION & ADU
8802 SE 37th ST. MERCER ISLAND WA 98040

Kesh Design Lines
425 361 7325



APPLICABLE CODES

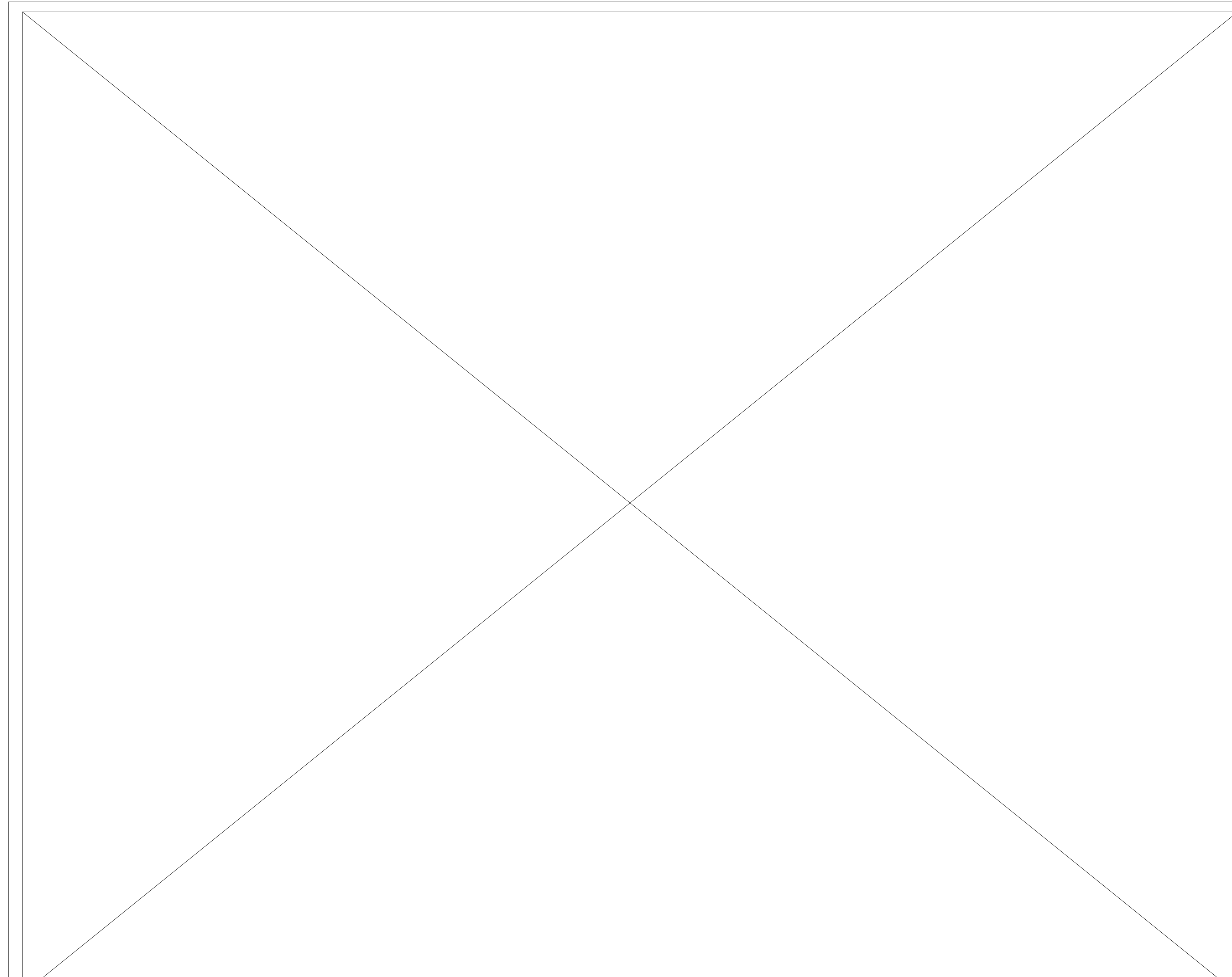
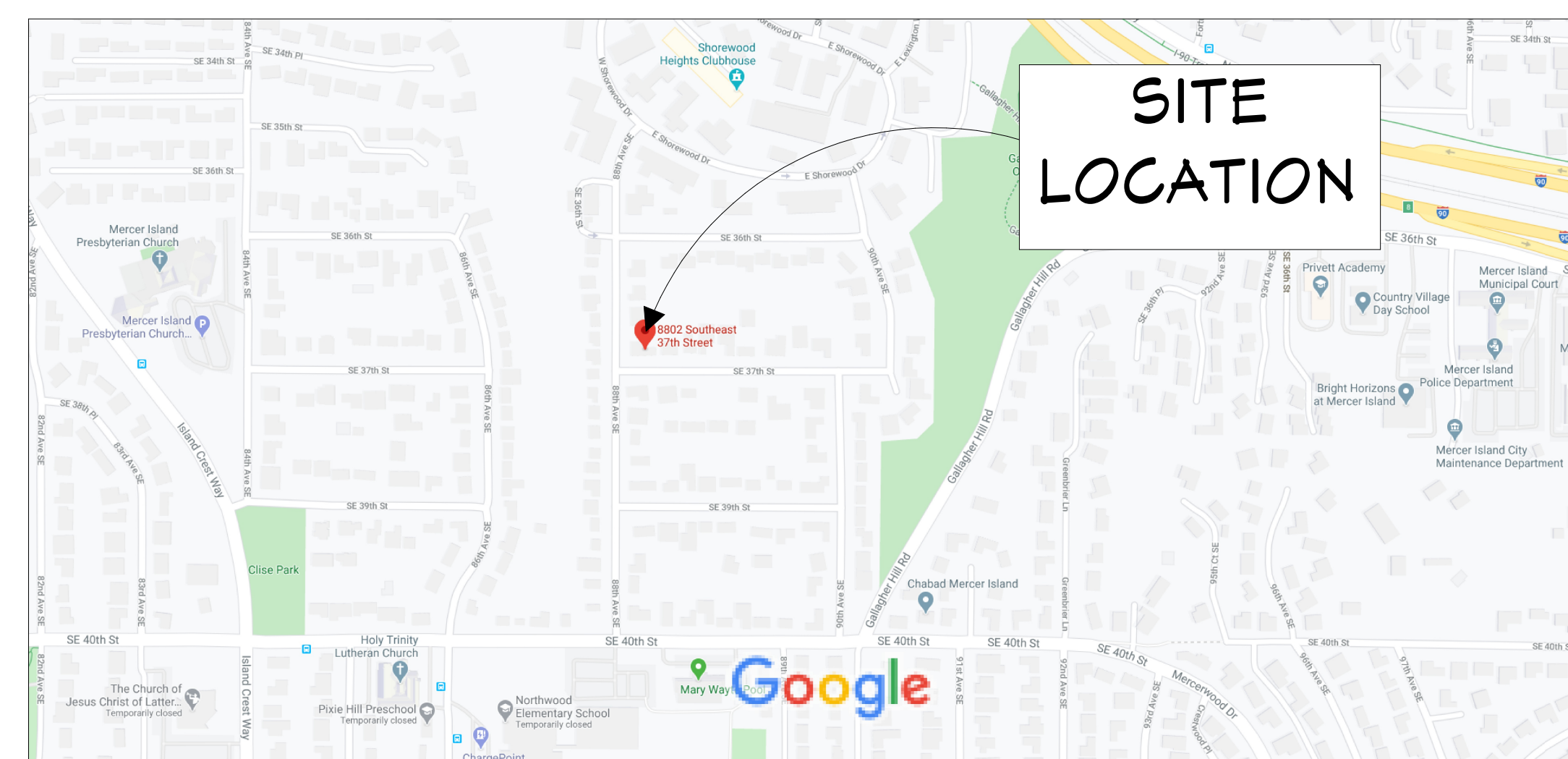
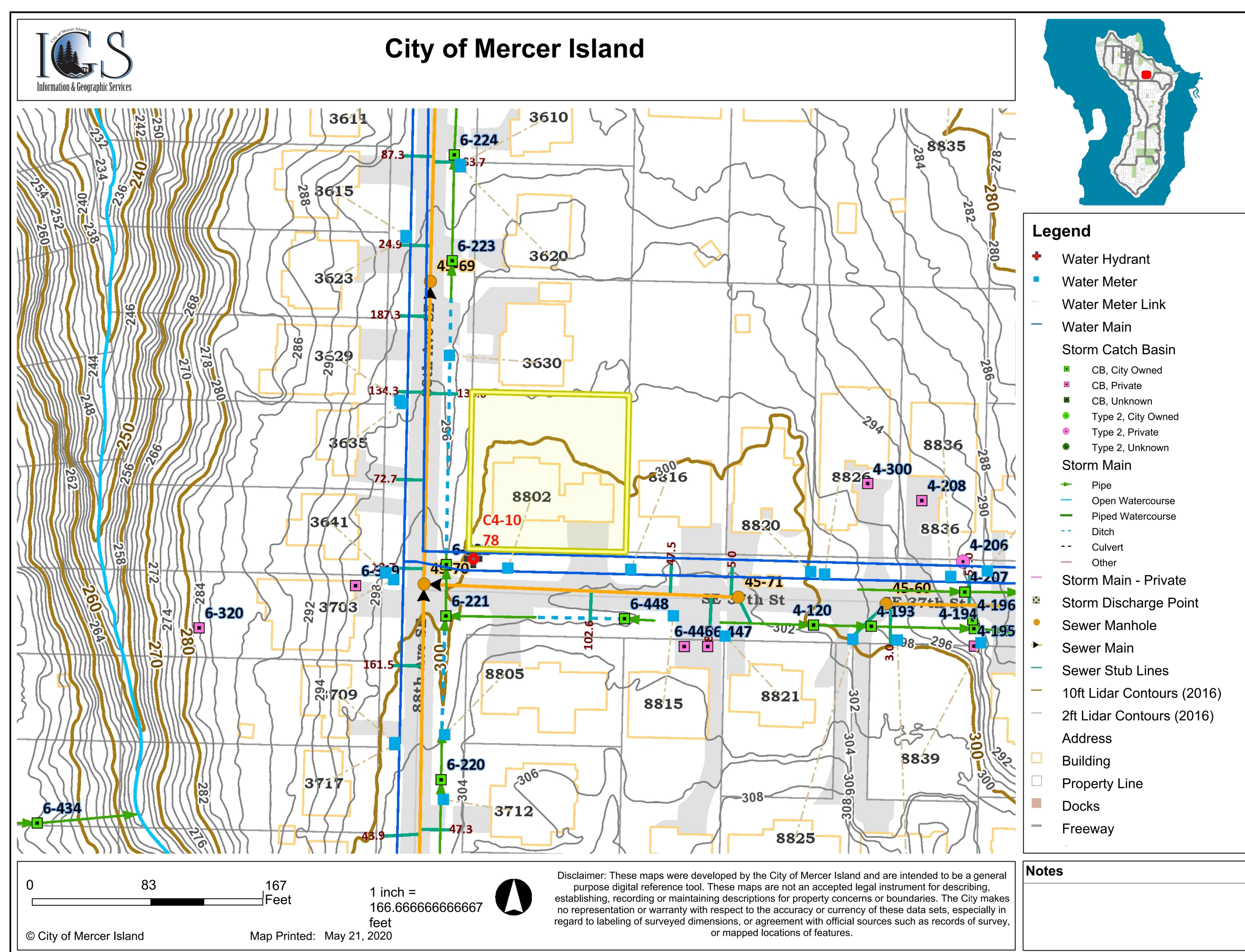
CITY OF MERCER ISLAND MUNICIPAL CODE
 2018 INTERNATIONAL BUILDING CODE
 2018 INTERNATIONAL RESIDENTIAL CODE
 2015 INTERNATIONAL FIRE CODE
 2015 INTERNATIONAL MECHANICAL CODE
 2015 INTERNATIONAL FUEL AND GAS CODE
 2015 UNIFORM PLUMBING CODE
 2012 WASHINGTON CITIES ELECTRICAL CODE
 CITY OF MERCER ISLAND ELECTRICAL CODE
 STATE ENVIRONMENTAL POLICY ACT (SEPA)
 WASHINGTON STATE ENERGY CODE

DESIGN CRITERIA

Wind Speed: 110 mph (IBC Figure 1609A)
 Wind Exposure: Category C
 Kzt Factor: 1.6 Per City of Mercer Island Wind Map
 Ground Snow Load: 25 psf (Snow drift per ASCE 7-10)
 Rain-on-Snow Surcharge: 5 psf added to flat roofs per (ASCE 7-10)
 Seismic Design Category: D2
 Rainfall: 1"/Hr (UPC Table D101.1)
 Soil Bearing Capacity: 1500 psf (IBC Table 1806.2)

COMPLIANCE PATH PRESCRIPTIVE:
 International Residential Code 2018 (IRC 2018)
 with WA State Amendments

TOPO & UTILITIES MAP nts



ADU LOWER FLOOR		
ROOM NAME	AREA, INC. WALLS	NOTES
ADU BATH	45.35	
ADU BEDROOM 1	78.47	
ADU CLOSET 1	6.39	
ADU HALL/ENTRY	129.09	
CEILING HEIGHT MODIFIER	31.18	GRAY AREA
TOTALS:	290.48 SQ. FT.	

ADU UPPER FLOOR	
ROOM NAME	AREA, INC. WALLS
ADU BATH	71.18
ADU BEDROOM 1	142.27
ADU CLOSET	14.58
ADU LAUNDRY	291.40
ADU STORAGE	22.75
ADU OPEN BELOW 33%	46.00
TOTALS:	603.54 SF

ADU TOTAL	
ROOM NAME	AREA, (INC WALLS)
LOWER FLOOR	290.48 SF
UPPER FLOOR	603.54 SF
TOTAL:	894.02 SF

GFA TOTAL	
EXISTING	NEW ADU
3,279 SF	894.02 SF
TOTAL:	4,173.02 SF
4,173.02 / 12,100 = 34.49%	

GROSS FLOOR AREA

Building Area	Existing Area	Removed Area	New/Addition Area	Total
Upper Floor	1,193	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 1,193
Main Floor	1,022	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 1,022
Gross Basement Area	0	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 0
Garage/ Carport	833	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 833
Total Floor Area	3,048	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 3,048
Accessory Buildings	82	Sq. Ft. (82)	Sq. Ft. 0	Sq. Ft. 0
Accessory Dwelling Unit	0	Sq. Ft. 0	Sq. Ft. 894	Sq. Ft. 894
2nd & 3rd Story Roofed Decks	0	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 0
Basement Area	0	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 0
Excluded	0	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 0
150% GFA Modifier* (main and upper floor x2)	0	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 0
200% GFA Modifier* (main and upper floor x2)	231	Sq. Ft. 0	Sq. Ft. 26	Sq. Ft. 257
Staircase GFA Modifier* (x2 for a three story staircase, x3 for a four story staircase)	0	Sq. Ft. 0	Sq. Ft. 0	Sq. Ft. 0
TOTAL Building Area	3,361	Sq. Ft. (82)	Sq. Ft. 900	Sq. Ft. 4,179

*Enter the actual room area

A. Lot Area	12,100	Square Feet
B. Zone R-8.4 <input checked="" type="checkbox"/> R-9.6 <input type="checkbox"/>	R-12 <input type="checkbox"/> R-15 <input type="checkbox"/>	
C. Allowed Gross Floor Area (refer to "allowed GFA")	4,840	Square Feet
D. Allowed Gross Floor Area	40%	% of Lot
E. Proposed Gross Floor Area	3,982	Square Feet
F. Proposed Gross Floor Area	32.90%	% of Lot

Gross floor area calculations found on Plan Sheet # P2
 Basement exclusion calculations found on Plan Sheet # N/A

SHEET NUMBER

P2

Revision #:

DATE: 11.15.22

DRAWN BY: K.C.

**SUPPLEMENTAL SHEET
 GFA CALCULATIONS**

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