



CITY OF MERCER ISLAND

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www.mercergov.org

CRITICAL AREAS DETERMINATION

NOTICE OF DECISION

August 14, 2017

Project Number:	CAO17-002
Description:	An application to reduce the buffer from a Type 2 watercourse from 50 feet to 25 feet. The buffer reduction is for the addition to the existing home and mitigation includes removing a gravel parking pad (impervious surface) and planting native vegetation.
Applicant:	Brad Sturman 7939 139 th Avenue SE Newcastle, WA 98059
Owner:	Carl and Donna Platou 8316 Avalon Drive Mercer Island, WA 98040
Site Address:	8613 Avalon Drive, Mercer Island, WA, 98040; Identified by King County Assessor tax parcel number 032110-0290.
Zoning District:	R-8.4
SEPA Compliance:	The proposal underwent SEPA review, processed under file number SEP17-004. A Determination of Nonsignificance was issued on July 31, 2017.
Exhibits:	<ol style="list-style-type: none">1. Site Plan received by the City on July 3, 2017.2. Development Application received by the City on April 4, 2017.3. Project Narrative received by the City on February 20, 2017.4. Geotechnical Engineering Evaluation, prepared by Michael Xue, Senior Geotechnical Engineer at PanGeo, received by the City on February 20, 2017.5. Critical Areas Study, prepared by John Altmann, Ecologist at Altmann Oliver Associates, received by the City on July 3, 2017.6. Peer Review Memorandum, prepared by ESA, received by the City on May 15, 2017.7. Peer Review Memorandum response by John Altmann received by the City on July 3, 2017.8. SEPA Environmental Checklist received by the City on April 4, 2017.9. Determination of Nonsignificance for SEP17-004 issued July 31, 2017.

I. FINDINGS OF FACT

1. Application Description:

The request is for approval of a critical areas determination for the reduction of a required buffer associated with a Type 2 watercourse. The proposal is to reduce the 50-foot buffer from the Type 2 stream to 25 feet to allow for the construction of a 135 square foot addition to an existing garage attached to a single family residence. Mitigation for the 135 square foot encroachment into the current buffer includes the removal of approximately 450 square feet of impervious surface (gravel parking pad) located within the stream buffer. The applicant is also proposing to replant the watercourse buffer with native vegetation as a part of their mitigation. A network of cedar chip pathways will be installed for the purpose of granting maintenance access to the buffer plantings.

2. Zoning:

The existing zoning of the subject site is Single Family Residential R-8.4 (8,400 square foot minimum lot area).

3. Adjacent Land Use:

The surrounding land uses consist of single family residences to the East, North, and West. The Mercer Island Beach Club, a private recreation area, is located to the south of the subject property.

4. Consistency with Land Use Code/Zoning Requirements:

MICC 19.16 Definitions "Critical Area Determination" states that the land use application is "An administrative action by the code official pursuant to MICC 19.15.010(E) to allow reduction or averaging of a wetland or watercourse buffer, or alteration of a steep slope." The applicant has applied for a Critical Areas Determination to do reduce the buffer of a Type 2 watercourse from 50 feet to 25 feet, and to replant the buffer in native vegetation as mitigation.

Mercer Island City Code (MICC) MICC 19.07.070(B)(2) allows for watercourse buffer reduction provided the following are met:

- a. The code official may allow the standard buffer width to be reduced to not less than the [minimum width as specified in MICC 19.07.070(B)(1)] in accordance with an approved critical area study when he/she determines that a smaller area is adequate to protect the watercourse, the impacts will be mitigated using the combinations of the below mitigation options, and the proposal will result in no net loss of watercourse and buffer functions. However, in no case shall a reduced buffer contain a steep slope.
- b. The code official may consider the following mitigation options:
 - i. Permanent removal of impervious surfaces and replacement with native vegetation;
 - ii. Installation of biofiltration mechanisms such as bioswales, created and/or enhanced wetlands, or ponds supplemental to existing storm drainage and water quality requirements;
 - iii. Removal of noxious weeds, replanting with native vegetation and five-year monitoring;
 - iv. Habitat enhancement within the watercourse such as log structure placement, bioengineered bank stabilization, culvert removal, improved salmonid passage and/or creation of side channel or backwater areas;
 - v. Use of best management practices (e.g., oil/water separators) for storm water quality control exceeding standard requirements;
 - vi. Installation of pervious material for driveway or road construction;

- vii. Use of “green” roofs in accordance with the standards of the LEED Green Building Rating System;
- viii. Restoration of off-site area if no on-site area is possible;
- ix. Removal of sources of toxic material that predate the applicant’s ownership; and
- x. Opening of previously channelized and culverted watercourses.

5. SEPA Compliance:

A SEPA Environmental Checklist (Exhibit 8) was received by the City on April 4, 2017 and processed under file number SEP17-004. A Determination of Non Significance (Exhibit 9) was issued for this project on July 31, 2017.

6. Public Noticing and Comments:

There is no public hearing requirement for a critical areas determination (an administrative action) per MICC 19.15.010(E) and 19.15.020(F)(1). On April 3, 2017, City staff sent a Public Notice of Application to all property owners within 300 feet of the subject property and placed the Public Notice of Application in the City Weekly Permit Bulletin. The site was posted with a public notice sign, in a location that is visible to the public right-of-way on April 3, 2017 as required by MICC 19.15.020(E)(4)(a). A public comment period ran from April 3, 2017 through 5:00 P.M. on April 17, 2017. No comments were received during the public comment period.

8. MICC 19.07.070(A):

Watercourses – Designation and Typing. Watercourses shall be designated as Type 1, Type 2, Type 3 and Restored according to the following criteria:

1. Type 1 Watercourse. Watercourses or reaches of watercourses used by fish, or are downstream of areas used by fish.
2. Type 2 Watercourse. Watercourses or reaches of watercourses with year-round flow, not used by fish.
3. Type 3 Watercourse. Watercourses or reaches of watercourses with intermittent or seasonal flow and not used by fish.
4. Restored Watercourse. Any Type 1, 2 or 3 watercourses created from the opening of previously piped, channelized or culverted watercourses.

Staff Analysis:

The applicant provided a critical areas study (Exhibit 5), which states that the watercourse “does not contain fish habitat but does likely convey perennial flows. Watercourses in the City of Mercer Island that contain perennial flows without fish habitat are considered Type 2 watercourses per MICC 19.07.070(A).”

9. MICC 19.07.070(B)(1):

Watercourse Buffer Widths. Standard buffer widths shall be as follows, measured from the ordinary high water mark (OHW), or top of bank if the OHW cannot be determined through simple nontechnical observations.

Watercourse Type	Standard (Base) Buffer Width (feet)	Minimum Buffer Width with Enhancement (feet)
Type 1	75	37
Type 2	50	25
Type 3	35	25
Restored or Piped	25	Determined by the code official

Staff Analysis:

As stated above, both the City's resources and the applicant's critical areas study (Exhibit 5) identify the existing watercourse as a Type 2 watercourse that are subject to a 50 foot regulated buffer that may be reduced to a minimum buffer width of 25 feet with an approved critical areas determination. Staff finds that the mitigation proposed by the applicant will result in no adverse impact on the watercourse, provided that the conditions below are met.

10. MICC 19.07.070(B)(2):

Reduction of Buffer Widths. The code official may allow the standard buffer width to be reduced subject to the following:

- a. The code official may allow the standard buffer width to be reduced to not less than the [minimum width as specified in MICC 19.07.070(B)(1)] in accordance with an approved critical area study when h/she determines that a smaller area is adequate to protect the watercourse, the impacts will be mitigated using the combinations of the below mitigation options, and the proposal will result in no net loss of watercourse and buffer functions. However, in no case shall a reduced buffer contain a steep slope.
- b. The code official may consider the following mitigation options:
 - i. Permanent removal of impervious surfaces and replacement with native vegetation;
 - ii. Installation of biofiltration mechanisms such as bioswales, created and/or enhanced wetlands, or ponds supplemental to existing storm drainage and water quality requirements;
 - iii. Removal of noxious weeds, replanting with native vegetation and five-year monitoring;
 - iv. Habitat enhancement within the watercourse such as log structure placement, bioengineered bank stabilization, culvert removal, improved salmonid passage and/or creation of side channel or backwater areas;
 - v. Use of best management practices (e.g., oil/water separators) for storm water quality control exceeding standard requirements;
 - vi. Installation of pervious material for driveway or road construction;
 - vii. Use of "green" roofs in accordance with the standards of the LEED Green Building Rating System;
 - viii. Restoration of off-site area if no on-site area is possible;
 - ix. Removal of sources of toxic material that predate the applicant's ownership; and
 - x. Opening of previously channelized and culverted watercourses.

Staff Analysis:

The applicant is proposing to reduce a Type 2 watercourse buffer from 50 feet to 25 feet in order to construct an addition to an existing single family residence.

As mitigation for the buffer reduction, the applicant is proposing to remove much of the existing vegetation within the buffer and replace it with native vegetation, consistent with MICC 19.07.070(B)(3)(b)(iii) (Exhibits 1, 3, 5, and 7). Additionally, the applicant has proposed to remove an impervious, gravel parking pad within the buffer and to replant the area with native vegetation (Exhibits 1, 5, and 7). The removal of the gravel pad would remove about 450 square feet of impervious surface from the watercourse buffer, consistent with MICC 19.07.070(B)(3)(b)(i).

Staff finds that the proposed buffer reduction will not cause adverse impact on the watercourse, provided the mitigation measures proposed by the applicant (Exhibits 1, 3, 5, and 7) are implemented and the conditions below are met.

10. MICC 19.07.040(J)(1):

Maintenance and Monitoring. Landscape maintenance and monitoring may be required for up to five years from the date of project completion if the code official determines such condition is necessary to ensure mitigation success and critical area protection.

Staff Analysis:

Staff finds that project approval may be conditioned with a five year maintenance bond or assignment of funds. Additionally, a financial guarantee (e.g. bond, cash deposit, or assignment of funds) is typically required for critical area mitigation projects prior to the issuance of any permit for clearing, grading, or building. In some circumstances, the code official shall have the discretion to waive the requirement for bonding or an assignment of funds. Staff finds this is an appropriate condition of approval.

11. MICC 19.07.040(J)(2):

Maintenance and Monitoring. Where monitoring reveals a significant variance from predicted impacts or a failure of protection measures, the applicant shall be responsible for appropriate corrective action, which may be subject to further monitoring.

Staff Analysis:

Staff finds that this requirement is appropriate as a condition of approval.

12. Permit Expiration:

MICC 19.15.020(K) states "Except for building permits or unless otherwise conditioned in the approval process, permits shall expire one year from the date of notice of decision if the activity approved by the permit is not exercised. Responsibility for knowledge of the expiration date shall be with the applicant."

Staff Analysis:

Staff finds that this requirement shall carry with the proposal, and is appropriate as a condition of approval.

II. CONCLUSIONS OF LAW

Based on the above Findings of Facts, the following Conclusions of Law have been made:

1. The subject property contains a Type 2 watercourse associated buffer.
2. The Type 2 watercourse buffer will not be less than 25 feet, which is the minimum buffer specified in MICC 19.07.070(B)(1).
3. An approved critical areas study was submitted (Exhibit 5).
4. The buffer reduction will not result in a net reduction of critical area function.
5. A financial guarantee (e.g. bond, cash deposit, or assignment of funds) may be required for critical area mitigation prior to the issuance of any permit for clearing, grading, or building.
6. As shown in Exhibit 1 and Exhibit 5, no portion of the reduced Type 2 watercourse buffer is on a steep slope.
7. Approximately 450 square feet of impervious surface will be removed within the buffer and replaced with native vegetation.
8. The applicant will replant the reduced buffer using native vegetation.

III. DECISION

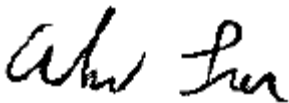
Based upon the above noted Findings of Fact and Conclusions of Law, critical areas determination application CAO17-002 to reduce a 50-foot Type 2 watercourse buffer, as depicted by Exhibits 1, 3, 4, 5 and 7, is hereby **APPROVED** subject to the Conditions of Approval. This decision is final, unless appealed in writing consistent with adopted appeal procedures.

IV. CONDITIONS OF APPROVAL

The following conditions shall be binding on the "Applicant," which shall include owner or owners of the property, heirs, assigns and successors.

1. The applicant shall provide additional Geotechnical review during construction and the building permit application. In addition, the City shall require field observation during the removal of the gravel parking pad and the native vegetation planting.
2. The approval of the permit is based on the proposal substantially complying with the submittal, as demonstrated in Exhibits 1, 3, 5, and 7.
3. The applicant shall complete a King County Critical Area Bond Quantity Worksheet and submit to the Code Official for review and approval. To view this worksheet please visit: <http://www.kingcounty.gov/~media/depts/permitting-environmental-review/dper/documents/forms/ls-wks-sensareaBQ-pdf.ashx?la=en>
4. The applicant shall submit a revised mitigation plan including a planting plan, monitoring protocols and performance measurements prior to building permit issuance.
5. Upon completion of the mitigation work, a letter written by a qualified professional detailing compliance with the approved mitigation plan shall be submitted to the City of Mercer Island Development Services Group. The compliance letter shall be accompanied by a set of as-built drawings depicting type and location of mitigation plantings. A maintenance and monitoring memo shall be submitted to the City of Mercer Island Development Services Group annually for a period of five years. Plant survival rates are to meet or exceed those set out in Exhibit 5.
6. This permit approval shall expire one year from the date of notice of decision if the activity approved by the permit is not exercised.
7. The applicant shall obtain all required permits for construction.
8. The applicant shall install and have inspected full temporary erosion and sediment control measures prior to construction.

Approved this 14th day of August, 2017.



Andrew Leon
Planner
Development Services Group
City of Mercer Island

Parties of record have the right to appeal the decision on this action when it is issued. If at that time you desire to file an appeal, you must submit the appropriate form, available from the Development Services Group, and file it with the City Clerk within fourteen (14) days from the date this decision is signed. Upon receipt of a timely complete appeal application and appeal fee, an appeal hearing will be scheduled. To reverse, modify or remand this decision, the appeal hearing body must find that there has been substantial error, the proceedings were

materially affected by irregularities in procedure, the decision was unsupported by material and substantial evidence in view of the entire record, or the decision is in conflict with the city's applicable decision criteria.

Please note that the City will provide notice of this decision to the King County Department of Assessment, as required by State Law (RCW 36.70B.130). Pursuant to RCW 84.41.030(1), affected property owners may request a change in valuation for property tax purposes notwithstanding any program of revaluation by contacting the King County Department of Assessment at (206) 296-7300.

GENERAL NOTES

- CODE COMPLIANCE
ALL WORK SHALL COMPLY WITH THE 2015 IBC, 2015 IRC, 2015 IFGC, 2015 UPC, 2015 IPCM, 2008 NEC, 2015 INTERNATIONAL ENERGY CONSERVATION CODE WITH WASHINGTON STATE AMENDMENTS, 2009 ICC A117.1, AND WITH ALL LOCAL CODES AND ORDINANCES.
- DIMENSIONS
DO NOT SCALE DRAWINGS. VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION. NOTIFY THE ARCHITECT OF DISCREPANCIES. IF WORK IS STARTED PRIOR TO NOTIFICATION, THE GENERAL AND SUBCONTRACTOR PROCEED AT THEIR OWN RISK.
UNLESS OTHERWISE NOTED, PLAN DIMENSIONS ARE TO FACE OF STUDS OR FACE OF CONCRETE WALLS. FACE OF STONE VENEER LIES 6" +/- OUTSIDE THE FACE OF FRAMING. INTERIOR PLAN DIMENSIONS ARE TO FACE OF STUDS UNLESS OTHERWISE NOTED.
VERIFY ALL ROUGH-IN DIMENSIONS FOR WINDOWS, DOORS, PLUMBING, ELECTRICAL FIXTURES AND APPLIANCES PRIOR TO COMMITMENT OF WORK. NOTIFY ARCHITECT OF ANY DISCREPANCIES OF DIMENSIONAL TOLERANCES REQUIRED.
- DOCUMENT REVIEW/REVISIONS
CONSULT WITH ARCHITECT REGARDING ANY SUSPECTED ERRORS, OMISSIONS, OR CHANGES ON PLANS BEFORE PROCEEDING WITH THE WORK
ROUGH OPENINGS/BACKING
VERIFY SIZE AND LOCATION, AS WELL AS PROVIDE ALL OPENINGS THROUGH FLOORS AND WALLS. FURRING, CURBS, ANCHORS, INSERTS, EQUIPMENT BASES AND ROUGH BACKS/BACKING FOR SURFACE-MOUNTED ITEMS.
FURRING: PROVIDE FURRING AS REQUIRED TO EQUAL MECHANICAL AND/OR ELECTRICAL EQUIPMENT IN FINISHED AREAS. FURRING NOT SHOWN ON PLANS SHALL BE APPROVED BY ARCHITECT PRIOR TO CONSTRUCTION.
GRADES: VERIFY ALL GRADES AND THEIR RELATIONSHIP TO THE BUILDING(S).
FLOOR LINES: "FLOOR LINE" REFERS TO TOP OF CONCRETE SLAB OR TOP OF WOOD SUBFLOOR.
REPEATITIVE FEATURES: OFTEN DRAWN ONLY ONCE AND SHALL BE PROVIDED AS IF FULLY DRAWN.
DOORS
DOORS NOT DIMENSIONALLY LOCATED SHALL BE 6" FROM STUD FACE TO EDGE OF DOOR. ROUGH OPENING OR CENTERED BETWEEN WALLS AS SHOWN (IONS OF UTILITY SERVICES AND ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE)
WOOD MEMBERS IN CONTACT WITH CONCRETE, AND/OR EXPOSED TO WEATHER: TO BE PRESSURE TREATED, TYPICAL. PROVIDE PRESSURE TREATED SILL PLATE IF FINISH GRADE IS WITHIN 8", TYPICAL.
FRAMING
ALL NEW INTERIOR FRAME PARTITIONS TO BE 2X4 @ 16" O.C., & ALL NEW EXTERIOR FRAME PARTITIONS TO BE 2X6 @ 16" O.C. UNLESS OTHERWISE NOTED. VERIFY W/ STRUCTURAL DRAWINGS. EXISTING EXTERIOR WALLS ARE 2X4 STUDS @ 16" O.C., AND ARE TO REMAIN.
VENTILATION
VENT ALL BATHROOM FANS, LAUNDRY FANS, RANGE HOODS AND DRYERS TO OUTSIDE ATMOSPHERE. BATHROOM/UTILITY ROOM FANS SHALL BE CAPABLE OF 5 AIR CHANGES PER HOUR AND SHALL BE VENTED DIRECTLY TO THE OUTSIDE THROUGH SMOOTH, RIGID, NON-CORROSIVE METAL, 24 GA. DUCTWORK. FLEX DUCTING IS NOT ALLOWED.
FLUES: FLUES TO BE LOCATED MINIMUM 2" FROM ALL COMBUSTIBLE MATERIALS.
DOWNSPOUTS: LOCATE NEW DOWNSPOUTS AS SHOWN ON ROOF PLAN, FLOOR PLANS & ELEVATIONS. OTHER DOCUMENTATION
REFER TO STRUCTURAL, MECHANICAL, ELECTRICAL, AND/OR LANDSCAPE DRAWINGS FOR ADDITIONAL DRAWINGS, NOTES, SCHEDULES, AND SYMBOLS.
PROTECTION:
PROTECT ALL EXISTING FINISHES AND SURFACES. ANY DAMAGE WILL BE REPAIRED WITHOUT ADDITIONAL COST TO OWNER.
PERMITS
SEPARATE ELECTRICAL, MECHANICAL, AND PLUMBING PERMITS ARE REQUIRED IN ADDITION TO THE BASIC BUILDING PERMIT
ROOFING: PROVIDE NEW ROOFING TO MATCH EXISTING.
EXHAUST DUCTS: PROVIDE BACKDRAFT DAMPERS AT ALL EXHAUST DUCTS.
PROVIDE COMBUSTION AIR OPENINGS INTO FURNACE ROOM PER UMC 703.
APPLIANCES
CLEARANCES OF UL LISTED APPLIANCES FROM COMBUSTIBLE MATERIALS SHALL BE AS SPECIFIED IN UL LISTING.
WATER FLOW:
SHOWER SHALL BE EQUIPPED WITH FLOW CONTROL DEVICE TO LIMIT WATER FLOW TO 2.5 GALLONS PER MINUTE.
SMOKE DETECTORS:
SMOKE & CARBON MONOXIDE THROUGH NEW CONSTRUCTION, TO BE MONITORED PER FIRE DEPARTMENT REQUIREMENTS.

PROJECT DATA

PROJECT ADDRESS: 8316 AVALON DRIVE
MERCER ISLAND, WA 98040

PROPERTY TAX ID NUMBER: 032110-0280

SCOPE OF WORK: ADDITION TO AND RECONSTRUCTION OF EXISTING GARAGE, ADDITIONS TO AND RENOVATIONS OF EXISTING PERVIOUS DECK, WITH NEW ROOF OVER PORTION OF DECK.

ZONING: R-8.4

CONSTRUCTION TYPE: TYPE V B

SEISMIC ZONE: 3

NUMBER OF STORIES: 2 STORY + DAYLIGHT BASEMENT

FIRE PROTECTION: 13D FIRE SPRINKLERS & FIRE CODE ALT. T.B.D.

BUILDING HEIGHT: 30 FT ABOVE AVERAGE BUILDING ELEVATION

LOT AREA: 18,528 SF

SETBACKS: FRONT LOT LINE = 20 FT
REAR LOT LINE = 25 FT
SIDE LOT LINES = SUM 15 FT, MIN 5' EACH

LEGAL DESCRIPTION

AVALON PARK ADD. PLAT BLOCK 4, PLAT LOT 10, QUARTER-SECTION-TOWNSHIP-RANGE NW-31-24-5.

2015 WSEC CREDITS

PROJECT IS AN ADDITION OF MORE THAN 500 SQ FT CONDITIONED AREA AND LESS THAN 1,500 SQ FT CONDITIONED AREA, AND SO IS A SMALL DWELLING UNIT REQUIRING 1.5 CREDITS

CREDITS	OPTION	DESCRIPTION
1.0	3A	INSTALL A HIGH EFFICIENCY FURNACE W/ MIN AFUE OF 94%
1.0	3B	INSTALL A DUCTLESS SPLIT SYSTEM HEAT PUMP
1.0	5D	INSTALL GAS, OIL, OR PROPANE HEATER W/ MIN. EFFICIENCY OF .74
TOTAL CREDITS		3.0

CUT/FILL

CUT = 22 C.Y.
FILL = 0 C.Y.

ENERGY NOTES

CODE: 2015 W.S.E.C. & 2015 IRC, WAC 51-11R

CLIMATIC ZONE: ZONE #4C

SPACE HEAT TYPE: NATURAL GAS, IN-FLOOR RADIANT HEAT

INSULATION VALUES:
WALLS: R-21
FLAT ATTIC/CEILING: R-49
VAULTED CEILING: R-38
FLOORS (OVER UNHEATED SPACES): R-30
SLAB-ON-GRADE: R-10

THERMAL STANDARDS FOR OPENINGS:
UNLIMITED OPTION

AIR INFILTRATION:
MANUFACTURED DOORS/WINDOWS: CONFORM TO SECTION 502.1.5 OF THE WASHINGTON STATE ENERGY CODE

EXTERIOR JOINTS/OPENINGS: SEAL, CAULK, GASKET OR WEATHERSTRIP TO LIMIT AIR LEAKAGE AT EXTERIOR JOINTS AROUND WINDOW AND DOOR FRAMES. OPENINGS BETWEEN WALLS AND FOUNDATION, BETWEEN WALLS AND ROOF; OPENINGS AT PENETRATIONS FOR UTILITY SERVICES AND ALL OTHER SUCH OPENINGS IN THE BUILDING ENVELOPE

MOISTURE CONTROL:
WALLS: VAPOR RETARDER BONDED TO BATT INSULATION. INSTALL WITH STAPLES NOT MORE THAN 8 INCHES ON CENTER AND WITH A GAP BETWEEN AND OVER FRAMING NOT GREATER THAN 1/16 OF AN INCH. OR, VAPOR RETARDER OF ONE PERM CUP RATING (4 MIL POLYETHYLENE).
ATTICS/CEILING: VAPOR RETARDER OF ONE PERM CUP RATING (4 MIL POLYETHYLENE). INSTALL CONTINUOUSLY
CRAWL SPACE: 6 MIL POLYETHYLENE

VENTILATION:
ATTICS WITH LOOSE FILL: N.A. Baffle vent openings to deflect air above INSULATION SURFACE
ENCLOSED JOIST OR RAFTER SPACES: PROVIDE MINIMUM OF ONE INCH CLEAR VENTED AIR SPACE ABOVE INSULATION. TAPER OR COMPRESS INSULATION AT PERIMETER TO INSURE PROPER VENTILATION

HEATING & COOLING:
IN-FLOOR RADIANT HEATING

TEMP. CONTROL:
FOR HEATING AND COOLING, THERMOSTAT SHALL BE CAPABLE OF BEING SET FROM 55-85 DEGREES FAHRENHEIT AND OF OPERATING THE HEATING/COOLING SYSTEM IN SEQUENCE. THERMOSTAT TO BE AUTOMATIC DAY/NIGHT SETBACK TYPE.

DUCT INSULATION:
THERMALLY INSULATE ALL PLENUMS, DUCTS AND ENCLOSURES IN ACCORDANCE WITH TABLE 5-11 OF THE WASHINGTON STATE ENERGY CODE.
a. ALL HEATING DUCTS IN UNCONDITIONED SPACES SHALL BE INSULATED WITH A MIN. OF R-8. ALL SEAM JOINTS SHALL BE TAPED, SEALED AND FASTENED WITH THE MINIMUM OF FASTENERS PER WSEC.

LIGHTING:
RECESSED LIGHTING FIXTURES INSTALLED IN BUILDING ENVELOPE SHALL COMPLY WITH WSEC PROVISIONS AND SHALL BE IC LISTED.
ALL ROOMS WITHOUT GLAZING SHALL HAVE ARTIFICIAL LIGHTING ACROSS THE AREA OF THE ROOM PRODUCING AN AVERAGE 6 FOOT CANDLES AT 30" ABOVE THE FLOOR.
NON RECIRCULATING HOT AND COLD WATER PIPES LOCATED IN UNCONDITIONED SPACE SHALL BE INSULATED TO R-3 MIN. PLUMBING OR MECHANICAL CANNOT DISPLACE THE REQUIRED INSULATION.

PIPE INSULATION:
NON RECIRCULATING HOT AND COLD WATER PIPES LOCATED IN UNCONDITIONED SPACE SHALL BE INSULATED TO R-3 MIN. PLUMBING OR MECHANICAL CANNOT DISPLACE THE REQUIRED INSULATION.

WHOLE HOUSE VENTILATION:
WHOLE HOUSE VENTILATION SYSTEM:
a. FAN SIZE TO BE DESIGNED BY MECHANICAL CONTRACTOR, TO MEET 2012 IRC TABLE M1507.3.3 (182) REQUIRING 105CFM CONTINUOUS VENTILATION WITH OUTDOOR AIR RUNNING, CONNECTED TO A 24 HOUR CLOCK TIMER, AND WITH A SONE RATING OF LESS THAN 1.0.
b. SHALL HAVE A 5" SMOOTH FRESH AIR DUCT W/ LOUVER & SCREEN TO BE CONNECTED TO THE RETURN AIR STREAM 4' UPSTREAM OF THE AIR HANDLER AND BE INSULATED WITH MIN R-4 IN HEATED AREAS.
c. SHALL HAVE A FILTER WITH A MERV OF AT LEAST 6 INSTALLED IN EASILY ACCESSIBLE LOCATION.
d. FRESH AIR VENT SHALL BE LOCATED AWAY FROM SOURCES OF ODORS OR FUMES, MIN 10' FROM PLUMBING OR APPLIANCE VENTS, AWAY FROM ROOMS W/ FUEL BURNING APPLIANCES, AND OUT OF ATTICS, CRAWL SPACES, AND GARAGES.

PROJECT TEAM

OWNER: CARL PLATOU
8316 AVALON DRIVE
MERCER ISLAND, WA 98040
PHONE: [REDACTED]

ARCHITECT: STURMAN ARCHITECTS, INC.
9 - 103RD AVE NE SUITE 203 BELLEVUE, WA 98004
PHONE: 425.451.7003
CONTACT: BRAD STURMAN

STRUCTURAL: ANNEE STRUCTURAL ENGINEERING
1801 18TH AVENUE S
SEATTLE, WA 98144
PHONE: 206.658.5169
CONTACT: MIKE ANNEE

CONTRACTOR: GALLAGHER CO.
3017 77TH AVE SE, STE. 202
MERCER ISLAND, WA 98040
PHONE: 206.849.4992
CONTACT: [REDACTED]

BIOLOGIST: ALTMANN OLIVER ASSOCIATES, LLC
PO BOX 578
CARINATON, WA 98014
PHONE: 425.333.4535
CONTACT: SIMONE OLIVER

SHEET INDEX

A1.0	COVER SHEET - GENERAL & ENERGY NOTES, LEGAL, PROJECT DATA, CUT-FILL CALC, INDEX, SITE PLAN
SURVEY	
C1.0	TESC PLAN
A2.0	LOWER FLOOR PLAN
A2.1	MAIN FLOOR PLAN
A2.2	UPPER FLOOR PLAN
A2.3	ROOF PLAN
A3.0	EXTERIOR ELEVATIONS
A3.1	EXTERIOR ELEVATIONS
A4.0	BUILDING SECTIONS
A4.1	BUILDING SECTIONS
A4.2	BUILDING SECTIONS
A5.0	WALL SECTIONS
A6.0	EXTERIOR DETAILS
S1.0	STRUCTURAL NOTES
S1.1	STRUCTURAL NOTES
S2.0	FOUNDATION PLANS
S2.1	MAIN FLOOR FRAMING PLANS
S2.2	UPPER FLOOR FRAMING PLANS
S2.3	ROOF FRAMING PLANS
S3.0	STRUCTURAL DETAILS
S3.1	STRUCTURAL DETAILS
W-1	STREAM BUFFER MITIGATION EXISTING PLAN
W-2	STREAM BUFFER MITIGATION PLANTING PLAN
W-3	STREAM BUFFER MITIGATION DETAILS

LOT COVERAGE (IMPERVIOUS AREA)

	GROSS LOT S.F.	MAIN STRUCT. & ROOF S.F.	GRAVEL PAD S.F.	DRIVES/ WALKS S.F.	IMPERVIOUS PATIO S.F.	TOTAL IMPERV.	% LOT COVERAGE
EXISTING IMPERVIOUS AREA		3,523.8 SF	585.4 SF	2,713.8 SF	128 SF	6,951 SF	37.5 %
PROPOSED IMPERVIOUS AREA		3,838.8 SF	440.7 SF	2,694.3 SF	0 SF	6,973.8 SF	37.6 %
NET GAINLOSS IMPERVIOUS AREA		+315 SF	-144.7 SF	-19.5 SF	-128 SF	+22.8 SF	+0.1 %
% ALLOWED IMPERVIOUS AREA	18,528 SF					7,411.2 SF ALLOWABLE	40 %

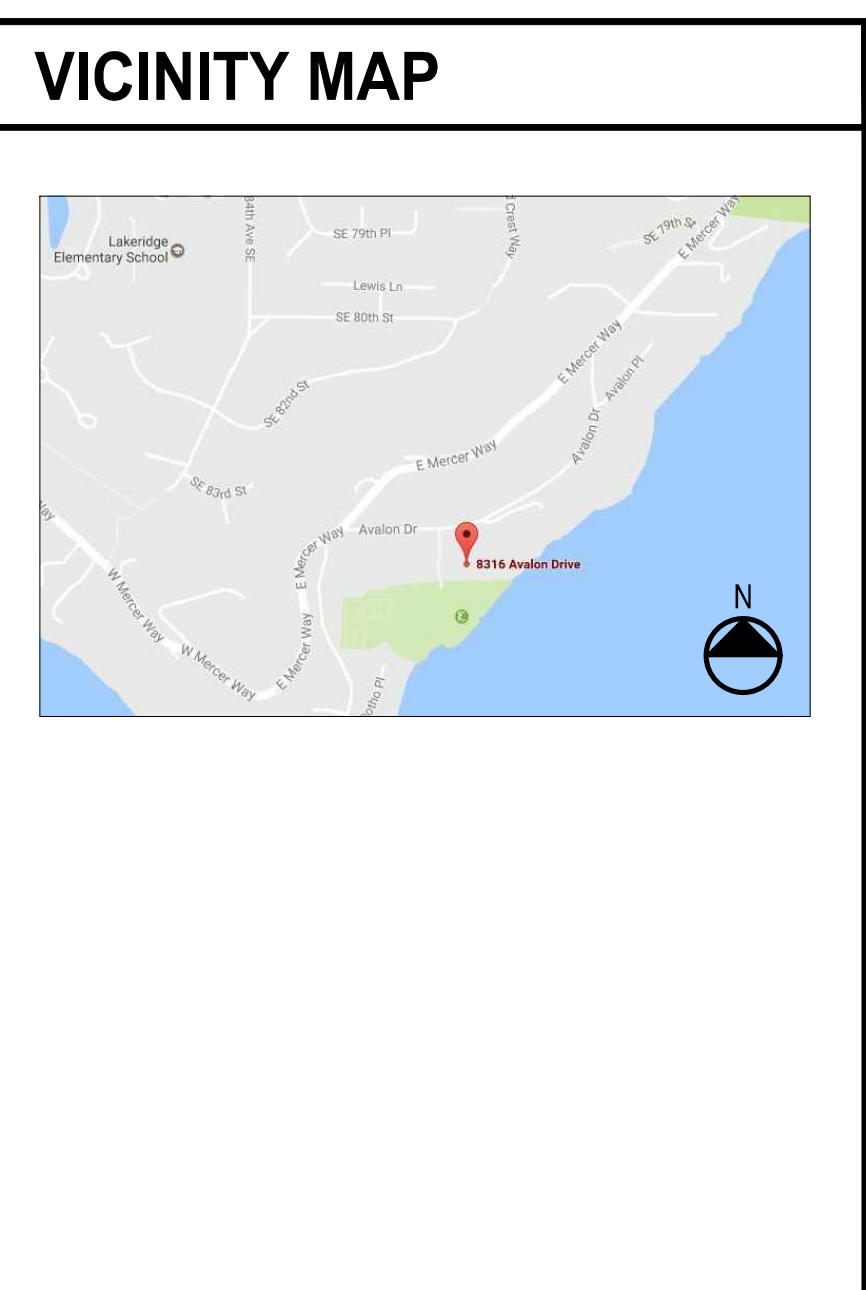
HIGHEST EL: 67' - LOWEST EL: 45.91' = 21.09'
21.09' DIVIDED BY 274.5' (HORIZ. DIST. BTWN. HIGHEST & LOWEST ELEV.) = .077
LOT SLOPE IS 1.7%, WHICH IS UNDER 15%. SO 40% LOT COVERAGE IS ALLOWED.

BUILDING AREA

BUILDING S.F.:	LOWER FLOOR	MAIN FLOOR	UPPER FLOOR	BONUS ROOM	SUB-TOTAL HEATED	GARAGE UNHEATED	GRAND TOTAL	UNHEATED DECKS
EXISTING S.F.:	927.6 SF	1863.1 SF	1494.2 SF	0 SF	4,284.9 SF	625.5 SF	4,910.4 SF	810.8 SF
ADDED S.F.:	0 SF	+279.3 SF	+129.3 SF	+663.1 SF	+1,071.7 SF	+154.3 SF	+1,226 SF	+37 SF
TOTALS:	927.6 SF	2142.4 SF	1623.5 SF	663.1 SF	5,356.6 SF	779.8 SF	6,136.4 SF	847.8 SF

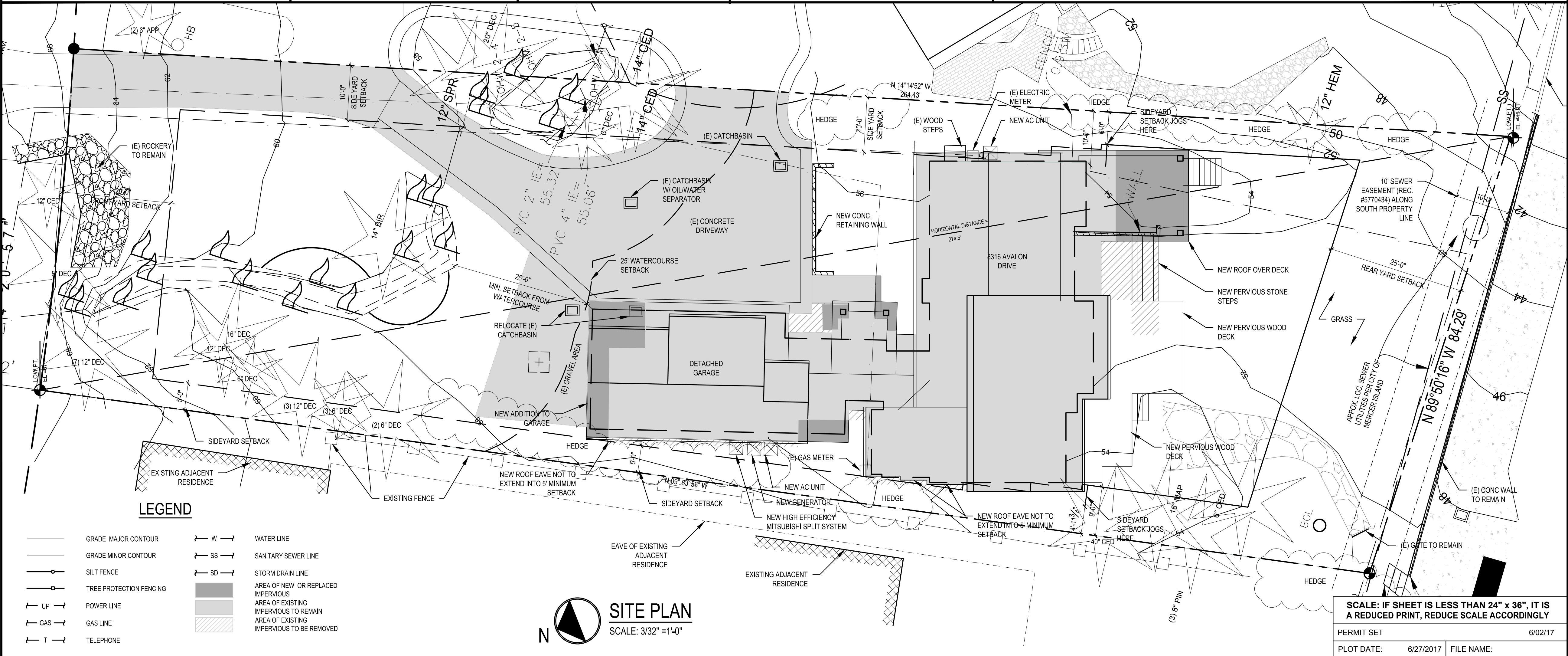
GROSS FLOOR AREA

	BASEMENT EXCLUSION	NEW FLOOR AREA
LOWER FLOOR	0 SF EXCLUDED	927.6 SF
MAIN FLOOR		2,142.4 SF
UPPER FLOOR		1,235.6 SF
BONUS ROOM		663.1 SF
GARAGE		779.8 SF
GROSS FLOOR AREA		5,748.5 SF
NET LOT AREA		18,528 SF
ALLOWED MAX. % GFA COVERAGE		45 %
ALLOWED GROSS FLOOR AREA		8,337.6 SF
PROPOSED GROSS FLOOR AREA		5,748.5 SF
PROPOSED % GFA COVERAGE		31 %



AVERAGE BUILDING ELEVATION

	Wall Length	Elevation Pt.	Wall Length X Elev. Pt.
A	22.29	57.5	1281.675
B	35.4375	57.0	2019.9375
C	4.96	57.0	282.72
D	19	57.0	1083
E	1.79	57.0	102.03
F	7.75	57.0	441.75
G	8.96	57.0	510.72
H	1.375	57.0	78.375
I	4.54	57.0	258.78
J	1.375	57.0	78.375
K	21.52	56.3	1210.5
L	28.58	55.0	1571.9
M	12	53.0	636
N	2.1	53.0	111.3
O	13.67	50.0	683.5
P	3.6	48.0	172.8
Q	17	51.0	867
R	4.9	52.0	254.8
TOTALS	341.12	1542.8	18876.7475
18876.7475 / 341.12	55.34	Average Building Elevation	



STURMAN ARCHITECTS
 TEL (425) 451-7003
 9 103rd Avenue NE Suite 203 Bellevue, WA 98004

REGISTERED ARCHITECT
 BRADLEY J. STURMAN
 STATE OF WASHINGTON

www.sturmanarchitects.com
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PLATOU RESIDENCE PERMIT SET
8316 AVALON DRIVE
MERCER ISLAND, WA 98040

SITE PLAN

REVISIONS:

DRAWN BY: KE
 CHECKED BY: BJS
 SHEET

A1.0

OF

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY

PERMIT SET
 PLOT DATE: 6/27/2017
 FILE NAME: 6/02/17

LEGAL DESCRIPTION

(PER STATUTORY WARRANTY DEED RECORDING #20160802002115)

LOT 10, BLOCK 4, AVALON PARK, ACCORDING TO THE PLAT THEREOF, RECORDED IN VOLUME 49 OF PLATS, PAGE 64, IN KING COUNTY, WASHINGTON.

BASIS OF BEARINGS

PLAT MERIDIAN—HELD BEARING N 48°18'03" E BETWEEN EXISTING PLAT MONUMENTS AS SHOWN HEREON

REFERENCES

1. RECORD OF SURVEY VOL. 98, PG 157, RECORDING NO. 9406019004
2. PLAT OF AVALON PARK RECORDED IN VOL. 49 OF PLATS, PG. 64-65 IN KING COUNTY WASHINGTON

VERTICAL DATUM

NAVD88 PER GPS OBSERVATIONS

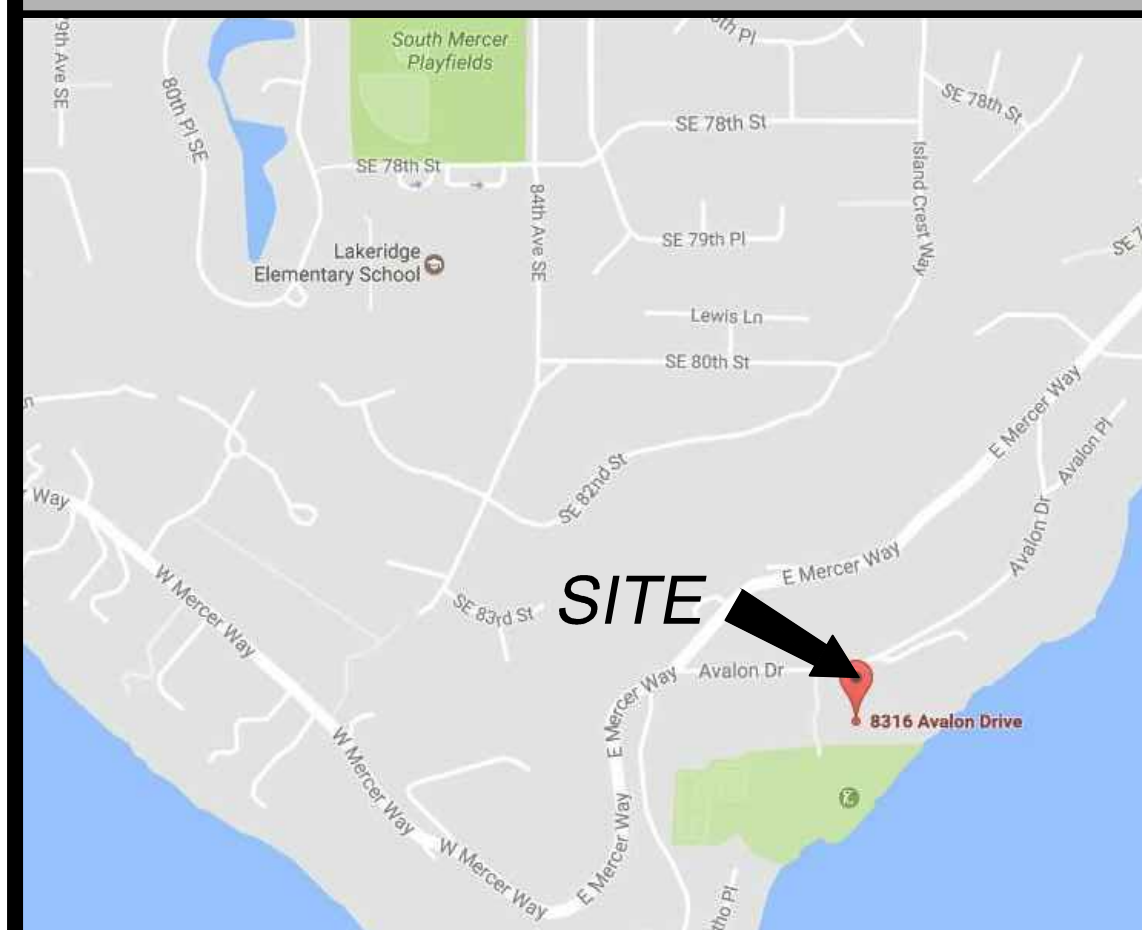
SURVEYOR'S NOTES

1. THE TOPOGRAPHIC SURVEY SHOWN HEREON WAS PERFORMED IN DECEMBER OF 2016. THE FIELD DATA WAS COLLECTED AND RECORDED ON MAGNETIC MEDIA THROUGH AN ELECTRONIC THEODOLITE. THE DATA FILE IS ARCHIVED ON DISC OR CD. WRITTEN FIELD NOTES MAY NOT EXIST. CONTOURS ARE SHOWN FOR CONVENIENCE ONLY. DESIGN SHOULD RELY ON SPOT ELEVATIONS.
2. ALL MONUMENTS SHOWN HEREON WERE LOCATED DURING THE COURSE OF THIS SURVEY UNLESS OTHERWISE NOTED.
3. BURIED UTILITIES SHOWN BASED ON RECORDS FURNISHED BY OTHERS AND VERIFIED WHERE POSSIBLE IN THE FIELD. TERRANE ASSUMES NO LIABILITY FOR THE ACCURACY OF THOSE RECORDS OR ACCEPT RESPONSIBILITY FOR UNDERGROUND LINES WHICH ARE NOT MADE PUBLIC RECORD. FOR THE FINAL LOCATION OF EXISTING UTILITIES IN AREAS CRITICAL TO DESIGN CONTACT THE UTILITY OWNER/AGENCY. AS ALWAYS, CALL 1-800-424-5555 BEFORE CONSTRUCTION.
4. SUBJECT PROPERTY TAX PARCEL NO. 032110-0290
5. SUBJECT PROPERTY AREA PER THIS SURVEY IS 18,528± S.F. (0.43± ACRES)— 18,779 PER KING COUNTY ASSESSOR'S
6. THIS SURVEY WAS PERFORMED WITHOUT THE BENEFIT OF A TITLE REPORT. EASEMENTS AND OTHER ENCUMBRANCES MAY EXIST THAT ARE NOT SHOWN HEREON.
7. INSTRUMENTATION FOR THIS SURVEY WAS A TRIMBLE ELECTRONIC DISTANCE MEASURING UNIT. PROCEDURES USED IN THIS SURVEY WERE DIRECT AND REVERSE ANGLES, NO CORRECTION NECESSARY. MEETS STATE STANDARDS SET BY WAC 332-130-090.

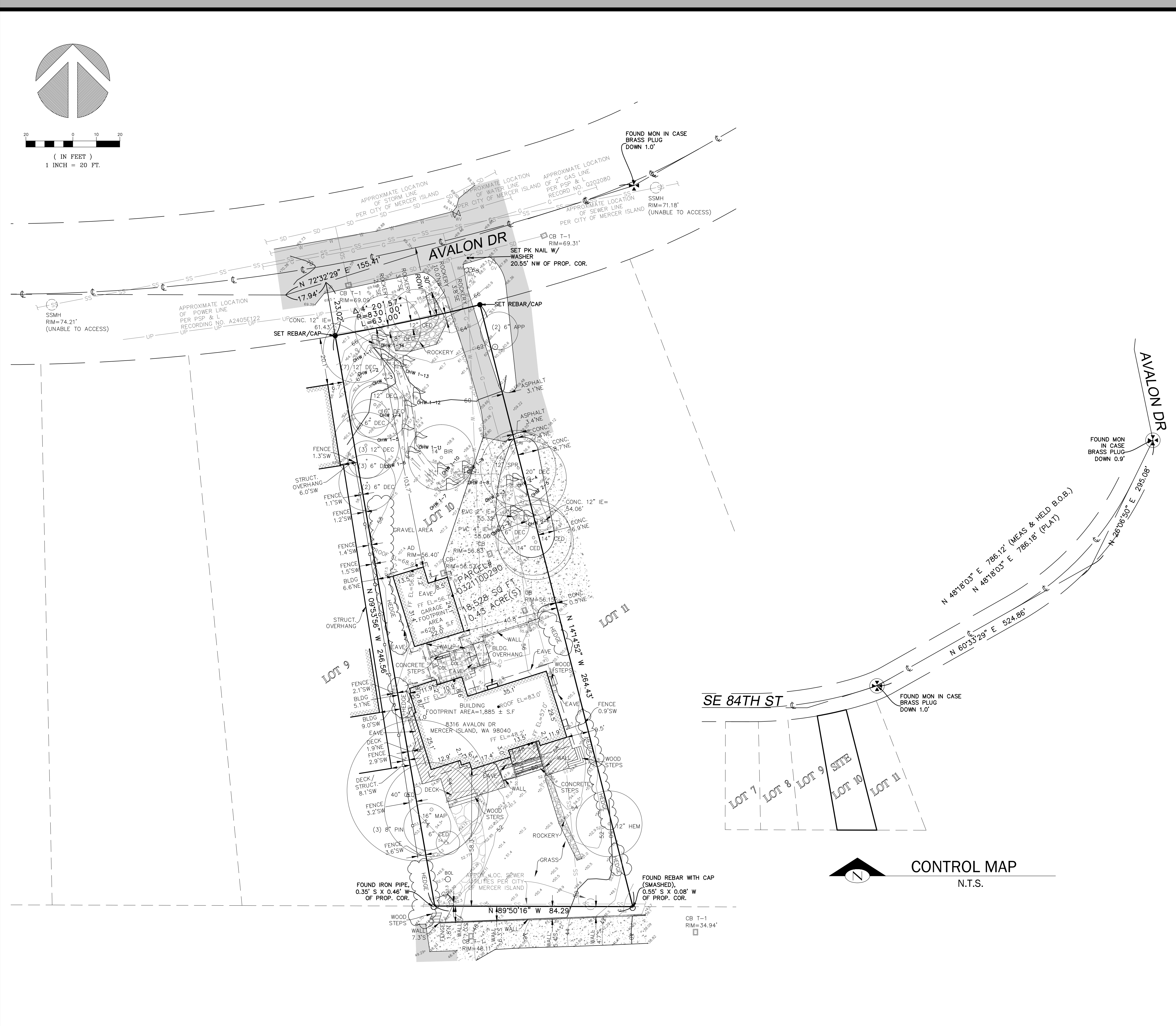
LEGEND

	AREA DRAIN		MONUMENT IN CASE (FOUND)
	ASPHALT SURFACE		PAVER SURFACE
	FLAGSTONE SURFACE		POWER METER
	BOLLARD		POWER LINE (UNDERGROUND)
	BUILDING		AREA DRAIN
	CENTERLINE ROW		REBAR AS NOTED (FOUND)
	CULVERT		REBAR & CAP (SET)
	CONCRETE SURFACE		ROCKERY
	CONCRETE WALL		SEWER LINE
	100 CONTOUR (MAJOR)		SEWER MAINTENANCE
	102 CONTOUR (MINOR)		STORM CATCH BASIN
	DECK		STORM DRAIN LINE
	DITCH (FLOWLINE)		TREE (AS NOTED)
	FENCE LINE (CHAIN LINK)		WATER LINE
	FENCE LINE (WOOD)		WATER METER
	GAS LINE		WATER VALVE
	GAS METER		HOSEBIB
	GAS VALVE		WETLAND FLAG
	GRAVEL SURFACE		HEDGE ROW
	NAIL AS NOTED		

VICINITY MAP
N.T.S.



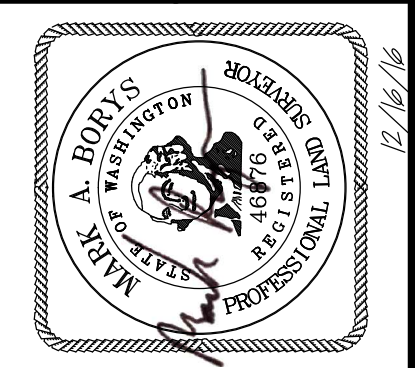
TOPOGRAPHIC & BOUNDARY SURVEY



measure success

TOPOGRAPHIC & BOUNDARY SURVEY
NW 1/4 OF NW 1/4 SEC 31, TWP. 24N., RGE 05E., W.M.
PARCEL NO. 0321100290

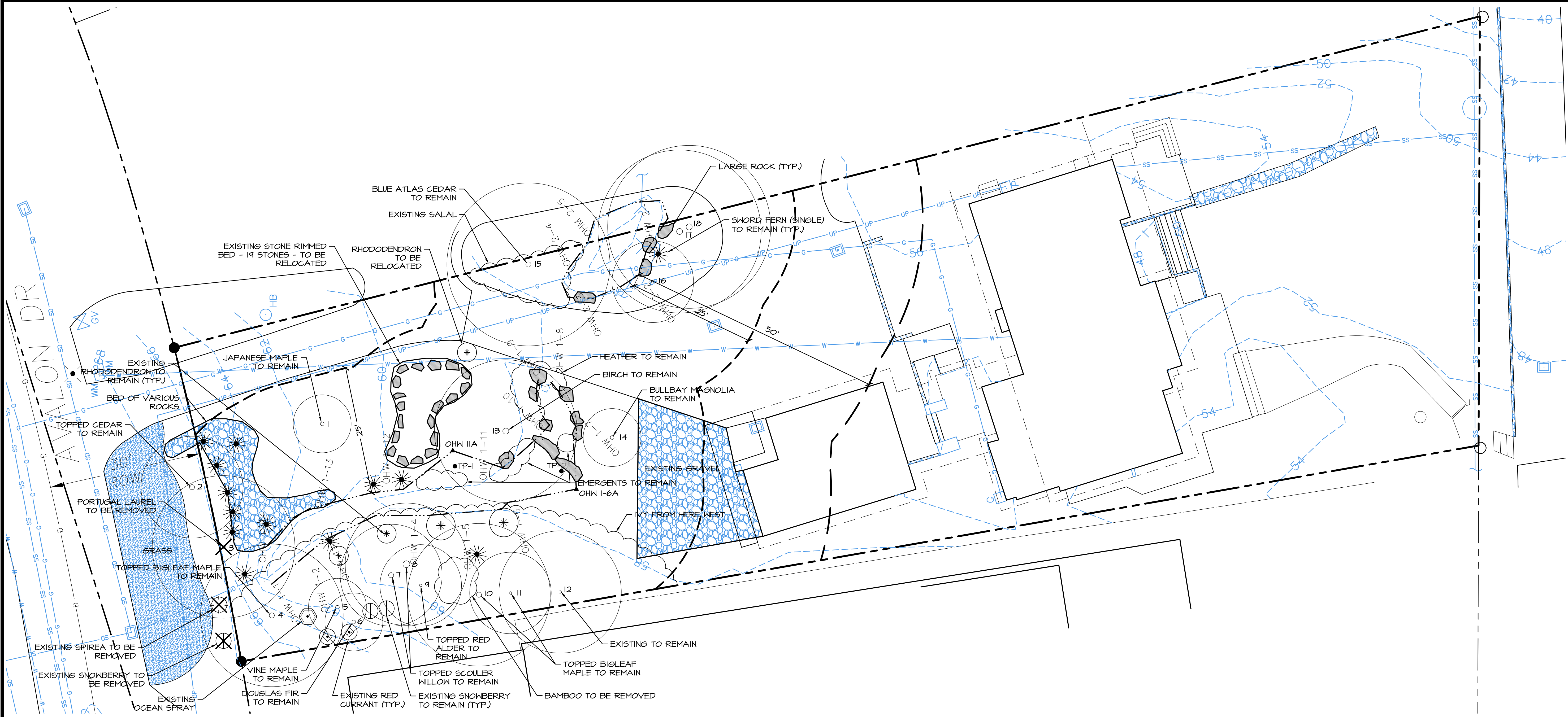
PLATOU RESIDENCE
8316 AVALON DR
MERCER ISLAND, WA 98040



Terrane
10801 Main Street, Suite 102, Bellevue, WA 98004
phone 425.458.4498 support@terrane.net
www.terrane.net

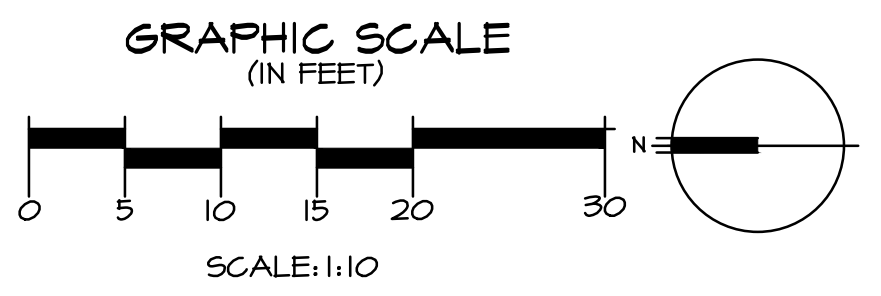
JOB NUMBER:	161490
DATE:	12/16/16
DRAFTED BY:	IDV-PSC
CHECKED BY:	MAB/TMM
SCALE:	1"= 20'
REVISION HISTORY	
SHEET NUMBER	
1 OF 1	

STREAM BUFFER MITIGATION PLAN
EXISTING CONDITIONS
PLATOU RESIDENCE
8316 AVALON DR.
MERCER ISLAND, WA 98040



PLAN LEGEND

- PROPERTY LINE
- ORDINARY HIGH WATER LINE OF STREAM
- 50' STANDARD STREAM BUFFER
- - - 25' REDUCED STREAM BUFFER
- ▲ OHW # REVISED STREAM ORDINARY HIGH WATER FLAG LOCATION
- TP-# SOIL TEST PLOT LOCATION



EXISTING TREE LEGEND

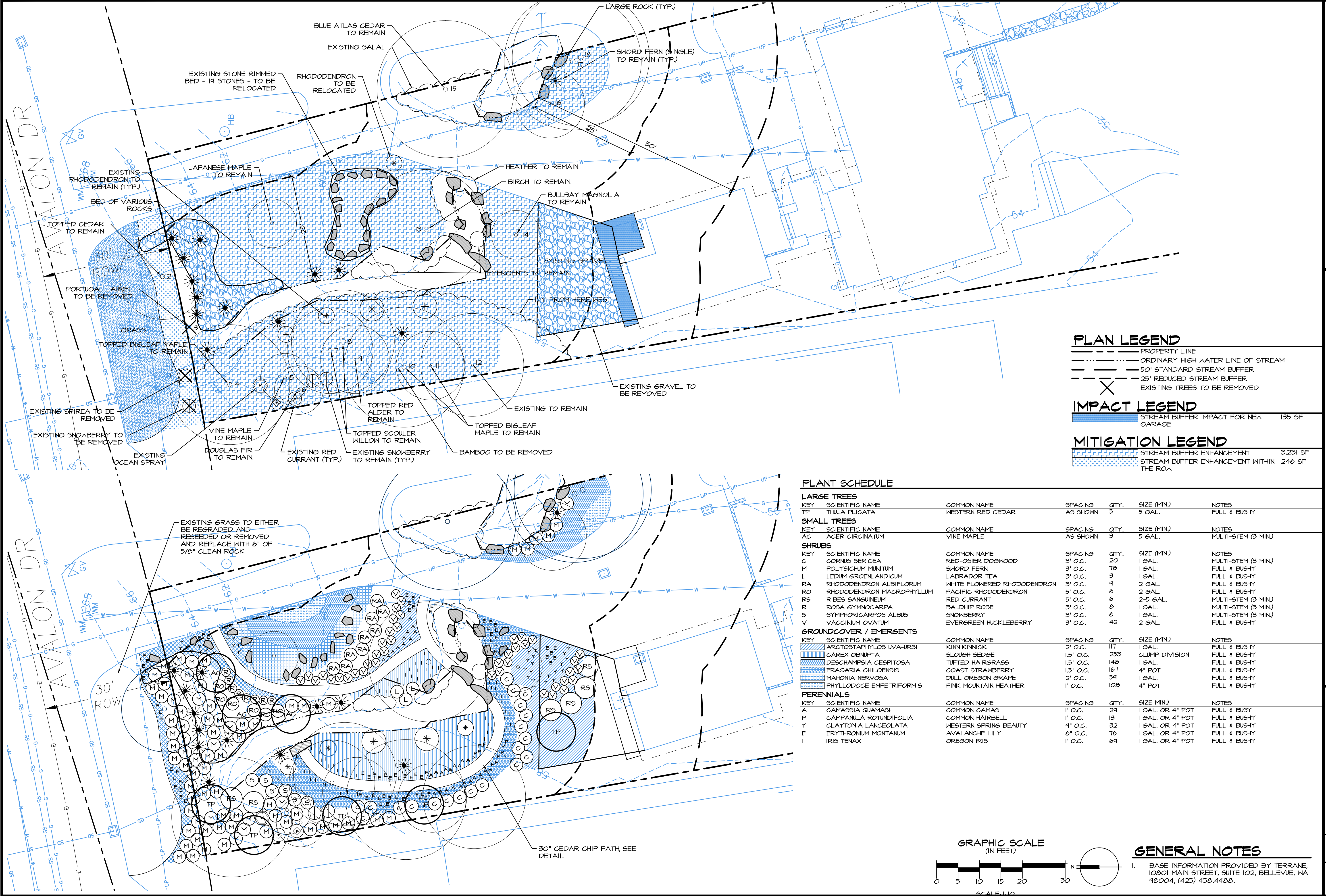
TREE #	SPECIES	DBH (CAL. INCHES)	NOTES	REMAIN	REMOVE
1	JAPANESE MAPLE		WEeping	X	
2	WESTERN RED CEDAR	12"	TOPPED	X	
3	PORTUGAL LAUREL	8"	INVASIVE SPECIES		X
4	BIGLEAF MAPLE	(7) 12"	TOPPED	X	
5	VINE MAPLE	4' TALL		X	
6	DOUGLAS FIR	SEEDLING		X	
7	SCOULER WILLOW	12"	TOPPED	X	
8	SCOULER WILLOW	16"	TOPPED	X	
9	RED ALDER	6"	TOPPED	X	
10	BIGLEAF MAPLE	(3) 12"	TOPPED	X	
11	BIGLEAF MAPLE	(3) 6"	TOPPED	X	
12	DECIDUOUS	(2) 6"		X	
13	BIRCH	14"		X	
14	BULLBAY MAGNOLIA	4" DIAMETER		X	
15	BLUE ATLAS CEDAR	12"		X	
16	DECIDUOUS	6"		X	
17	EXCESLA CEDAR	14"		X	
18	EXCESLA CEDAR	14"		X	

GENERAL NOTES

- BASE INFORMATION PROVIDED BY TERRANE, 10801 MAIN STREET, SUITE 102, BELLEVUE, WA 98004, (425) 458.4488.

Revisions	Date	By
TO KEEP NATIVE TOPPED TREES	05-11-17	SO
PER CITY COMMENTS	06-23-17	SO

Date: 02-14-17
 Scale: AS NOTED
 Project#: 5327



PLAN LEGEND

- PROPERTY LINE
- ORDINARY HIGH WATER LINE OF STREAM
- 50' STANDARD STREAM BUFFER
- 25' REDUCED STREAM BUFFER
- X EXISTING TREES TO BE REMOVED

IMPACT LEGEND

- STREAM BUFFER IMPACT FOR NEW GARAGE 135 SF

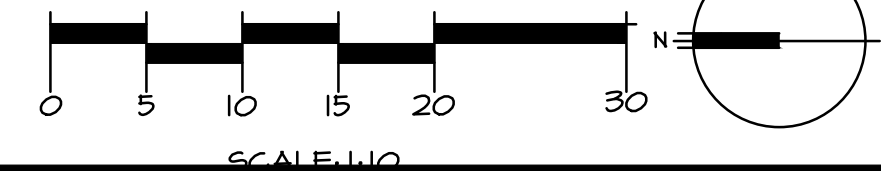
MITIGATION LEGEND

- STREAM BUFFER ENHANCEMENT 3,231 SF
- STREAM BUFFER ENHANCEMENT WITHIN THE ROW 246 SF

PLANT SCHEDULE

LARGE TREES						
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
TP	THUJA PLICATA	WESTERN RED CEDAR	AS SHOWN	5	5 GAL.	FULL & BUSHY
SMALL TREES						
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
AC	ACER CIRCINATUM	VINE MAPLE	AS SHOWN	3	5 GAL.	MULTI-STEM (3 MIN.)
SHRUBS						
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
C	CORNUS SERICEA	RED-OSIER DOGWOOD	3' O.C.	20	1 GAL.	MULTI-STEM (3 MIN.)
M	POLYSGIUM MUNITUM	SWORD FERN	3' O.C.	78	1 GAL.	FULL & BUSHY
L	LEDUM GROENLANDICUM	LABRADOR TEA	3' O.C.	3	1 GAL.	FULL & BUSHY
RA	RHODODENDRON ALBIFLORUM	WHITE FLOWERED RHODODENDRON	3' O.C.	4	2 GAL.	FULL & BUSHY
RO	RHODODENDRON MACROPHYLLUM	PACIFIC RHODODENDRON	5' O.C.	6	2 GAL.	FULL & BUSHY
RS	RIBES SANGUINEUM	RED CURRANT	5' O.C.	6	2-5 GAL.	MULTI-STEM (3 MIN.)
R	ROSA GYMNOCARPA	BALDHIP ROSE	3' O.C.	8	1 GAL.	MULTI-STEM (3 MIN.)
S	SYMPHORICARPOS ALBUS	SNOWBERRY	3' O.C.	6	1 GAL.	MULTI-STEM (3 MIN.)
V	VACCINIUM OVATUM	EVERGREEN HUCKLEBERRY	3' O.C.	42	2 GAL.	FULL & BUSHY
GROUNDCOVER / EMERGENTS						
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
A	ARCTOSTAPHYLOS UVA-URSI	KINKINNICK	2' O.C.	117	1 GAL.	FULL & BUSHY
C	CAREX OBNUPTA	SLOUGH SEDGE	15" O.C.	253	CLUMP DIVISION	FULL & BUSHY
D	DESCHAMPSIA CESPITOSA	TUFTED HAIRGRASS	15" O.C.	148	1 GAL.	FULL & BUSHY
F	FRAGARIA CHILOENSIS	COAST STRAWBERRY	15" O.C.	167	4" POT	FULL & BUSHY
M	MAHONIA NERVOSA	DULL OREGON GRAPE	2' O.C.	59	1 GAL.	FULL & BUSHY
P	PHYLLODOCE EMPETRIFORMIS	PINK MOUNTAIN HEATHER	1' O.C.	108	4" POT	FULL & BUSHY
PERENNIALS						
KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
A	CAMASSIA QUAMASH	COMMON CAMAS	1' O.C.	24	1 GAL. OR 4" POT	FULL & BUSHY
P	CAMPANULA ROTUNDFOLIA	COMMON HAIRBELL	1' O.C.	13	1 GAL. OR 4" POT	FULL & BUSHY
Y	CLAYTONIA LANCEOLATA	WESTERN SPRING BEAUTY	4" O.C.	32	1 GAL. OR 4" POT	FULL & BUSHY
E	ERYTHRONIUM MONTANUM	AVALANCHE LILY	6" O.C.	76	1 GAL. OR 4" POT	FULL & BUSHY
I	IRIS TENAX	OREGON IRIS	1' O.C.	64	1 GAL. OR 4" POT	FULL & BUSHY

GRAPHIC SCALE (IN FEET)



GENERAL NOTES

- BASE INFORMATION PROVIDED BY TERRANE, 10801 MAIN STREET, SUITE 102, BELLEVUE, WA 98004, (425) 458.4488.

Revisions	Date	By
TO KEEP NATIVE TOPPED TREES	05-11-17	SO
PER CITY COMMENTS	06-23-17	SO

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CONSTRUCTION SPECIFICATIONS

- 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 INSTALLING REQUIRED PLANTS AND PERFORMING REQUIRED MAINTENANCE.
- CONTRACTOR'S QUALIFICATIONS. ALL WORK SHALL BE PERFORMED BY A LICENSED LANDSCAPE CONTRACTOR REGISTERED IN THE STATE OF WASHINGTON. CONTRACTOR MUST BE EXPERIENCED IN MITIGATION AND RESTORATION WORK. THE CONTRACTOR 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. THIS PERSON SHALL HAVE A MINIMUM OF FIVE YEARS EXPERIENCE INSTALLING NATIVE PLANT MATERIALS FOR WETLAND MITIGATION OR RESTORATION PROJECTS, UNLESS OTHERWISE ALLOWED BY THE LANDSCAPE DESIGNER, WETLAND BIOLOGIST AND/OR THE CITY OF MERCER ISLAND.
- TRAIL AND STEPS TO BE FIELD LOCATED BY AOA PRIOR TO CLEARING. LANDSCAPE CONTRACTOR TO VERIFY THE AMOUNT OF STEPS AND WALLS BASED ON ACTUAL GRADES (PLAN IS APPROXIMATE ONLY).
- ALL PLANTS SHOULD BE INSTALLED BETWEEN DECEMBER 1ST AND MARCH 15TH, UNLESS SUPPLEMENTAL IRRIGATION IS PROVIDED.
- INTERMEDIATE INSPECTIONS. ALL PLANTS SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE DESIGNER AND/OR WETLAND BIOLOGIST PRIOR TO INSTALLATION. CONDITION OF ROOTS OF A RANDOM SAMPLE OF PLANTS WILL BE INSPECTED, AS WELL AS ALL ABOVEGROUND GROWTH ON ALL PLANTS. ROOTS OF ANY BARE ROOT PLANTS, IF PERMITTED FOR USE, WILL BE INSPECTED. PLANT MATERIAL MAY BE APPROVED AT THE SOURCE, AT THE DISCRETION OF THE LANDSCAPE DESIGNER AND THE WETLAND BIOLOGIST, BUT ALL MATERIAL MUST BE RE-INSPECTED AND APPROVED ON THE SITE PRIOR TO INSTALLATION. PLANT LOCATIONS SHALL ALSO BE INSPECTED AND APPROVED PRIOR TO PLANTING.
- PRIOR TO INSTALLATION OF PLANT MATERIAL, THE PLANTING AREAS WILL BE LAID OUT BASED ON THE PLANTING PLAN, AND ALL HIMALAYAN BLACKBERRY, ENGLISH IVY OR OTHER INVASIVE PLANT SPECIES LOCATED IN THE PLANTING AREAS WILL BE REMOVED BY HAND. NO HERBICIDES OR PESTICIDES SHOULD BE USED WITHIN THE ENHANCEMENT AREA. AOA SHALL REVIEW INVASIVE REMOVAL PRIOR TO PLANTING.
- ALL PLANTS SHALL BE PIT-PLANTED IN PLANTING PITS EXCAVATED 2X THE DIAMETER OF THE PLANT. PITS SHALL BE BACKFILLED WITH A 30/70 MIX OF STEERCO TO NATIVE SOIL. PITS SHALL BE AMENDED WITH A HYDRATED SOIL POLYMER (INSTALLED AT RATES PER MANUFACTURER'S SPECIFICATIONS). PLANTS SHALL BE INSTALLED 3" HIGH AND SURFACED MULCHED TO A DEPTH OF 3" WITH PACIFIC GARDEN MULCH PLACED CONTINUOUSLY THROUGHOUT THE PLANTING BED.
- ON STEEP SLOPES, 1/2" BIODERADABLE JUTE MESH SHALL BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS UPON COMPLETION OF INVASIVE REMOVAL AND INSTALLATION OF TREES AND PRIOR TO INSTALLATION OF SHRUBS AND GROUNDCOVER. THESE PLANTS SHALL BE INSTALLED THROUGH THE MESH BY CUTTING A LARGE X AT EACH PLANT LOCATION. AOA TO REVIEW PLANT LAYOUT PRIOR TO INSTALLATION. PACIFIC GARDEN MULCH SHALL BE PLACED OVER JUTE.
- ALL PLANTS SHALL BE NURSERY GROWN (IN WESTERN WA OR OR) FOR AT LEAST 1 YEAR FROM PURCHASE DATE, FREE FROM DISEASE OR PESTS, WELL-ROOTED, BUT NOT ROOT-BOUND AND TRUE TO SPECIES.
- PLANT LAYOUT SHALL BE APPROVED BY AOA PRIOR TO INSTALLATION AND APPROVED UPON COMPLETION OF PLANTING.
- UPON COMPLETION OF PLANTING, ALL PLANTS SHALL BE THOROUGHLY WATERED.
- UPON APPROVAL OF PLANTING INSTALLATION BY AOA, THE CITY OF MERCER ISLAND WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL OF CONSTRUCTION.
- MAINTENANCE SHALL BE REQUIRED IN ACCORDANCE WITH THE CITY OF MERCER ISLAND SENSITIVE AREAS MITIGATION GUIDELINES AND APPROVED PLANS.
- ALL PLANTS SHALL BE HAND-WATERED, AS NECESSARY DURING THE FIRST TWO DRY SEASONS. BETWEEN JUNE 15 - OCTOBER 31. FLOW SHOULD ENSURE COMPLETE SATURATION OF THE ROOT ZONE.
- MAINTENANCE SHALL BE IMPLEMENTED ON A REGULAR BASIS ACCORDING TO THE SCHEDULE BELOW.

ANNUAL MAINTENANCE SCHEDULE

MAINTENANCE ITEM	J	F	M	A	M	J	J	A	S	O	N	D
WATERING - YEARS 1							1-2					
WEED CONTROL												
GENERAL MAINT.												

1-2 = NUMBER OF TIMES TASK SHALL BE PERFORMED PER MONTH.

MAINTENANCE & MONITORING PLAN

1.0 PROPOSED BUFFER MITIGATION

Due to the degraded condition of the existing buffer, the proposed project would utilize mitigation option 19.07.070.B.2.b.ii to allow for a buffer reduction from 50 to 25 feet minimum to accommodate the minor expansion. Under the proposed project, all of the degraded vegetated portions of the watercourse buffer would be enhanced by the removal of invasive weeds and re-planting a variety of native tree, shrub, and groundcover species.

As part of the enhancement measures, a small, 30" wide cedar chip path is proposed to be located in the buffer for maintenance access to the plantings and passive access to the stream by the property owners. A rock bridge already exists and will be used for trail access across the stream. Allowing the property owners specific access points into the buffer allows better success of maintenance of the plantings overtime, ease in invasive removal and creates a connection to the stream as a part of the larger property thus increasing stewardship of the stream and the buffer.

The proposed plantings have been designed to increase the plant species and structural diversity within the buffer and to provide physical and visual screening to the watercourse from the residence. Increasing the plant species and structural diversity within the buffer would also increase the wildlife habitat of the area over current conditions.

1.1 Goal, Objective, and Performance Standard for Enhancement Area

The primary goal of the enhancement plan is to restore the watercourse buffer with native vegetation. To meet this goal, the following objectives and performance standards have been incorporated into the design of the plan:

Objective A: Increase the structural and plant species diversity within the enhancement area.

Performance Standard: At the end of the five-year monitoring period, the enhancement area will contain at least fifteen native plant species. In addition, there will be 100% survival of all woody planted species throughout the enhancement area at the end of the first year of planting. Following Years 2 through 5, success will be based on an 80% survival rate.

Objective B: Limit the amount of invasive and exotic species within the enhancement area.

Performance Standard: After installation and at the end of the fifth year after planting, exotic and invasive plant species will be maintained at levels below 10% total cover in all planted areas. These species include, but are not limited to, Himalayan and evergreen blackberry, reed canarygrass, purple loosestrife, morning glory, Japanese knotweed, English ivy, hedge bindweed, English holly, and creeping nightshade.

1.2 Monitoring Methodology

The monitoring program will be conducted for a period of five years, with annual reports submitted to the City of Mercer Island.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the enhancement area. Review of the photos over time will provide a visual representation of success of the plan.

2.0 MAINTENANCE PLAN

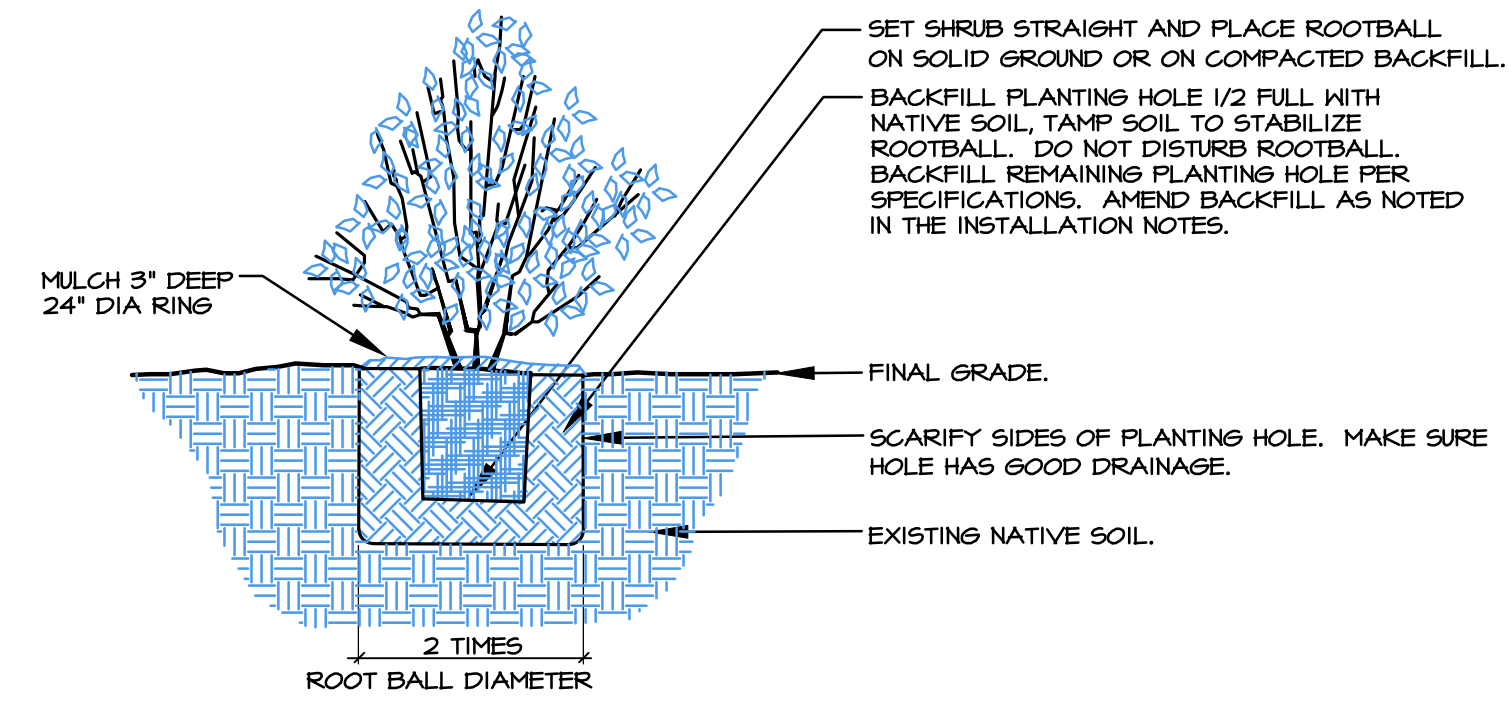
Maintenance will be conducted on a routine, year round basis. Additional maintenance needs will be identified and addressed following a twice-yearly maintenance review. Contingency measures and remedial action on the site shall be implemented on an as-needed basis at the direction of the consultant or the owner. Tall grasses and weeds shall be removed at the base of plants to prevent entanglement. Weed control should be performed by hand removal.

3.0 CONTINGENCY PLAN

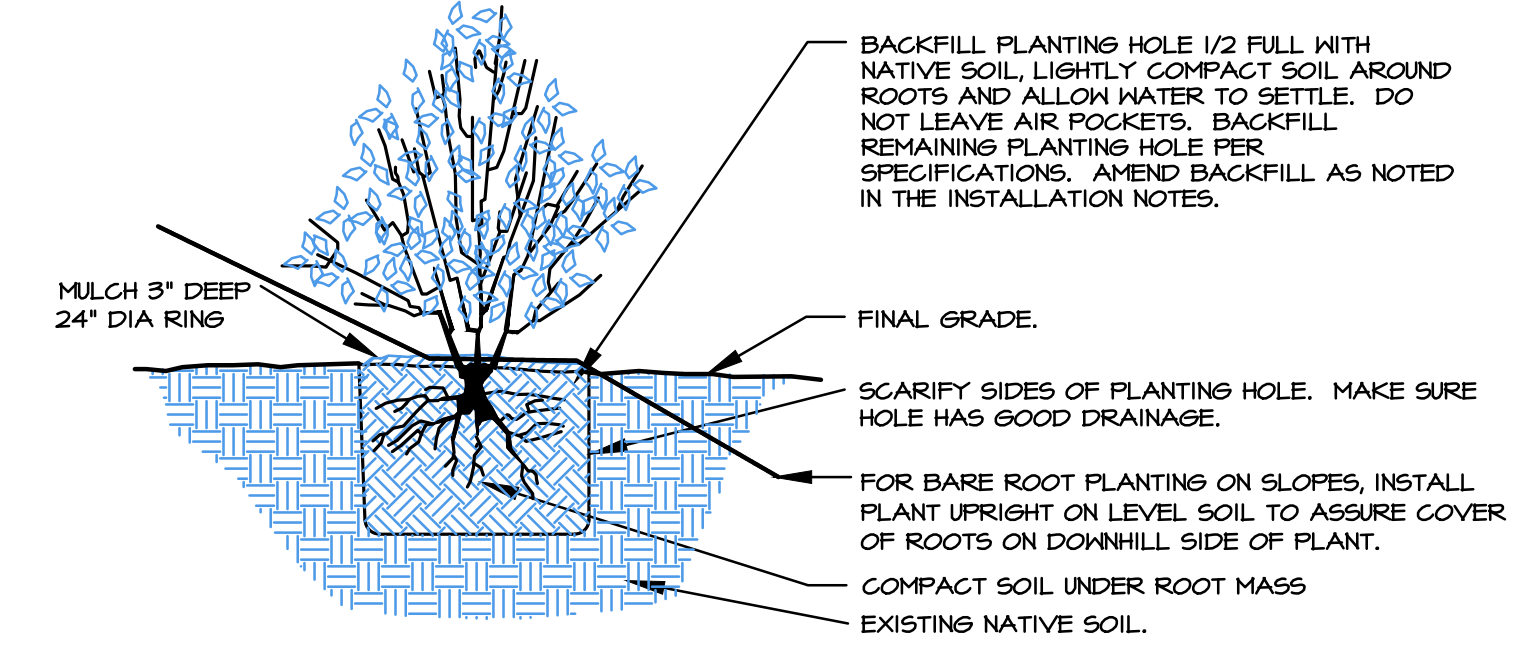
All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the enhancement plan. Plant material shall meet the same specifications as originally-installed material. Replanting will not occur until after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant, City of Mercer Island, or the owner.

4.0 AS-BUILT PLAN

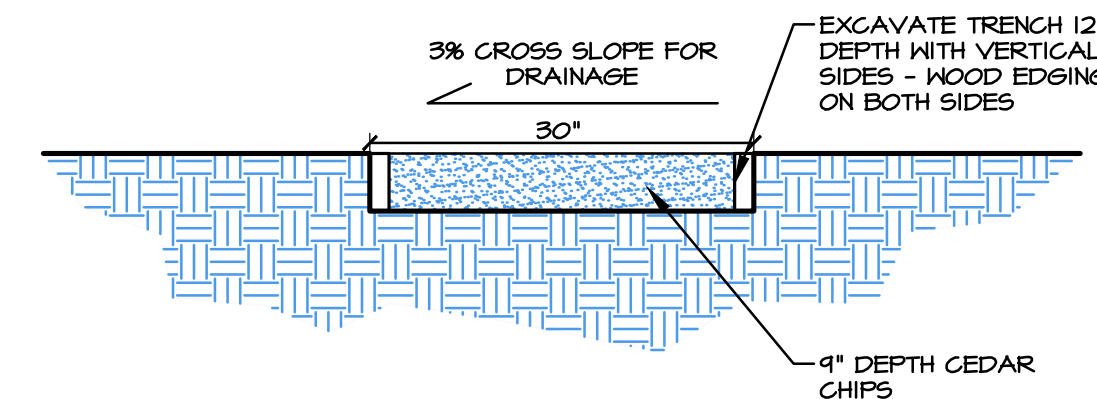
Following completion of construction activities, an as-built plan for the enhancement area will be provided to the City of Mercer Island. The plan will identify and describe any changes in relation to the original approved plan.



1 CONTAINER PLANTING DETAIL (TYP.)
SCALE: NTS



2 BARE-ROOT PLANTING DETAIL (TYP.)
SCALE: NTS



3 CEDAR CHIP TRAIL DETAIL
SCALE: NTS



Altmann Oliver Associates, LLC
Office (425) 333-4535 Fax (425) 333-4509
PO Box 378 Camanion, WA 98014

**STREAM BUFFER MITIGATION PLAN
SPECIFICATIONS & DETAILS
PLATOU RESIDENCE
8816 AVALON DR.
MERCER ISLAND, WA 98040**

Revisions	Date	By
TO KEEP NATIVE TOPPED TREES	05-11-17	SO
PER CITY COMMENTS	06-23-17	SO

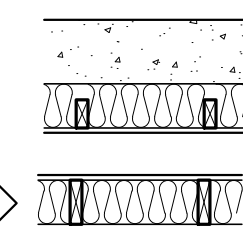
Date: 02-14-17
Scale: AS NOTED
Project#: 5327

Sheet # **N-3**

WALL PARTITION TYPES:

N.T.S. (SEE STRUCTURAL SHEETS FOR SHEARWALLS.)

- TYPICAL EXTERIOR WALL
EXTERIOR WALL FINISH OF (2) LAYERS 60# BLDG. PAPER OF 1/2" CDX PLYWOOD OF 2x6 WOOD STUDS AT 16" O.C. W/ 1/2" GYPSUM WALLBOARD AT INTERIOR. PROVIDE R-21 BATT INSULATION EXCEPT AROUND GARAGE.
- TYPICAL INTERIOR PARTITION
U.N.O. ALL INTERIOR WALL SHALL BE 2x4 WOOD STUDS @ 16" O.C. W/ 1/2" GYPSUM WALLBOARD EACH SIDE.



TYPICAL FURRED WALL
2" AIRSPACE, 2x4 P.T. WOOD STUDS @ 16" O.C. W/ 1/2" GYPSUM WALLBOARD AT INTERIOR. PROVIDE R-21 BATT INSULATION.

1HR. FIRE RATED WALL
5/8" THK GWB, TYPE 'X' OI 2X6 WD STUDS @ 16" O.C. PANELS NAILED 7" O.C. - 1 7/8" CEM CTD NAILS - JOINTS EXP OR FIN - PERIM CAULKED - UL DES U305 & U314 - JOINTS FIN

ABBREVIATIONS:

- ALUM ALUMINUM
- MC METAL CLAD
- PRE-FIN PRE-FINISHED
- PNT PAINTED
- SCW SOLID CORE WOOD
- WD WOOD

SCHEDULE NOTES:

- 1) CONTRACTOR TO VERIFY ALL GLAZING SIZING, AND DOOR DIMENSIONS IN FIELD PRIOR TO ROUGH FRAMING & ORDERING OF GLAZING/WINDOW/DOOR MATERIALS. REVIEW SIZES AND ANY DISCREPANCIES W/ ARCHITECT.
- 2) ALL GLAZING TO BE "LOW E", INSULATED GLASS UNLESS NOTED OTHERWISE.
- 3) ALL OPERABLE WINDOWS TO HAVE SCREENS.
- 4) GLAZING INDOORS AND/OR WITHIN 24" OF A DOOR TO BE TEMPERED. SEE EXTERIOR ELEVATION FOR TEMP. GLASS LOCATION & EGRESS WINDOWS.
- 5) 2015 WSEC & VIA RESIDENTIAL PRESCRIPTIVE OPTION 3 ADOPTED. GLAZING AREA INDICATED UNLIMITED. SEE ENERGY NOTE AT A1.0 SHEET FOR DETAILS.

WINDOW SCHEDULE

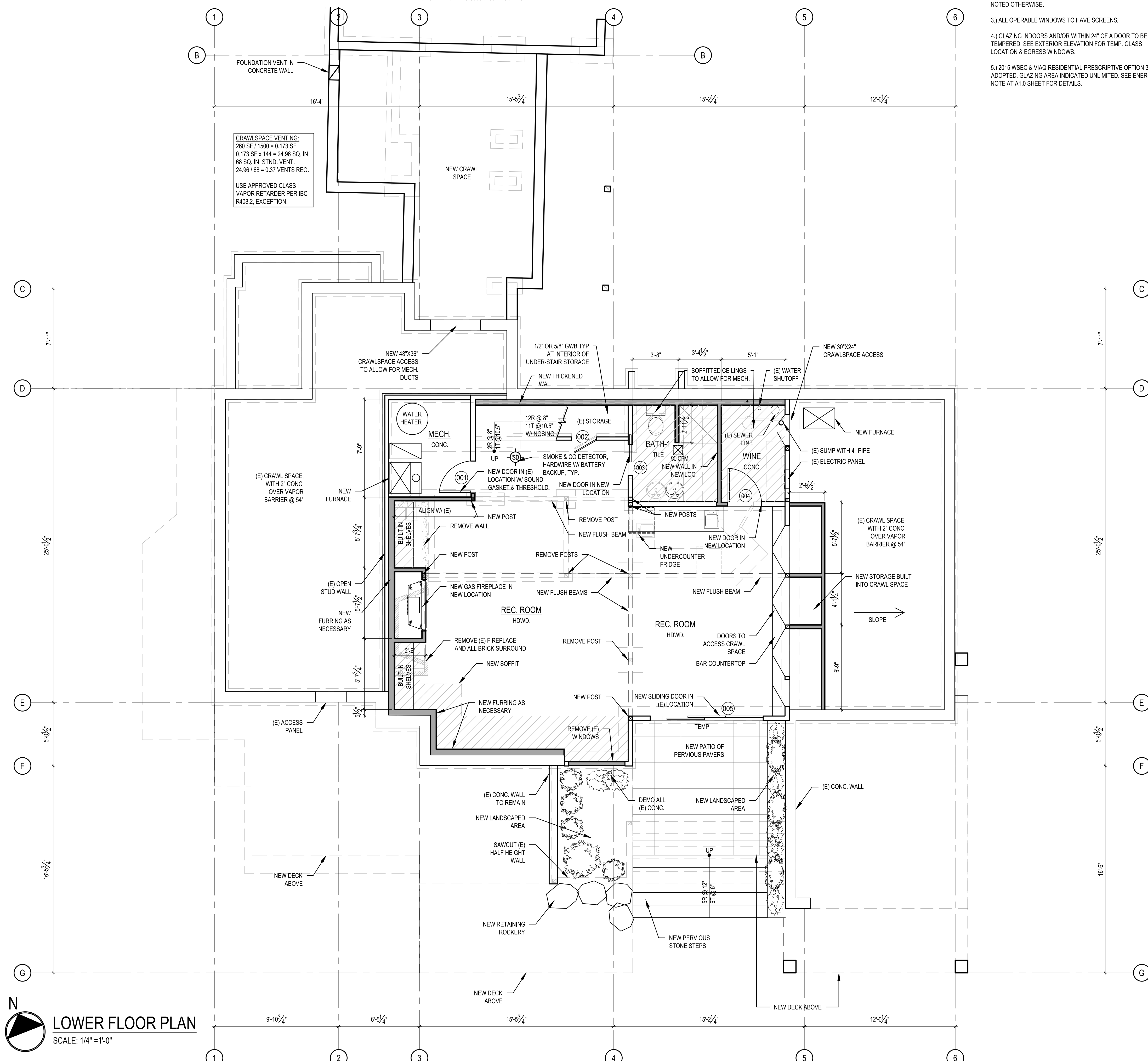
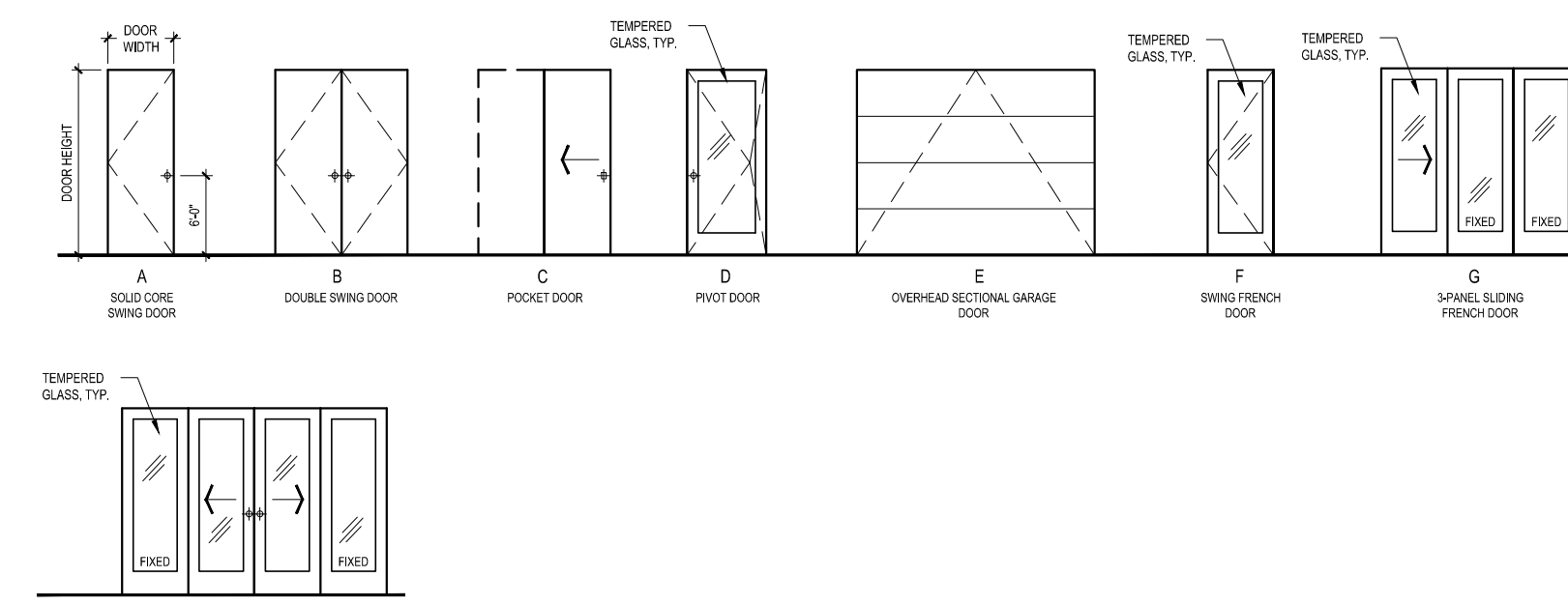
WINDOW MARK	DESCRIPTION	R.O. SIZE		TEMP.	QTY.	TOTAL AREA (SF)	U-VALUE (MIN.)	GLAZING	REMARKS & NOTES
		WIDTH	HEIGHT						
A	CASEMENT	2'-6"	2'-8"	-	1	.30	LOW E / CLEAR	-	TEMPERED, NEW IN (E) LOC
B	FIXED	3'-9-1/2"	7'-7-1/2"	Y	2	.30	LOW E / CLEAR	-	TEMPERED, NEW IN (E) LOC
C	FIXED	2'-3"	2'-4"	-	6	.30	LOW E / CLEAR	-	NEW IN (E) LOC
D	CASEMENT	3'-0"	2'-6"	-	2	.30	LOW E / CLEAR	-	WINDOWS GANGED TOGETHER
E	SLIDER	8'-0"	2'-2"	-	1	.30	LOW E / CLEAR	-	-
F	FIXED	4'-6"	3'-2"	Y	1	.30	LOW E / CLEAR	-	TEMPERED, PATTERNED GLASS
G	CASEMENT	3'-0"	3'-8"	-	2	.30	LOW E / CLEAR	-	WINDOWS GANGED TOGETHER
H	CASEMENT	2'-7"	4'-6"	-	1	.30	LOW E / CLEAR	-	NEW IN (E) LOC
I	CASEMENT ASSEMBLY	2'-6"	6'-2"	-	4	.30	LOW E / CLEAR	-	TEMPERED, WINDOWS GANGED TOGETHER
J	CASEMENT	2'-6"	3'-2"	Y	1	.30	LOW E / CLEAR	-	TEMPERED, OBSCURED GLASS
K	CASEMENT	3'-0"	3'-8"	-	4	.30	LOW E / CLEAR	-	WINDOWS GANGED TOGETHER
K1	FIXED	3'-0"	3'-8"	-	1	.30	LOW E / CLEAR	-	WINDOWS GANGED TOGETHER
L	CASEMENT ASSEMBLY	2'-9"	5'-2"	-	2	.30	LOW E / CLEAR	-	WINDOWS GANGED TOGETHER
M	FIXED ASSEMBLY	5'-0"	5'-2"	-	1	.30	LOW E / CLEAR	-	-
N	FIXED	3'-11-5/8"	4'-2"	-	8	.30	LOW E / CLEAR	-	WINDOWS GANGED TOGETHER
O	CASEMENT ASSEMBLY	2'-0"	3'-8"	-	4	.30	LOW E / CLEAR	-	WINDOWS GANGED TOGETHER
P	FIXED	4'-0"	3'-8"	-	2	.30	LOW E / CLEAR	-	WINDOWS GANGED TOGETHER
Q	CASEMENT ASSEMBLY	2'-0"	3'-8-1/2"	Y	2	.30	LOW E / CLEAR	-	TEMPERED, NEW IN (E) LOC
R	FIXED ASSEMBLY	4'-5"	3'-8-1/2"	Y	1	.30	LOW E / CLEAR	-	TEMPERED, NEW IN (E) LOC
S	NOT USED	-	-	-	-	-	-	-	-
T	FIXED	2'-6"	5'-0"	-	1	.30	LOW E / CLEAR	-	-
U	NOT USED	-	-	-	-	-	-	-	-
V	FIXED	6'-0"	2'-0"	-	1	.30	LOW E / CLEAR	-	-
W	NOT USED	-	-	-	-	-	-	-	-
X	FIXED	5'-0"	2'-0"	-	1	.30	LOW E / CLEAR	-	-

DOOR SCHEDULE

DOOR NO.	LOCATION	SIZE		DOOR TYPE	TEMP. GLASS	DOOR FIN.	DOOR THK.	U-VAL. (MIN.)	DOOR HDWR.	REMARKS
		WIDTH	HEIGHT							
001	MECHANICAL	2'-6"	6'-8"	A	-	-	1-3/4"	-	-	SOUND GASKET
002	STORAGE	2'-0"	6'-8"	A	-	-	1-3/4"	-	-	NEW IN (E) LOCATION
003	BATH-1	2'-6"	6'-8"	C	-	-	1-3/4"	-	-	NEW POCKET IN (E) LOCATION
004	WINE ROOM	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	NEW IN (E) LOCATION
005	REC ROOM	9'-0"	6'-8"	G	Y	-	1-3/4"	.30	-	TEMPERED

DOOR NO.	LOCATION	SIZE		DOOR TYPE	TEMP. GLASS	DOOR FIN.	DOOR THK.	U-VAL. (MIN.)	DOOR HDWR.	REMARKS
		WIDTH	HEIGHT							
101	ENTRY	5'-0"	8'-0"	D	Y	-	1-3/4"	.30	-	TEMPERED, PIVOT
102	BATH-3	2'-6"	8'-0"	A	-	-	1-3/4"	-	-	NEW IN (E) LOCATION
103	BATH-2	PR 1'-4"	8'-0"	B	-	-	1-3/4"	-	-	NEW IN (E) LOCATION
104	PANTRY	2'-8"	8'-0"	A	-	-	1-3/4"	-	-	-
105	(E) LAUNDRY	2'-8"	8'-0"	A	-	-	1-3/4"	-	-	-
106	(E) LAUNDRY	2'-8"	6'-8"	F	Y	-	1-3/4"	.30	-	TEMPERED, IN (E) LOCATION
107	DINING	11'-10-5/8"	7'-2-1/2"	H	Y	-	1-3/4"	.30	-	TEMPERED, DOUBLE SLIDER
108	LIVING	15'-10-5/8"	7'-2-1/2"	H	Y	-	1-3/4"	.30	-	TEMPERED, DOUBLE SLIDER
109	BED/ OFFICE	9'-0"	6'-8"	G	Y	-	1-3/4"	.30	-	TEMPERED
110	BED/ OFFICE CLOSET	PR 2'-0"	6'-8"	B	-	-	1-3/4"	-	-	-
111	BED/ OFFICE	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	-
112	BATH 2	2'-8"	6'-8"	C	-	-	1-3/4"	-	-	POCKET
113	BATH 2	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	-
114	BEDROOM 1	2'-8"	6'-8"	B	-	-	1-3/4"	-	-	-
115	CLOSET 1	PR 2'-0"	6'-8"	B	-	-	1-3/4"	-	-	NEW IN (E) LOCATION
116	MUDROOM	PR 2'-10"	6'-8"	C	-	-	1-3/4"	-	-	POCKET
117	MUDROOM	2'-10"	6'-8"	A	-	-	1-3/4"	.30	-	20 MIN GASKETED FIRE RATED DOOR
118	GARAGE	18'-0"	8'-0"	E	-	-	1-3/4"	-	-	OVERHEAD DOOR
119	GARAGE	9'-0"	8'-0"	E	-	-	1-3/4"	-	-	OVERHEAD DOOR

DOOR NO.	LOCATION	SIZE		DOOR TYPE	TEMP. GLASS	DOOR FIN.	DOOR THK.	U-VAL. (MIN.)	DOOR HDWR.	REMARKS
		WIDTH	HEIGHT							
201	HALL CLOSET	PR 3'-0"	6'-8"	B	-	-	1-3/4"	-	-	-
202	HALL LAUNDRY	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	-
203	BATH-4	2'-6"	6'-8"	A	-	-	1-3/4"	-	-	-
204	BEDROOM-2	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	-
205	NEW OFFICE	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	NEW IN (E) LOCATION
206	MASTER BEDROOM	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	-
207	MASTER CLOSET	2'-8"	6'-8"	C	-	-	1-3/4"	-	-	POCKET
208	MASTER BATH	2'-8"	6'-8"	C	-	-	1-3/4"	-	-	POCKET
209	MASTER BATH CLOSET	2'-8"	6'-8"	C	-	-	1-3/4"	-	-	POCKET
210	MASTER BATH WC	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	-
211	NEW BONUS ROOM	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	-
212	NEW BATH 5	2'-8"	6'-8"	A	-	-	1-3/4"	-	-	-
213										



LOWER FLOOR PLAN
SCALE: 1/4" = 1'-0"

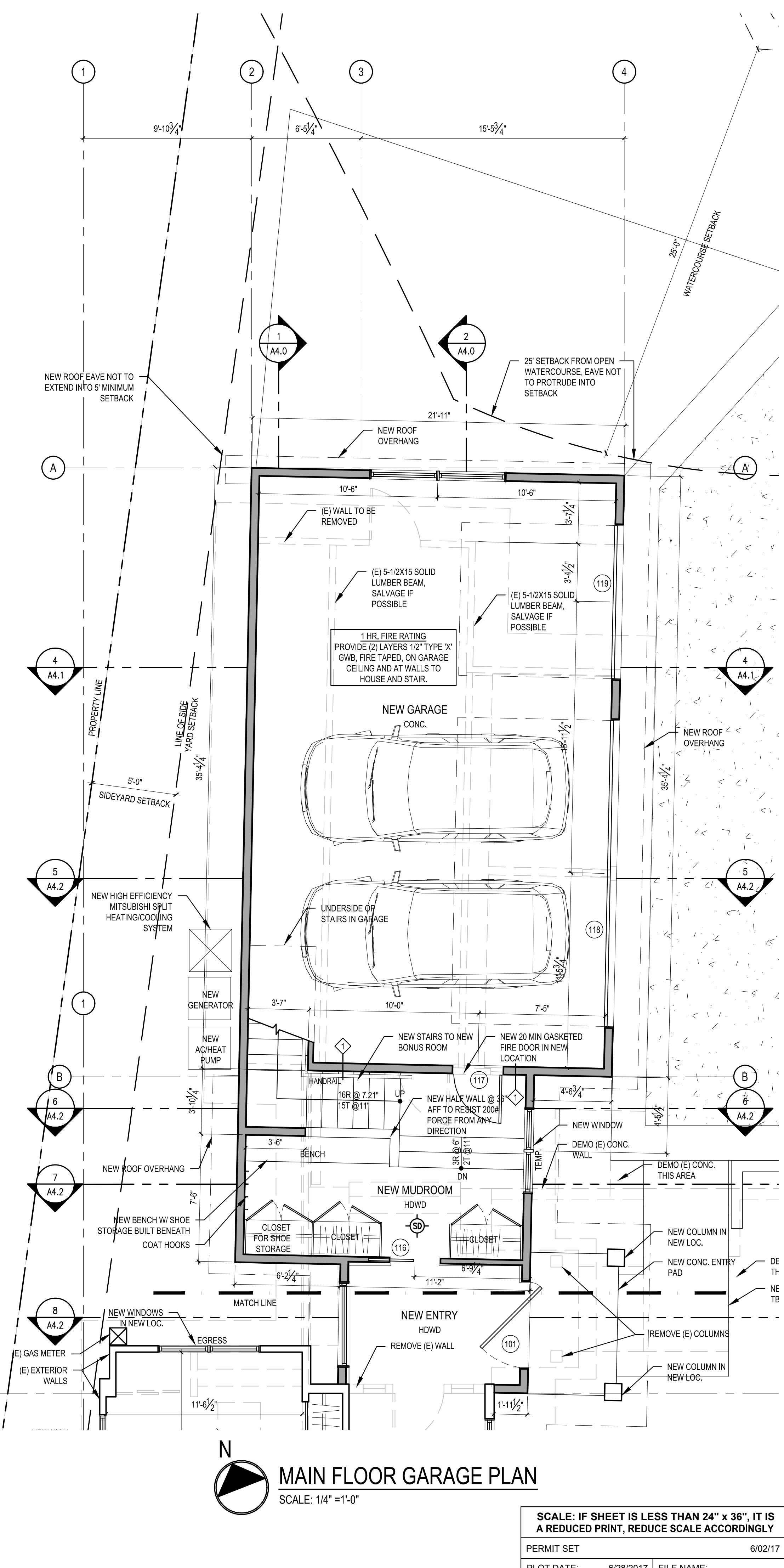
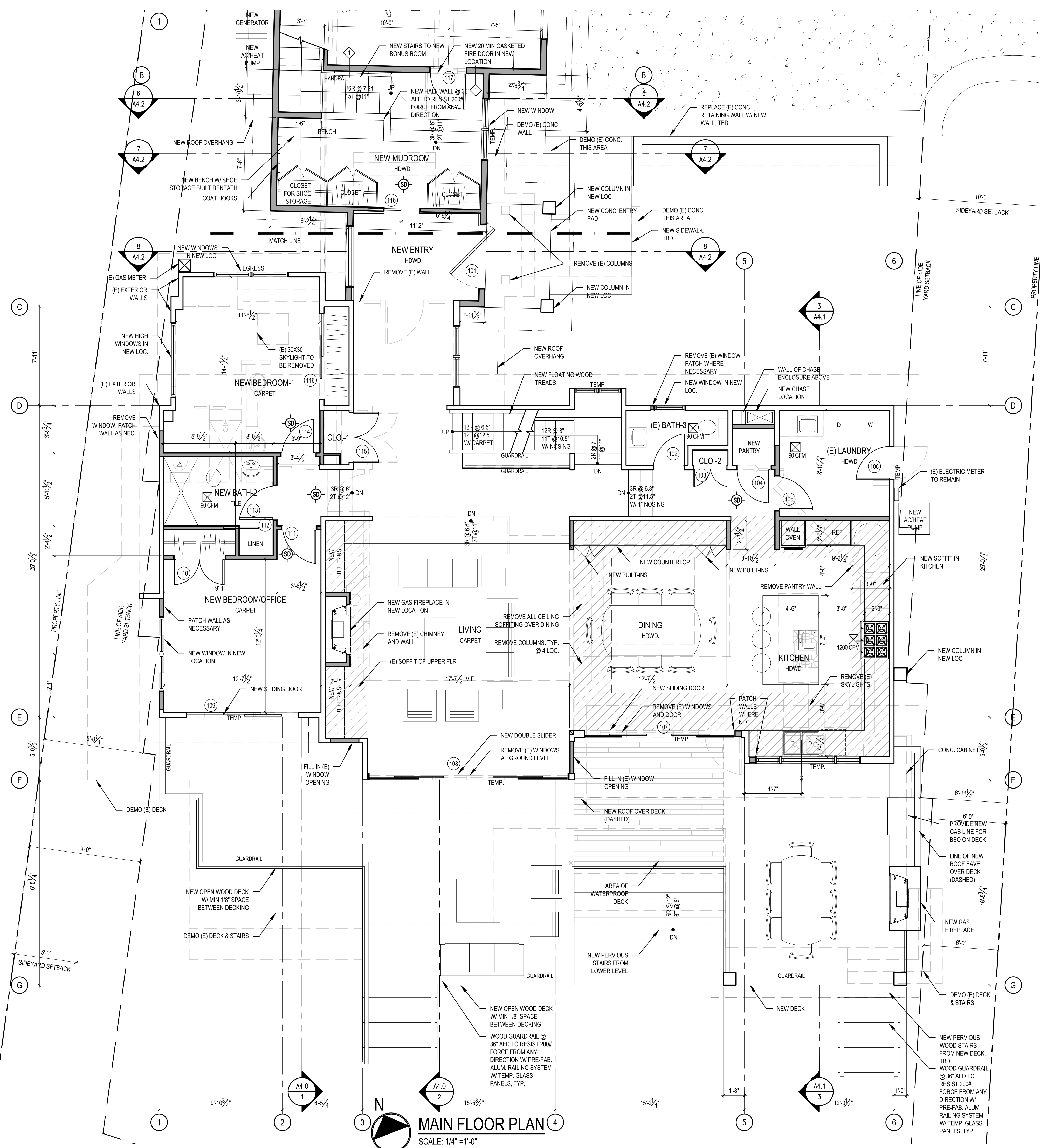
STURMAN ARCHITECTS
TEL (425) 451-7003
9 103rd Avenue NE Suite 203 Bellevue, WA 98004
REGISTERED ARCHITECT
BRADLEY J. STURMAN
STATE OF WASHINGTON

PLATOU RESIDENCE PERMIT SET
8316 AVALON DRIVE
MERCER ISLAND, WA 98040

LOWER FLOOR PLAN

REVISIONS:
DRAWN BY: KE
CHECKED BY: BJS
SHEET
A2.0
OF

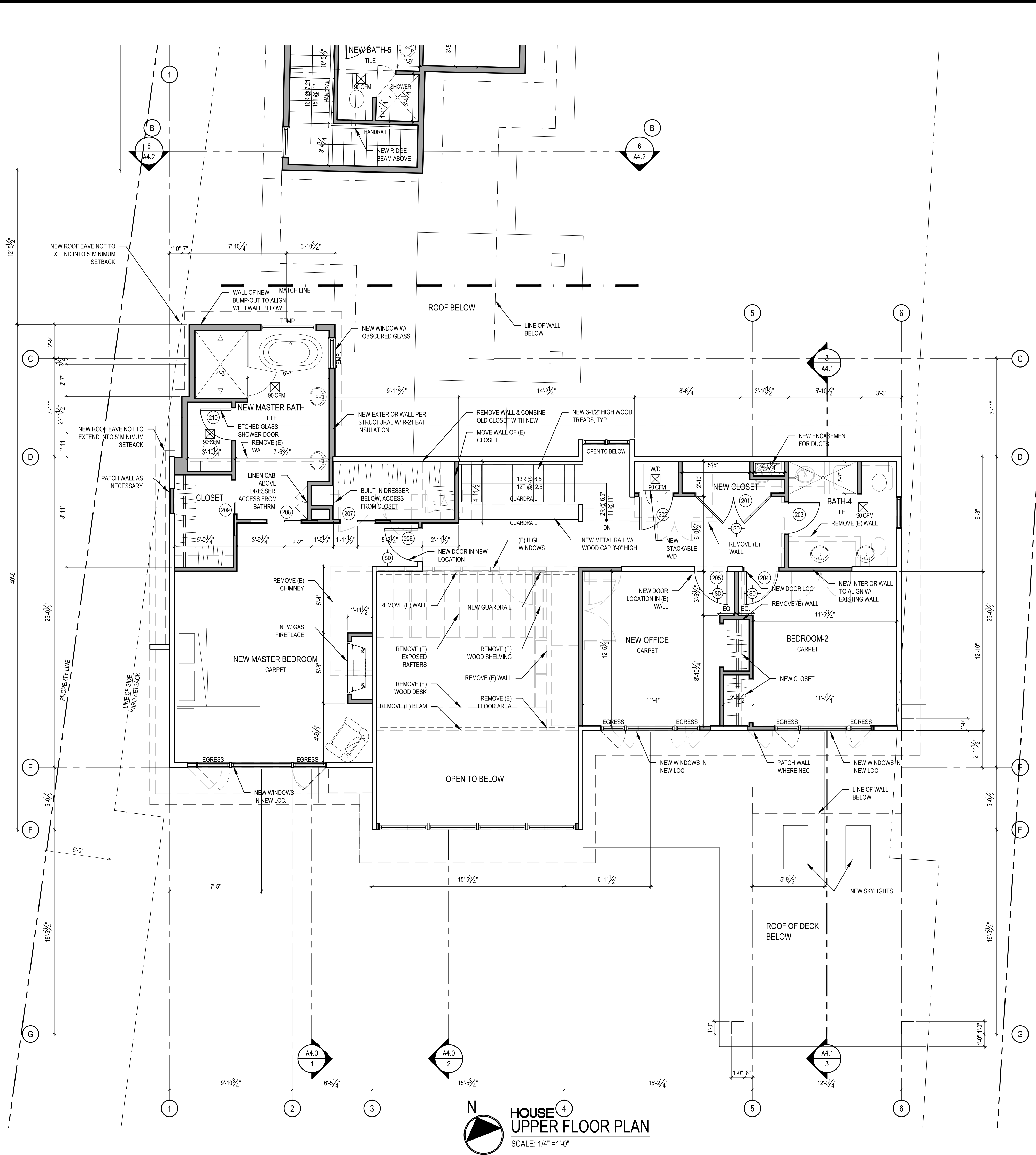
SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY
PERMIT SET
PLOT DATE: 6/28/2017 FILE NAME: 6/02/17



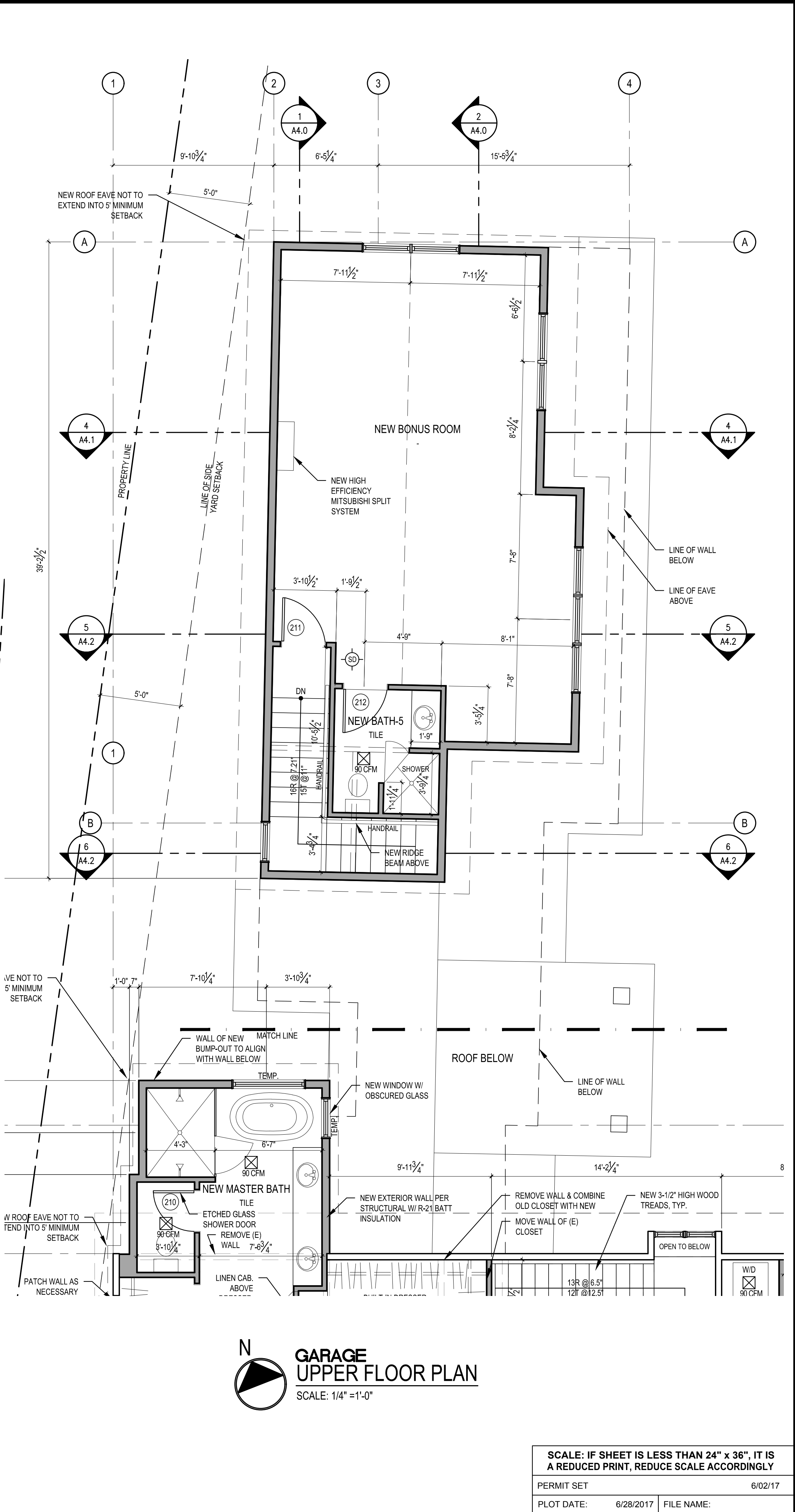
MAIN FLOOR PLAN
 SCALE: 1/4" = 1'-0"

MAIN FLOOR GARAGE PLAN
 SCALE: 1/4" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY
 PERMIT SET
 PLOT DATE: 6/28/2017 FILE NAME:



HOUSE UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"



GARAGE UPPER FLOOR PLAN
SCALE: 1/4" = 1'-0"

SCALE: IF SHEET IS LESS THAN 24" x 36", IT IS A REDUCED PRINT, REDUCE SCALE ACCORDINGLY
PERMIT SET
PLOT DATE: 6/28/2017 FILE NAME: 6/02/17

STURMAN ARCHITECTS
TEL (425) 451-7003
9 103rd Avenue NE Suite 203 Bellevue, WA 98004

5562 REGISTERED ARCHITECT
BRADLEY J. STURMAN STATE OF WASHINGTON

www.sturmanarchitects.com
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PLATOU RESIDENCE PERMIT SET
8316 AVALON DRIVE
MERCER ISLAND, WA 98040

UPPER FLOOR PLAN

REVISIONS:	
DRAWN BY:	KE
CHECKED BY:	BJS
SHEET	A2.2
OF	OF

**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: _____

DEVELOPMENT APPLICATION

Received By: _____

STREET ADDRESS/LOCATION 8316 AVALON DRIVE		ZONE R8.4
COUNTY ASSESSOR PARCEL #'S 032110-0290		PARCEL SIZE (SQ. FT.) 18,528
PROPERTY OWNER (required) CARL & DONNA PLATOU	ADDRESS (required) 8316 AVALON DRIVE MERCER ISLAND, WA 98040	CELL/OFFICE (required) 206-713-8128 E-MAIL (required) <i>PLATOU1@COMCAST.NET</i>
PROJECT CONTACT NAME BRAD STURMAN	ADDRESS 9 - 103RD AVE. N.E. #203 BELLEVUE, WA 98004	CELL/OFFICE 425-451-7003 E-MAIL brads@sturmanarchitects.com
TENANT NAME	ADDRESS	CELL PHONE 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.

SIGNATURE *Brad A.*

DATE *3.31.17*

PROPOSED APPLICATION(S) AND CLEAR DESCRIPTION OF PROPOSAL (PLEASE USE ADDITIONAL PAPER IF NEEDED):

BUFFER REDUCTION FROM 50 FEET TO 25 FEET FROM AN EXISTING WATERCOURSE TO ALLOW FOR THE ADDITION TO THE GARAGE.

ATTACH RESPONSE TO DECISION CRITERIA IF APPLICABLE

CHECK TYPE OF LAND USE APPROVAL REQUESTED:

APPEALS	DEVIATIONS Continued	SUBDIVISION SHORT PLAT Continued
<input type="checkbox"/> Building (+cost of file preparation)	<input type="checkbox"/> Impervious Surface (5% Lot overage)	<input type="checkbox"/> Short Plat Amendment
<input type="checkbox"/> Land use (+cost of verbatim transcript)	<input type="checkbox"/> Shoreline	<input type="checkbox"/> Final Short Plat Approval
<input type="checkbox"/> Code Interpretation	<input type="checkbox"/> Wet Season Construction Moratorium	VARIANCES (Plus Hearing Examiner Fee)
CRITICAL AREAS	ENVIRONMENTAL REVIEW (SEPA)	<input type="checkbox"/> Type 1**
<input type="checkbox"/> Determination	<input checked="" type="checkbox"/> Checklist: Single Family Residential Use	<input type="checkbox"/> Type 2***
<input type="checkbox"/> Reasonable Use Exception	<input type="checkbox"/> Checklist: Non-Single Family Residential Use	OTHER LAND USE
DESIGN REVIEW	<input type="checkbox"/> Environmental Impact Statement	<input type="checkbox"/> Accessory Dwelling Unit
<input type="checkbox"/> Administrative Review	SHORELINE MANAGEMENT	<input type="checkbox"/> Code Interpretation Request
<input type="checkbox"/> Design Review – Major	<input type="checkbox"/> Exemption	<input type="checkbox"/> Comprehensive Plan Amendment (CPA)
<input type="checkbox"/> Design Review – Minor	<input type="checkbox"/> Semi-Private Recreation Tract (modification)	<input type="checkbox"/> Conditional Use (CUP)
WIRELESS COMMUNICATIONS FACILITIES	<input type="checkbox"/> Semi-Private Recreation Tract (new)	<input type="checkbox"/> Lot Line Revision
<input type="checkbox"/> Wireless Communications Facilities- 6409 Exemption	<input type="checkbox"/> Substantial Dev. Permit	<input type="checkbox"/> Lot Consolidation
<input type="checkbox"/> New Wireless Communications Facility	SUBDIVISION LONG PLAT	<input type="checkbox"/> Noise Exception
DEVIATIONS	<input type="checkbox"/> Long Plat	<input type="checkbox"/> Reclassification of Property (Rezoning)
<input type="checkbox"/> Changes to Antenna requirements	<input type="checkbox"/> Subdivision Alteration to Existing Plat	<input type="checkbox"/> ROW Encroachment Agreement (requires separate ROW Use Permit)
<input type="checkbox"/> Changes to Open Space	<input type="checkbox"/> Final Subdivision Review	<input type="checkbox"/> Zoning Code Text Amendment
<input type="checkbox"/> Fence Height	SUBDIVISION SHORT PLAT	
<input checked="" type="checkbox"/> Critical Areas Setback	<input type="checkbox"/> Short Plat	
	<input type="checkbox"/> 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-2L, MF-3,TC,P

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



Date: February 15, 2017

To: City of Mercer Island – Building Department
From: Brad Sturman

Re: Platou Residence
8316 Avalon Drive
Mercer Island, WA

Subj.: Critical Area Determination

Sturman Architects has been authorized by the property owners, Carl and Donna Platou, to act on their behalf in the submittal of this application.

This letter is being submitted to request a Critical Area Determination in order to reduce the Type 2 Watercourse buffer currently existing on the property.

The property of interest is 8316 Avalon Drive, parcel number: 0321100290; legal description: Avalon Park Add., Plat Block: 4 Plat Lot: 10.

This project is a remodel and addition to an existing single family residence including interior renovations, new pervious and covered deck construction. The existing breezeway between house and detached garage will become a new entry and mudroom and the now attached existing garage will be extended and have a new second floor added above.

The property has a Type 2 Watercourse running through it, in a rock-banked channel until it enters a culvert under the existing entry drive, then into a landscape pond along the property line, then exiting into a culvert to continue on to the adjacent property. This Type 2 watercourse requires a 50 feet Standard Buffer, which the existing garage and gravel parking area encroach into. The proposed expansion and space above the existing garage would add 135 s.f. of new building area in the Standard Buffer on area that was previously gravel parking area. As a result, we are requesting a reduction of the buffer to the 25 feet Minimum Buffer Width. No structure or eave of



the proposed project would enter the 25 ft Minimum Buffer Width at any point.

Altmann Oliver Associates, LLC, has conducted a critical areas study and created plans to satisfy the mitigation requirements; these are included in this submittal. Per their report, “due to the degraded condition of the existing buffer, the proposed project would utilize mitigation option 19.07.070.B.2.b.iii to allow for a buffer reduction from 50 to 25 feet minimum.” We have included their report and mitigation plans in our Critical Area Determination submittal.

Also included for your review are the SEPA checklist, the property survey, and architectural site and main floor plans.

Thank you for your time and attention.

Sincerely,

**Kati Eitzman for Brad Sturman
Sturman Architects**

February 20, 2017
Project No. 17-054

Mr. Brad Sturman
9 – 103rd Avenue NE, Suite 203
Bellevue, WA 98125

**Subject: Geotechnical Engineering Evaluation
Platou Residence
8316 Avalon Drive, Mercer Island, Seattle, WA**

Dear Mr. Sturman,

As requested, PanGEO Inc. (PanGEO) completed a geotechnical engineering evaluation to assist you for the proposed project located at 8316 Avalon Drive in Mercer Island, Washington. This study was performed in general accordance with verbally discussed scope of work with you. Our service scope included reviewing geology maps in the area, reviewing readily available geotechnical data in the site vicinity, conducting a site reconnaissance, performing engineering analysis, and developing the conclusions and recommendations presented in this report.

SITE AND PROJECT DESCRIPTION

The project site is located at 8316 Avalon Drive in Mercer Island, Washington (see Figure 1, Vicinity Map). The subject property is an approximately 18,779 square foot, roughly trapezoidal-shaped lot (see Figure 2). It is bordered to the north by Avalon Drive, to the south by Mercer Island beach club, and to the east and west by existing single-family residences. The site is currently occupied by a two-story house. Based on review of site topographic survey map, the existing site grade slopes down from north to south with an average gradient of about 5 percent.

We understand that the proposed project consists of a complete interior remodel. Based on review the current design plans, we understand the proposed project will also include a second story expansion at the northeast corner of the house off the master bedroom, expansion of the garage, and enclosure of the covered walkway between the garage and house. We anticipate that

site grading for the proposed new footings will be minor, likely consisting of fills and cuts on the order of 3 feet or less for the new foundation construction.

The conclusions and recommendations outlined in this report are based on our understanding of the proposed improvements, which is in turn based on the project information provided to us. If the above project description is substantially different from your proposed improvements, or if the project scope changes, PanGEO should be consulted to review the recommendations contained in this study and make modifications, if needed.

SITE GEOLOGY

The Geologic Map of Mercer Island (Troost and Wisher, 2006) mapped the surficial geologic units at the subject site as Lawton Clay (Q_{vlc}) and Pre-Olympia Non-Glacial Deposits (Q_{pon}). Lake Deposits (Q_l) is mapped along the lakeshore, to the south and east of the site. Lawton Clay (Q_{vlc}) are described by Troost, et al. as stiff to hard clay, silt, and clayey silt deposited in lowland proglacial lakes. Pre-Olympia Nonglacial deposits (Q_{pon}) typically consist of stiff to hard, laminated to massive, silt and clay with sand interbeds to clean to silty sand and gravel with silt and peat interbeds that had been overridden by Olympia Interglaciation. Lake Deposit (Q_l) typically consists of very loose to loose sand to very soft to medium stiff silt and clay with peat and other organic sediments deposited adjacent to Lake Washington.

SURFACE AND SUBSURFACE AND CONDITIONS

The existing house was built in 1969. A site reconnaissance of the subject property was conducted on February 20, 2017. During our site reconnaissance, we did not observe any noticeable cracks on the building foundations and the existing house foundations appear to be in good conditions. We also did not observe any obvious evidence of ground settlement at the subject site. Based on our field observations, the topography at the site and vicinity, and the anticipated subsurface conditions, in our opinion, the subject site appears to be globally stable in its current configuration. Furthermore, it is our opinion that the proposed project as currently planned will not adversely affect the overall stability of the site or adjacent properties, provided it is properly designed and constructed in accordance with the current code.

Our understanding of the site subsurface conditions is inferred from summary logs of test borings completed in the site vicinity. Specifically, three test borings (B-1 through B-3) were previously completed by Geotech Consultant, Inc. (GCI) at 8300 Avalon Drive in 2002, two

parcels to the east of the subject property. The approximate locations of these three test borings and summary test boring logs are included in Appendix A of this report. The 8300 Avalon Drive property is in a similar location with the subject property but more close to the lake. We anticipate that the subject site should have similar representative soil conditions with less lake deposits.

The previous borings generally encountered soft silt and loose silty sand to about 8 to 15 feet below the surface, overlying very stiff to hard, low-plasticity silt, and medium dense to dense non-plasticity silt. Groundwater was observed at about 4 feet below the surface in the boring close near the lake, and about 13 feet deep for the boring in the upper land.

GEOTECHNICAL DESIGN RECOMMENDATIONS

SOIL LIQUEFACTION EVALUATION

The site is mapped within a soil liquefaction geologic hazards area. Soil liquefaction is a condition where saturated cohesionless soils undergo a substantial loss of strength due to the build-up of excess pore water pressures resulting from cyclic stress applications induced by earthquakes. Soils most susceptible to liquefaction are typically cohesionless, predominantly silt and sand sized, must be loose, and be below the groundwater table.

The existing wood frame building at the site and in the site vicinity appeared to have performed well during the 2001 Nisqually earthquake. In addition, there were no reported signs of liquefaction such as sand boils in the area during 2001 earthquake. As such, it is our opinion that the proposed wood frame structures will perform reasonably well during future earthquakes with the magnitude similar to 2001 Nisqually earthquake.

For the purpose of soil liquefaction assessment, we assume the site soils will consist of loose to medium dense sandy soils and non-plasticity silt to a maximum depth of approximately 20 feet. We also assume that the groundwater may be as shallow as about 6 to 7 feet, as worst case condition. As such, the soils between about 6 and 20 feet will have a potential for soil liquefaction during a 2,475-year IBC-code level earthquake. As a result of soil liquefaction, ground settlement may likely occur and the ground settlement due to soil liquefaction for this event is estimated to be on the order of about 2 to 3 inches, and the differential foundation settlement is estimated to be about 1 to 1½ inches.

Based on above discussions, it is our opinion that the existing building with the proposed second story addition and the expanded additions may be founded on conventional shallow footings. If liquefaction occurs at the site, it would likely result in differential settlement of the foundations. However, in our opinion, the potential foundation settlement due to a design-level earthquake would not pose a life safety issue for the occupants and would not significantly impede entrance or egress from the structure following an earthquake. If a higher level of performance is desired, use of deep foundations will be required and PanGEO can provide additional input if needed.

Based on the site topography and soil conditions, the potential for seismic-induced landsliding and lateral spreading is considered to be low. And it is our opinion that special design considerations associated with seismic-induced landsliding and lateral spreading are not necessary for this project.

SEISMIC DESIGN PARAMETERS

Table 1 below provides seismic design parameters for the site that are in conformance with the 2012/2015 editions of the International Building Code (IBC), which specifies a design earthquake having a 2% probability of occurrence in 50 years (return interval of 2,475 years), and the 2008 USGS seismic hazard maps. The spectral response accelerations were obtained from the USGS Earthquake Hazards Program Interpolated Probabilistic Ground Motion website (2008 data) for the project latitude and longitude.

Table 1 – 2012/2015 IBC Seismic Design Parameters

Site Class	Spectral Acceleration at 0.2 sec. (g)	Spectral Acceleration at 1.0 sec. (g)	Site Coefficients		Design Spectral Response Parameters	
	S _s	S ₁	F _a	F _v	S _{DS}	S _{DI}
D	1.460	0.555	1.00	1.50	0.973	0.555

BUILDING FOUNDATIONS

New Footings - Based on review of the geologic map and the results of the existing borings nearby, we recommend that an allowable soil bearing pressure of 1,500 psf be used for sizing the new building footings. The recommended bearing pressure should not be increased when design

for seismic conditions. The new footings should have a minimum width of 18 inches. The footings should be placed at a minimum depth of 18 inches below final grade. We recommend that the new footings bear on a minimum of 6 inches compacted structural fill to provide a more uniform support. The structural fill should extend horizontally a minimum of 6 inches beyond the edge of the footing.

Existing Footings – In our opinion, an allowable soil bearing pressure of 2,000 psf may be used to evaluate the adequacy of the existing footings due to the added structural loads. A higher allowable bearing pressure is used for the existing footings since the existing foundation soil had been consolidated under the existing building loads. The existing footings may be enlarged to account for the added structural loads. The recommended bearing pressure should not be increased when evaluating the seismic conditions.

Lateral Resistance

Lateral loads acting on the foundations may be resisted by passive earth pressure developed against the embedded portion of the foundation system and by frictional resistance at the bottom of the footings. For footings bearing on the compacted structural fill, a frictional coefficient of 0.35 may be used to evaluate sliding resistance. Passive soil resistance may be calculated using an equivalent fluid unit weight of 250 pcf, assuming properly re-compacted native sandy soil or compacted structural fill will be placed against the footings. The above values include a factor of safety of 1.5. Unless covered by pavements or slabs, the passive resistance in the upper 12 inches of soil should be neglected.

Footing Subgrade Preparation

The footing excavations for the new footings should be trimmed neat and the native subgrade at the bottom of 6-inch structural fill should be properly compacted prior to structural fill placement. The structural fill should also be compacted to a firm, unyielding condition prior to form setting and rebar placement. The adequacy of footing subgrade should be verified by a representative of PanGEO, prior to placing forms or rebar.

Foundation Performance

Settlement for the existing and new footings under static loading conditions is estimated to be less than about 1 inch. Most of the anticipated settlements are likely to occur during

construction as dead loads are applied. Total settlement for footings due to seismic shaking may be as much as 2 to 3 inches during an IBC code-level design earthquake. Differential post-liquefaction foundation settlement is estimated to be on the order of 1 to 1½ inches. As previously indicated, if a higher level of foundation performance is desired, use of deep foundations, such as pin pile foundation, will be required. PanGEO can provide additional design recommendations as requested.

TEMPORARY EXCAVATIONS

As currently planned, temporary excavations for the proposed construction will be less than 3 feet below the existing grade for the new foundations. We anticipate the excavations to mainly encounter loose to medium dense sand and silt. All temporary excavations should be performed in accordance with Part N of WAC (Washington Administrative Code) 296-155. The contractor is responsible for maintaining safe excavation slopes and/or shoring.

All temporary excavations deeper than a total of 4 feet should be sloped or shored. Based on the soil conditions at the site, for planning purposes, it is our opinion that temporary excavations for the proposed construction may be sloped 1H:1V or flatter.

The temporary excavations and cut slopes should be re-evaluated in the field during construction based on actual observed soil conditions, and may need to be flattered in the wet seasons and should be covered with plastic sheets. We also recommend that heavy construction equipment, building materials, excavated soil, and vehicular traffic should not be allowed within a distance equal to 1/3 the slope height from the top of any excavation.

MATERIAL REUSE

In the context of this report, structural fill is defined as compacted fill placed under footings, concrete stairs and landings, and slabs, or other load-bearing areas. In our opinion, the on-site sand is poorly graded and will be difficult to compact to a dense condition. As such, on-site sand is not suitable to be used as structural fill, but can be used as wall backfill and general fill in the non-structural areas. Structural fill, if needed, should consist of imported, well-graded, granular material, such as WSDOT Gravel Borrow or approved equivalent. Well-graded recycled concrete may also be considered as a source of structural fill. Use of recycled concrete as structural fill should be approved by the geotechnical engineer. The on-site soil may be used as general fill in the non-structural and landscaping areas. If use of the on-site soil is planned, the

excavated soil should be stockpiled and protected with plastic sheeting to prevent softening from rainfall in the wet season.

STRUCTURAL FILL PLACEMENT AND COMPACTION

Structural fill should be moisture conditioned to within about 3 percent of optimum moisture content, placed in loose, horizontal lifts less than 8 inches in thickness, and systematically compacted to a dense and relatively unyielding condition and to at least 95 percent of the maximum dry density, as determined using test method ASTM D 1557.

Depending on the type of compaction equipment used and depending on the type of fill material, it may be necessary to decrease the thickness of each lift in order to achieve adequate compaction. PanGEO can provide additional recommendations regarding structural fill and compaction during construction.

WET WEATHER EARTHWORK

In our opinion, the proposed site construction may be accomplished during wet weather (such as in winter) without adversely affecting the site stability. However, earthwork construction performed during the drier summer months likely will be more economical. Winter construction will require the implementation of best management erosion and sedimentation control practices to reduce the chance of off-site sediment transport. Some of the site soils contain a high percentage of fines and are moisture sensitive. Any footing subgrade soils that become softened either by disturbance or rainfall should be removed and replaced with structural fill, Controlled Density Fill (CDF), or lean-mix concrete. General recommendations relative to earthwork performed in wet conditions are presented below:

- Site stripping, excavation and subgrade preparation should be followed promptly by the placement and compaction of clean structural fill or CDF;
- The size and type of construction equipment used may have to be limited to prevent soil disturbance;
- The ground surface within the construction area should be graded to promote run-off of surface water and to prevent the ponding of water;
- Bales of straw and/or geotextile silt fences should be strategically located to control erosion and the movement of soil;

- Structural fill should consist of less than 5% fines; and
- Excavation slopes should be covered with plastic sheets.

SURFACE DRAINAGE AND EROSION CONSIDERATIONS

Surface runoff can be controlled during construction by careful grading practices. Typically, this includes the construction of shallow, upgrade perimeter ditches or low earthen berms in conjunction with silt fences to collect runoff and prevent water from entering excavations or to prevent runoff from the construction area from leaving the immediate work site. Temporary erosion control may require the use of hay bales on the downhill side of the project to prevent water from leaving the site and potential storm water detention to trap sand and silt before the water is discharged to a suitable outlet. All collected water should be directed under control to a positive and permanent discharge system.

Permanent control of surface water should be incorporated in the final grading design. Adequate surface gradients and drainage systems should be incorporated into the design such that surface runoff is directed away from structures. Potential problems associated with erosion may also be reduced by establishing vegetation within disturbed areas immediately following grading operations.

ADDITIONAL SERVICES

To confirm that our recommendations are properly incorporated into the design and construction of the proposed addition, PanGEO should be retained to conduct a review of the final project plans and specifications, and to monitor the construction of geotechnical elements. The City of Mercer Island, as part of the permitting conditions, may also require geotechnical construction inspection services. PanGEO can provide you a cost estimate for construction monitoring services at a later date.

Modifications to our recommendations presented in this report may be necessary, based on the actual conditions encountered during construction.

CLOSURE

We have prepared this report for Mr. Brad Sturman and the project design team. Recommendations contained in this report are based on a site reconnaissance, a subsurface

exploration program, review of pertinent subsurface information, and our understanding of the project. The study was performed using a mutually agreed-upon scope of work.

Variations in soil conditions may exist between the locations of the explorations and the actual conditions underlying the site. The nature and extent of soil variations may not be evident until construction occurs. If any soil conditions are encountered at the site that are different from those described in this report, we should be notified immediately to review the applicability of our recommendations. Additionally, we should also be notified to review the applicability of our recommendations if there are any changes in the project scope.

The scope of our work does not include services related to construction safety precautions. Our recommendations are not intended to direct the contractors' methods, techniques, sequences or procedures, except as specifically described in our report for consideration in design. Additionally, the scope of our work specifically excludes the assessment of environmental characteristics, particularly those involving hazardous substances. We are not mold consultants nor are our recommendations to be interpreted as being preventative of mold development. A mold specialist should be consulted for all mold-related issues.

This report has been prepared for planning and design purposes for specific application to the proposed project in accordance with the generally accepted standards of local practice at the time this report was written. No warranty, express or implied, is made.

This report may be used only by the client and for the purposes stated, within a reasonable time from its issuance. Land use, site conditions (both off and on-site), or other factors including advances in our understanding of applied science, may change over time and could materially affect our findings. Therefore, this report should not be relied upon after 24 months from its issuance. PanGEO should be notified if the project is delayed by more than 24 months from the date of this report so that we may review the applicability of our conclusions considering the time lapse.

It is the client's responsibility to see that all parties to this project, including the designer, contractor, subcontractors, etc., are made aware of this report in its entirety. The use of information contained in this report for bidding purposes should be done at the contractor's option and risk. Any party other than the client who wishes to use this report shall notify PanGEO of such intended use and for permission to copy this report. Based on the intended use

Mr. Brad Sturman
Platou Residence – 8316 Avalon Drive, Mercer Island, WA
February 20, 2017

of the report, PanGEO may require that additional work be performed and that an updated report be reissued. Noncompliance with any of these requirements will release PanGEO from any liability resulting from the use this report.

We appreciate the opportunity to be of service. Please feel free to contact our office with any questions you have regarding our study, this report, or any geotechnical engineering related project issues.

Sincerely,



2/20/2017

H. Michael Xue, P.E.
Senior Geotechnical Engineer

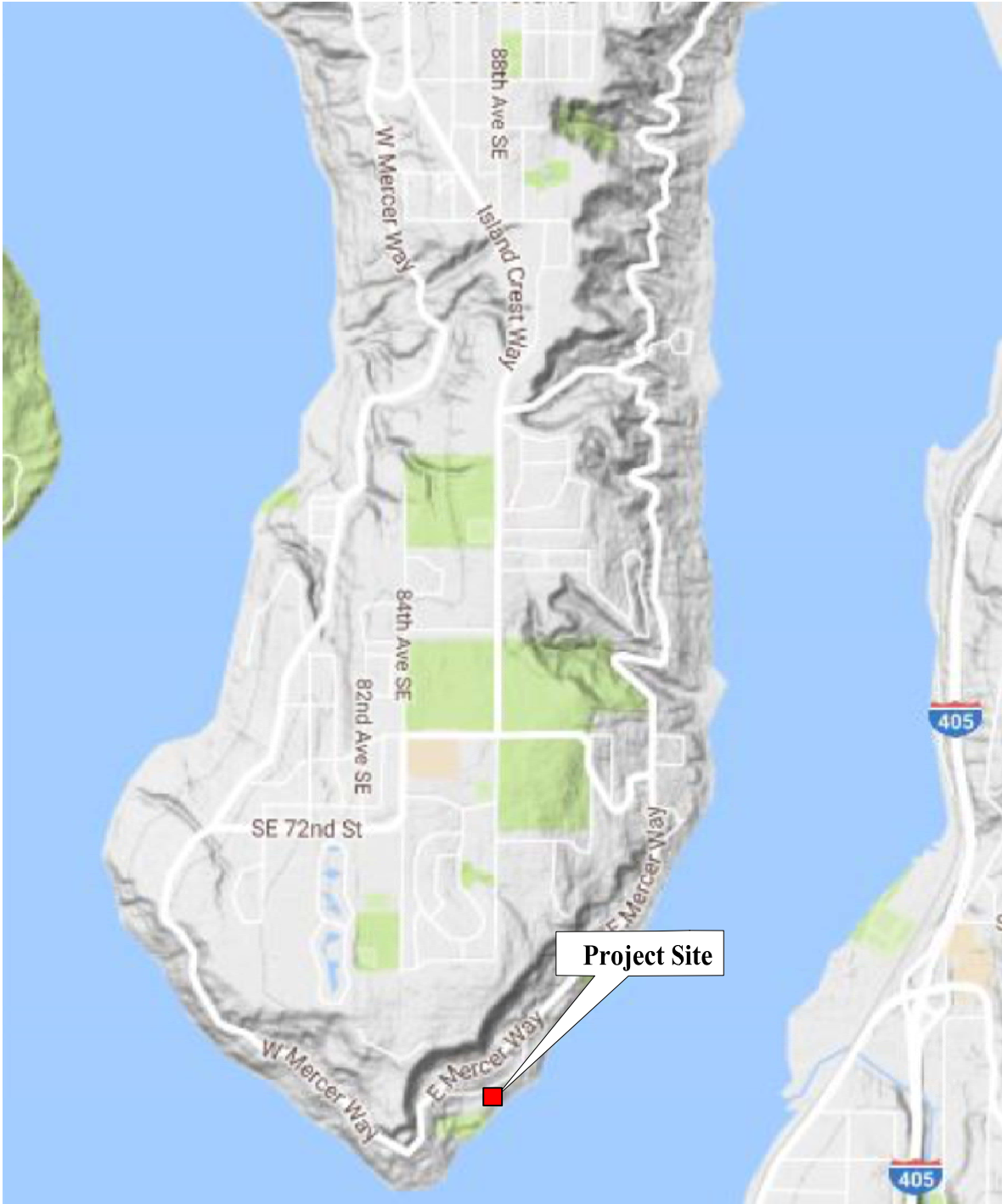
Attachments:

- Figure 1 Vicinity Map
- Figure 2 Site and Exploration Plan

Appendix A – Previous Test Boring Logs by Geotech Consultants

REFERENCES

- Geotech Consultants, 2002, *Geotechnical Engineering Study, Proposed Residential Remodel and Additions, 8300 Avalon Drive, Mercer Island, Washington, dated February 28, 2002.*
- International Code Council, 2012/2015, *International Building Code.*
- Troost, K.G., and Wisner, A. P, 2006. *Geologic Map of Mercer Island, Washington, scale 1:12,000.*
- WSDOT, 2016, *Standard Specifications for Road, Bridge and Municipal Construction, M 41-10, Washington State Department of Transportation.*



Not to Scale

Reference: Google Terrain Map



Platou Residence
8316 Avalon Drive
Mercer Island, Washington

VICINITY MAP

Project No. **17-054**

Figure No. **1**



Note: Basemap modified from King County iMap.



Platou Residence
8316 Avalon Drive
Mercer Island, Washington

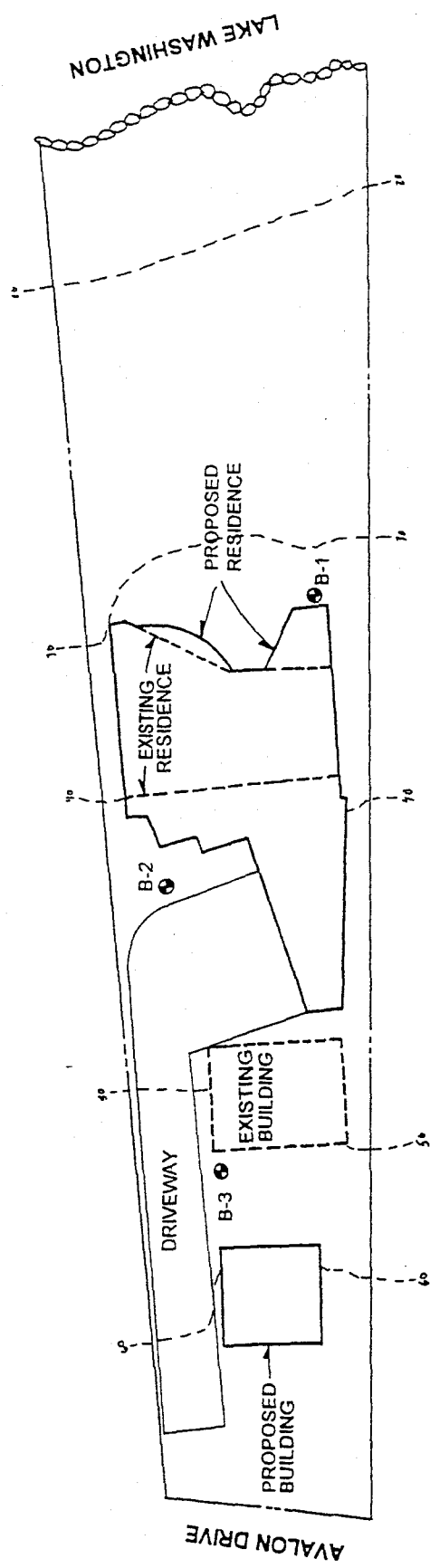
SITE AND EXPLORATION PLAN

Project No. **17-054**

Figure No. **2**

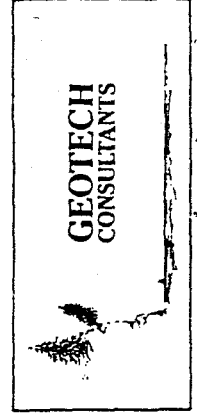
APPENDIX A

PREVIOUS TEST BORING LOGS (GEOTECH CONSULTANTS)



LEGEND:
 ● APPROXIMATE BORING LOCATIONS

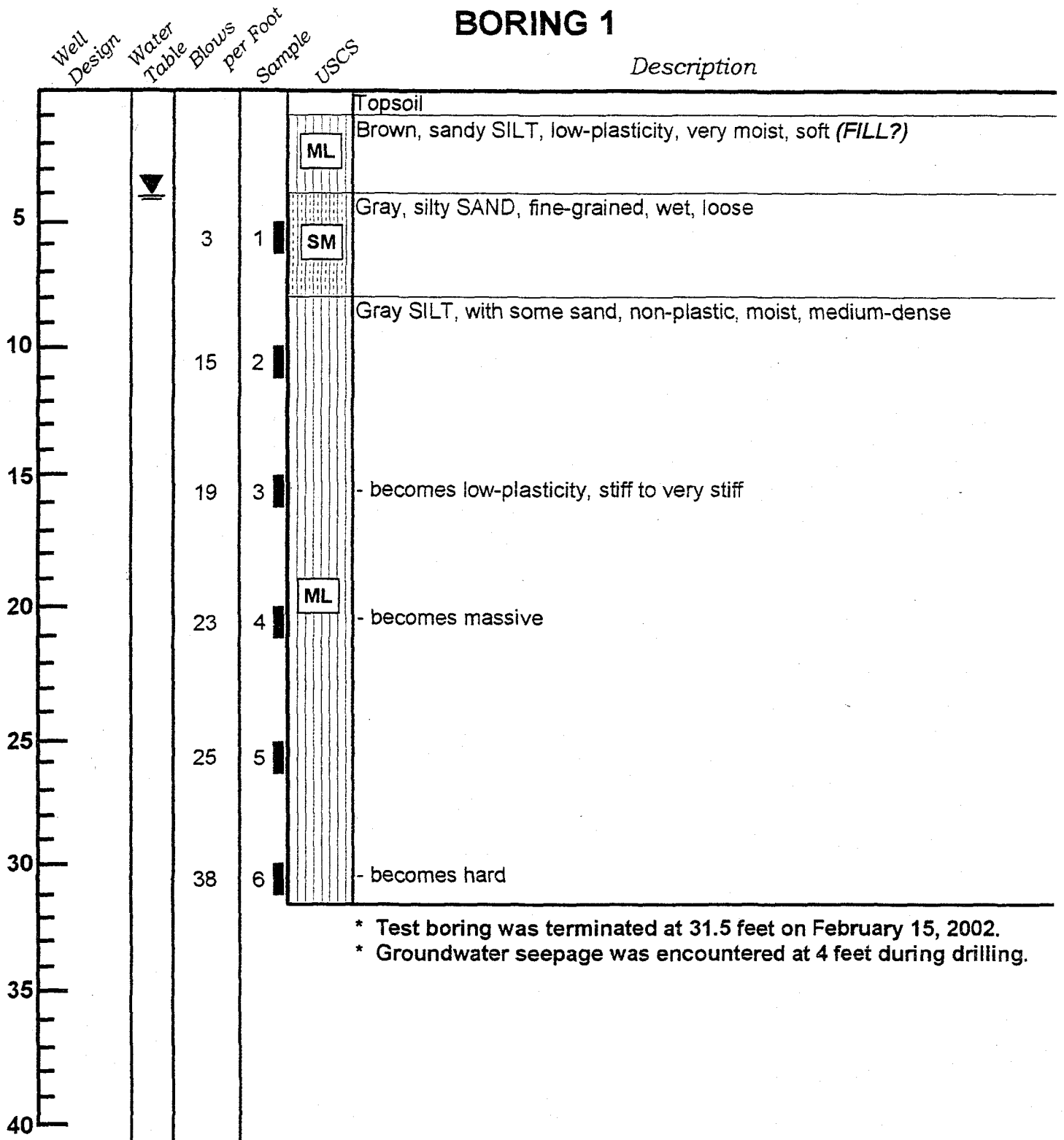
Source: Topographic Survey of a Portion of Lot 31, Avalon Park Park Unrecorded;
 M.W. Marshall, undated.



SITE EXPLORATION PLAN
 8300 Avalon Drive
 Mercer Island, Washington

Job No.: 02054 Date: Feb 2002 Scale: Sheet: 2

BORING 1



GEOTECH
CONSULTANTS, INC.

BORING LOG

8300 Avalon Drive
Mercer Island, Washington

Job No: 02054	Date: Feb. 2002	Logged by: GDB	Plate: 3
-------------------------	---------------------------	--------------------------	--------------------

BORING 2

Well Design
Water Table
Blows per Foot
Sample
USCS

Description

Well Design	Water Table	Blows per Foot	Sample	USCS	Description
					Topsoil/Wood mulch
					Brown/gray SILT, low-plasticity, moist, soft
		5	1		
		11	2		- becomes medium-stiff to stiff with trace of sand
		15	3	ML	
		25	4		- becomes gray, massive, slightly plastic, medium-dense
		24	5		
		35	6		- becomes non-plastic, dense

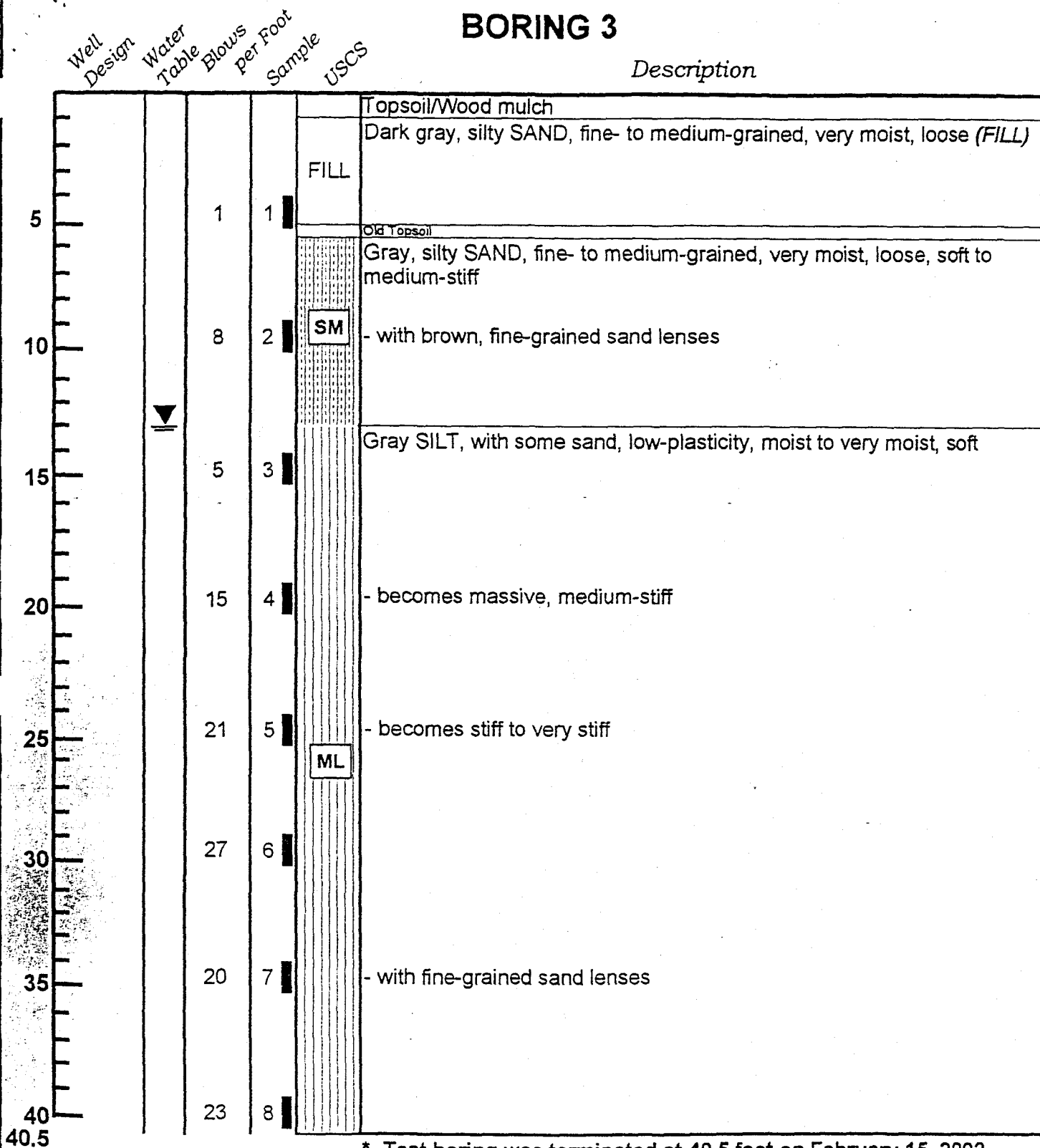
* Test boring was terminated at 31.5 feet on February 15, 2002.
* No groundwater seepage was encountered during drilling.



BORING LOG
8300 Avalon Drive
Mercer Island, Washington

Job No: 02054	Date: Feb. 2002	Logged by: GDB	Plate: 4
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BORING 3



* Test boring was terminated at 40.5 feet on February 15, 2002.

* Groundwater seepage was encountered at 13 feet during drilling.



GEOTECH
CONSULTANTS, INC.

BORING LOG

8300 Avalon Drive
Mercer Island, Washington

Job No:
02054

Date:
Feb. 2002

Logged by:
GDB

Plate:
5



June 23, 2017

AOA-5327

Brad Sturman
Sturman Architects, Inc.
9-103rd Ave. NW, Suite 203
Bellevue, WA 98004

**SUBJECT: Stream Delineation and Buffer Reduction for Platau Residence
8316 Avalon Drive, Mercer Island, WA (Parcel 032110-0290)
Revised Per Peer Review Comments (City #CAO17-002)**

Dear Brad:

We have revised this critical areas study to incorporate the comments presented in the May 9, 2017 memorandum from ESA to Andrew Leon, Planner with the City of Mercer Island.

Background

On December 6, 2016 I conducted an initial wetland and stream reconnaissance on the subject property utilizing the methodology outlined in the May 2010 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region (Version 2.0)*. The site is currently developed with an existing single-family residence and associated maintained yard.

Although no wetlands were identified on the site during the site review, one stream (Stream 1) was observed flowing from north to south through the northern portion of the property. The ordinary high water of this stream was delineated during the field investigation and subsequently surveyed.

1.0 EXISTING CRITICAL AREAS

Stream 1 is located within a well-defined channel, much of which consists of historically rocked banks. Runoff within the stream flows south through a landscaped yard and drains through a culvert under the existing access drive to the residence before entering a small landscape pond located along the east property line. Runoff from the pond continues east under the driveway for the adjacent residence to the east.

Vegetation within the riparian corridor of the stream consists of a mix of native species and a variety of ornamental plantings. Trees included big-leaf maple (*Acer macrophyllum*), red alder (*Alnus rubra*), and willow (*Salix* sp.), with many of the trees appearing to be in poor health due to periodic topping and trunk sprouting. Shrubs and groundcover included Pacific ninebark (*Physocarpus capitatus*), sword fern (*Polystichum munitum*), English ivy (*Hedera helix*), and bamboo.

Stream 1 does not contain fish habitat but does likely convey perennial flows. Watercourses in the City of Mercer Island that contain perennial flows without fish habitat are considered Type 2 watercourses per MICC 19.07.070.A. Type 2 watercourses require a standard buffer of 50 feet from the ordinary high water per MICC 19.070.B.1. This standard buffer can be reduced to a minimum of 25 feet with the implementation of a buffer enhancement plan that increases the functions of the riparian corridor over existing conditions per MICC 19.07.070.B.2.

1.1 Two Small Areas Adjacent Stream per ESA

ESA recommended reviewing 2 small areas adjacent the stream as potential wetlands or for inclusion within the ordinary high water of the stream. On May 23, 2017 I conducted a site review of these 2 areas to document vegetation, soil, and hydrologic conditions. **Attachment A** contains data sheets at each of these locations.

Both of the areas consists of gently sloped terraces located along the rockied stream channel and have likely been disturbed through historic grading. Vegetation within the area along the east side of the stream was dominated by field horsetail (*Equisetum arvense*) (FAC) and a smaller component of nipplewort (*Lapsana communis*)(FACU), with much of the area consisting of bare ground as a result of landscape maintenance. The western area contained a large planted laurel shrub as well as field horsetail, nipplewort, and a small amount of fringed willow-herb (*Epilobium ciliatum*)(FACW) adjacent the stream.

Soils within both of the areas were dark (typically 10YR 2/1 or 3/1) with faint redoximorphic features observed in places. No standing water or seepage was observed in either test hole at the time of the May 23rd site review, although soils were wet in the eastern area within a sand lense at 16 inches below the surface. Due to: 1) the very small size, 2) lack of clear hydrophytic plant community, and 3) potential for relic soil conditions associated with historic grading, the 2 areas were re-delineated and included within the ordinary high water of the stream as suggested as an option within the ESA letter. The site plan has been modified such that the 25-foot minimum enhanced buffer extends from the newly delineated areas.

2.0 PROPOSED PROJECT

The standard 50-foot stream buffer currently extends into the existing garage and adjacent gravel parking area for the residence (**Photo 1**). The proposed project consists of the re-development and expansion of the existing residence and garage. As part of the expansion, 135 s.f. of new structure would be added within the standard 50-foot buffer. No new structure area would be added within the minimum 25-foot buffer. Since the area of proposed expansion is located over existing gravel that does not currently provide any functional benefit to the riparian corridor, there would be no loss of stream buffer function from the expansion project.

In addition to the expansion project, an existing non-native, invasive Portugal laurel tree will be removed. All the other topped native trees will remain, per City recommendations (see tree legend on **Drawing W-1**).

3.0 PROPOSED BUFFER MITIGATION

Due to the degraded condition of the existing buffer, the proposed project would utilize mitigation option 19.07.070.B.2.b.iii to allow for a buffer reduction from 50 to 25 feet minimum to accommodate the minor expansion. Under the proposed project, all of the degraded vegetated portions of the watercourse buffer would be enhanced by the removal of invasive weeds and re-planting a variety of native tree, shrub, and groundcover species. In addition, that portion of the existing gravel parking area located within 25 feet of the OHW of the stream will be restored by removing the gravel and planting with native trees and shrubs.

As part of the enhancement measures, a small, 30" wide cedar chip path is proposed to be located in the buffer for maintenance access to the plantings and passive access to the stream by the property owners. A rock bridge already exists and will be used for trail access across the stream. Allowing the property owners specific access points into the buffer allows better success of maintenance of the plantings overtime, ease in invasive removal and creates a connection to the stream as a part of the larger property thus increasing stewardship of the stream and the buffer.

The proposed plantings have been designed to increase the plant species and structural diversity within the buffer and to provide physical and visual screening to the watercourse from the residence. Increasing the plant species and structural diversity within the buffer would also increase the wildlife habitat of the area over current conditions.

3.1 Goal, Objective, and Performance Standard for Enhancement Area

The primary goal of the enhancement plan is to restore the watercourse buffer with native vegetation. To meet this goal, the following objectives and performance standards have been incorporated into the design of the plan:

Objective A: Increase the structural and plant species diversity within the enhancement area.

Performance Standard: At the end of the five-year monitoring period, the enhancement area will contain at least fifteen native plant species. In addition, there will be 100% survival of all woody planted species throughout the enhancement area at the end of the first year of planting. Following Years 2 through 5, success will be based on an 80% survival rate.

Objective B: Limit the amount of invasive and exotic species within the enhancement area.

Performance Standard: After installation and at the end of the fifth year after planting, exotic and invasive plant species will be maintained at levels below 10% total cover in all planted areas. These species include, but are not limited to, Himalayan and evergreen blackberry, reed canarygrass, purple loosestrife, morning glory, Japanese knotweed, English ivy, hedge bindweed, English holly, and creeping nightshade.

3.2 Monitoring Methodology

The monitoring program will be conducted for a period of five years, with annual reports submitted to the City of Mercer Island.

Photo-points will be established from which photographs will be taken throughout the monitoring period. These photographs will document general appearance and progress in plant community establishment in the enhancement area. Review of the photos over time will provide a visual representation of success of the plan.

4.0 MAINTENANCE PLAN

Maintenance will be conducted on a routine, year round basis. Additional maintenance needs will be identified and addressed following a twice-yearly maintenance review. Contingency measures and remedial action on the site shall be implemented on an as-needed basis at the direction of the consultant or the owner. Tall grasses and weeds shall be removed at the base of plants to prevent engulfment. Weed control should be performed by hand removal.

5.0 CONTINGENCY PLAN

All dead plants will be replaced with the same species or an approved substitute species that meets the goal of the enhancement plan. Plant material shall meet the same specifications as originally-installed material. Replanting will not occur until after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.). Replanting shall be completed under the direction of the consultant, City of Mercer Island, or the owner.

Brad Sturman
June 23, 2017
Page 5

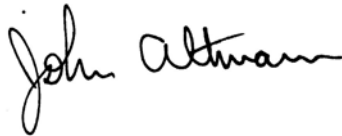
6.0 AS-BUILT PLAN

Following completion of construction activities, an as-built plan for the enhancement area will be provided to the City of Mercer Island. The plan will identify and describe any changes in relation to the original approved plan.

If you have any questions, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC

A handwritten signature in black ink that reads "John Altmann". The signature is written in a cursive, flowing style.

John Altmann
Ecologist



Photo 1: View of existing garage within buffer proposed for expansion.

ATTACHMENT A

DATA SHEETS

TP # 1 EAST SIDE OF STREAM
(INCLUDED WITHIN OHW OF STREAM)

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 8316 AVALON DR. City/County: MERCER ISLAND Sampling Date: 05/23/17
 Applicant/Owner: PLATOU State: WA Sampling Point: TP 1
 Investigator(s): ALTMANN Section, Township, Range: SEC 31, T24N, R5E W.M.
 Landform (hillslope, terrace, etc.): TERPACE Local relief (concave, convex, none): CONCAVE Slope (%): _____
 Subregion (LRR): A Lat: 47.5282 Long: -122.22268 Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland?	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/> No _____		
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>		

Remarks:
 SITE IS LOCATED WITHIN MAINTAINED LANDSCAPE AREA THAT HAS LIKELY BEEN GRADED DURING HISTORIC STREAM CHANNEL MODIFICATIONS

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. _____	_____	_____	_____		
_____ = Total Cover					
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species _____ x 1 = _____	
3. _____	_____	_____	_____	FACW species _____ x 2 = _____	
4. _____	_____	_____	_____	FAC species _____ x 3 = _____	
5. _____	_____	_____	_____	FACU species _____ x 4 = _____	
_____ = Total Cover				UPL species _____ x 5 = _____	
				Column Totals:	_____ (A) _____ (B)
				Prevalence Index = B/A = _____	
Herb Stratum (Plot size: <u>5'R</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:	
1. <u>Equisetum arvense</u>	<u>50</u>	<u>Y</u>	<u>FAC</u>	<input type="checkbox"/> 1 - Rapid Test for Hydrophytic Vegetation <input checked="" type="checkbox"/> 2 - Dominance Test is >50% <input type="checkbox"/> 3 - Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> 4 - Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> 5 - Wetland Non-Vascular Plants ¹ <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
2. <u>Lapsana communis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
9. _____	_____	_____	_____		
10. _____	_____	_____	_____		
11. _____	_____	_____	_____		
<u>60</u> = Total Cover					
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?	
1. _____	_____	_____	_____	Yes <input checked="" type="checkbox"/> No _____	
2. _____	_____	_____	_____		
_____ = Total Cover					
% Bare Ground in Herb Stratum <u>40</u>					

Remarks: NO NON-PLANTED TREES/SHRUBS ROOTED IN AREA

SOIL

Sampling Point: TP 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)								
Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-10"	10YR 2/2	100					Gravelly Sandy loam	
11-15"	10YR 2/1	100					GSI - some faint redox	
16-18"	5Y 4/1	100					sand	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)		

³Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)		Secondary Indicators (2 or more required)	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)	
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)	
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)	
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)	
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)	
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)	
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)	
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)	
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)			
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)			

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present? (includes capillary fringe) Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:
 NO WATER IN HOLE - BUT SAND LENSE IS WET

TP # 2 WEST SIDE OF STREAM
(INCLUDED WITHIN OHW OF STREAM)

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys, and Coast Region

Project/Site: 8316 AVALON DR. City/County: MERCER ISLAND Sampling Date: 05/23/17
 Applicant/Owner: PLATON State: WA Sampling Point: TP 2
 Investigator(s): ALTMANN Section, Township, Range: SEC 31, T24N, R5E W.M.
 Landform (hillslope, terrace, etc.): TERRACE Local relief (concave, convex, none): CONCAVE Slope (%): _____
 Subregion (LRR): A Lat: 47.5282 Long: -122.22268 Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes _____ No _____	
Remarks: <u>SITE IS LOCATED WITHIN MAINTAINED LANDSCAPE AREA THAT HAS LIKELY BEEN GRADED DURING HISTORIC STREAM CHANNEL MODIFICATION</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. <u>Planted laurel shrubs not included</u>	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>5' R</u>)				
1. <u>Equisetum arvense</u>	<u>60</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Lapsana communis</u>	<u>10</u>	<u>N</u>	<u>FACU</u>	
3. <u>Epilobium ciliatum</u>	<u>10</u>	<u>N</u>	<u>FACW</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>70</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>30</u>	_____ = Total Cover			
Remarks: _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

SOIL

Sampling Point: TP 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-7"	10YR 2/2	100					Sandy clay loam	
8-14"	10YR 3/1	80	10YR 4/3	20			Sandy loam	
15-18"	10YR 2/1	100					Sandy clay loam	

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. ²Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 2 cm Muck (A10)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)	<input type="checkbox"/> Very Shallow Dark Surface (TF12)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)	

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)		
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)		

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

Saturation Present? (includes capillary fringe) Yes No Depth (inches): _____

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:



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Suite 200
Seattle, WA 98107
206.789.9658 phone
206.789.9684 fax

www.esassoc.com

memorandum

date May 15, 2017

to Andrew Leon, Planner; City of Mercer Island

from Brooke Benson, Ecologist; ESA
Aaron Booy, Natural Resources Specialist; ESA

subject Proposed 8316 Avalon Drive Residence Critical Areas Determination (CAO17-002) –
Environmental Review

Environmental Science Associates (ESA) has prepared this memorandum on behalf of the City of Mercer Island, providing environmental peer review for the development proposal at 8316 Avalon Drive. The project (City permit number CAO17-002) proposes to expand and renovate the existing garage and residence, as well as to remove several trees. A stream flows through the site (Parcel 032110-0290), designated as a Type 2 watercourse and requiring a 50-foot standard buffer. The focus of this review is to confirm accuracy of the Critical Areas Study (CAS) and Stream Buffer Mitigation Plan, and consistency with City Critical Areas Requirements within Mercer Island City Code (MICC) Chapter 19.07.

Document Review

We reviewed the following City-provided background files: Stream Delineation and Buffer Reduction for Platau Residence (the CAS, prepared by Altmann Oliver Associates, LLC, April 3, 2017), Stream Buffer Mitigation Plan (plan sheets W-1 – W-3, Altmann Oliver Associates, LLC, February 14, 2017), and project site plan set (Sturman Architects, February 2017). ESA also reviewed public-domain information for the study area. These sources include National Wetland Inventory maps, Washington Department of Fish and Wildlife web mapping tools (Priority Habitats & Species and SalmonScape), King County's GIS mapping website (iMap), and City of Mercer Island critical areas maps.

Site Visit

Brooke Benson conducted a site visit along with City of Mercer Island Planner Andrew Leon to the proposed project site on April 27, 2017. Brad Sturman of Sturman Architects and the property owner were also present at the site, and provided project background information before ESA conducted the site reconnaissance. The site visit included visual observations of the stream and buffer area, the onsite pond (in-line with the stream to the east of the on-site driveway), trees to be removed under the proposal, the existing garage and gravel parking area, and the backyard area.

Review Comments

Stream Identification and Site Conditions: Based upon our review, ESA agrees with the location of the onsite stream. It enters the property at the northwest corner through a one-foot perched culvert. From there it flows

south towards the residence then turns east, flows under the driveway and into a small pond, and then continues to flow east under the neighbors' driveway and offsite. We agree that per MICC 19.07.070, the stream should be designated a Type 2 watercourse and accordingly requires a 50-foot standard buffer. Furthermore, we agree with the CAS characterization of Type 2 watercourse buffer reduction allowances (per MICC 19.07.070.B.2), to a minimum 25-foot buffer when appropriate mitigation is employed that increases riparian functions over existing conditions. Therefore, we generally agree that the stream and associated buffers are correctly shown on the Stream Buffer Mitigation Plan.

During our site visit, most of the project site consisted of upland plant communities and bright, drier soil that did not suggest wetland conditions. However, in two relatively small areas adjacent to the on-site stream, dark, saturated soils containing redoximorphic features were observed. One of these areas was east of the stream between the stone-rimmed garden area and where the stream turns to the east. The other area was south of this turn, to the north of the gravel parking area. See Figure 1 (marked-up sheet from the Buffer Mitigation Plan) for approximate locations of wet areas. The dominant vegetation in these areas was field horsetail (*Equisetum arvense*). The Critical Areas Study did not identify any wetlands on site and it does not appear that Altmann Oliver Associates established any formal data plots to document existing conditions. Based on our observations, we recommend that the applicant's consultant provide additional information to document existing conditions in these areas. Depending on the findings, it may be appropriate to include these areas within the ordinary high water mark (OHWM) of the stream, or they may be identified as separate wetlands.

Proposed Impacts and Mitigation Approach: The north end of the existing garage and the gravel parking pad both encroach into the standard 50-foot watercourse buffer. The project proposes to reduce the buffer to 25 feet and expand the garage to the edge of the 25-foot buffer. The area proposed for the garage expansion is currently a gravel parking pad, which is not providing any buffer function to the stream. The gravel parking pad extends past the proposed garage expansion location and into the 25-foot buffer; the project proposes to leave this portion of the gravel area intact.

The proposed mitigation for the buffer reduction includes removal of noxious weeds replanting with native vegetation and five-year monitoring (consistent with option (iii) under MICC 19.07.070.B.2). During the site visit, we observed high cover of English ivy (*Hedera helix*) in the understory of the buffer west of the stream. There was also a patch of reed canarygrass (*Phalaris arundinacea*) observed on the stream bank. Removing these and other invasive species and planting with native species would improve the habitat function of the stream buffer. We agree that the chosen mitigation option is appropriate; however, we recommend that it be combined with the mitigation option to permanently remove impervious surfaces and replacement with vegetation (MICC 19.07.070.B.2(i)), by removing and replanting the gravel area that is outside of the new garage footprint and within the reduced 25-foot buffer. Per MICC 19.07.070.C, impervious surfaces, including gravel parking areas, are not permitted within a watercourse buffer.

The applicant additionally proposes to construct a cedar chip trail and remove several existing trees within the reduced stream buffer. The cedar chip trail would loop through the buffer area on both sides of the stream, crossing the stream at an existing stone bridge (which will not be altered) and linking to the driveway. The proposed trail is consistent with allowed critical areas alteration provided by MICC 19.07.030.9. We agree that the trails should encourage stewardship of the enhanced buffer area.

Trees within a watercourse or its buffer are part of a "Critical Tree Area, per MICC 19.16.010 (Title 19 Definitions). A tree permit is required to cut any large tree in a Critical Tree Area, per MICC 19.10.020B.3 (City Tree regulations). According to MICC 19.16.010, a large (regulated) tree is any conifer that is six feet tall or greater and any deciduous tree with a diameter greater than six inches. Several of the trees proposed for removal are large trees, so a tree permit will be required for removal. Based on assessment by the applicant's arborist report and verification by the City, tree removal would only be authorized for large trees that are diseased or dead, are a short-lived "weedy" tree species (i.e., alder, bitter cherry, or black cottonwood), or where their

removal and replacement would enhance the ecosystem (MICC 19.10.040). Based on our review of trees proposed for removal within the watercourse buffer area, we do not believe any removal could be warranted to enhance the riparian ecosystem. For any permitted removal, tree replacement may be required at a ratio ranging from 0:1 to 4:1, as determined by the City arborist (MICC 19.10.080.B).

Buffer Mitigation Plan: ESA landscape architect Allisona Greenberg completed review of the Stream Buffer Mitigation Plan. We generally agree that the proposed Mitigation Plan approach is consistent with MICC 19.07.040 and .070 standards. The plant schedule should support achieving identified objectives and corresponding performance standards, resulting in increased structural and plant species diversity and reduced extent of invasive and exotic plant species across the enhancement area. We have specific recommendations for updates to the proposed Buffer Mitigation Plan, intended to improve opportunity for success. These recommendations are provided below.

Summary and Recommendations

Based on our site visit and review of project materials, we agree that the Type 2 watercourse is accurately located on the proposed project parcel and characterized by the CAS. The on-site stream requires a 50-foot standard buffer. Buffer reduction may be allowed to a minimum of 25 feet with mitigation that increases riparian functions over existing conditions. We have the following recommendations for updates to the CAS and Buffer Mitigation Plan to ensure consistency with Mercer Island Critical Areas requirements:

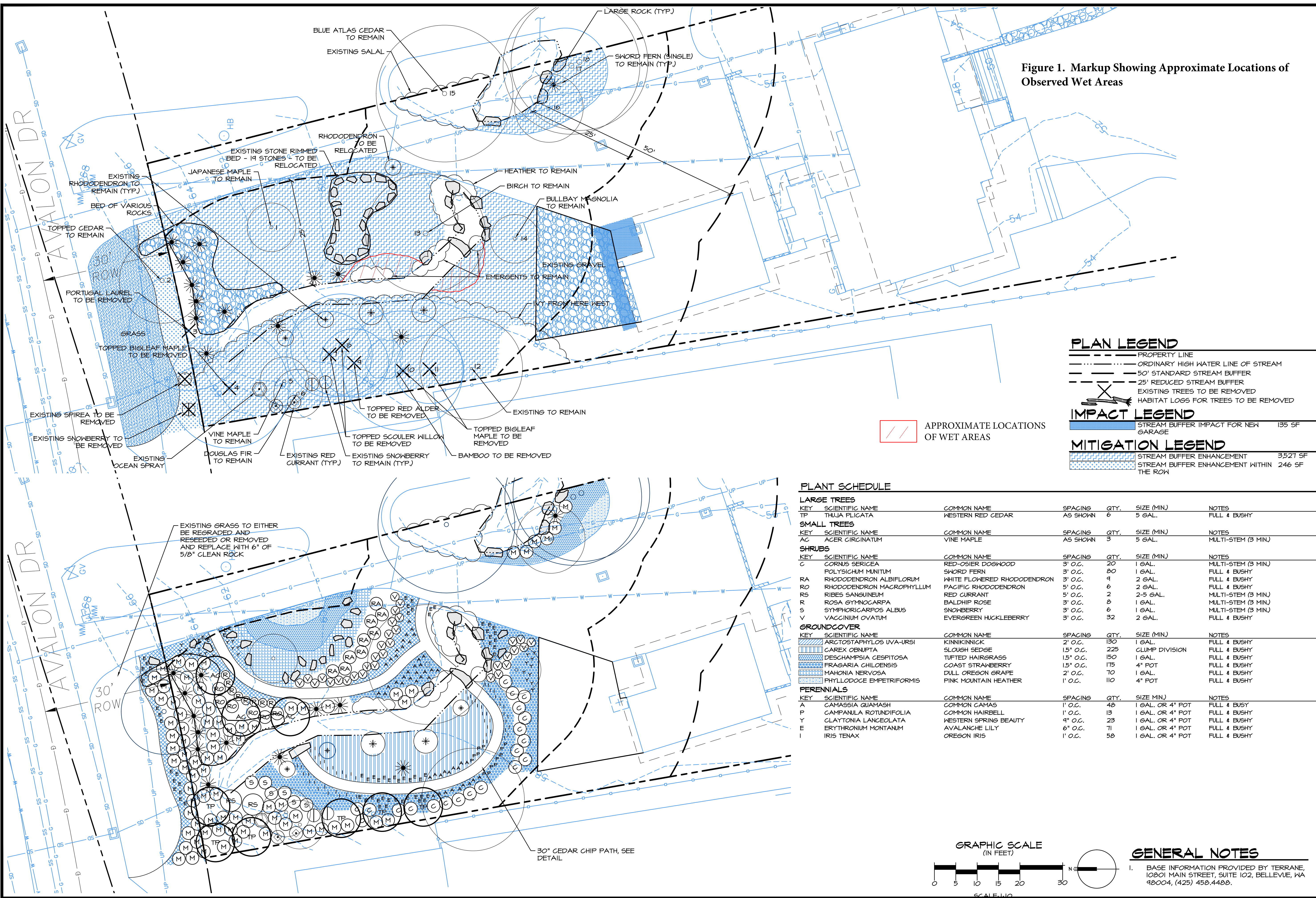
- Based on our observations of site conditions, we recommend that two relatively small areas adjacent to the on-site stream be further investigated for wetland indicators, with documentation provided in an updated CAS. Based on this investigation, if any wetland area is identified or the stream OHWM is expanded, we recommend that project materials be updated to reflect conditions and associated MICC Chapter 19.07 requirements.
- In addition to proposed invasive species removal and buffer enhancement within the reduced buffer area, we recommend that the City require removal of the gravel parking area that would be within the 25-foot reduced buffer. This area should be incorporated into the buffer mitigation plan, including restoration of underlying soils and planting with native species. Removing the impervious surface within the 25-foot buffer combined with removing invasive species and replanting with native species is appropriate mitigation for the proposed buffer reduction.
- We recommend that an arborist report be developed, as required when removing large trees from a critical tree area.
- We recommend the following updates to the Stream Buffer Mitigation Plan in order to maximize opportunity for mitigation success:
 - Update the planting plan to include Sections 3.0 through 6.0 from the CAS.
 - We recommend increasing the spacing of the western red cedars (*Thuja plicata*) to at least 15 feet apart to give them room to grow.
 - On the planting plan, sword fern (*Polystichum munitum*) does not have a corresponding letter in the plant schedule. Confirm if “M” corresponds to sword fern and revise the plant schedule accordingly.
 - If wetland areas are identified on the site (or the OHWM is expanded to include wetter areas along the stream corridor), soil and hydrology conditions should be taken into account for plants

selected for these areas. For the areas noted on Figure 1, we recommend the following plant changes to species more appropriate for wet conditions:

- Substitute sword fern with Labrador tea (*Ledum groenlandicum*)
 - Substitute coast strawberry (*Fragaria chiloensis*) with bunchberry (*Cornus canadensis*)
 - Substitute common camas (*Camassia quamash*) with western columbine (*Aquilegia formosa*)
- The Construction Specifications should specify that pesticides are not permitted within the enhancement area.

If you have any questions, please call me at (206) 789-9658.

Figure 1. Markup Showing Approximate Locations of Observed Wet Areas



**STREAM BUFFER MITIGATION PLAN
 STREAM BUFFER ENHANCEMENT & PLANTING PLAN
 PLATOU RESIDENCE
 8316 AVALON DR.
 MERCER ISLAND, WA 98040**

Revisions	Date	By



June 23, 2017

AOA-5327

Andrew Leon, Planner
City of Mercer Island Development Services
9611 SE 36th Street
Mercer Island WA 98040-3732

**SUBJECT: Response to ESA Peer Review Comments for Platau Residence
8316 Avalon Drive, Mercer Island, WA (Parcel 032110-0290)
City #CAO17-002**

Dear Andrew:

We have revised the critical areas study and stream buffer mitigation plans per the comments presented in the May 9, 2017 memorandum to you from ESA. The comments included:

- *Based on our observations of site conditions, we recommend that two relatively small areas adjacent to the on-site stream be further investigated for wetland indicators, with documentation provided in an updated CAS. Based on this investigation, if any wetland area is identified or the stream OHWM is expanded, we recommend that project materials be updated to reflect conditions and associated MICC Chapter 19.07 requirements.*

The 2 small areas adjacent the stream identified by ESA were re-evaluated and the plans were revised to include the areas within the OHW of the stream. Attachment A of the revised critical areas study includes data plots at the 2 locations and Section 1.1 has been added to the report.

- *In addition to proposed invasive species removal and buffer enhancement within the reduced buffer area, we recommend that the City require removal of the gravel parking area that would be within the 25-foot reduced buffer. This area should be incorporated into the buffer mitigation plan, including restoration of underlying soils and planting with native species. Removing the impervious surface within the 25-foot buffer combined with removing invasive species and replanting with native species is appropriate mitigation for the proposed buffer reduction.*

The proposed mitigation plan has been revised to depict removal and restoration of the gravel parking area located within 25 feet of the OHW of the stream.

- *We recommend that an arborist report be developed, as required when removing large trees from a critical tree area.*

The only tree now proposed for removal is an invasive Portugal laurel located along the north property line.

- *We recommend the following updates to the Stream Buffer Mitigation Plan in order to maximize opportunity for mitigation success:*
 - *Update the planting plan to include Sections 3.0 through 6.0 from the CAS.*

The monitoring and maintenance program (Sections 3 through 6) has been added to the plan set.

- *We recommend increasing the spacing of the western red cedars (*Thuja plicata*) to at least 15 feet apart to give them room to grow.*

The spacing of the cedars has been increased on the plan.

- *On the planting plan, sword fern (*Polystichum munitum*) does not have a corresponding letter in the plant schedule. Confirm if "M" corresponds to sword fern and revise the plant schedule accordingly.*

The plant schedule for sword fern has been revised accordingly.

- *If wetland areas are identified on the site (or the OHWM is expanded to include wetter areas along the stream corridor), soil and hydrology conditions should be taken into account for plants selected for these areas. For the areas noted on Figure 1, we recommend the following plant changes to species more appropriate for wet conditions:*
 - *Substitute sword fern with Labrador tea (*Ledum groenlandicum*)*
 - *Substitute coast strawberry (*Fragaria chiloensis*) with bunchberry (*Cornus canadensis*)*
 - *Substitute common camas (*Camassia quamash*) with western columbine (*Aquilegia formosa*)*

The planting plan has been revised accordingly.

Andrew Leon, Planner
June 23, 2017
Page 23

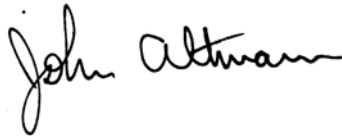
- o The Construction Specifications should specify that pesticides are not permitted within the enhancement area.*

The specifications have been revised accordingly.

If you have any questions regarding the comment response, please give me a call.

Sincerely,

ALTMANN OLIVER ASSOCIATES, LLC

A handwritten signature in black ink that reads "John Altmann". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke at the end.

John Altmann
Ecologist

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:

PLATOU REMODEL AND ADDITIONS

2. Name of applicant:

BRAD STURMAN

3. Address and phone number of applicant and contact person:

9 - 103rd Ave. N.E., Suite 203, Bellevue, WA 98004

4. Date checklist prepared:

2-14-17 Original and Revised on 4-4-2017

5. Agency requesting checklist:

City of Mercer Island

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

Proposed construction would begin 5-1-17.

7. Do you have any plans for future additions, expansions, or further activity related to or connected with this proposal? If yes, explain:

No, this is the final addition proposed.

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal:

There is a watercourse buffer reduction application including a critical area report being prepared.

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:

There are not other proposals affection this project.

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

A watercourse buffer reduction permit and the general building permit for construction.

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.)

The property size is 18,528 square feet. The proposed addition adds 315 square feet of new impervious surface. There are reductions to the impervious surfaces by removing 144 sf of gravel pad, 19.5 sf of walks and 128 sf of patio area so that the net increase is only 22.8 square feet. The addition includes a larger garage with room above and an out door covered patio area at the back of the house.

As part of the enhancement measures, a small, 30" wide cedar chip path is proposed to be located in the buffer for maintenance

B. ENVIRONMENTAL ELEMENTS

1. Earth

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

Flat Rolling Hilly Steep slopes Mountainous Other

Flat in the front yard and rolling in the back yard.

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

The average lot slope is 7.7%

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.

The site consists of sandy soils.

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

No unstable soils known.

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.

The only grading will be to dig out a crawlspace at the existing exterior entry that will be an enclosed space as part of the project and also to excavate for the new slab on grade at the expanded garage area. The total area to be cut is 47 cubic yards.

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

No, the area of new construction is on flat ground therefore no erosion hazards exist.

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

The site will have 37.6% impervious surfaces including the building roof, driveways and walks.

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

There will be a silt fence erected to protect for any run off, no potential for erosion hazard exists.

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.

During demolition there would be some dust created but would be managed with watering down debris. There will be no negative emissions after the project is completed.

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

No off-site sources of emissions.

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

Water down debris during demolition.

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.

There is a Class II watercourse on the property. This watercourse flows into Lake Washington.

- 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.

The buffer reduction for the watercourse will include mitigations such as removing non-native plants and some trees and adding new native plants, trees to enhance the area around the existing watercourse. See attached plans.

- 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.

There is no work directly in the water and no fill or dredging will be done.

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

No work in the water will be done.

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

No, the proposal is not in the 100 year floodplain.

- 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, the proposal does not involve any discharges into the surface water.

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.

There is no well water on this project.

- 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.

There is no septic system on this project.

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.

The existing storm water at the front of the house flows into the watercourse leading to lake washington. The storm water at the back of the house is tight lined to an existing storm drainage system leading to lake washington. The proposed additions will tie into these existing systems.

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

There are no waste materials on this project.

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

The project demolition is minor and will not produce much ground water runoff. There will be silt fencing with hay bales to protect the watercourse from potential mud or soils entering the water.

4. Plants

a. Check types of vegetation found on the site

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

b. What kind and amount of vegetation will be removed or altered?

There will be six trees removed from the front yard and new trees and plants added. See the attached mitigation plans.

c. List threatened or endangered species known to be on or near the site.

There are not threatened or endangered species known on site.

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

There are new native plants proposed to enhance the vegetation on the site. See the attached mitigation plans.

e. List all noxious weeds and invasive species known to be on or near the site.

See mitigation plans.

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:

In general there are songbirds, racoons, and other small animals on this site.

b. List any threatened or endangered species known to be on or near the site.

No threatened or endangered species known on this site.

c. Is the site part of a migration route? If so, explain.

No migration route.

d. Proposed measure to preserve or enhance wildlife, if any:

No wildlife preservation is proposed.

e. List any invasive animal species known to be on or near the site.

No invasive animals known.

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.

There will be gas fired furnaces for heating the house and electrical for lights and ovens and general use.

- 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:

New windows will be installed with better energy performance.

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 environmental health hazards.

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

No know potential of contamination at the site.

- 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.

No hazardous chemical / conditions on this project.

- 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.

No storage of toxic or hazardous chemicals on this project.

- iv. Describe special emergency services that might be required.

None.

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

None.

b. Noise

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

The noise associated with this project would be from a backhoe during demolition and standard framing nail guns saws, and hammers.

- 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.

Standard construction noises between the hours of 8am to 3pm.

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

Construction noise will be limited to the standard hours based on the City of Mercer Island requirements.

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.

The project is in a residential neighborhood and will not affect any adjacent properties in a negative way.

- 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 farmlands.

- c. Describe any structures on the site.

There is a single family residence, two stories over a basement and a two car garage.

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

The garage will be demolished and re-built with a new second floor over the top of the garage.

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

The zoning is residential.

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

The comprehensive plan designation remains as residential.

g. If applicable, what is the current shoreline master program designation of the site?
None, its not on the shoreline.

h. Has any part of the site been classified as an "environmentally sensitive" area? If so, specify.
The site has the typical Mercer Island hazards which include Erosion, Landslide and Seismic Hazards. The area of the proposed project is on flat ground which minimizes the potential of construction issues related to these hazards.

i. Approximately how many people would reside or work in the completed project?
There will be primarily two adults living in the house.

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

k. Proposed measures to avoid or reduce displacement impacts, if any:
None.

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
The residential use is compatible with the existing uses.

9. Housing

a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low income housing.
This would be a high income house, one unit.

b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low income housing.
None.

c. Proposed measures to reduce or control housing impacts, if any:
None.

10. Aesthetics

a. What is the tallest height of any proposed structure(s), not including antennas? What is the principal exterior material(s) proposed?
The tallest hight of the roof is 22 feet above the entry ground area. The exterior material is a combination of cedar siding and concrete panels.

b. What views in the immediate vicinity would be altered or obstructed?

No views would be altered.

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

The project will upgrade the aesthetics of the house.

11. Light and glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur?

No additional light or glare will be produced by the project.

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:

None.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity?

Lake Washington has recreational opportunities.

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:

None.

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.

None.

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.

Avalon Road is the primary street accessing this property. Avalon serves a number of residential properties.

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?

The nearest transit stop would not be on Avalon Road but on the main road call East Mercer Way.

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

The project will add one additional parking space by expanding the existing garage.

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?

No additional vehicular trips would be generated by this project.

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:

None.

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.

No.

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

None.

16. Utilities

a. Check utilities currently available at the site:

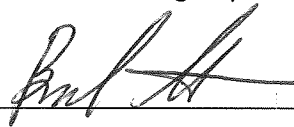
Electricity Natural Gas Water Refuse Service
Telephone Sanitary sewer Septic system Other

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.

The project has existing electricity, gas, sewer, water and storm systems. The proposed project will use the existing utilities.

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: 

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 proposed project will increase noise on a temporary basis for the duration of the demolition of the garage and general construction process.

Proposed measures to avoid or reduce increases are:

Noise levels will be based on the City of Mercer Island standard hours for construction activities.

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

The watercourse mitigation will improve the plants at the front portion of the property. See attached mitigation plans.

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

The watercourse mitigation design will protect some existing plants and restore the buffer with native plant materials.

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

The project will not deplete energy or natural resources.

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

Not required.

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?

The watercourse buffer plantings will enhance this sensitive area and provide a long term solution for the buffer.

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

The watercourse will be protected while the buffer plantings are installed to reduce impacts.

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?

No affect.

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

Not required.

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

No increase.

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

None.

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

No conflict.

[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.]



DETERMINATION OF NON-SIGNIFICANCE (DNS)

Application Nos.: **SEP17-004 (CAO17-002)**

Description of proposal: **Review under the State Environmental Policy Act (SEPA) to install vegetation and a trail system within the 25-foot buffer of a Type 2 stream. The trail construction would involve work up to the ordinary high water mark of the stream. The scope of this project also involves the reduction of the Type 2 stream's 50-foot buffer to 25 feet in order to construct an addition to a single-family residence, and the removal of a gravel pad within the stream's buffer.**

Proponent: **Brad Sturman (Sturman Architects)**

Owner: **Carl and Donna Platou**

Location of proposal: **8316 Avalon Drive, Mercer Island WA 98040;
Identified by King County Assessor tax parcel number 032110-0290**

Lead agency: **City of Mercer Island**

The lead agency for this proposal has determined that it does not have a probable significant adverse impact on the environment. An environmental impact statement (EIS) is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental checklist. This information is available to the public on request.

_____ There is no comment period for this DNS.

_____ This DNS is issued after using the optional DNS process in WAC 197-11-355. There is no further comment period on the DNS.

✓ _____ This DNS is issued under WAC 197-11-340(2); the lead agency will not act on this proposal for 14 days from the date below. Comments must be submitted by August 14, 2017.

Responsible Official: Andrew Leon, Planner
City of Mercer Island
9611 SE 36th Street
Mercer Island, WA 98040
Phone: (206) 275-7720
Email: andrew.leon@mercergov.org

Date: July 31, 2017

Signature:

APPEAL INFORMATION

This decision to issue a Determination of Non-significance (DNS) rather than to require an EIS may be appealed pursuant to Section 19.07 of the Mercer Island Unified Land Development Code, Environmental procedures.



_____ Any party of record may appeal this determination to the City Clerk at 9611 SE 36th Street Mercer Island, WA 98040 no later than **5:00 PM on Monday August 14, 2017** by filing a timely and complete appeal application and paying the appeal fee. You should be prepared to make specific factual objections. Contact the City Clerk to read or ask about the procedures for SEPA appeals. To reverse, modify or remand this decision, the appeal hearing body must find that there has been substantial error, the proceedings were materially affected by irregularities in procedure, the decision was unsupported by material and substantial evidence in view of the entire record, or the decision is in conflict with the city's applicable decision criteria.

_____ There is no agency appeal.