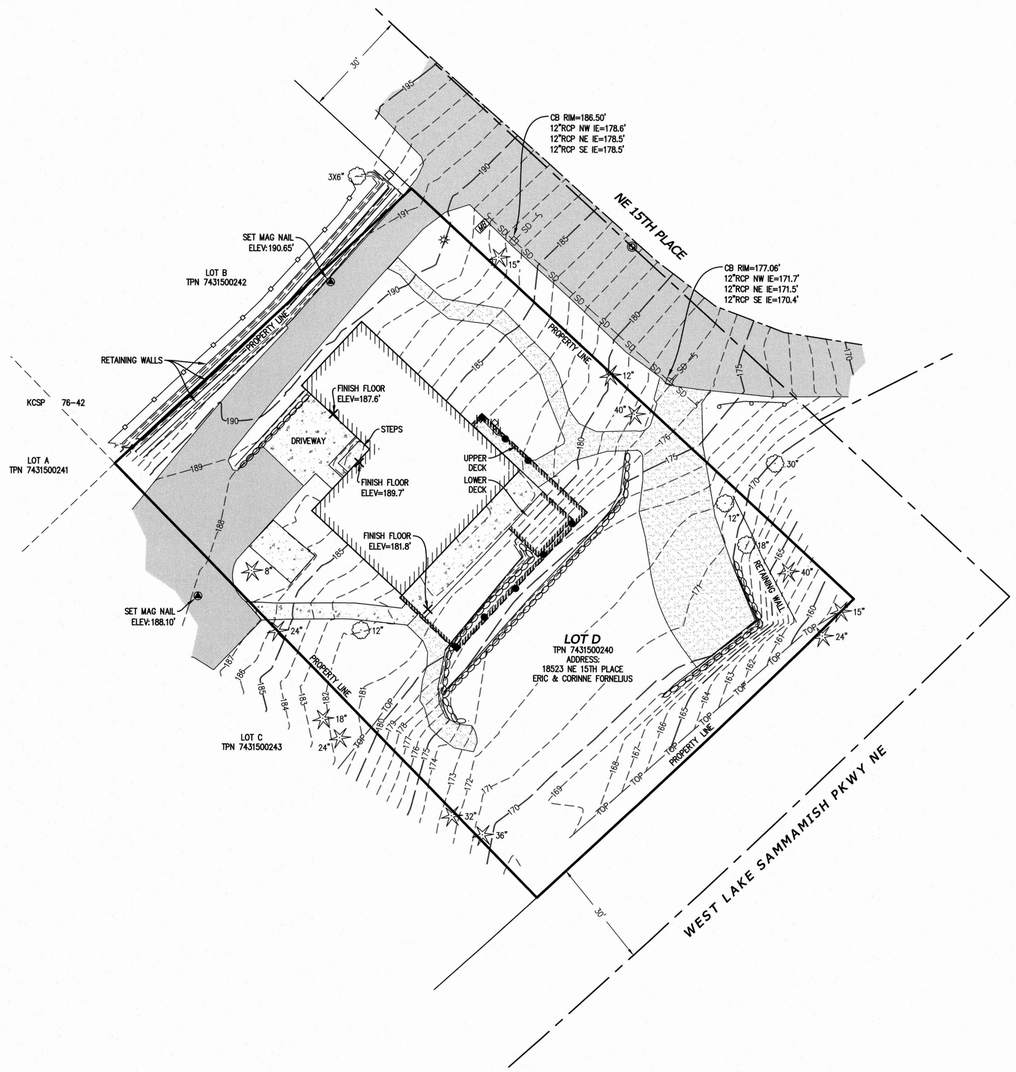
TOPOGRAPHIC SURVEY

THE SW 1/4 OF SECTION 30 TOWNSHIP 25 NORTH, RANGE 6 EAST, W.M.
KING COUNTY, WASHINGTON



NORTH

0 10 20 40

SCALE: 1"=20'
CONTOUR INTERVAL: 1 FOOT

LEGEND

- FOUND MONUMENT
- SET MAG NAIL WITH WASHER
- TPN TAX PARCEL NUMBER
- BOUNDARY LINE
- ADJOINER PROPERTY BOUNDARY
- RIGHT OF WAY LINE
- ROAD CENTERLINE
- BUILDING COLUMN
- MB MAILBOX
- WOOD FENCE (AS NOTED)
- GUARD RAIL
- DECIDUOUS TREE (DIAMETER AS NOTED)
- EVERGREEN TREE (DIAMETER AS NOTED)
- STORM CATCH BASIN
- SD — SD — BURIED STORM DRAIN LINE
- IE INVERT ELEVATION
- RCP REINFORCED CONCRETE PIPE
- LIGHT POLE
- TELEPHONE RISER
- IRRIGATION CONTROL VALVE
- ROCKERY
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE
- BRICK SURFACE

LEGAL DESCRIPTION

PER STATUTORY WARRANTY DEED, KING COUNTY RECORDING NO. 20171212000172

LOT D, CITY OF BELLEVUE SHORT PLAT NO. 76-42, RECORDED UNDER RECORDING NO. 7609200724, RECORDS OF KING COUNTY, WASHINGTON, BEING A PORTION OF:

LOT 12, ROSEMONT HEIGHTS ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 40 OF PLATS, PAGE 214, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE (NAD 83/2011) BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE REFERENCE NETWORK.

VERTICAL DATUM

NAVD 88 BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE REFERENCE NETWORK.

SURVEY NOTES

1. DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION, AND MEETS OR EXCEEDS ACCURACY REQUIREMENTS CONTAINED IN W.A.C. 332.130.090. ALL MEASURING INSTRUMENTS EMPLOYED IN THIS SURVEY HAVE BEEN MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. THIS MAP GRAPHICALLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY ONLY, WHICH WAS PERFORMED DURING JULY OF 2021.
3. THE CERTIFICATION OF THIS SURVEY AND MAP IS EXCLUSIVE TO THE NAMED CLIENT WHO REQUESTED THIS SURVEY. IT WAS SPECIFICALLY DESIGNED TO MEET THEIR STATED NEED(S). THAT CERTIFICATION DOES NOT EXTEND TO ANY OTHER PARTIES OR FOR ANY ALTERNATIVE USE OF THIS MAP WITHOUT THE EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING THOSE PARTIES.
4. THE PURPOSE OF THIS SURVEY IS TO PROVIDE A TOPOGRAPHIC MAP OF THE EXISTING CONDITIONS WITHIN PARCEL #7431500240 FOR PLANNING, DESIGN AND CONSTRUCTION.
5. UTILITIES OTHER THAN SHOWN MAY EXIST ON THE SITE. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY. THE SURVEYOR DOES CERTIFY THAT THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY INFORMATION.
6. KING COUNTY PARCEL NO. 7431500240
7. PARCEL AREA: 19,766 ± SQ.FT. (0.45 ACRES)
8. ALL DISTANCES AND DIMENSIONS SHOWN ARE U.S. SURVEY FEET GROUND MEASUREMENTS.
9. CONTOUR INTERVALS ARE 1-FOOT AND ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY UTILIZING ELECTRONIC DATA COLLECTION.
10. THE PROPERTY AND PUBLIC RIGHT-OF-WAY LINES SHOWN HEREON ARE FROM PUBLIC RECORDS. THEY ARE NOT THE RESULT OF AN OFFICIAL BOUNDARY SURVEY AND SHOULD BE RELIED ON FOR GENERAL REFERENCE ONLY.
11. WE HAVE USED GRAPHIC SYMBOLS TO REPRESENT SOME FEATURES ON THIS MAP, SUCH AS UTILITIES, TREES AND FENCES. THE DEFAULT SIZE OF THOSE SYMBOLS MAY NOT REFLECT THE TRUE SIZE OF THE FEATURE THAT WAS MAPPED.

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS MAP CORRECTLY REPRESENTS A TOPOGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECTION AND TO THE BEST OF MY KNOWLEDGE REPRESENTS THE TOPOGRAPHIC FEATURES AS THEY EXIST ON THE GROUND AS OF 7/6/2021.

KURT A. PARCHER P.L.S. NO. 49286 — DATE July 20, 2021

REV NO	REVISION DESCRIPTION	DATE	BY

Apex Engineering PLLC
2601 South 35th Street, Suite 200
Tacoma, Washington 98409-7479
(253) 475-4494 FAX (253) 473-0599

TITLE: TOPOGRAPHIC SURVEY

CLIENT: ERIC FORNELIUS
18523 NE 15TH PLACE
BELLEVUE, WA 98008

DATE SEALED 7/20/21

KURT A. PARCHER — STATE OF WASHINGTON — 49286 — REGISTERED PROFESSIONAL LAND SURVEYOR

PROJECT MANAGER: KURT A. PARCHER
DESIGN
DRAWN BPM
CHECKED KAP
SEC 30 T 25 N R 6 E
FILE NO 35705
DATE 7/20/2021
SCALE 1"=20'

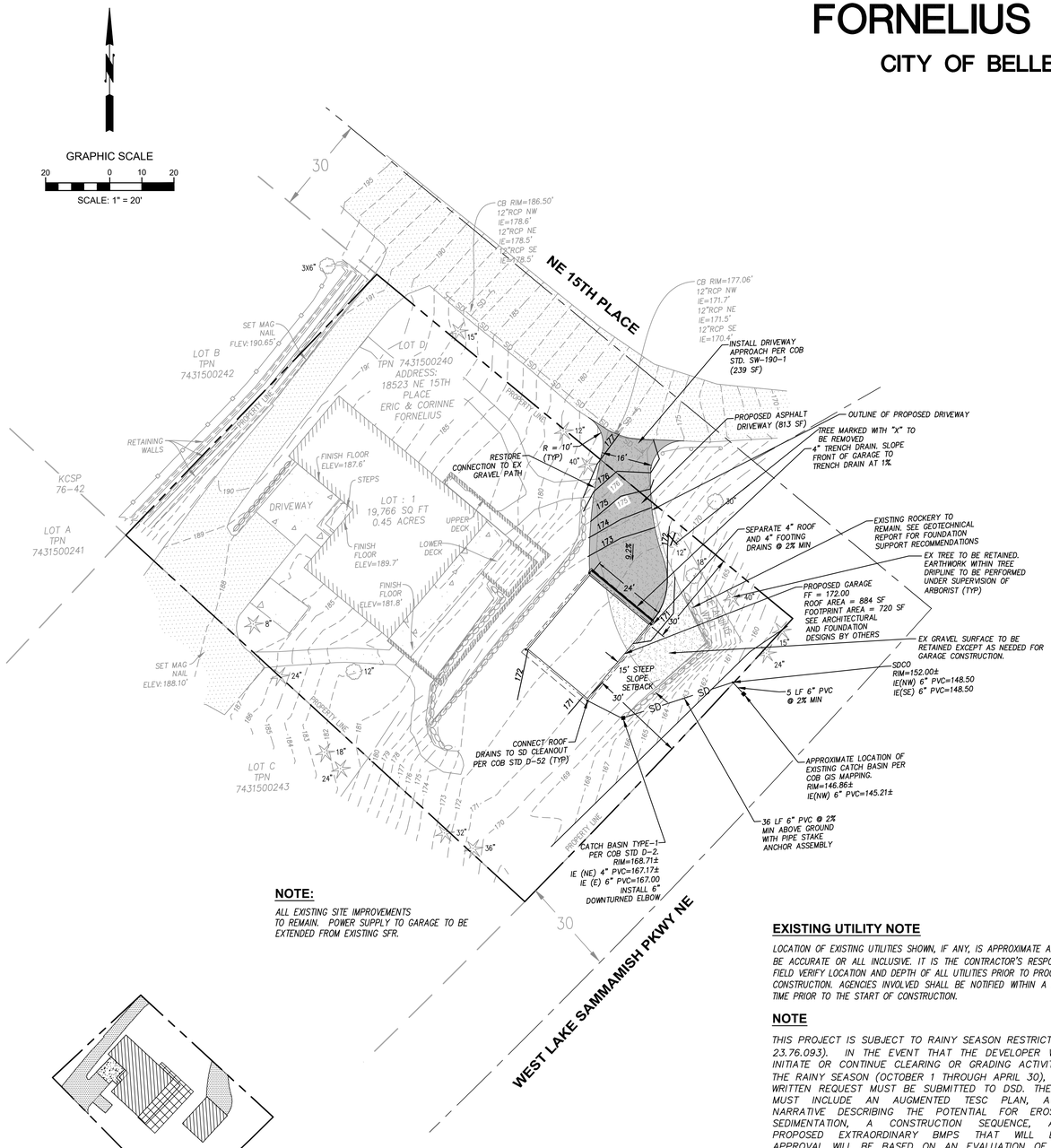
SHEET 1 OF 1
FILE NO 35705

I:\35705\Survey\35705-SV TOPO.dwg

NE 1/4 OF THE SW 1/4 OF SEC. 30 , T-25 N, R-6 E, W.M.

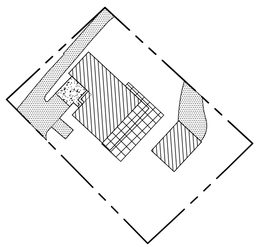
FORNELIUS GARAGE

CITY OF BELLEVUE, WA



NOTE:

ALL EXISTING SITE IMPROVEMENTS TO REMAIN. POWER SUPPLY TO GARAGE TO BE EXTENDED FROM EXISTING SFR.



PARCEL AREA:	19,766 SF
ROOF AREA & PATIO:	4,448 SF
UNCOVERED PAVED AREA:	3,142 SF
TOTAL IMPERVIOUS AREA:	7,590 SF (38.4%)

SURFACE AREAS EXHIBIT

SCALE 1" = 60'

811 Know what's **below.** **Call** before you dig.

GENERAL NOTES

1. *SPECIAL INSPECTIONS BY CITY INSPECTOR ARE REQUIRED DURING CONSTRUCTION.*
2. *ALL EXISTING ON-SITE STRUCTURES AND ASSOCIATED UTILITIES TO BE DEMOLISHED, REMOVED, AND/OR ABANDONED PER APPLICABLE JURISDICTIONAL REQUIREMENTS.*
3. *DEFICIENCIES, WHETHER CAUSED BY CONTRACTOR OPERATIONS OR NOT CAUSED BY THE CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED IMMEDIATELY.*
4. *THE CONTRACTOR SHALL MAINTAIN ROADS AND STREETS ADJACENT TO THE PROJECT LIMITS WHEN AFFECTED BY THE CONTRACTOR'S OPERATIONS. THE CONTRACTOR SHALL REMOVE OR REPAIR ANY CONDITION RESULTING FROM THE WORK THAT MIGHT IMPEDE TRAFFIC OR CREATE A HAZARD.*
5. *THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF THE WORK COVERED BY THE CONTRACT.*
6. *ROCKERIES AND/OR RETAINING WALLS TO BE CONSTRUCTED PER GEOTECHNICAL AND/OR STRUCTURAL ENGINEER'S PLANS & SPECIFICATIONS.*

ARCHITECTURAL, STRUCTURAL & GEOTECHNICAL NOTES

1. *THESE PLANS ARE APPROVED FOR STANDARD ROAD AND DRAINAGE IMPROVEMENTS ONLY. PLANS FOR STRUCTURES SUCH AS RETAINING WALLS REQUIRE A SEPARATE REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.*
2. *SPECIAL INSPECTIONS FOR GEOTECHNICAL AND/OR STRUCTURAL ASPECTS OF OF THE PROJECT MAY BE REQUIRED DURING VARIOUS STAGES OF THE PROECT. CONTRACTOR TO BE RESPONSIBLE FOR COORDINATION AND OBTAINING INSPECTIONS WHEN AND WHERE NECESSARY.*
3. *SEE ARCHITECTURAL PLANS FOR BUILDING SECTIONS AND ALL LOCATIONAL/DIMENSIONAL ASPECTS OF BUILDINGS.*
4. *SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL BUILDING AND RETAINING WALL DETAILS.*
5. *COORDINATE ALL SITE CIVIL CONSTRUCTION WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL/PLUMBING AND LANDSCAPE PLANS AND IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS.*

DRAINAGE NOTES

1. *ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT 7-02.3(1). THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL, AND ANY REQUIRED PIPE BEDDING, TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE.*
2. *STEEL PIPE SHALL BE GALVANIZED AND HAVE ASPHALT TREATMENT #1 OR BETTER INSIDE AND OUTSIDE.*
3. *ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS.*

ADDITIONAL NOTES

1. *THIS PLAN DOES NOT SHOW THE LOCATION OF ALL EXISTING UTILITIES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.*
2. *THE CONTRACTOR SHALL EXPOSE ALL EXISTING PIPING THAT WILL BE CONNECTED TO WITH NEW PIPING. DEPTH, LOCATION, AND CONDITION SHALL BE RELAYED TO THE ENGINEER IF CONDITIONS VARY SIGNIFICANTLY FROM WHAT IS DETAILED OR ANTICIPATED.*
3. *ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE TO DETAILS AND SPECIFICATIONS OF THE CITY OF BELLEVUE STANDARDS.*
4. *CONNECTION TO THE EXISTING ROADWAY WILL REQUIRE RESTORATION OF THE ROADWAY SECTION IN KIND. NEW PAVEMENT SECTION, IF NECESSARY, SHALL BE PER CITY OF BELLEVUE STANDARDS.*
5. *ALL CONSTRUCTION DEBRIS GENERATED DURING CONSTRUCTION TO BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION OFF SITE.*
6. *NEATLY SAW CUT EXISTING EDGE OF PAVEMENT 1' INSIDE EDGE OF PAVEMENT TO PROVIDE A SMOOTH & CLEAN TRANSITION TO BUTT AGAINST NEW PAVEMENT AND/OR DRIVEWAY SECTION.*

GRADING NOTES

1. *ALL CUT MATERIAL GENERATED DURING THE PROJECT THAT IS NOT ACCEPTABLE FOR USE AS COMPACTED FILL MATERIAL AT ANOTHER LOCATION ON-SITE MUST BE HAULED TO AN APPROVED LOCATION OFF-SITE.*
2. *FILL MATERIAL PLACED UNDER BUILDING FOUNDATIONS OR PAVEMENT SHALL BE CRUSHED BASE ROCK OR COMPACTED STRUCTURAL FILL IN ACCORDANCE TO WSDOT STANDARD SPECIFICATIONS.*
3. *ROCKERY AND/OR RETAINING WALLS GREATER THAN FOUR (4) FEET IN HEIGHT REQUIRES A BUILDING PERMIT FROM THE CITY OF SEATTLE.*
4. *IT WILL BE THE PERMITEE'S RESPONSIBILITY TO SUCCESSFULLY CAP AND ABANDON ALL EXISTING UTILITIES WITHIN THE DEVELOPMENT IN ACCORDANCE TO THE GOVERNING UTILITY AGENCY.*
5. *ALL TEMPORARY CUTS SHALL NOT EXCEED 1H:1V UNLESS APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.*
6. *WORK OUTSIDE THE PROPERTY BOUNDARIES IS STRICTLY PROHIBITED. IN THE EVENT WORK ON ADJACENT PRIVATE PROPERTY IS DEEMED NECESSARY, THE PROPERTY DEVELOPER SHALL OBTAIN TEMPORARY CONSTRUCTION EASEMENTS PRIOR TO BEGINNING CONSTRUCTION.*

EXISTING UTILITY NOTE

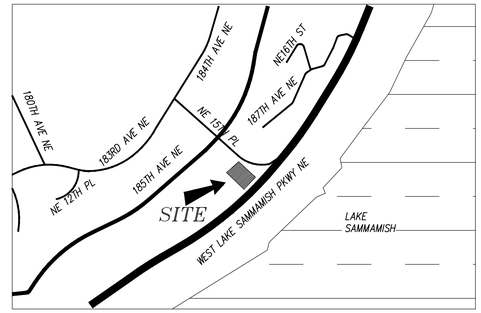
LOCATION OF EXISTING UTILITIES SHOWN, IF ANY, IS APPROXIMATE AND MAY NOT BE ACCURATE OR ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. AGENCIES INVOLVED SHALL BE NOTIFIED WITHIN A REASONABLE TIME PRIOR TO THE START OF CONSTRUCTION.

NOTE

THIS PROJECT IS SUBJECT TO RAINY SEASON RESTRICTIONS (BCC 23.76.093). IN THE EVENT THAT THE DEVELOPER WISHES TO INITIATE OR CONTINUE CLEARING OR GRADING ACTIVITY DURING THE RAINY SEASON (OCTOBER 1 THROUGH APRIL 30), A FORMAL WRITTEN REQUEST MUST BE SUBMITTED TO DSD. THE REQUEST MUST INCLUDE AN AUGMENTED TESC PLAN, A WRITTEN NARRATIVE DESCRIBING THE POTENTIAL FOR EROSION AND SEDIMENTATION, A CONSTRUCTION SEQUENCE, AND THE PROPOSED EXTRAORDINARY BMPS THAT WILL BE USED. APPROVAL WILL BE BASED ON AN EVALUATION OF SITE AND PROJECT CONDITIONS. AN IMPORTANT CRITERIA FOR APPROVAL IS GUARANTEEING TEMPORARY AND PERMANENT SLOPE STABILITY AND PROTECTION OF RECEIVING WATERS FROM INCREASED EROSION AND SEDIMENTATION DURING CONSTRUCTION.

SURVEY NOTE

EXISTING SURVEY FEATURES, BOUNDARY AND TOPOGRAPHIC DATA SHOWN ON THESE DRAWINGS HAS BEEN PREPARED, BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, G2 CIVIL CANNOT ENSURE THE ACCURACY AND THUS IS NOT RESPONSIBLE FOR THE ACCURACY OF DATA/INFORMATION PROVIDED BY OTHERS, OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.



VICINITY MAP

NTS

PROJECT DATA

PROPERTY ADDRESS:	*18523 NE 15TH PL BELLEVUE 98008*
TAX LOT NUMBER:	*743150-0240*
SITE AREA:	*19,766 SF (0.45 AC.)*
ZONING:	*R-1.8*

PROJECT TEAM

OWNER:	*ERIC FORNELIUS 18523 NE 15TH PLACE BELLEVUE, WA 98008*
BUILDER:	*RUSS BUILDERS PO BOX 2421 NORTH BEND, WA 98045 (425) 341-3476 CONTACT: JIM RUSKOWSKI*
CIVIL ENGINEER:	*G2 CIVIL 1700 NW GILMAN BLVD, STE 200 ISSAQUAH, WA 98027 (425) 821-5038 CONTACT: EDWARD MECUM, PE*
SURVEYOR:	*APEX ENGINEERING, LLC 2601 S 35TH ST, SUITE 200, TACOMA, WA 98409 (253) 473-4494 CONTACT: KURT A. PARCHER*
GEOTECHNICAL ENGINEER:	*ROBERT M. PRIDE, LLC 13203 HOLMES POINT DRIVE NE KIRKLAND, WA 98034 CONTACT: ROBERT M. PRIDE, PE SONDERGAARD GEOSCIENCE, PLLC 1921 MILL FERN DRIVE SE MILL CREEK, WA 98012 CONTACT: JON N. SONDERGAARD, LG, LEG*

LEGAL DESCRIPTION

PER STATUTORY WARRANTY DEED, KING COUNTY RECORDING NO. 20171121000172

LOT D, CITY OF BELLEVUE SHORT PLAT NO. 76-42, RECORDED UNDER RECORDING NO. 7609200724, RECORDS OF KING COUNTY, WASHINGTON, BEING A PORTION OF:

LOT 12, ROSEMONT HEIGHTS ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 40 OF PLATS, PAGE 214, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE (NAD 83/2011) BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE REFERENCE NETWORK.

VERTICAL DATUM

NAVD 88 BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE REFERENCE NETWORK.

BENCHMARK

SEE TOPOGRAPHIC SURVEY BY APEX ENGINEERING

BASIS OF BEARING

SEE TOPOGRAPHIC SURVEY BY APEX ENGINEERING

REFERENCES

SEE TOPOGRAPHIC SURVEY BY APEX ENGINEERING

NOTE

SEE TOPOGRAPHIC SURVEY BY APEX ENGINEERING

SHEET INDEX

NOTES	DATE	CHKD BY	DWN BY

G2 CIVIL
1700 NW GILMAN BLVD, STE 200
ISSAQUAH, WA 98027
PHONE: (425) 821-5038

SITE PLAN B

FORNELIUS BELLEVUE GARAGE

ERIC FORNELIUS
18523 NE 15TH PLACE
BELLEVUE, WA 98008

SHEET
1 of **1**

JOB No.

July 28, 2021

Mr. Jim Ruskowski
Russ Builders
P. O. Box 2421
North Bend, WA 98045

Re: **Geotechnical Recommendations**
Proposed Fornilius Garage
18523 NE 15th Place
Bellevue, Washington

Dear Mr. Ruskowski,

This report summarizes the results of our site investigation and geologic research for the property located adjacent to West Lake Sammamish Parkway in Bellevue. It is understood that a new garage is planned for construction with driveway access from NE 15th Place on the NE side of this property.

The purpose of this report is to describe existing site and subsoil conditions, and to provide recommendations for foundation design. A preliminary plan shows the location of the new garage to be constructed on existing gravel that has provided previous parking for vehicles. Geologic research for this area included a review of the Booth 2007 map that shows this area is underlain by pre-Fraser (Qpff) fine grained deposits.

Site Conditions

This proposed garage building pad area has been raised up 2 to 10 feet with fill soils that were found to be medium dense without any groundwater conditions. A wooden railroad tie wall was installed on the downslope sides of this garage parking area to provide lateral support to the parking area fill, and there has been noticeable deterioration of the railroad ties since they were installed.

Two test pits were dug around the proposed garage area and the subsoil conditions were found to be similar in these excavations. Medium dense fill soils were encountered to a depth of 4.5 feet near the center of the building pad area, and medium dense to dense glacial soils were exposed in the test pit located on the downslope side of the railroad tie retaining wall.

Geotechnical Recommendations

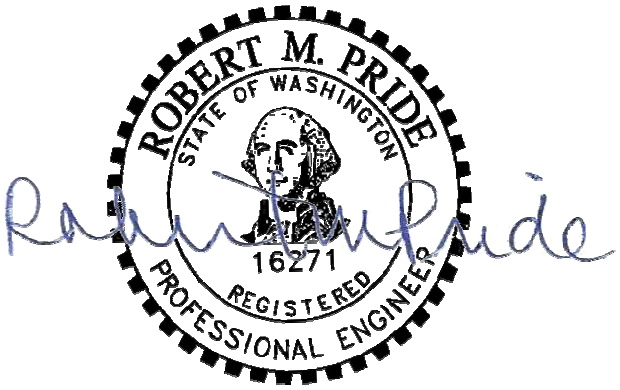
Based on the results of our site investigation, the following recommendations have been developed for foundation design. Support for the new garage should include pipe piles that are driven to refusal into the dense glacial soils using an appropriate pneumatic

hammer. It is recommended that either 3 or 4 inch diameter pipe piles be used for support of the new garage footings, and these piles may be designed for either 10 or 20 kips respectively when driven to refusal.

It is recommended that the reinforced concrete floor slab be supported on 12 inches of compacted gravel. Storm water will need to be collected from the roof area and discharged into a catch basin and then connected into the city storm drain system.

Final design plans will be reviewed and a report will be prepared that will provide approval of these structural drawings along with a minimum risk statement. Please call me if there are any questions.

Respectfully,



Robert M. Pride, P. E.
Principal Geotechnical Engineer

dist: (1) Addressee

rmp: Ruskowski15thGar1

SONDERGAARD GEOSCIENCE, PLLC
1921 Mill Fern Drive SE
Mill Creek, Washington 98012

June 7, 2023
Project No. J-0227

Russ Builders
1545 NW Mall Street
Issaquah, Washington
Atten: Jim Ruskowski

Subject: Critical Area Report
18523 NW 15th Place
Bellevue, Washington

Dear Mr. Ruskowski:

Sondergaard Geosciences, PLLC (SGP) is pleased to present our critical area report for the subject site. This study has been prepared for the exclusive use of Russ Builders and their agents, for specific application to this project. Within the limitations of scope and schedule, our services have been performed in accordance with generally accepted engineering geology and geotechnical engineering practices in effect in this area at the time our study was prepared. Our observations, findings and opinions are a means to identify and reduce the inherent risk to the owner. No other warranty, express or implied, is made.

PREVIOUS REPORTS

A geotechnical report for the project dated July 28, 2021 and entitled "Geotechnical Recommendations, Proposed Fornilius Garage" was prepared by Robert M. Pride, P.E.

ABSTRACT

The subject project consists of constructing a new, approximately 720 square feet garage southeast of the existing home on a vacant portion of the lot. Access to the garage would be provided along an existing gravel drive (see Photo 1 attached) that would subsequently be paved with asphalt. According to the geotechnical report completed for the project, the proposed location of the garage is underlain by approximately 4.5 feet of medium dense fill over medium dense to dense glacial deposits. Groundwater was not encountered within subsurface exploration completed at the site in July 2021. The subject site is classified as an erosion hazard area with areas of steep slopes on the northwest and southeast sides of the lot. In our opinion, the proposed project is feasible from a geotechnical standpoint and can be completed safely with implementation of the recommendations presented in this report.

SITE AND PROJECT DESCRIPTION

The project site is located on a rectangular-shaped, approximately 19,765 square feet parcel (King County Parcel Number 7431500240) located at the above referenced address in Bellevue, Washington (Figure 1). The subject parcel is bounded to the northwest and southwest sides by single-family residential structures, to the northeast by NE 15th Place and to the southeast by West Lake Sammamish Parkway NE. The site is currently developed with a single-family residence constructed in 1977 (see Photo 2). The parcel generally slopes down to the southeast but is terraced with a flat, back lawn area (see Photo 6) below the house location on the northwest half of the lot (see Figure 2). Grade separation southeast of the back yard and between the backyard and the house is provided by rockeries and a timber retaining wall (see Photo 5). The proposed project consists of constructing a new garage in the backyard area (Figure 3 and Photo 6).

Surface Water

Lake Sammamish is located approximately 380 feet southeast of the subject site.

Geologic Mapping

Review of the regional geologic map *Geologic Map of the East Half of the Bellevue South 7.5'x15' Quadrangle, Issaquah Area, King County Washington* by D.B.Booth, et. al. (2012) indicates that the subject site is underlain by undifferentiated sedimentary deposits of the pre-Fraser glaciation age (Figure 4). These deposits typically consist of oxidized sand, gravel, silt and clay. The interpretation of the sediments encountered in geotechnical explorations completed by Pride (2021) is in general agreement with the regional geologic map.

GEOLOLGIC HAZARDS

The following discussion of applicable geologic hazards is based on review of the City of Bellevue Municipal Code (BMC) Chapter 20 Section 20.25H and the geologic, topographic, and ground and surface water conditions as observed and discussed herein. The discussion will be limited to landslide and steep slope hazards, seismic hazards, and erosion hazards. Geologic Hazard Areas are shown on Figure 5.

Landslide Hazard Area and Mitigations

Based upon review of the City of Bellevue hazard maps and review of the BMC Chapters 20, Section 20.25H.120(A)(1) the subject site does not meet the criteria for a Landslide Hazard Area due to the lack of indications of past or present slope movement, steam erosion or undercutting and existing groundwater seepage. The property is underlain by competent, Pre-Fraser, over-

consolidated glacial deposits. The site slopes and property contain evergreen trees with trunk diameters ranging from about 24 to 32 inches indicating stable slopes over time. Geotechnical mitigations for landslide hazards are not recommended nor warranted for this site. A lidar image of the site and surrounding area is presented in Figure 6.

Steep Slope Hazard Area and Mitigations

The rockery supported slopes along the southeast property line (southeast of the proposed garage site) and along on the northwest property meet the criteria for a steep slope hazard area according to the BMC Chapter 20, Section 25H.120 (A)(2). We recommend that a minimum 15 feet top of slope set back be maintained between the proposed garage and the top of the rockery to the southeast.

Seismic Hazards and Mitigations

Based on review of the BMC Chapter20, Section 25H.120(A)(4) and The City of Bellevue Geologic Hazard Area Maps the subject site does not meet the criteria for a Seismic Hazard Area. Earthquakes occur in the Puget Lowland with great regularity. The majority of these events are small and are usually not felt by people. However, large earthquakes do occur, as evidenced by the 1949, 7.2-magnitude event; the 1965, 6.5-magnitude event; and the 2001, 6.8-magnitude event. The 1949 earthquake appears to have been the largest in this area during recorded history. Evaluation of return rates indicates that an earthquake of magnitude between 5.5 and 6.0 is likely within a given 20- to 40-year period.

Generally, there are four types of potential hazards associated with large seismic events: 1) surficial ground rupture, 2) seismically induced landslides, 3) liquefaction, and 4) ground motion. The potential for each of these hazards to adversely impact the proposed project is discussed below.

<u>Surficial Ground Rupture</u>

The project site is located approximately 3 to 4 miles north of the Seattle Fault Zone. This fault system has been hypothesized to have a reoccurrence interval in excess of several thousand years. Due to the suspected long recurrence interval and distance from the subject site, the potential for surficial ground rupture is considered to be low during the expected life of the proposed development. No mitigation efforts beyond complying with the requirements of the local jurisdictions and the 2018 *International Building Code* (IBC) are recommended for this site.

Seismically Induced Landslides

The potential risk of damage to the proposed structures by seismically induced land sliding is low due to the historically stable slopes, the lack of ground water seepage and the strength of the soils underlying the site, in our opinion.

Liquefaction

Liquefaction is the process of loose, saturated sand losing its internal shear strength when subjected to cyclic loading, as may occur during an earthquake. In our opinion, the site does not present a liquefaction hazard due to the density and strength of the underlying soils and lack of a shallow ground water table.

Ground Motion

It is our opinion that earthquake damage to the proposed structures, when founded on suitable bearing strata in accordance with the recommendations contained herein, will likely be caused by the intensity and acceleration associated with the event. Structural design for the project should follow 2018 IBC standards. The 2018 IBC defines Site Classification by reference to Table 20.3.-1 of the *American Society of Civil Engineers* publication ASCE 7, the current version of which is ASCE 7-10. In our opinion the subsurface conditions at the site are consistent with a Site Classification of "C" as defined in the referenced documents.

Erosion Hazards and Mitigations

According to the City of Bellevue Geologic Hazard Area Maps, the subject property is classified as a Very Severe Soil Erosion Hazard Area. The following discussion addresses potential erosion hazards that could develop during construction.

The most effective erosion control measure is the maintenance of adequate ground cover. Maintaining cover measures atop disturbed ground provides the greatest reduction to the potential generation of turbid runoff and sediment transport. During the local wet season (October 1 through March 31), exposed soil should not remain uncovered for more than 2 days unless it is actively being worked. Ground-cover measures can include erosion control matting, plastic sheeting, straw mulch, crushed rock or recycled concrete, or mature hydroseed.

Some fine-grained surface soils are the result of natural weathering processes that have broken down parent materials into their mineral components. These mineral components can have an inherent electrical charge. Electrically charged mineral fines attract oppositely charged particles and can combine (flocculate) to form larger particles that will settle out of suspension. The sediments produced during the recent glaciation of Puget Sound are, however, most commonly the suspended soils that are carried by site storm water. The fine-grained fraction of the glacially

derived soil is referred to as “rock flour,” which is primarily a silt-sized particle with no electrical charge. These particles, once suspended in water, may have settling times in periods of months.

Therefore, the flow length within a temporary sediment control trap or pond has virtually no effect on the water quality of the discharge, since silt will not settle out of suspension in the time it takes to flow from one end of the pond to the other. Reduction of turbidity from a construction site is almost entirely a function of cover measures and flow control. Temporary sediment traps and ponds are necessary to control the release rate of the runoff and to provide a catchment for sand-sized and larger soil particles but are very ineffective at reducing the turbidity of the runoff.

To mitigate the erosion hazards and potential for off-site sediment transport, we recommend the following:

1) The winter performance of a site is dependent on a well-conceived plan for control of site erosion and storm water runoff. It is easier to keep the soil on the ground than to remove it from storm water. The owner and the design team should include adequate ground-cover measures, access roads, and staging areas in the project bid to give the selected contractor a workable site. The selected contractor needs to be prepared to implement and maintain the required measures to reduce the amount of exposed ground. A site maintenance plan should be in place in the event storm water turbidity measurements are greater than the City of Bellevue standards.

2) All TESC measures for a given area to be graded or otherwise worked should be installed prior to any activity within that area. The recommended sequence of construction within a given area would be to install sediment traps and/or ponds and establish perimeter flow control prior to starting mass grading.

3) During the wetter months of the year, or when large storm events are predicted during the summer months, each work area should be stabilized so that if showers occur, the work area can receive rainfall without excessive erosion or sediment transport. The required measures for an area to be “buttoned-up” will depend on the time of year and the duration the area will be left un-worked. During the winter months, areas that are to be left un-worked for more than 2 days should be mulched or covered with plastic. During the summer months, stabilization will usually consist of seal-rolling the subgrade. Such measures will aid in the contractor’s ability to get back into a work area after a storm event. The stabilization process also includes establishing temporary storm water conveyance channels through work areas to route runoff to the approved treatment facilities.

4) All disturbed areas should be revegetated as soon as possible. If it is outside of the growing season, the disturbed areas should be covered with mulch, as recommended in

the erosion control plan. Straw mulch provides the most cost-effective cover measure and can be made wind-resistant with the application of a tackifier after it is placed.

5) Surface runoff and discharge should be controlled during and following development. Uncontrolled discharge may promote erosion and sediment transport. Under no circumstances should concentrated discharges be allowed to flow over significant slopes.

6) Soils that are to be reused around the site should be stored in such a manner as to reduce erosion from the stockpile. Protective measures may include, but are not limited to, covering with plastic sheeting, the use of low stockpiles in flat areas, or the use of straw bales/silt fences around pile perimeters. During the period between October 1 and March 31, these measures are required.

7) On-site erosion control inspections and turbidity monitoring should be performed in accordance with City of Bellevue requirements. TESC monitoring may be part of the weekly construction team meetings. Temporary and permanent erosion control and drainage measures should be adjusted and maintained, as necessary, at the time of construction.

It is our opinion that with the proper implementation of the TESC plans and by field-adjusting appropriate mitigation elements (best management practices) during construction, as recommended by the erosion control inspector, the potential adverse impacts from erosion hazards on the project can be mitigated.

CONCLUSIONS

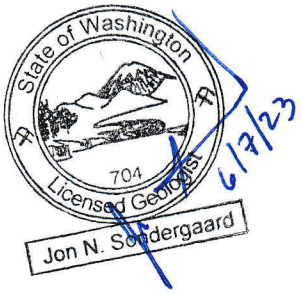
The proposed project is located in an area that has previously been developed with a gravel driveway and grass lawn. The project will not impinge upon the rockery or slopes to the southeast and will not impact the steep slope hazard area provided the recommendations presented in this report are implemented. In our opinion, provided good construction practices are used and an erosion control plan is implemented the proposed project will not impact geologic hazard areas identified on the property nor will it impact adjacent properties.

CLOSURE

Our report is based on project plans provided by the client. We recommend that SGP be allowed to review this report and update it as needed if project plans are revised in the future. In this way, we can confirm that our recommendations have been properly interpreted and implemented in the design. This review is not included in our current scope of work and budget.

We appreciate the opportunity to be of service to you on this project. Should you have any questions regarding this report or other geotechnical aspects of the project, please call us at your earliest convenience.

Sincerely,
SONDERGAARD GEOSCIENCE, PLLC.
Snohomish, Washington

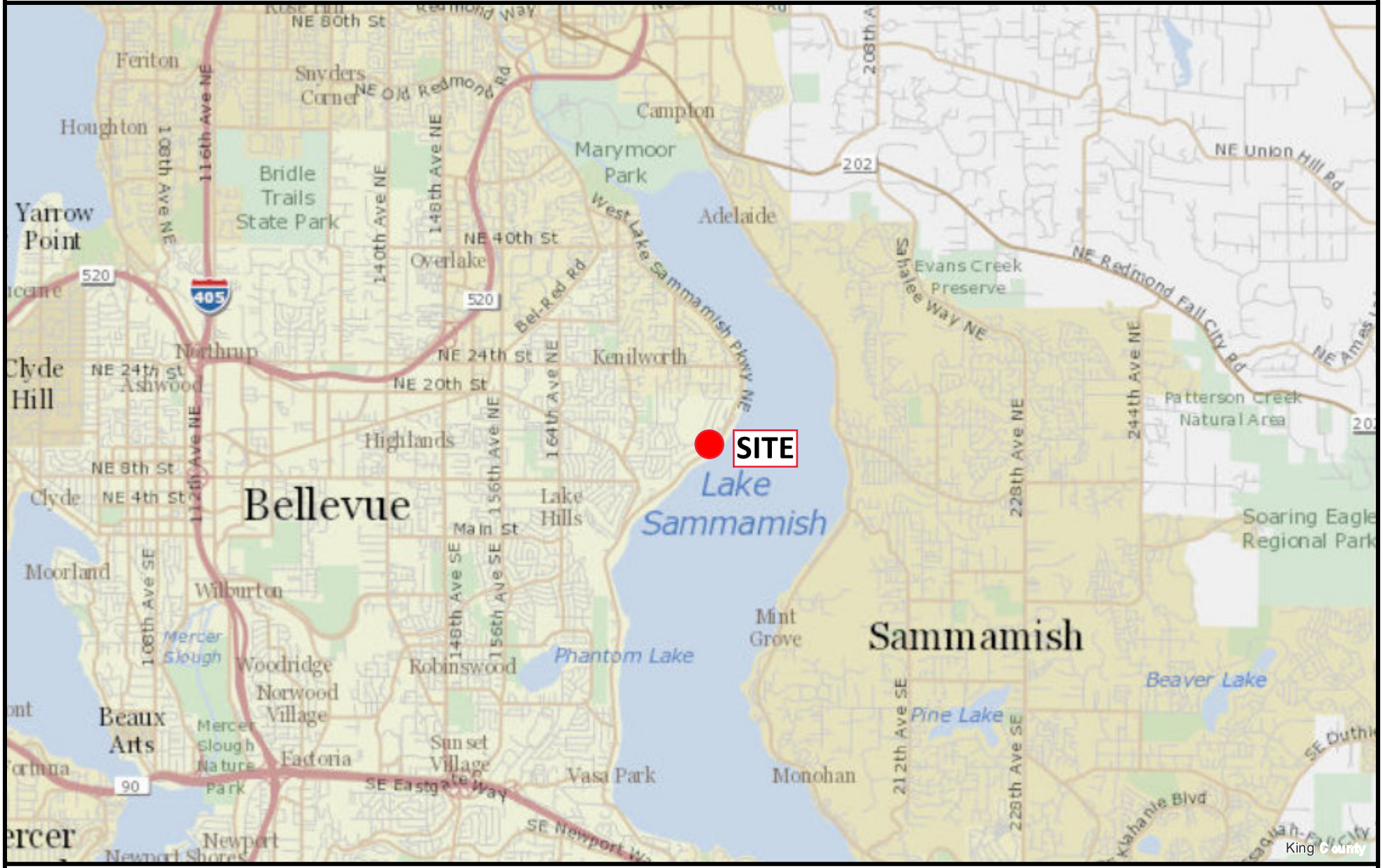


Jon N. Sondergaard, L.G., L.E.G.
Principal Engineering Geologist

Attachments:

	Figure 1:	Vicinity Map
	Figure 2:	Topographic Map
	Figure 3:	Site Development Plan
	Figure 4:	Geologic Map
	Figure 5:	Geologic Hazard Areas
	Figure 6:	Lidar Image

King County iMap



The information included on this map has been compiled by King County staff from a variety of sources and is subject to change without notice. King County makes no representations or warranties, express or implied, as to accuracy, completeness, timeliness, or rights to the use of such information. This document is not intended for use as a survey product. King County shall not be liable for any general, special, indirect, incidental, or consequential damages including, but not limited to, lost revenues or lost profits resulting from the use or misuse of the information contained on this map. Any sale of this map or information on this map is prohibited except by written permission of King County.

Date: 5/24/2023 Notes:

VICINITY MAP
18523 NW 15TH PLACE
BELLEVUE, WASHINGTON

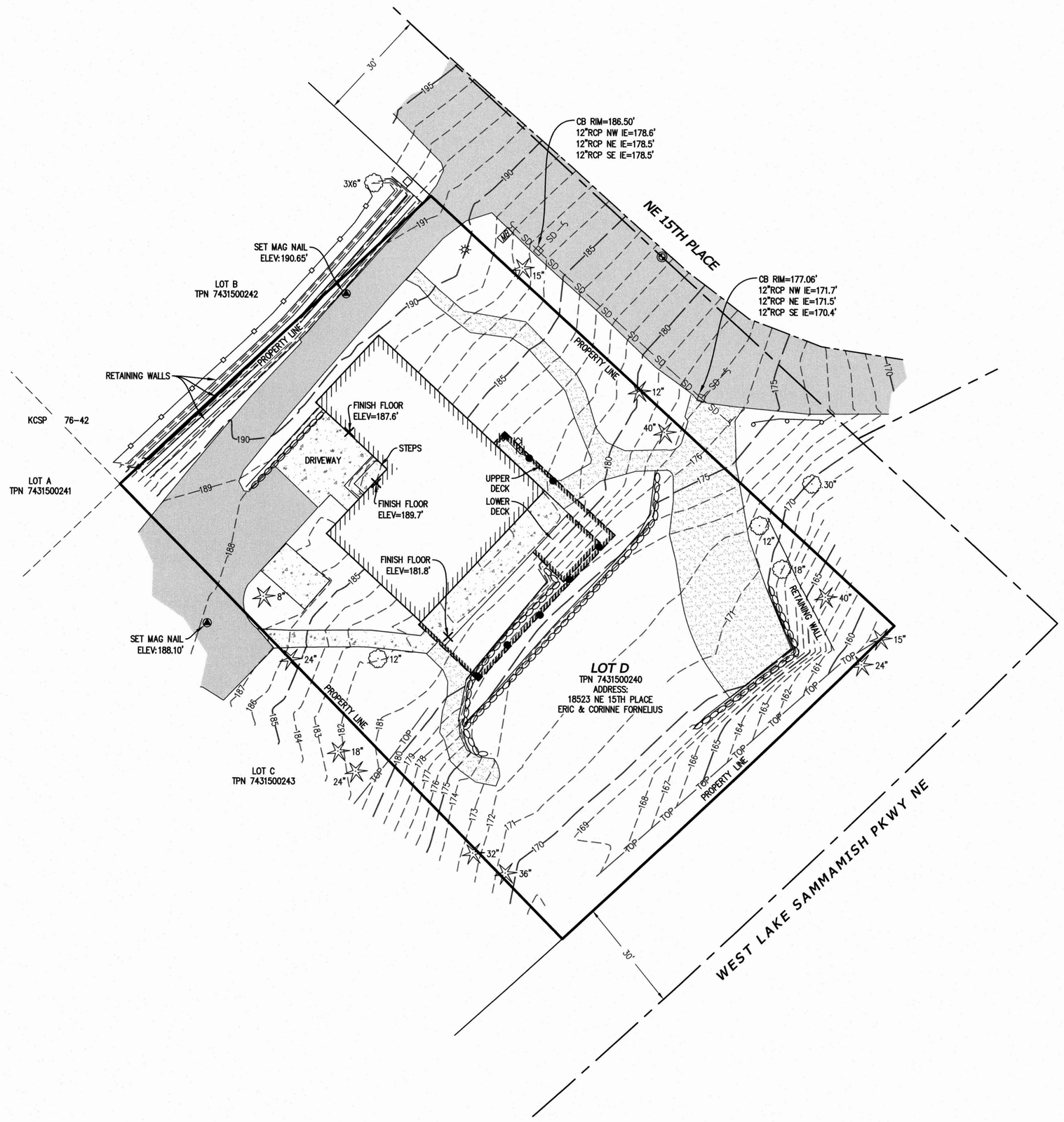
N

J-0227 FIGURE 1

King County

TOPOGRAPHIC SURVEY

THE SW 1/4 OF SECTION 30 TOWNSHIP 25 NORTH, RANGE 6 EAST, W.M.
KING COUNTY, WASHINGTON



NORTH

0 10 20 40

SCALE: 1"=20'
CONTOUR INTERVAL: 1 FOOT

LEGEND

- FOUND MONUMENT
- SET MAG NAIL WITH WASHER
- TPN TAX PARCEL NUMBER
- BOUNDARY LINE
- ADJOINER PROPERTY BOUNDARY
- RIGHT OF WAY LINE
- ROAD CENTERLINE
- BUILDING COLUMN
- MB MAILBOX
- WOOD FENCE (AS NOTED)
- GUARD RAIL
- DECIDUOUS TREE (DIAMETER AS NOTED)
- EVERGREEN TREE (DIAMETER AS NOTED)
- STORM CATCH BASIN
- SD — SD — BURIED STORM DRAIN LINE
- IE INVERT ELEVATION
- RCP REINFORCED CONCRETE PIPE
- LIGHT POLE
- TELEPHONE RISER
- IRRIGATION CONTROL VALVE
- ROCKERY
- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE
- BRICK SURFACE

LEGAL DESCRIPTION

PER STATUTORY WARRANTY DEED, KING COUNTY RECORDING NO. 20171212000172

LOT D, CITY OF BELLEVUE SHORT PLAT NO. 76-42, RECORDED UNDER RECORDING NO. 7609200724, RECORDS OF KING COUNTY, WASHINGTON, BEING A PORTION OF:

LOT 12, ROSEMONT HEIGHTS ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 40 OF PLATS, PAGE 214, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE (NAD 83/2011) BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE REFERENCE NETWORK.

VERTICAL DATUM

NAVD 88 BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE REFERENCE NETWORK.

SURVEY NOTES

1. DATA FOR THIS SURVEY WAS GATHERED BY FIELD TRAVERSE UTILIZING ELECTRONIC DATA COLLECTION, AND MEETS OR EXCEEDS ACCURACY REQUIREMENTS CONTAINED IN W.A.C. 332.130.090. ALL MEASURING INSTRUMENTS EMPLOYED IN THIS SURVEY HAVE BEEN MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.
2. THIS MAP GRAPHICALLY REPRESENTS CONDITIONS AND FEATURES EXISTING AT THE TIME OF THIS SURVEY ONLY, WHICH WAS PERFORMED DURING JULY OF 2021.
3. THE CERTIFICATION OF THIS SURVEY AND MAP IS EXCLUSIVE TO THE NAMED CLIENT WHO REQUESTED THIS SURVEY. IT WAS SPECIFICALLY DESIGNED TO MEET THEIR STATED NEED(S). THAT CERTIFICATION DOES NOT EXTEND TO ANY OTHER PARTIES OR FOR ANY ALTERNATIVE USE OF THIS MAP WITHOUT THE EXPRESS RECERTIFICATION BY THE SURVEYOR NAMING THOSE PARTIES.
4. THE PURPOSE OF THIS SURVEY IS TO PROVIDE A TOPOGRAPHIC MAP OF THE EXISTING CONDITIONS WITHIN PARCEL #7431500240 FOR PLANNING, DESIGN AND CONSTRUCTION.
5. UTILITIES OTHER THAN SHOWN MAY EXIST ON THE SITE. THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY, AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY. THE SURVEYOR DOES CERTIFY THAT THEY ARE SHOWN AS ACCURATELY AS POSSIBLE FROM FIELD SURVEY INFORMATION.
6. KING COUNTY PARCEL NO. 7431500240
7. PARCEL AREA: 19,766 ± SQ.FT. (0.45 ACRES)
8. ALL DISTANCES AND DIMENSIONS SHOWN ARE U.S. SURVEY FEET GROUND MEASUREMENTS.
9. CONTOUR INTERVALS ARE 1-FOOT AND ARE COMPUTER GENERATED FROM GROUND FIELD TOPOGRAPHY GATHERED FOR THIS SURVEY UTILIZING ELECTRONIC DATA COLLECTION.
10. THE PROPERTY AND PUBLIC RIGHT-OF-WAY LINES SHOWN HEREON ARE FROM PUBLIC RECORDS. THEY ARE NOT THE RESULT OF AN OFFICIAL BOUNDARY SURVEY AND SHOULD BE RELIED ON FOR GENERAL REFERENCE ONLY.
11. WE HAVE USED GRAPHIC SYMBOLS TO REPRESENT SOME FEATURES ON THIS MAP, SUCH AS UTILITIES, TREES AND FENCES. THE DEFAULT SIZE OF THOSE SYMBOLS MAY NOT REFLECT THE TRUE SIZE OF THE FEATURE THAT WAS MAPPED.

TOPOGRAPHIC MAP
2912 120TH AVENUE NE
BELLEVUE, WASHINGTON

J-0227 FIGURE 2

SURVEYOR'S CERTIFICATE

I HEREBY CERTIFY THAT THIS MAP CORRECTLY REPRESENTS A TOPOGRAPHIC SURVEY MADE BY ME OR UNDER MY DIRECTION AND TO THE BEST OF MY KNOWLEDGE REPRESENTS THE TOPOGRAPHIC FEATURES AS THEY EXIST ON THE GROUND AS OF 7/6/2021.

KURT A. PARCHER P.L.S. NO. 49286 — DATE July 20, 2021

REV NO	REVISION DESCRIPTION	DATE	BY

Apex Engineering PLLC
2601 South 35th Street, Suite 200
Tacoma, Washington 98409-7479
(253) 475-4464 FAX: (253) 475-0599

TITLE: TOPOGRAPHIC SURVEY

CLIENT: ERIC FORNELIUS
18523 NE 15TH PLACE
BELLEVUE, WA 98008

DATE SEALED 7/20/21

KURT A. PARCHER — STATE OF WASHINGTON — 49286 — REGISTERED PROFESSIONAL LAND SURVEYOR

PROJECT MANAGER KURT A. PARCHER
DESIGN
DRAWN BPM
CHECKED KAP
SEC 30 T 25 N R 6 E
FILE NO 35705
DATE 7/20/2021
SCALE 1"=20'

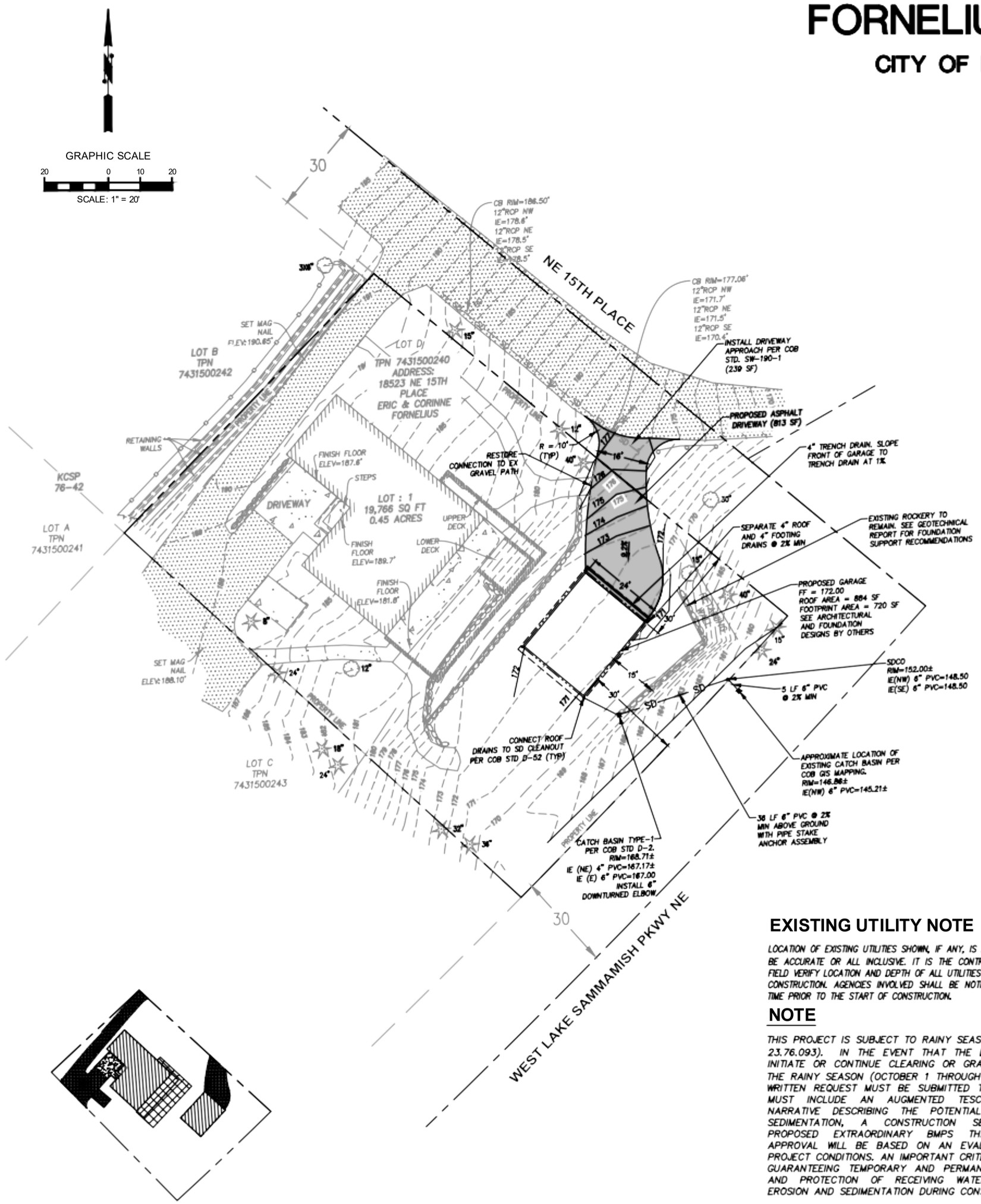
SHEET 1 OF 1
FILE NO 35705

I:\35705\Survey\35705-SV TOPO.dwg

NE 1/4 OF THE SW 1/4 OF SEC. 30 , T-25 N, R-6 E, W.M.

FORNELIUS GARAGE

CITY OF BELLEVUE, WA



PARCEL AREA: 19,766 SF
ROOF AREA & PATIO: 4,448 SF
UNCOVERED PAVED AREA: 3,142 SF
TOTAL IMPERVIOUS AREA: 7,590 SF (38.4%)

SURFACE AREAS EXHIBIT
SCALE 1" = 60'

811
Know what's below.
Call before you dig.

GENERAL NOTES

1. SPECIAL INSPECTIONS BY CITY INSPECTOR ARE REQUIRED DURING CONSTRUCTION.
2. ALL EXISTING ON-SITE STRUCTURES AND ASSOCIATED UTILITIES TO BE DEMOLISHED, REMOVED, AND/OR ABANDONED PER APPLICABLE JURISDICTIONAL REQUIREMENTS.
3. DEFICIENCIES, WHETHER CAUSED BY CONTRACTOR OPERATIONS OR NOT CAUSED BY THE CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED IMMEDIATELY.
4. THE CONTRACTOR SHALL MAINTAIN ROADS AND STREETS ADJACENT TO THE PROJECT LIMITS WHEN AFFECTED BY THE CONTRACTOR'S OPERATIONS. THE CONTRACTOR SHALL REMOVE OR REPAIR ANY CONDITION RESULTING FROM THE WORK THAT MIGHT IMPEDE TRAFFIC OR CREATE A HAZARD.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE SAFEGUARDS, SAFETY DEVICES, PROTECTIVE EQUIPMENT, AND ANY OTHER NEEDED ACTIONS TO PROTECT THE LIFE, HEALTH, AND SAFETY OF THE PUBLIC, AND TO PROTECT PROPERTY IN CONNECTION WITH THE PERFORMANCE OF THE WORK COVERED BY THE CONTRACT.
6. ROCKERIES AND/OR RETAINING WALLS TO BE CONSTRUCTED PER GEOTECHNICAL AND/OR STRUCTURAL ENGINEER'S PLANS & SPECIFICATIONS.

ARCHITECTURAL, STRUCTURAL & GEOTECHNICAL NOTES

1. THESE PLANS ARE APPROVED FOR STANDARD ROAD AND DRAINAGE IMPROVEMENTS ONLY. PLANS FOR STRUCTURES SUCH AS RETAINING WALLS REQUIRE A SEPARATE REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
2. SPECIAL INSPECTIONS FOR GEOTECHNICAL AND/OR STRUCTURAL ASPECTS OF OF THE PROJECT MAY BE REQUIRED DURING VARIOUS STAGES OF THE PROJECT. CONTRACTOR TO BE RESPONSIBLE FOR COORDINATION AND OBTAINING INSPECTIONS WHEN AND WHERE NECESSARY.
3. SEE ARCHITECTURAL PLANS FOR BUILDING SECTIONS AND ALL LOCATIONAL/DIMENSIONAL ASPECTS OF BUILDINGS.
4. SEE ARCHITECTURAL AND STRUCTURAL PLANS FOR ALL BUILDING AND RETAINING WALL DETAILS.
5. COORDINATE ALL SITE CIVIL CONSTRUCTION WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL/PLUMBING AND LANDSCAPE PLANS AND IN ACCORDANCE WITH GEOTECHNICAL RECOMMENDATIONS.

DRAINAGE NOTES

1. ALL PIPE AND APPURTENANCES SHALL BE LAID ON A PROPERLY PREPARED FOUNDATION IN ACCORDANCE WITH WSDOT 7-02.3(1). THIS SHALL INCLUDE LEVELING AND COMPACTING THE TRENCH BOTTOM, THE TOP OF THE FOUNDATION MATERIAL, AND ANY REQUIRED PIPE BEDDING, TO A UNIFORM GRADE SO THAT THE ENTIRE PIPE IS SUPPORTED BY A UNIFORMLY DENSE UNYIELDING BASE.
2. STEEL PIPE SHALL BE GALVANIZED AND HAVE ASPHALT TREATMENT #1 OR BETTER INSIDE AND OUTSIDE.
3. ALL DRAINAGE STRUCTURES, SUCH AS CATCH BASINS AND MANHOLES, NOT LOCATED WITHIN A TRAVELED ROADWAY OR SIDEWALK, SHALL HAVE SOLID LOCKING LIDS.

ADDITIONAL NOTES

1. THIS PLAN DOES NOT SHOW THE LOCATION OF ALL EXISTING UTILITIES, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES PRIOR TO EXCAVATION.
2. THE CONTRACTOR SHALL EXPOSE ALL EXISTING PIPING THAT WILL BE CONNECTED TO WITH NEW PIPING. DEPTH, LOCATION, AND CONDITION SHALL BE RELAYED TO THE ENGINEER IF CONDITIONS VARY SIGNIFICANTLY FROM WHAT IS DETAILED OR ANTICIPATED.
3. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE TO DETAILS AND SPECIFICATIONS OF THE CITY OF BELLEVUE STANDARDS.
4. CONNECTION TO THE EXISTING ROADWAY WILL REQUIRE RESTORATION OF THE ROADWAY SECTION IN KIND. NEW PAVEMENT SECTION, IF NECESSARY, SHALL BE PER CITY OF BELLEVUE STANDARDS.
5. ALL CONSTRUCTION DEBRIS GENERATED DURING CONSTRUCTION TO BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION OFF SITE.
6. NEATLY SAW CUT EXISTING EDGE OF PAVEMENT 1' INSIDE EDGE OF PAVEMENT TO PROVIDE A SMOOTH & CLEAN TRANSITION TO BUTT AGAINST NEW PAVEMENT AND/OR DRIVEWAY SECTION.

GRADING NOTES

1. ALL CUT MATERIAL GENERATED DURING THE PROJECT THAT IS NOT ACCEPTABLE FOR USE AS COMPACTED FILL MATERIAL AT ANOTHER LOCATION ON-SITE MUST BE HAULED TO AN APPROVED LOCATION OFF-SITE.
2. FILL MATERIAL PLACED UNDER BUILDING FOUNDATIONS OR PAVEMENT SHALL BE CRUSHED BASE ROCK OR COMPACTED STRUCTURAL FILL IN ACCORDANCE TO WSDOT STANDARD SPECIFICATIONS.
3. ROCKERY AND/OR RETAINING WALLS GREATER THAN FOUR (4) FEET IN HEIGHT REQUIRES A BUILDING PERMIT FROM THE CITY OF SEATTLE.
4. IT WILL BE THE PERMITEE'S RESPONSIBILITY TO SUCCESSFULLY CAP AND ABANDON ALL EXISTING UTILITIES WITHIN THE DEVELOPMENT IN ACCORDANCE TO THE GOVERNING UTILITY AGENCY.
5. ALL TEMPORARY CUTS SHALL NOT EXCEED 1H:1V UNLESS APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER.
6. WORK OUTSIDE THE PROPERTY BOUNDARIES IS STRICTLY PROHIBITED. IN THE EVENT WORK ON ADJACENT PRIVATE PROPERTY IS DEEMED NECESSARY, THE PROPERTY DEVELOPER SHALL OBTAIN TEMPORARY CONSTRUCTION EASEMENTS PRIOR TO BEGINNING CONSTRUCTION.

EXISTING UTILITY NOTE

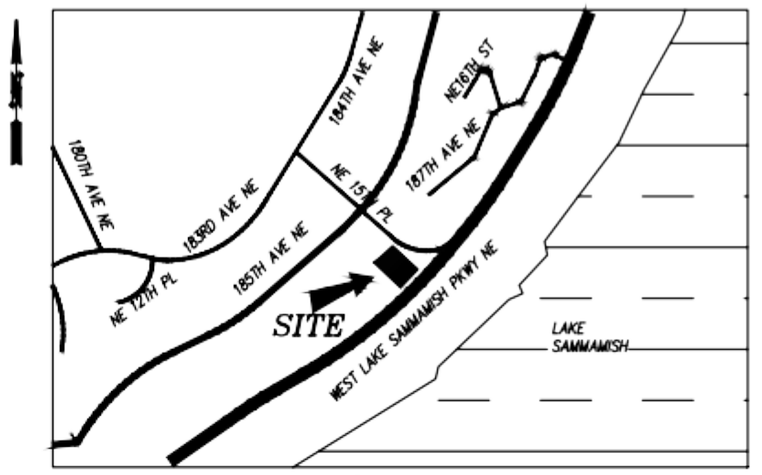
LOCATION OF EXISTING UTILITIES SHOWN, IF ANY, IS APPROXIMATE AND MAY NOT BE ACCURATE OR ALL INCLUSIVE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO PROCEEDING WITH CONSTRUCTION. AGENCIES INVOLVED SHALL BE NOTIFIED WITHIN A REASONABLE TIME PRIOR TO THE START OF CONSTRUCTION.

NOTE

THIS PROJECT IS SUBJECT TO RAINY SEASON RESTRICTIONS (BCC 23.76.093). IN THE EVENT THAT THE DEVELOPER WISHES TO INITIATE OR CONTINUE CLEARING OR GRADING ACTIVITY DURING THE RAINY SEASON (OCTOBER 1 THROUGH APRIL 30), A FORMAL WRITTEN REQUEST MUST BE SUBMITTED TO DSD. THE REQUEST MUST INCLUDE AN AUGMENTED TESC PLAN, A WRITTEN NARRATIVE DESCRIBING THE POTENTIAL FOR EROSION AND SEDIMENTATION, A CONSTRUCTION SEQUENCE, AND THE PROPOSED EXTRAORDINARY BMPS THAT WILL BE USED. APPROVAL WILL BE BASED ON AN EVALUATION OF SITE AND PROJECT CONDITIONS. AN IMPORTANT CRITERIA FOR APPROVAL IS GUARANTEEING TEMPORARY AND PERMANENT SLOPE STABILITY AND PROTECTION OF RECEIVING WATERS FROM INCREASED EROSION AND SEDIMENTATION DURING CONSTRUCTION.

SURVEY NOTE

EXISTING SURVEY FEATURES, BOUNDARY AND TOPOGRAPHIC DATA SHOWN ON THESE DRAWINGS HAS BEEN PREPARED, BASED UPON INFORMATION FURNISHED BY OTHERS. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, G2 CIVIL CANNOT ENSURE THE ACCURACY AND THUS IS NOT RESPONSIBLE FOR THE ACCURACY OF DATA/INFORMATION PROVIDED BY OTHERS, OR FOR ANY ERRORS OR OMISSIONS WHICH MAY HAVE BEEN INCORPORATED INTO THESE DRAWINGS AS A RESULT.



VICINITY MAP
NTS

PROJECT DATA

PROPERTY ADDRESS:	18523 NE 15TH PL BELLEVUE 98008
TAX LOT NUMBER:	7431500-0240
SITE AREA:	19,766 SF (0.45 AC.)
ZONING:	R-1.8

PROJECT TEAM

OWNER:	ERIC FORNELIUS 18523 NE 15TH PLACE BELLEVUE, WA 98008
BUILDER:	RUSS BUILDERS PO BOX 2421 NORTH BEND. WA 98045 (425) 341-3476 CONTACT: JIM RUSKOWSKI
CIVIL ENGINEER:	G2 CIVIL 1700 NW GILMAN BLVD, STE 200 ISSAQUAH, WA 98027 (425) 821-5038 CONTACT: EDWARD MECUM, PE
SURVEYOR:	APEX ENGINEERING, LLC 2601 S 35TH ST, SUITE 200, TACOMA, WA 98409 (253) 473-4494 CONTACT: KURT A. PARCHER
GEOTECHNICAL ENGINEER:	ROBERT M. PRIDE, LLC 13203 HOLMES POINT DRIVE NE KIRKLAND, WA 98034 CONTACT: ROBERT M. PRIDE, PE

LEGAL DESCRIPTION

PER STATUTORY WARRANTY DEED, KING COUNTY RECORDING NO. 20171121000172

LOT D, CITY OF BELLEVUE SHORT PLAT NO. 76-42, RECORDED UNDER RECORDING NO. 7609200724, RECORDS OF KING COUNTY, WASHINGTON, BEING A PORTION OF:

LOT 12, ROSEMONT HEIGHTS ADDITION, ACCORDING TO THE PLAT THEREOF RECORDED IN VOLUME 40 OF PLATS, PAGE 214, RECORDS OF KING COUNTY, WASHINGTON;

SITUATE IN THE COUNTY OF KING, STATE OF WASHINGTON.

HORIZONTAL DATUM

WASHINGTON STATE PLANE COORDINATE SYSTEM, NORTH ZONE (NAD 83/2011) BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE REFERENCE NETWORK.

VERTICAL DATUM

NAVD 88 BASED ON RTK GPS MEASUREMENTS CONSTRAINED TO THE WASHINGTON STATE REFERENCE NETWORK.

BENCHMARK

SEE TOPOGRAPHIC SURVEY BY APEX ENGINEERING

BASIS OF BEARING

SEE TOPOGRAPHIC SURVEY BY APEX ENGINEERING

REFERENCES

SEE TOPOGRAPHIC SURVEY BY APEX ENGINEERING

NOTE

SEE TOPOGRAPHIC SURVEY BY APEX ENGINEERING

J-0227 FIGURE 3

SHEET INDEX

EDWARD D. MECUM
STATE OF WASHINGTON
39374
REGISTERED PROFESSIONAL ENGINEER

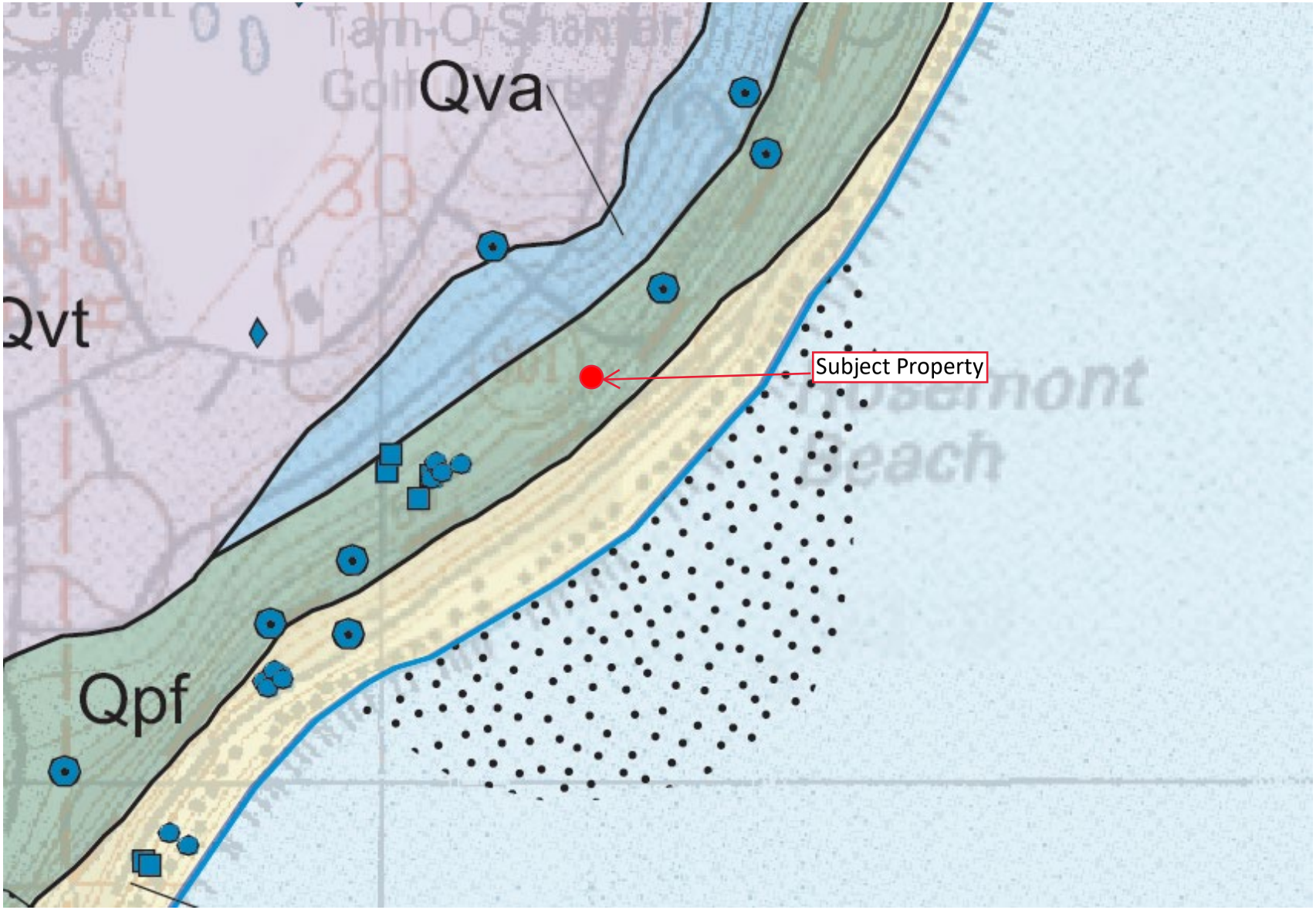
DWN BY	CHKD BY	DATE	NOTES
NM	EDM	12-20-2022	SUBMITTED TO CLIENT

G2 CIVIL
1700 NW GILMAN BLVD, STE 200
ISSAQUAH, WA 98027
PHONE: (425) 821-5038

STORMWATER & SITE IMPROVEMENT PLAN
FORNELIUS BELLEVUE GARAGE
ERIC FORNELIUS
18523 NE 15TH PLACE
BELLEVUE, WA 98008

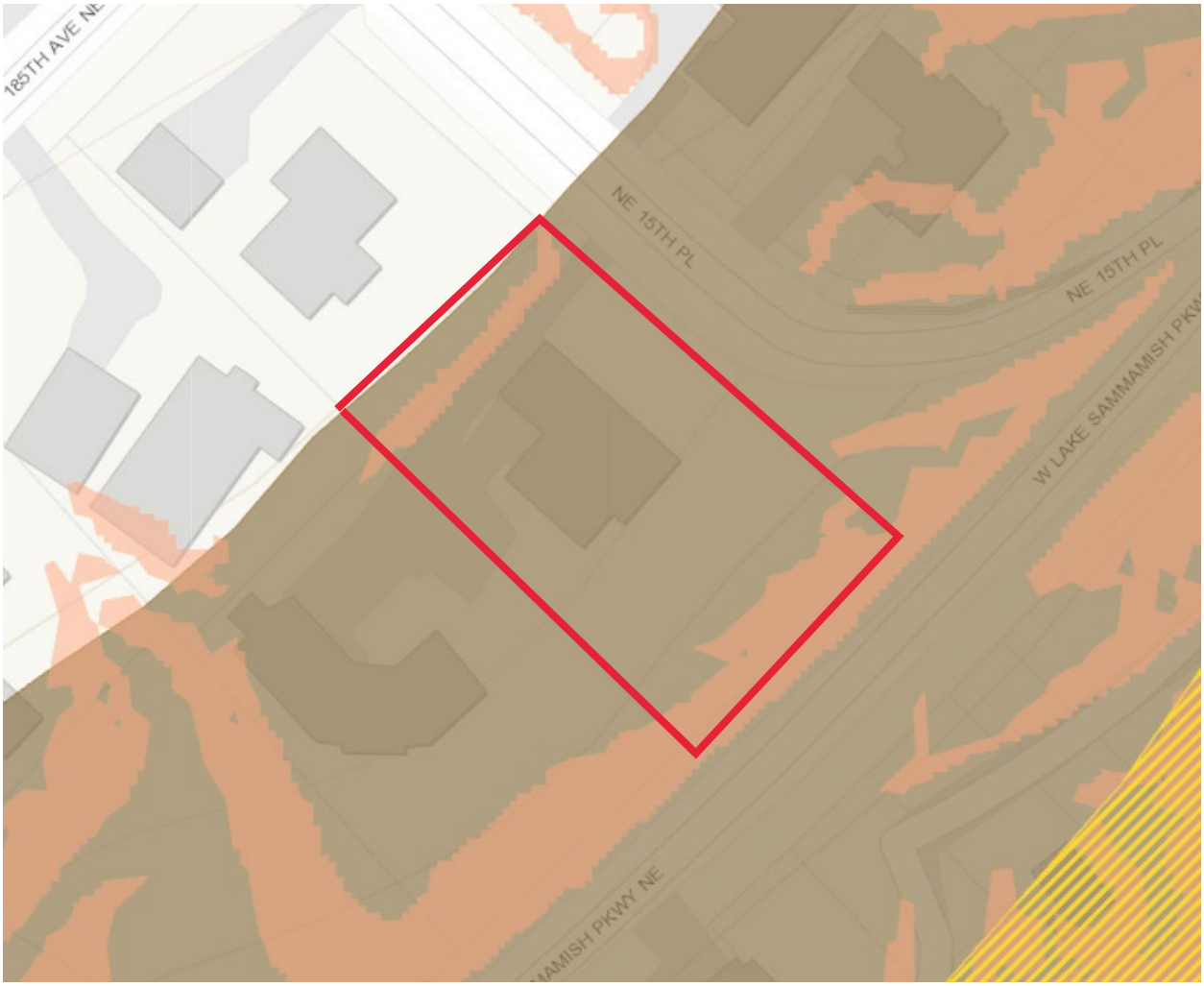
SHEET
1 of 3

JOB No.



GEOLOGIC MAP
18523 NE 15TH PLACE
BELLEVUE, WASHINGTON

J-0227 FIGURE 4



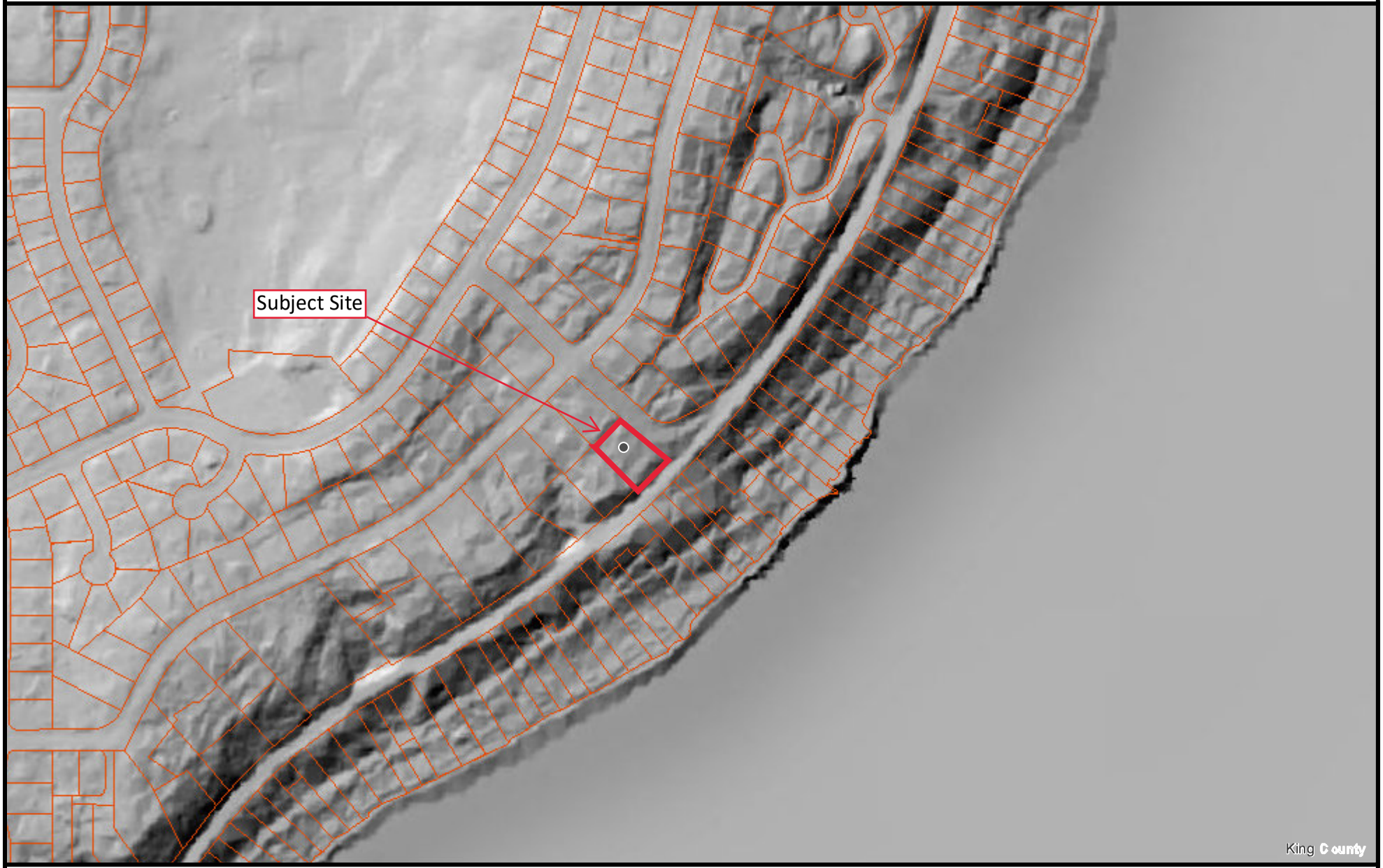
GEOLOGIC HAZARD AREAS
18523 NW 15TH PLACE
BELLEVUE, WASHINGTON

Very Severe Erosion Hazard

Steep Slopes >40%

J-0227 FIGURE 5

King County iMap



Date: 6/6/2023 Notes:

LIDAR IMAGE
18523 NW 15TH PLACE
BELLEVUE, WASHINGTON

N

J-0227 FIGURE 6

King County

Photo 1. Looking south down existing gravel drive

Photo 2. Looking southwest towards residence

Photo 3. Looking west up 15th Place NE towards residence

Photo 4. Looking south towards slope east of proposed garage site

Photo 5. Looking southwest along timber wall southeast of proposed garage site

Photo 6. Looking north across proposed garage site

Altmann Oliver Associates, LLC

PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4509

AOA
Environmental
Planning &
Landscape
Architecture

December 8, 2023

AOA-7257

Jim Ruskowski
jrussbuilders@gmail.com

SUBJECT: **Critical Areas Report for Fornelius Garage**
18523 NE 15th Place, Bellevue, WA
Parcel 743150-0240

Dear Jim:

On November 13, 2023 AOA conducted a habitat assessment on the subject property to review the proposed steep slope buffer impacts associated with the construction of a new garage. The property is currently developed with a single-family residence and associated yard.

1.0 EXISTING CRITICAL AREAS

A steep slope is located along the east property line adjacent to West Lake Sammamish Parkway NE. The steep slope requires a standard 50-foot buffer from the top of the slope, but the geotechnical engineer has recommended a 15-foot steep slope setback for the project. It is my understanding that a second small steep slope is located under the existing deck for the residence and that a 75-foot setback from the toe of the slope is typically required.

2.0 WILDLIFE HABITAT ASSESSMENT

Prior to conducting the field investigations, the Washington State Department of Fish and Wildlife's Priority Habitats and Species (PHS) database was reviewed. No priority habitats or species were identified on or immediately adjacent to the proposed work area on the site as part of this mapping (**Attachment A**).

The project site consists of one 0.45-acre tax parcel that is nearly entirely developed with a single-family residence and associated yard. The northeast corner of the site includes a clump of larger trees including Douglas fir (*Pseudotsuga menziesii*) and western red cedar, (*Thuja plicata*), and big-leaf maple (*Acer macrophyllum*). Understory and groundcover are relatively sparse and dominated by English ivy (*Hedera helix*) and some Himalayan blackberry (*Rubus armeniacus*).

Surrounding land use consists entirely of single-family residential.

No large snags, downed logs, or other significant habitat features were observed on or adjacent to the site and no raptors or raptor nests were identified during the field investigation.

Wildlife Species of Local Importance
Twenty-three (23) species have been designated by the City of Bellevue as species of local importance (**LUC 20.25H.150**). The potential of site utilization by each species is briefly described below:

- Bald eagle (*Haliaeetus leucocephalus*): site not located within Bald Eagle Buffer Management Zone per PHS data. Some potential occasional perching opportunity within larger trees in vicinity of site possible but does not have a primary association with habitat on or immediately adjacent site. Primary Association: no.

- Peregrine falcon (*Falco peregrinus*): generally associated with coastal cliffs and shorelines, but also use large buildings in city center. Use of project site unlikely. Primary Association: no.

- Common Loon (*Gavia immer*): no presence - highly aquatic species associated with large water bodies. Primary Association: no.

- Pileated woodpecker (*Dryocopus pileatus*): Pileated woodpeckers generally inhabit mature and old-growth forests, and second-growth forests with large snags and fallen trees. The range of the species encompasses all of the forested areas of the state. Although typically found in larger forested tracts, they are known to occur in suburban habitats as well. Their key breeding habitat need is the presence of large snags or decaying live trees for nesting, as this species generally excavates a new nest cavity each year. The breeding and nesting periods of the pileated woodpecker extends from late March to early July. Although some foraging potential is present, the lack of large snags limits the nesting potential of this species. Primary Association: no.

- Vaux's swift (*Chaetura vauxi*): Vaux's swifts are strongly associated with old growth and mature forests throughout the state and are highly dependent on large hollow trees and snags for breeding and roosting. Although some minor potential for foraging, unlikely nesting or primary association on the site due to lack of large snags. Primary Association: no.

- Merlin (*Falco columbarius*): unlikely presence – generally require coastal or high elevation forests. Primary Association: no.

- Purple martin (*Progne subis*): unlikely presence – generally require cavities near or over water for nesting. Primary Association: no.

- Western grebe (*Aechmophorus occidentalis*): no presence – highly aquatic species associated with large water bodies. Primary Association: no.

- Great blue heron (*Ardea herodias*): unlikely presence – typically forage in larger wetlands or pasture which do not occur on-site. No roosts observed on or adjacent site. Primary Association: no.

- Osprey (*Pandion haliaetus*): unlikely presence - perch availability not adjacent large water body. Primary Association: no.

- Green heron (*Butorides striatus*): unlikely presence – not near large wetland or waterbody. Primary Association: no.

- Red-tailed hawk (*Buteo jamaicensis*): potential utilization of site for occasional perching, although no nests observed and not near significant open expanse. Primary Association: no.

- Western big-eared bat (*Plecotus townsendii*): potential presence, but no known nearby hibernacula or caves so not considered a habitat of primary association. Primary Association: no.

- Keen's myotis (*Myotis keenii*): potential presence, but generally associated with larger coniferous forests so not considered a habitat of primary association. Primary Association: no.

- Long-legged myotis (*Myotis volans*): potential presence, but generally associated with larger coniferous forests so not considered a habitat of primary association. Primary Association: no.

- Long-eared myotis (*Myotis evotis*): potential presence, but generally associated with larger coniferous forests so not considered a habitat of primary association. Primary Association: no.

- Oregon spotted frog (*Rana pretiosa*): no presence - believed to be extirpated from nearly all of western Washington and no ponding on the site. Primary Association: no.

- Western toad (*Bufo boreas*): presence possible but no breeding potential and not considered habitat of primary association. Primary Association: no.

- Western pond turtle (*Clemmys marmorata*): no presence - no ponding on site and no known nearby populations. Primary Association: no.

- Chinook (*Oncorhynchus tshawytscha*): no presence – no streams that support Chinook on or adjacent to the site. Primary Association: no.

- Bull trout (*Salvelinus confluentus*): no presence – no streams that support bull trout on or adjacent to the site. Primary Association: no.

- Coho salmon (*Oncorhynchus kisutch*): no presence – no streams that support Coho on or adjacent to site. Primary Association: no.

- River lamprey (*Lampetra ayresi*): no presence – no streams that support river lamprey on or adjacent to the site. Primary Association: no.

None of the 23 species of local importance appear to have a primary association with habitat on or adjacent to the project site. The proposed project consists of the construction of a new garage and access in the eastern portion of the property. There are no anticipated significant impacts to any species of local importance from the proposed project.

3.0 PROPOSED SLOPE AND SLOPE BUFFER MODIFICATIONS

The proposed project consists of the construction of a new garage and access in the eastern portion of the site. As part of the project, 653 s.f. of the standard slope buffer/setback would be permanently impacted by the development. All temporary impacts would be fully restored.

Due to the standard slope buffer/setback encumbrances it is not possible to avoid the buffer modification. It is also my understanding that site grading is the minimum necessary to accomplish the goal of the project. The area in the vicinity of the slope buffer and setback impact consists almost entirely of existing lawn and gravel areas that do not provide a significant habitat function. As part of the project it is my understanding that significant vegetation removal will be limited to one 12-inch dbh big-leaf maple.

3.1 Steep Slope and Slope Buffer Modification

Any proposals to modify a critical area buffer must meet the criteria of **LUC 20.25H.255.A**

A. General.

Except for the proposals described in subsection B of this section, the Director may approve, or approve with modifications, the proposed modification where the applicant demonstrates:

1. *The modifications and performance standards included in the proposal lead to levels of protection of critical area functions and values at least as protective as application of the regulations and standards of this code;*

We have prepared an enhancement plan (**Figures 1 through 6**) for an area of degraded habitat on the site. Enhancement will occur through the removal of invasive plant species and re-planting degraded or sparsely vegetated areas with a variety of native plant species. Implementation of this plan will increase critical area functions over current conditions.

2. *Adequate resources to ensure completion of any required mitigation and monitoring efforts*;

Installation of the habitat enhancement plan should be a condition of any permit requirement by the City of Bellevue and the project would be maintained and monitored for a period of 5 years.

3. *The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and*

The proposed work should not be detrimental to any off-site critical area functions

4. *The resulting development is compatible with other uses and development in the same land use district*.

The residential project is compatible with adjacent land uses and is in line with the land use district.

We have also included the decision criteria of **LUC 20.25H.255.B**

B. Decision Criteria – Proposals to Reduce Regulated Critical Area Buffer.

The Director may approve, or approve with modifications, a proposal to reduce the regulated critical area buffer on a site where the applicant demonstrates:

1. *The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in overall critical area or critical area buffer functions;*

   A habitat enhancement plan has been prepared for an area of degraded habitat in the eastern portion of the site immediately adjacent to the proposed work area. Enhancement will occur through the removal of invasive plant species and re-planting degraded or sparsely vegetated areas with a variety of native plant species.

2. *The proposal includes plans for restoration of degraded critical area or critical area buffer functions which demonstrate a net gain in the most important critical area or critical area buffer functions to the ecosystem in which they exist;*

   Since the primary function of the buffer on the site is as a component of the overall habitat on and adjacent to the property, an enhancement plan has been prepared to increase the plant species and structural diversity of the degraded habitat on the site.

3. *The proposal includes a net gain in stormwater quality function by the critical area buffer or by elements of the development proposal outside of the reduced regulated critical area buffer;*

   The proposed project will be designed to incorporate all required City of Bellevue stormwater management measures.

4. *Adequate resources to ensure completion of any required restoration, mitigation and monitoring efforts;*

   Installation of the habitat enhancement plan should be a condition of any permit requirement by the City of Bellevue and will include a 5 year maintenance and monitoring program.

5. *The modifications and performance standards included in the proposal are not detrimental to the functions and values of critical area and critical area buffers off-site; and*

   The proposed work should not be detrimental to any off-site critical areas.

6. *The resulting development is compatible with other uses and development in the same land use district. (Ord. 5680, 6-26-06)*

   The residential project is compatible with adjacent land uses and is in line with the land use district.

3.2 Decision Criteria per LUC 20.30P.140

The Director may approve or approve with modifications an application for a Critical Areas Land Use Permit if:

A. *The proposal obtains all other permits required by the Land Use Code; and*

It is our understanding that all permits required by the Land Use Code will be obtained.

B *The proposal utilizes to the maximum extent possible the best available construction, design and development techniques which result in the least impact on the critical area and critical area buffer; and*

The project will need to utilize all of the best available construction, design, and development techniques to ensure the least possible impact on the critical area and its buffer.

All plantings within the enhancement area will consist of native species and will be installed and maintained only by a qualified landscape contractor familiar with work in sensitive environments.

C *The proposal incorporates the performance standards of Part 20.25H LUC to the maximum extent applicable; and*

All of the applicable performance standards in LUC 20.25H would be implemented to the maximum extent possible.

D The proposal will be served by adequate public facilities including streets, fire protection, and utilities; and

It is our understanding that the proposal will be served by adequate public facilities including streets, fire protection, and utilities.

E The proposal includes a mitigation or restoration plan consistent with the requirements of LUC 20.25H.210; except that a proposal to modify or remove vegetation pursuant to an approved Vegetation Management Plan under LUC 20.25H.055.C.3.i shall not require a mitigation or restoration plan; and

A critical area enhancement plan has been prepared for a degraded portion of the site.

F The proposal complies with other applicable requirements of this code

It is our understanding that all other applicable requirements of the Land Use Code will be met.

4.0 FUNCTIONAL ASSESSMENT

Per LUC 20.25H.250.B.5, the City of Bellevue requires an *analysis of the level of protection of critical area functions and values provided by the regulations or standards of this code, compared with the level of protection provided by the proposal. The analysis shall include:*

a. *A discussion of the functions and values currently provided by the critical area and critical area buffer on the site and their relative importance to the ecosystem in which they exist*;

Critical areas on the site include steep slopes. The steep slope requires a standard 50-foot buffer from the top of the slope and a 75-foot setback from the toe of the slope. This steep slope buffer/setback is currently almost entirely lawn or existing gravel parking that does not provide a significant functional benefit to the slope.

The primary habitat function of the steep slope and steep slope buffer/setback on this site are as a component of the overall habitat on and adjacent to the property and not as specific habitat for an individual species of local importance. The slope stability functions of the slope and slope buffer have been assessed by the geotechnical engineer.

b. A discussion of the functions and values likely to be provided by the critical area and critical area structure setback on the site through application of the regulations and standards of this Code over the anticipated life of the proposed development; and

The slope stability functions of the slope and structure setback have been assessed by the geotechnical engineer and these functions should continue following the proposed project.

c. *A discussion of the functions and values likely to be provided by the critical area and critical area structure setback on the site through the modifications and performance standards included in the proposal over the anticipated life of the proposed development;*

Enhancement of a degraded area on the site will increase the habitat value of the property by increasing the plant species and structural diversity within the enhanced area. The proposed plantings will increase the quality of the preserved habitat. Without implementation of the proposed planting plan, the degraded area will likely continue to become established with invasive species such as Himalayan blackberry and English ivy.

5.0 MONITORING PROGRAM

We have prepared a mitigation plan (**Figures 1 through 6**) for the required slope and slope buffer impacts on the site. Mitigation will consist of enhancing with native plantings a degraded area on the property. The mitigation has been designed to increase the habitat quality of the degraded area by increasing the plant species and structural diversity over current conditions.

5.1 Goal, Objectives, and Performance Standards for Enhancement Areas

The primary goal of the enhancement plan is to increase the habitat and protective functions of the degraded area on the site over current conditions. 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: There will be 100% survival of all woody planted species throughout the enhancement area at the end of the first year of planting. Following Year 1, success will be based on an 85% survival rate of all planted tree and shrub species or equivalent replacement of a combination of planted and re-colonized native species. Areal coverage of plantings or native re-colonized species will be at least 15% at Year 1, 20% at Year 2, 30% at Year 3, and 60% at Year 5.

Objective B: Limit the amount of invasive and exotic species within the enhancement area.
Performance Standard: After construction and following every monitoring event for a period of at least five years, exotic and invasive plant species will be maintained at levels below 10% total cover in all planted areas.

5.2 Construction Management

Prior to commencement of any work in the enhancement area, the clearing limits will be staked and all existing vegetation to be saved will be clearly marked. A pre-construction meeting will be held at the site to review and discuss all aspects of the project with the landscape contractor and the owner.

A consultant will supervise plan implementation during construction to ensure that objectives and specifications of the enhancement plan are met. Any necessary significant modifications to the design that occur as a result of unforeseen site conditions will be jointly approved by the City of Bellevue and the consultant prior to their implementation.

5.3 Monitoring Methodology

As required, the monitoring program will be conducted for a period of five years with annual reports submitted to the City of Bellevue. Permanent vegetation sampling plots will be established to monitor the general appearance, health, mortality, colonization rates, percent cover, percent survival, volunteer plant species, and invasive weeds.

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 the success of the plan.

5.4 Maintenance Plan

Maintenance will be conducted on a routine, year round basis. Additional maintenance needs will be identified and addressed following a twice-yearly consultant 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.

Routine removal and control of non-native and other invasive plants shall be performed by manual means whenever possible. Weed removal includes hand grubbing all roots and exporting off-site. Undesirable and weedy exotic plant species shall be maintained at levels below 10% total cover within any given stratum at any time during the five-year monitoring period.

5.5 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 the 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 Bellevue, or the owner.

5.6 As-Built Plan

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

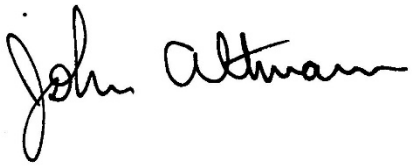
5.7 Financial Guarantee

A financial guarantee will be posted to ensure that the mitigation and monitoring program is fully implemented.

If you have any questions regarding the critical areas report, please give me a call.

Sincerely,

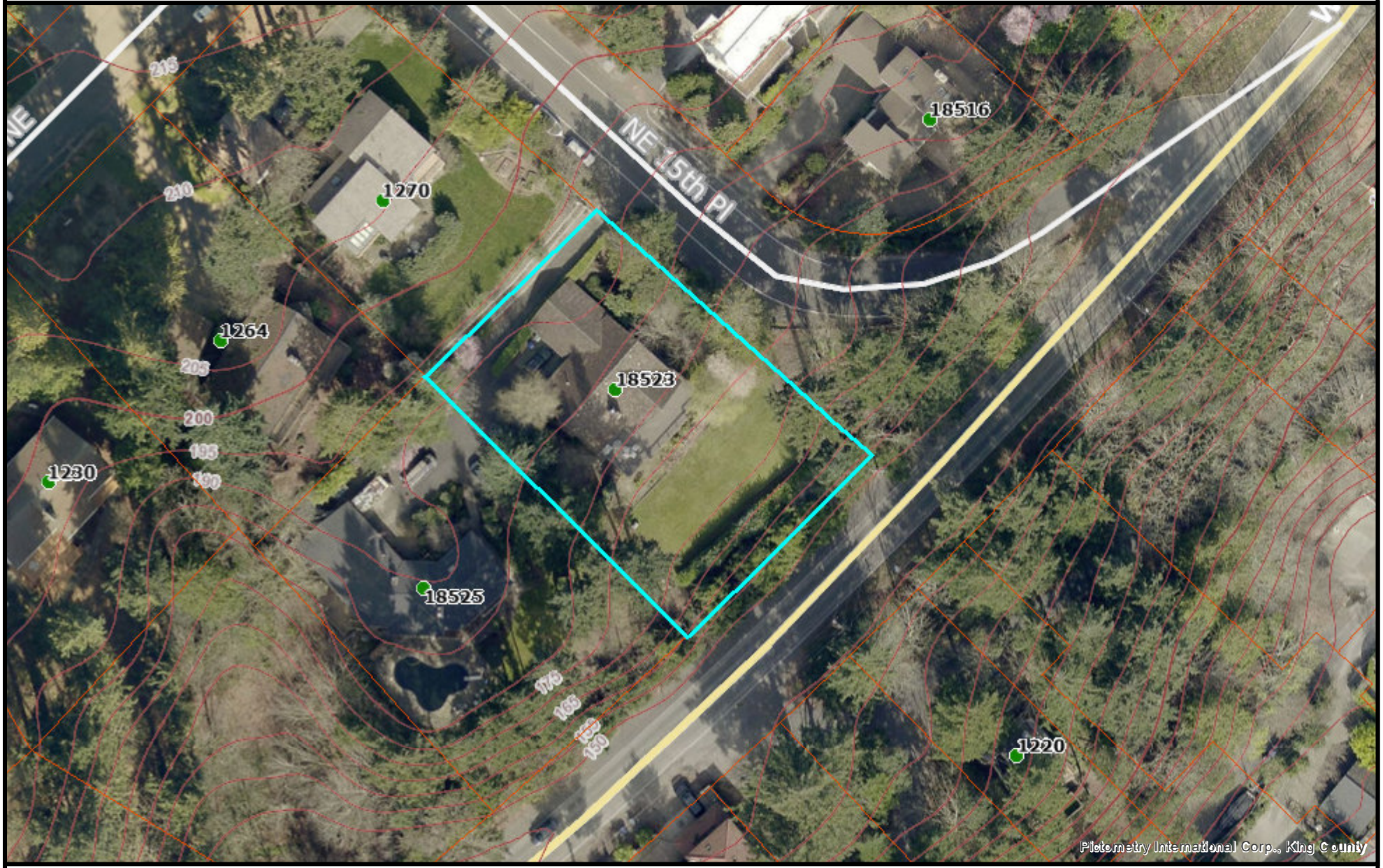
ALTMANN OLIVER ASSOCIATES, LLC



John Altmann
Ecologist

Attachments

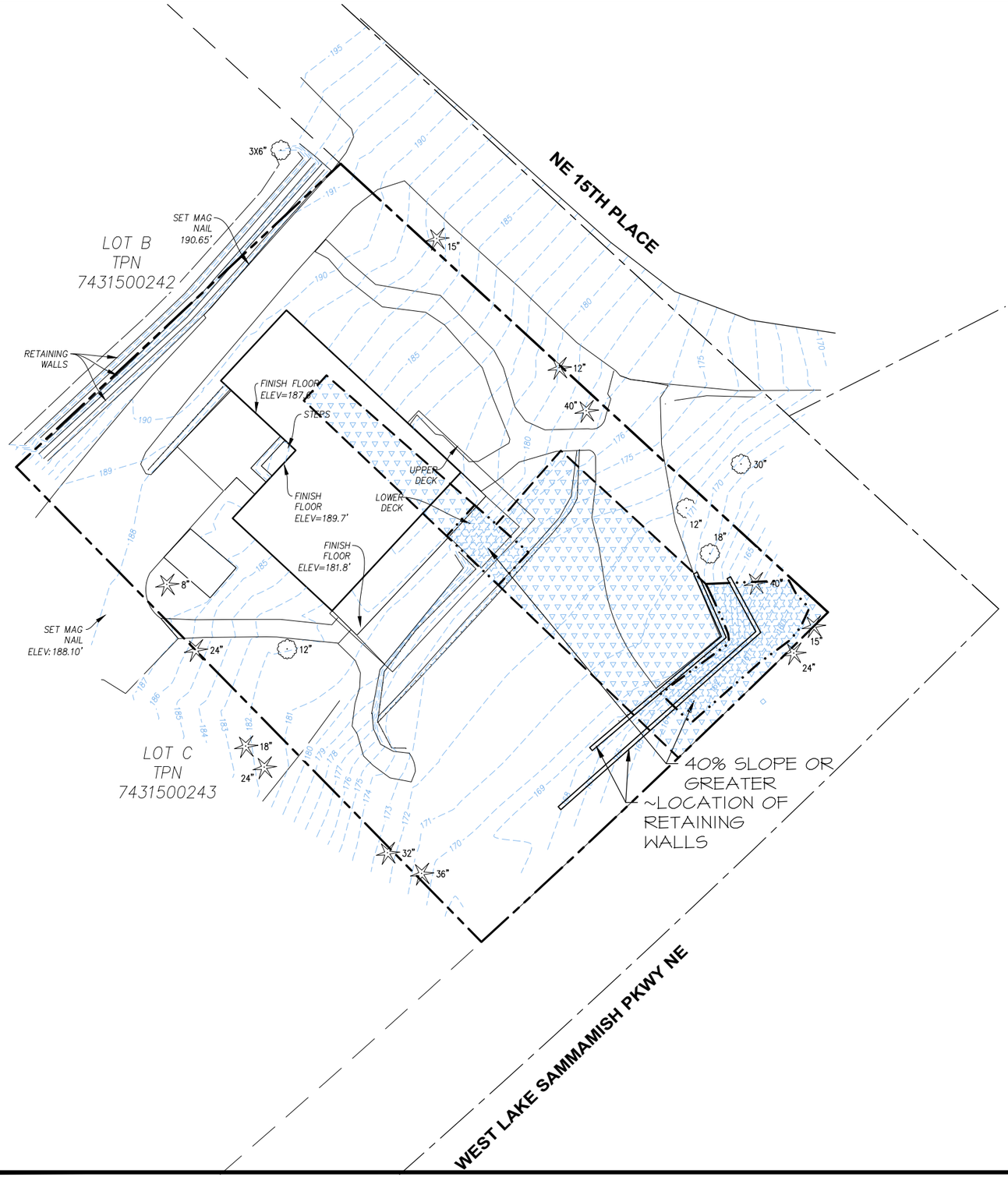
King County iMap



Date: 12/8/2023 Notes:

N

King County



PLAN LEGEND

- PROPERTY LINE
- STEEP SLOPES
- STEEP SLOPE BUFFER (50' FROM TOP OF SLOPE, 75' AT TOE OF SLOPE)

GRAPHIC SCALE
(IN FEET)

0 15 30 45 60 90

SCALE: 1:30

N

NOTES

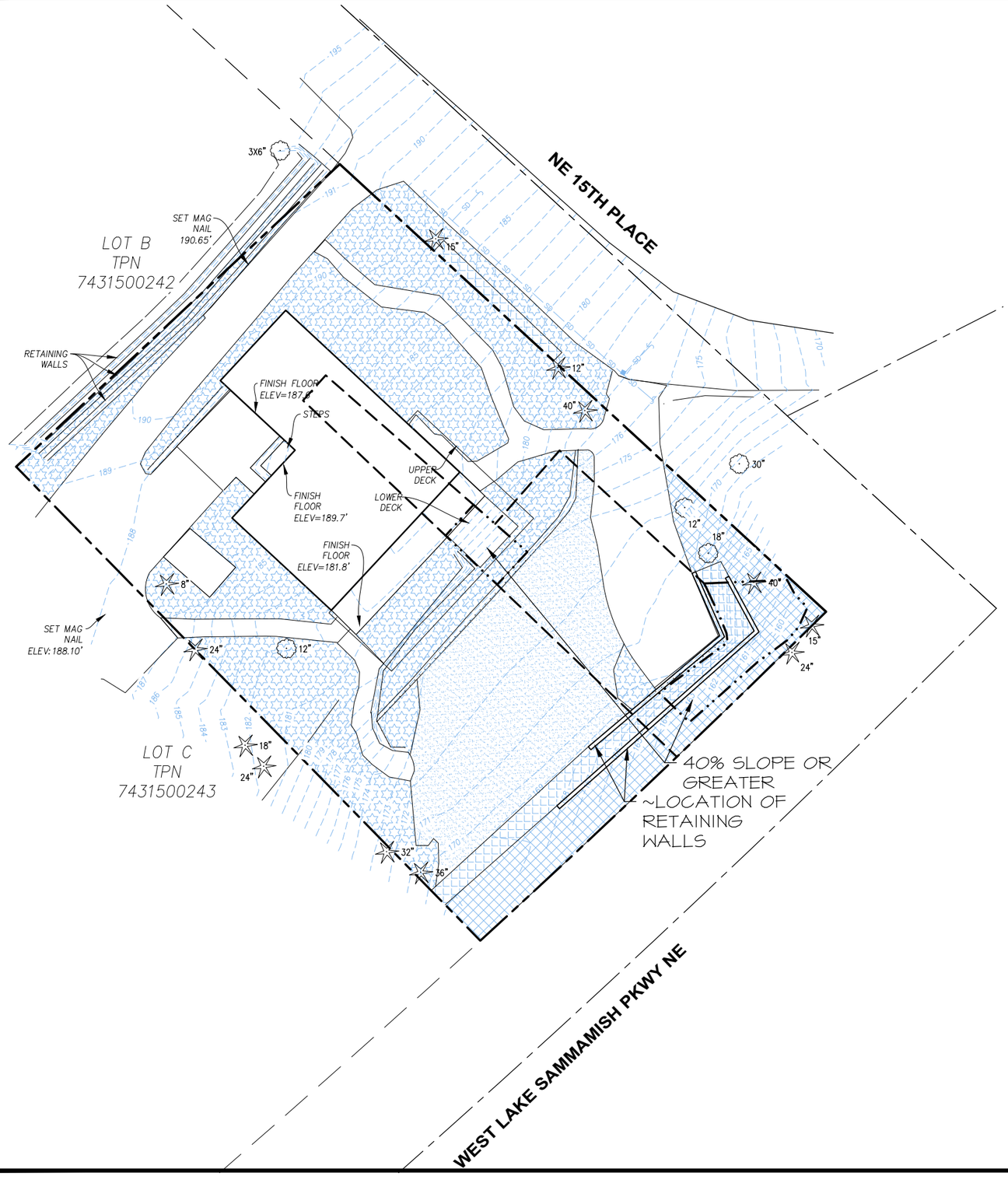
1. BASE INFORMATION PROVIDED BY G2 CIVIL, 1700 NW GILMAN BLVD, STE 200, ISSAQUAH, WA 98027, 425.821.5038.

PROJECT 7257
DRAWN SO
SCALE AS NOTED
DATE 12-07-23
REVISED
1/6

FIGURE 1: EXISTING CONDITIONS
RUSKOWSKI PROPERTY - STEEP SLOPE MITIGATION PLAN
18523 NE 15TH PL.
BELLEVUE, WA 98008
PARCEL 7431500240

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4599

7257-MIT-12-07-23.dwg



PLAN LEGEND

- PROPERTY LINE
- STEEP SLOPES
- STEEP SLOPE BUFFER (50' FROM TOP OF SLOPE, 75' AT TOE OF SLOPE)

EXISTING VEGETATION LEGEND

ORNAMENTAL PLANTING BEDS	6,580 SF
LAWN	2,983 SF
100% HEDGE	774 SF
100% IVY, 100% CANOPY	1,755 SF

GRAPHIC SCALE (IN FEET)

0 15 30 45 60 90

SCALE: 1:30

N

NOTES

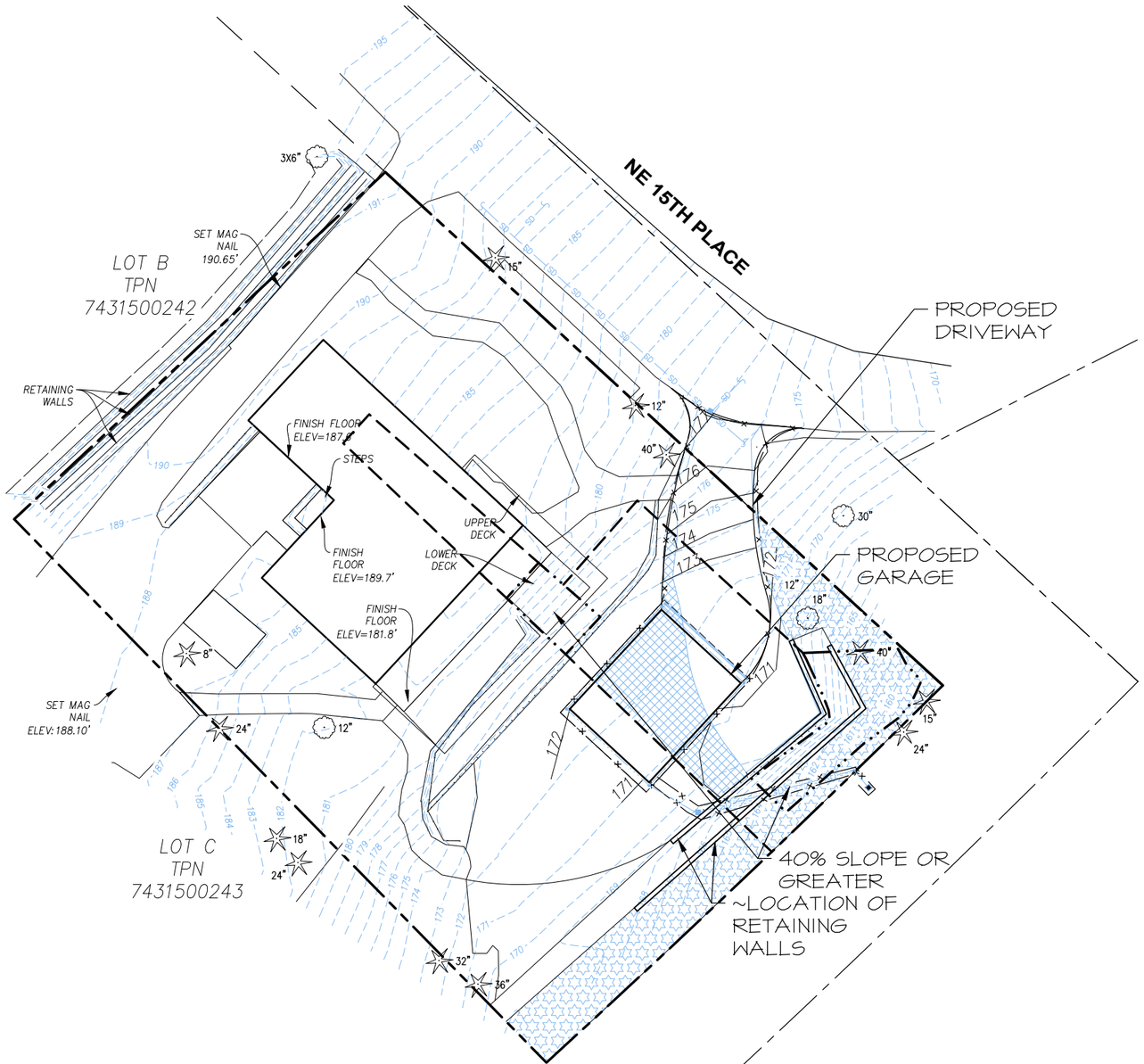
1. BASE INFORMATION PROVIDED BY G2 CIVIL, 1700 NW GILMAN BLVD, STE 200, ISSAQUAH, WA 98027, 425.821.5038.

FIGURE 2: EXISTING VEGETATION MAP
RUSKOWSKI PROPERTY - STEEP SLOPE MITIGATION PLAN
18523 NE 15TH PL.
BELLEVUE, WA 98008
PARCEL 743150-0240

PROJECT 7257
DRAWN SO
SCALE AS NOTED
DATE 12-07-23
REVISED
2/6

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4569

7257-MIT-12-07-23.dwg



PLAN LEGEND

- PROPERTY LINE
- STEEP SLOPES
- STEEP SLOPE BUFFER (50' FROM TOP OF SLOPE, 75' AT TOE OF SLOPE)
- CLEARING LIMITS

IMPACT LEGEND

	PERMANENT STEEP SLOPE BUFFER IMPACTS	653 SF
	TOTAL IMPACT	653 SF
	TEMPORARY STEEP SLOPE / STEEP SLOPE BUFFER IMPACTS TO BE RESTORED	65 SF

MITIGATION LEGEND (MC=MITIGATION CREDIT)

	STEEP SLOPE / STEEP SLOPE BUFFER RESTORATION WITH NATIVE GROUNDCOVER	65 SF
	MITIGATION AREA - PLANT WITH NATIVE SHRUBS AND GROUNDCOVER - 50% MC	1,718 SF (859 SF MC)

GRAPHIC SCALE
(IN FEET)

0 15 30 45 60 90

SCALE: 1:30

N

NOTES

1. BASE INFORMATION PROVIDED BY G2 CIVIL, 17100 NW GILMAN BLVD, STE 200, ISSAQUAH, WA 98027, 425.821.5038.

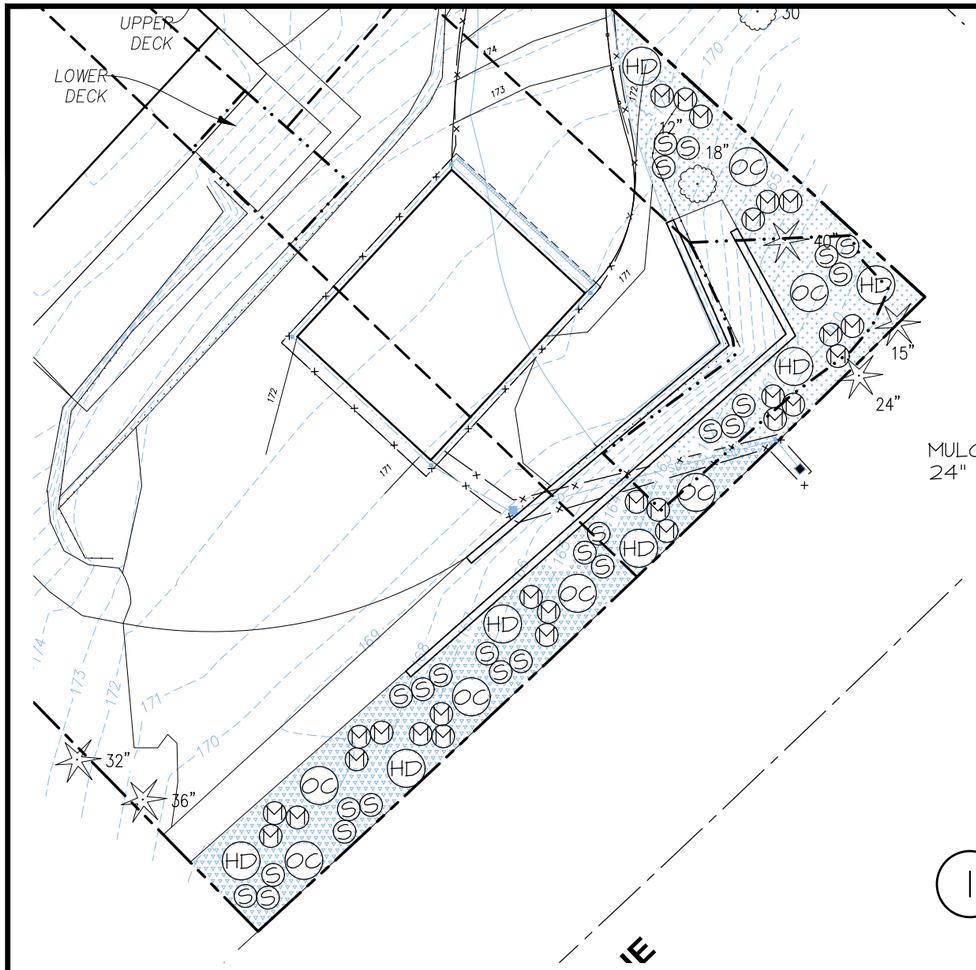
FIGURE 3: IMPACTS AND MITIGATION
RUSKOWSKI PROPERTY - STEEP SLOPE MITIGATION PLAN
18523 NE 15TH PL.
BELLEVUE, WA 98008
PARCEL 743150-0240

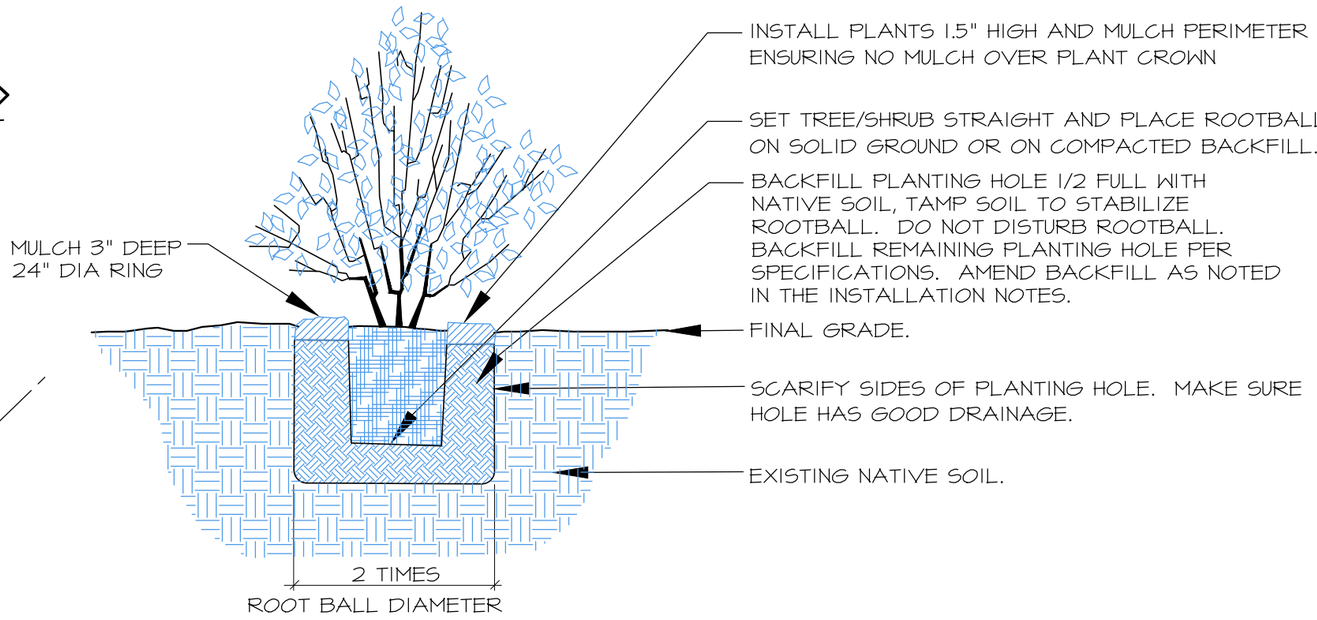
PROJECT 7257
DRAWN SO
SCALE AS NOTED
DATE 12-07-23
REVISED

3/6

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535Fax (425) 333-4539

7257-MIT-12-07-23.dwg





1 CONTAINER TREE/SHRUB PLANTING (TYP.)
SCALE: NTS

PLANT SCHEDULE

SHRUBS

KEY	SCIENTIFIC NAME	COMMON NAME	DENSITY	QTY.	SIZE (MIN.)	NOTES
HD	HOLODISCUS DISCOLOR	OCEAN SPRAY	4.5' O.C.	7	2 GAL.	MULTI-STEM (3 MIN.)
M	MAHONIA AQUIFOLIUM	TALL OREGON GRAPE	4.5' O.C.	27	2 GAL.	FULL & BUSHY
OC	OEMLERIA CERASIFORMIS	INDIAN PLUM	4.5' O.C.	7	2 GAL.	MULTI-STEM (3 MIN.)
S	SYMPHORICARPOS ALBUS	SNOWBERRY	4.5' O.C.	24	2 GAL.	MULTI-STEM (3 MIN.)

GROUNDCOVER

KEY	SCIENTIFIC NAME	COMMON NAME	SPACING	QTY.	SIZE (MIN.)	NOTES
	GAULTHERIA SHALLON	SALAL	2' O.C.	130	1 GAL.	FULL & BUSHY
	POLYSTICHUM MUNITUM	SWORD FERN	3' O.C.	55	1 GAL.	FULL & BUSHY

GRAPHIC SCALE (IN FEET)
0 10 20 30 40 60
SCALE: 1:20

N

NOTES

1. BASE INFORMATION PROVIDED BY G2 CIVIL, 1700 NW GILMAN BLVD, STE 200, ISSAQUAH, WA 98027, 425.821.5038.

DRAWN SO | PROJECT 7257
SCALE AS NOTED | 4/6
DATE 12-07-23 | REVISED

FIGURE 4: PLANTING PLAN & DETAILS
RUSKOWSKI PROPERTY - STEEP SLOPE MITIGATION PLAN
18523 NE 15TH PL.
BELLEVUE, WA 98008
PARCEL 7431500240

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4599

7257-MIT-12-07-23.dwg

SPECIFICATIONS

1. CONTRACTOR INFORMATION. WHEN IT IS AVAILABLE, CONTACT INFORMATION SHALL BE PROVIDED TO THE CITY OF BELLEVUE THAT INCLUDES NAMES, ADDRESSES AND PHONE NUMBERS OF PERSONS/FIRMS THAT WILL BE RESPONSIBLE FOR INSTALLING REQUIRED PLANTS AND PERFORMING REQUIRED MAINTENANCE.
2. 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 (5) 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 BELLEVUE.
3. TEMPORARY EROSION CONTROL MEASURES WILL BE INSTALLED ALONG THE PROPOSED BUFFER BOUNDARY PRIOR TO ANY WORK IN THE CRITICAL AREA OR BUFFER.
4. A PRE-CONSTRUCTION MEETING WILL BE HELD ONSITE WITH THE LANDSCAPE CONTRACTOR AND AOA PRIOR TO START OF WORK.
5. ALL PLANTS SHOULD BE INSTALLED BETWEEN DECEMBER 1ST AND MARCH 15TH UNLESS SUPPLEMENTAL IRRIGATION IS IN PLACE PRIOR TO PLANTING.
6. 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. 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.
7. PRIOR TO INSTALLATION OF PLANT MATERIAL, THE PLANTING AREAS WILL BE LAID OUT BASED ON THE PLANTING PLAN, AND ALL NON-NATIVE WOODY AND HERBACEOUS VEGETATION LOCATED IN THE PLANTING AREAS WILL BE REMOVED BY HAND.
8. IN WEED-REMOVAL AREAS, IMPORTED DEJONG'S FERTIL-MULCH SHALL BE PLACED TO PRE CLEARING GRADES.
9. 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 AND HYDRATED SOIL POLYMER (AT RATES PER MANUFACTURER). PLANTS SHALL BE INSTALLED 3" HIGH AND SURFACED MULCHED TO A DEPTH OF 3" WITH COMPOSTED HOG-FUEL OR WOOD CHIPS PLACED CONTINUOUSLY THROUGHOUT THE PLANTING BED IN OPEN AREAS AND PLACED WITHIN A 24" DIAMETER AROUND EACH PLANT IN VEGETATED AREAS..
10. 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.
11. PLANT LAYOUT SHALL BE APPROVED BY AOA PRIOR TO INSTALLATION AND APPROVED UPON COMPLETION OF PLANTING.
12. UPON COMPLETION OF PLANTING, ALL PLANTS SHALL BE THOROUGHLY WATERED.
13. UPON APPROVAL OF PLANTING INSTALLATION BY AOA, THE CITY OF BELLEVUE WILL BE NOTIFIED TO CONDUCT A SITE REVIEW FOR FINAL APPROVAL OF CONSTRUCTION.
14. MAINTENANCE SHALL BE REQUIRED IN ACCORDANCE WITH THE CITY OF BELLEVUE MITIGATION GUIDELINES AND APPROVED PLANS.
15. AN IRRIGATION SYSTEM SHALL BE DESIGNED BY THE LANDSCAPE CONTRACTOR TO PROVIDE 1/2" OF FLOW 1-2 TIMES WEEKLY FROM 6/15-10/15 THE FIRST YEAR AFTER PLANTING TO ALL PLANTED AREAS VIA DRIP IRRIGATION HEADS. FLOW SHALL REDUCE TO 1-2 TIMES WEEKLY FROM 7/1-9/30 THE SECOND YEAR AFTER PLANTING AND ONCE WEEKLY THE YEARS 3-5.
16. 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
WEED CONTROL			1		1		1		1			
GENERAL MAINT.			1		1		1		1			
IRRIGATION - YEAR 1						2	4	4	2			
IRRIGATION - YEAR 2							4	4				
IRRIGATION - YEARS 3-5							4	4				

1-8 = NUMBER OF TIMES TASK SHALL BE PERFORMED PER MONTH.

PROJECT 7257
DRAWN SO
SCALE AS NOTED
DATE 12-07-23
REVISED
5/6

FIGURE 5: SPECIFICATIONS
RUSKOWSKI PROPERTY - STEEP SLOPE MITIGATION PLAN
18523 NE 15TH PL.
BELLEVUE, WA 98008
PARCEL 743150-0240

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535Fax (425) 333-4599

7257-MIT-12-07-23.dwg

MAINTENANCE & MONITORING PLAN

CONSTRUCTION MANAGEMENT

1. Prior to commencement of any work in the mitigation planting area, the clearing limits will be staked and all existing vegetation to be saved will be clearly marked. A pre-installation meeting will be held at the site to review and discuss all aspects of the project with the owner, aoa, the geotechnical engineer and the civil engineer.
2. A biologist will supervise plan implementation during construction to ensure that objectives and specifications of the mitigation planting area are met.
3. Any necessary significant modifications to the design that occur as a result of unforeseen site conditions will be jointly approved by the City of Bellevue and the biologist prior to their implementation.

MONITORING METHODOLOGY

1. The monitoring program will be conducted twice yearly (in the beginning and end of the growing season) for a period of five years, with reports submitted annually (at the end of the growing season) to the City of Bellevue.
2. Vegetation establishment within the mitigation planting area will be monitored during each field visit with a record kept of all plant species found.
3. 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 mitigation area. Review of the photos over time will provide a semi-quantitative representation of success of the restoration plan.

PERFORMANCE STANDARDS

Success of plant establishment within the mitigation planting area will be evaluated on the basis of percent survival of planted species.
1. Native woody cover will be a minimum of; 10% at construction completion, 15% at year 1, 20% at year 2, 30% at year 3 and 60% at year 5.
2. There will be 100% survival of all woody planted species throughout the mitigation planted area at the end of the first year of planting. For years 2-5, success will be based on an 85% survival rate or similar number of recolonized native woody plants.
3. Exotic and invasive plant species will be maintained at levels below 10% total cover. Removal of these species will occur immediately following the monitoring event in which they surpass the above maximum coverage. Removal will occur by hand whenever possible.

MAINTENANCE (M) & CONTINGENCY (C)

1. Established performance standards for the project will be compared to the monitoring results in order to judge the success of the mitigation project.
2. Contingency will include many of the items listed below and would be implemented if these performance standards are not met.
3. Maintenance and remedial action on the site will be implemented immediately upon completion of the monitoring event, (unless otherwise specifically indicated below).

- replace dead plants with the same species or a substitute species that meet the goal of the mitigation plan (C)
- re-plant areas after reason for failure has been identified (e.g., moisture regime, poor plant stock, disease, shade/sun conditions, wildlife damage, etc.) (C)
- irrigate following plant installation for five years (M)

PERFORMANCE BOND

1. A performance bond or other surety device will be posted with the City of Bellevue by the applicant to cover the costs of mitigation plan implementation (including labor, materials, maintenance, and monitoring).
2. The bond or assignment may be released in partial amounts in proportion to work successfully completed over the five year monitoring period, as the applicant demonstrates performance and corrective measures.

PROJECT 7257
DRAWN SO
SCALE AS NOTED
DATE 12-07-23
REVISED
6/6

FIGURE 6: MAINTENANCE & MONITORING PLAN
RUSKOWSKI PROPERTY - STEEP SLOPE MITIGATION PLAN
18523 NE 15TH PL.
BELLEVUE, WA 98008
PARCEL 743150-0240

Altmann Oliver Associates, LLC
AOA
Environmental Planning & Landscape Architecture
PO Box 578 Carnation, WA 98014 Office (425) 333-4535 Fax (425) 333-4569

7257-MIT-12-07-23.dwg

Attachment A

Priority Habitats and Species on the Web

Report Date: 12/07/2023, Parcel ID: 7431500240

The Priority Habitats and Species (PHS) datasets do not contain information for your project area. This does not mean that species and habitats do not occur in your project area. PHS data, points, lines and polygons are mapped only when occurrences of these species or habitats have been observed in the field. Unfortunately, we have not been able to comprehensively survey all sections in the state and therefore, it is important to note that priority species and habitats may occur in areas not currently known to the Department.